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CALIFORNIA STATE UNIVERSITY, SAN MARCOS

First Generation College Students' Perception of Online Instruction During the COVID-19 Pandemic

A dissertation proposal submitted in partial satisfaction of the

requirements for the degree Doctor of Education

in

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by

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The dissertation of Jeanene Lyn Ames is approved, and it is acceptable in quality and form for publication on microfilm and electronically.

University of California San Diego

California State University, San Marcos

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EPIGRAPH

I'm a very strong believer in listening and learning from others.

Ruth Bader Ginsburg

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LIST OF ABBREVIATIONS

Abbreviations	Definitions
CCC	California Community Colleges
CGCS	Continuing-Generation College Student
CMC	Computer-Mediated Communication
CoI	Community of Inquire
ERT	Emergency Remote Teaching
FGCS	First-Generation College Students
FtF	Face-to-Face
JASP	Jeffrey's Amazing Statistics Program
LMS	Learning Management System
ODL	Online Distance Learning
OER	Open Educational Resources
RSI	Regular and Substantive Interaction

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ACKNOWLEDGEMENTS

A mother is always the beginning. She is how things begin—Amy Tan

As a child, I was closest to my mother, Marian Dolores Lopez Barrett. I told her I would never leave her as I could not imagine living anywhere other than with her. I did eventually leave home, yet I remained close with my mother. My mother served as our family matriarch, who lived a life of welcoming *every* person in her home, giving *all* she had to others, and effortlessly entertaining *everyone* with her amusing stories and her home cooked meals—especially annual tamales at Christmastime. She was a storyteller. She had a remarkable sense of humor with an infectious laugh that captivated everyone who met her. People gravitated toward my mother. My mother was also the most honest, principled, and industrious person I knew. She was also exceptionally creative and innovative—just like her father—Mariano Munoz Lopez. I did not realize as a child that my mother engrained her attributes of inclusion, integrity, compassion, and dedication to completing tasks within me and my daughters. Thus, everything that I am is because of my mother. Therefore, I begin with acknowledging my mother, whom I lost in Fall 2020, yet her essence continues to live on within me and my daughters. Next, I want to recognize Dr. Manuel Vargas, my chair. Dr. Vargas has shown great patience and encouragement with each step throughout this process. I knew I had wanted Dr. Vargas as my chair and I am grateful to have completed this journey with him before he begins his next chapter—retirement. I want to also acknowledge my Committee members, Dr. Beth Simon and Dr. Sinem Siyahhan for their thoughtful suggestions that improved the quality of my research study. Next, I want to include my colleagues, who are my dearest friends—Ken Lee, my mentor, my friend, known simply as "Lee," who walked me through the protocols and processes of a community college. I tracked Lee down many times on campus—either at the library reference desk or his campus office—

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ABSTRACT OF THE DISSERTATION

First Generation College Students' Perception of Online Instruction During the COVID-19 Pandemic

by

Jeanene Lyn Ames

Doctor of Education in Educational Leadership

University of California San Diego, 2023
California State University, San Marcos, 2023

Professor Manuel Vargas, Chair

This research will explore first-generation college students' (FGCS) experiences during the COVID-19 pandemic. FGCS come from a home where neither parent nor legal guardian has a college degree, yet, in contrast, continuing-generation students—who will be referred here as CGCS—are college students who have at least one parent or legal guardian who has earned a

college degree (Mehta et al., 2011). FGCS students graduate—persist—at a substantially lower rate than CGCS (Chen & Carroll, 2005; Ishitani, 2003; Ishitani, 2006; Mehta et al., 2011; Warburton et al., 2001). Studies have shown that FGCS work longer hours and have more financial responsibilities (Inman & Mayes, 1999; Mehta et al., 2011; Nunez & Cuccaro-Almin, 1998), and for the most part, feel ill-equipped to enroll in college (Mehta, 2011; Rodriguez, 2003). Notably, FGCS are disadvantaged in several ways, according to pre-COVID-19 research as they are less likely to seek academic support from staff, for example, and they tend to underutilize other services (Beattie & Thiele, 2016; Hicks & Wood, 2016; Mates et al., 2021). Moreover, FGCS are also more likely to connect with relationships at home, and they tend to have fewer developed college networks, which is perhaps unsurprising (Mates et al., 2021; Stuart et al., 2011). Thus, when schools and institutions shifted to the online setting across the nation in March 2020 because of the pandemic, students from lower-income communities, including FGCS, may have found it especially difficult to participate in educational activities or complete their assignments because of inconsistent internet or a lack of access to equipment (Case et al., 2021). In response, many campuses provided computers—either laptops or Chromebooks—and many also addressed other concerns like internet—by distributing hotspots—or facilitating participation in Zoom classes—by making headsets and webcams available (Hart et al., 2021). In addition to institutional support, distance education teams prepared and delivered faculty professional development that focused on humanizing online instruction. Humanizing instruction acknowledges that participation and success are social structures influenced by students' background and experiences within the instructional setting (Pacansky-Brock, 2019). A method of humanizing online instruction is integrating the Community of Inquiry Framework. This research study will utilize Garrison, Anderson, and Archer's Community of Inquiry (CoI)

Framework which has three interrelated essential components—teaching presence, social presence, and cognitive presence—with the purpose of promoting online communication in higher education (Garrison et al., 2000; Garrison et al., 2001). Through a sequential mixed-methods design, this study attempted to learn directly from FGCS if their perceptions of online instruction changed during the pandemic as it pertains to how online courses were designed and the relationships they developed with instructions and their classmates.

Keywords: First-Generation College Student, Online Instruction, Perception, Community of Inquiry, Interactions, Relationships, COVID-19.

CHAPTER ONE: INTRODUCTION

While college may be stressful for any student, it can be incredibly challenging for first-generation college students (FGCS)—whose parents did not attend college and are often working-class (LeBouef & Dworkin, 2021; Mates et al., 2021). FGCS generally attend high schools offering little in the way of a college-preparatory curriculum (Azmitia et al., 2018; DerSarkissian et al., 2022; Ellis et al., 2019; Juang et al., 2016; Ma & Shea, 2019). Aside from being unprepared, FGCS confront other difficulties, barriers, and disadvantages when navigating higher education institutions. Many FGCS begin their academic career at a community college, enroll part-time, reside at home, and are likely employed full-time (Gibbons & Shoffner, 2004; Inman & Mayes, 1999; Irbeck et al., 2014). FGCS may feel obligated to accept significant hours of employment because many are low-income and may also have families to support (Inman & Mayes, 1999; Irbeck et al., 2014).

FGCS' employment obligations and decision—or need—to live at home often limit their ability to participate actively on college campus activities (Gibbons & Shoffner, 2004; Irbeck et al., 2014). FGCS frequently view participation in activities outside the classroom as a privilege or a conflict with their need to concentrate on academic courses (Hurst, 2010; Jehangir, 2010; Lee & Kramer, 2013; Mcdossi et al., 2022). Nonetheless, engagement strategies identified to be associated with significant student academic improvement consist of student-faculty connections, time spent studying, peer relationships, and involvement in extracurricular activities (Astin, 1977; Astin, 1984; Carini et al., 2006; Chickering & Gamson, 1987; Coates, 2005; Pace, 1982; Feldman & Newcomb, 1969; Kuh, 2001; Pascarella & Terenzini, 2005; Wright, 2019). Kuh (2008) explains that academic success has been attributed to building relationships with faculty, including personal one-on-one interactions (as cited in Demetriou et al., 2017). Moreover,

relationships on campus are fundamental for FGCS to overcome academic burdens and feel empowered (Clauss-Ehlers & Wibrowski, 2007; Gist-Mackey et al., 2017). Thus, student persistence depends on robust interactions with peers, staff, faculty, and administrators at their institution (Kuh et al., 2011).

Many FGCS often feel less encouraged to attend college than their peers and may often lack a sense of connectedness to their campuses (Longwell-Grice & Longwell-Grice, 2008; Terenzini et al., 1996; Wirt & Livingston, 2001). Supporting the importance of connectedness, Gist-Mackey et al. (2017) found that FGCS mention newly formed peer relationships on campus as their primary point of contact involving college news and moral support. Altogether, FGCS relationships with faculty, peers, or academic advisors significantly affect their anticipated career path, particularly for students with family and friends who might not comprehend the difficulties of pursuing a college education (Ma & Shea, 2019). Encouragement from social relationships and a sense of belonging are essential for FGCS to thrive in college (Petty, 2014).

Statement of the Problem

Despite the relationships many FGCS established on campus, in March 2020, they encountered an abrupt interruption in their college social connections brought about by COVID-19[1] which required students, at a global level, to enter a world distant from social interactions. The global pandemic led governments and public health organizations to implement several quarantine restrictions and countermeasures to contain the spread of the virus, including closing colleges and universities, thereby necessitating nearly all courses to transition from in-person to primarily online instruction where students were scheduled to learn remotely (Cuschieri & Agius, 2020; Mushtaque et al., 2021). Roth et al. (2021) point out that, because of the pandemic,

[1] The terms COVID-19, COVID, and the pandemic will be used interchangeably to refer to the Corona Virus pandemic that began in winter 2019.

established personal relationships between instructors and students became considerably more distant. After the onset of COVID-19 in the Spring of 2020, nearly all students, including FGCS, previously enrolled in face-to-face (FtF) or hybrid courses at California Community Colleges (CCCs), had their classes unexpectedly transferred to predominantly online instruction. As instructors hastily migrated FtF and hybrid classes to mostly online instruction, it became imperative to maintain Regular and Substantive Interaction (RSI) (Downs, 2021) with all students to ensure they did not feel disconnected. RSI relies on distance-learning instruction to support regular and substantive interaction between instructors and students which can be both synchronously or asynchronously by giving students opportunities to interact on a regular basis with instructors throughout the course duration, and instructors sending timely responses to students as they monitor their participation and success (Code of Federal Regulations, 2006).

Soria et al. (2020) contend that FGCS, as compared to continuing-generation college students (CGCS), had a difficult time adjusting to online learning and were more likely to indicate they could not join online courses at the scheduled class times; therefore, in response to the pandemic, faculty engagement and RSI may have been even more critical for FGCS. Furthermore, FGCS may have become more vulnerable because they could not rely on their parents' since they had not attended college. Consequently, they generally depended on faculty guidance, dialogue, and ongoing feedback for their college experience (Neuwirth et al., 2021). Additionally, online students' remoteness, especially FGCS, may have discouraged them from seeking support, assistance, or asking questions (Stone & O'Shea, 2019). Hence, considering the need to build relationships and create a community for all students, particularly FGCS, it was important for instructors to develop online courses with continuous communication; opportunities for students to display their personality in peer interactions; and opportunities to

think through course material through peer collaborations. Given FGCS' struggles with a sense of belonging, Azmitia et al. (2018) identified several resources or events that help these students feel welcome and prevent them from leaving the university, including social and academic support programs, most notably peer support.

The COVID-19 pandemic has been deemed the most significant challenge to adaptability and viability for higher education institutions, thus, warranting creative and risk-reducing measures to ensure access to education and students' wellbeing (Ammigan et al., 2021; Fraser-Moleketi, 2021). As such, institutions rushed to find various possibilities of instructional strategies in synchronous or asynchronous modalities, as well as assessment strategies to address the lack of training, limited time, and insufficient opportunity to prepare for distance education—all of this contributed to more pressure and anxiety for faculty and academic staff (Ammigan et al., 2021; Dhawan, 2020; Rapanta et al., 2020). Although there was an immediate response to assist faculty in transitioning from FtF to online instruction, many individuals in academia noted that courses adapted to distance learning in an emergency do not reflect authentic online distance learning (ODL) and often lacked in-depth planning and theory-based instructional strategies for viable online learning (Gardner, 2020; Marek et al., 2021). Instead, impromptu, low-quality mitigation strategies were implemented (Gardner, 2020; Marek et al., 2021).

Since many instructors had not previously taught in the distance education[2] setting, they first had to learn the technical aspects to migrate their FtF classes to the distance education setting. Distance education uses technologies to provide instruction to students who are physically separated from the instructor, while maintaining regular and substantive interaction (RSI) between students and the instructor, either synchronously or asynchronously (Seaman &

[2] The terms distance education, distance learning, online distance learning, online instruction, online classes, online courses, virtual learning, and online teaching and learning will be used interchangeably to refer to online instruction.

Allen, 2018). The COVID-19 pandemic made it crucial for institutions to equip instructors with training to adapt from FtF classes to online instruction since it required specific skills to ensure student success during Emergency Remote Teaching (ERT) (Hart et al., 2021; Hodges et al., 2020). ERT is a temporary change in the way instruction is delivered to accommodate emergency situations (Hodges et al., 2020). Tan (2020) asserts that teaching presence, social presence, and cognitive presence, particularly within online instruction, enhance engagement and collaboration. Thus, this author contends, teaching faculty advocate and embrace new online teaching pedagogy as academic instruction moves from FtF instruction to online instruction.

Purpose of the Study

While COVID-19 presented many instructional delivery challenges, the pandemic's ongoing health concerns made the instructional shift—to online learning—essential, as well as appealing, despite pressures within higher education that excessive online instruction leads to an irreversible shift which is not the system's preferred instructional approach (Ewing, 2021). Given the sudden transition from in-person to remote learning in the Spring of 2020, first-generation college students may have been more vulnerable than most others. Consequently, this study will explore FGCS' experiences during the transition from FtF instruction to online instruction. FGCS may have benefitted from online courses that developed a sense of community through the elements of the Community of Inquiry (CoI) Framework—teaching presence, social presence, and cognitive presence (Garrison et al., 1999). The possible reasons are twofold. First, since it relates to how instructors designed and organized their online courses, how they facilitated online discussions, and how they provided direct instruction. Second, since it connects to how students had opportunities to reveal their personality and characteristics through class interactions (i.e., discussion boards), and how it correlates to students' introspection after

interacting and engaging in discussions with their peers. Therefore, the CoI Framework represents an invaluable paradigm for characterizing, interpreting, and advancing distance education (Shea & Bidjerano, 2009). In short, it is imperative to determine if online courses that implemented the elements of the CoI Framework impacted FGCS' perceptions of online instruction during the COVID-19 pandemic.

As a result of COVID-19 and the sudden modification to mostly online instruction, the proposed study intends to examine if FGCS' perceptions of online learning changed or remained the same after more than two years of distance education—particularly as it relates to instructors who put into action the CoI Framework in their online courses. Moreover, considering the sense of belonging struggles and other challenges experienced by FGCS, the proposed study is significant since it may inform institutions of resources or events to help this population feel welcome and identify retention programs, including social and academic support programs (Azmitia et al., 2018). Overall, the proposed study will explore how FGCS' perceptions of online instruction may have changed over the past two years because of their experience of participating in online courses that employed the aspects of the CoI Framework.

Theoretical Framework

Garrison et al. (1999) developed the Community of Inquiry (CoI) Framework, which identifies essential principles that serve as prerequisites for a successful experience in online higher education instruction. The three components of the CoI Framework include teaching presence, social presence, and cognitive presence. These elements build upon Moore's 1993 *Theory of Transactional Distance*, one of the most cited theories in the field of distance education (Delmas, 2017; Shearer, 2013). In the theory of transactional distance, Moore hypothesizes that in situations involving distance learning, the instructor's and students'

separation might result in communication challenges, including a cognitive area of potential misunderstandings between the instructor and student actions (Falloon, 2011; Moore & Kearsley, 1996). Therefore, the three elements require consideration when developing a transaction between faculty and students in online instruction: communication, structure, and learner autonomy (Fallon, 2011; Moore, 1997). Regular and Substantive Interaction (RSI) between faculty and students, communication amongst students, and opportunities for students to interact individually with peers within the course content. Thus, a well-designed course may promote students' confidence and success.

The transition from FtF to online instruction and loss of peer interaction may have been especially significant for FGCS (Scharp et al., 2022)—explicitly because this population gained more from participating in on-campus social activities and connecting with peers, even more than continuing-generation college students (Means & Pyne, 2017). The dynamic structure of the CoI Framework illustrates how each of its three components—teaching, social, and cognitive presences—develops and progresses, depicting a universal experience in education (Akyol et al., 2009). For instance, the goal of the teaching presence component is to support and improve social and cognitive presence to achieve academic objectives (Garrison et al., 2000). For that reason, FGCS' resilience, persistence, and self-determination in attaining their goals demonstrate their ability to seek support from sources other than their family, including developing community and relationships outlined in the CoI Framework (LeBouef & Dworkin, 2021).

Research Methodology Overview

Research is driven by inquisitiveness about a phenomenon (Merriam & Tisdell, 2015). It attempts to advance understanding, and although preliminary research may influence practice, its main objective is to attain a deeper understanding of a phenomenon (Merriam & Tisdell, 2015).

The COVID-19 pandemic is arguably a once-in-a-century phenomenon that impacted the education system around the world. This proposed study will employ an explanatory sequential mixed-methods design to examine FGCS' perceptions of online learning during COVID-19. Merriam and Tisdell (2015) explain it in the following manner:

> A mixed-methods study begins by designing a quantitative survey to examine the mindsets and preferences of the participants, their interest in local concerns and their topmost concerns because this provides the researcher with essential basic data to investigate statistically significant differences in interests and participation based on factors like gender, race, and economic level. (p. 44)

Therefore, the quantitative data component in an explanatory sequential mixed-methods design was selected because of the beneficial factor of providing both an overview of participants' experiences in online courses at the institution during the specified timeframe—Spring 2020 through Fall 2022—and highlighting specific data related to gender and race. Additionally, it will also signify whether a student is a FGCS or a continuing-generation college student (CGCS). Whereas a FGCS' parent did not attend college, a CGCS has at least one parent who has earned a bachelor's degree or higher level of education (Redford & Hoyer, 2017). Even though this study will benefit from a mixed-method approach, a limitation exists when the researcher fails to assess and examine all the potential avenues for confirming the quantitative findings, casting doubt on the overall validity of the results (Creswell & Creswell, 2018). As such, the researcher will remain rigorous in assessing and examining every possibility of quantitative findings.

An explanatory sequential mixed-methods design was also chosen because quantitative and qualitative data complement each other (Creswell & Creswell, 2018). Also, worthy to note, if conducted separately, it may be insufficient to understand a research problem and the characteristic of each research design, so analyzing quantitative and qualitative data can provide the most insight (Creswell & Creswell, 2018). Guided by the Community of Inquiry (CoI)

theoretical framework—which addresses teaching presence, social presence, and cognitive presence—the study explored FGCS' experiences in the accessibility of their online courses, building relationships, developing successful learning outcomes, and finding meaning through sustained reflection and inquiry. The CoI Framework is a conceptual model offering a thorough theoretical foundation that may guide online learning research and online teaching strategies (Swan et al., 2008). Because building relationships and experiencing worthwhile learning outcomes contribute to creating a sense of student success, faculty design and organization of online courses become focal points of this research.

The study included two data-collection phases. Phase One, a quantitative data collection phase, utilizing the CoI Framework's validated, slightly modified survey (see Appendix B). The design of the CoI Framework survey instrument provides a data collection tool to analyze online and hybrid instruction (Garrison et al., 2010). The survey addresses the teaching, social, and cognitive presences within the teaching and learning environment. Upon completion of the quantitative phase, individuals who met the institution's age, student enrollment status, FGCS identity criteria, and survey completion were invited to participate in an interview to understand the CoI Framework's three elements. As the researcher, I gathered survey data using Qualtrics—an online data-gathering application—which were distributed across campus through the campus student messaging system, student clubs and programs, and faculty Canvas announcements.

Phase Two, the qualitative data collection phase, included six interviews with FGCS to hear directly from students how they perceived the design and organization of their online courses and how their interactions with the instructor and other students may have impacted their perceptions of online instruction. As study participants for the qualitative phase were selected from the pool of respondents from Phase One, the survey included an item inviting those who

wanted to volunteer and participate in a follow-up interview. This data collection phase was an individual, semi-structured interview utilizing Zoom—a video conference application—fitting for students enrolled in online classes who cannot come to campus. The interview questions were open-ended and aligned with the CoI Framework's survey (see Appendix B). This data collection phase allowed me to gather firsthand FGCS' perceptions of online instruction during the COVID-19 pandemic.

Research Questions

The following overarching question guided the study: Did first-generation college students' perception of online instruction change during the pandemic as a result of how online courses were structured and their relationships with instructors and classmates? The following sub-questions further guided me in answering the central question:

1. How did online course design impact first-generation college students' learning experiences during the pandemic?
2. How did online instructor and peer relationships influence first-generation college students' learning experiences during the pandemic?

In summary, a survey based on the CoI Framework, individual interview questions associated with the CoI Framework, and document reviews were employed to gather data to address the above questions. Chapter Three and appendices will further describe data-gathering instruments.

Significance of the Study

Prior to COVID-19, some students, specifically FGCS, may have had a negative perception or unsatisfactory experiences with online instruction; however, some FGCS' unfavorable perceptions or experiences with distance education modalities may have changed

during the pandemic as many institutions provided a plethora of workshops and training centered on humanizing online instruction. Hence, there was an immense interest in ensuring faculty implementation of the CoI Framework—teaching presence, social presence, and cognitive presence—elements in online instruction to build relationships and community, thus addressing FGCS' sense of belonging, which may have resulted, or not, in course completion and program retention. This study listened directly to FGCS' voices pertaining to their perceptions of online instruction prior to and during the COVID-19 pandemic, thus, learning how, if at all, course design, or instructor and peer relationships had an impact on FGCS' educational experiences.

Assumptions, Limitations, and Delimitations

As a FGCS who understands firsthand the need for accessibility and flexibility afforded to students who aspire to complete a higher education program, as well as being a community college English professor—teaching for nearly 15-years—with a high-interest to learn and utilize the most recent technology, I have a preference to teach in the online setting. Distance education lends itself to holding the highest level of availability to confer with students, similar to FtF classes, where an instructor may "step in" and diverge from the week's teaching module to address any needed student support in the course content. While I prefer the online teaching and learning modality—both as a student and an instructor—I have also found teaching in the FtF setting enriching; hence, I can maintain objectivity as it relates to teaching and learning in both the online and FtF teaching and learning modalities.

However, because of the pandemic, including health concerns, access, and flexibility, I believe institutions should build, maintain, and expand online instruction as it addresses equity through educational access. Specifically, it addresses students' potential health concerns, physical limitations, limited transportation—public transportation may not, at times, provide

prompt departures or on-time arrivals—family caretaking responsibilities, and the necessity to seek and maintain employment. Consequently, online instruction provides a path to pursuing a higher education. While online instruction had been expanding prior to COVID-19, many students preferred learning in the FtF setting. Therefore, there is a value in implementing creative and innovative strategies to increase online instruction for students who may be unable to attend FtF classes. Finally, as a researcher, I am fully conscious that I must remain objective during data-gathering processes, especially during the individual semi-structured interviews when addressing preference for online teaching and learning.

Chapter Summary

Contrary to continuing-generation college students, FGCS are more likely to come from low socioeconomic status households, identify as an ethnic or racial minority, and drop out of college without receiving a degree (LeBouef & Dworkin, 2021). Furthermore, from a socialization aspect, the online shift offered even greater challenges for FGCS since it could devastate existing peer networks that were possibly already less extensive, and changes in networking and extracurricular engagement have been shown to have a negative impact on achievement; thus, FGCS may potentially miss out on the social capital benefits that networking can provide (Mates et al. 2021). So much so that it was essential for FGCS to establish relationships in the online setting. Akyol and Garrison (2019) contend that communities of inquiry have long been viewed as the standard in higher education, yet little was understood about the features of an online learning environment or how online learning communities could be constructed, of particular interest was the complexity related to how to establish and maintain a community of learners in the online setting. As such, this proposed research may provide insight on the subject of how FGCS' perceptions of online instruction changed during the

pandemic and which factors, if any, of their online courses influenced their point-of-view. Moreover, this proposed research may inform professional development for online instructors with an emphasis on building relationships and community in the online setting. Therefore, as colleges continue to offer COVID-19 related remote learning, it's crucial to examine how discrepancies in distant learning settings may affect vulnerable student populations, and to strive to close those gaps so that all students have equal access to remote learning (Barber et al., 2021).

CHAPTER TWO: LITERATURE REVIEW

The following literature review examines related and supported research findings about first-generation college students' perceptions of online learning during the ongoing COVID-19. The review is relevant given the sudden transition from in-person to remote learning at the beginning of the COVID-19 pandemic in 2020 as it may have generated institutional roadblocks, technological restrictions, and disrupted institutional and family support, thus affecting an equitable access to higher education. Moreover, this review examines how faculty implemented the Community of Inquiry (CoI) theoretical framework, which is intended to reassure students of continuous interactions with faculty and fellow students, provide them support, and avoid struggling with course content in isolation.

First-Generation College Students

During the pandemic, most college students expressed higher levels of anxiety and distress (DeRossett et al., 2021; Wang et al., 2020) because of health and safety concerns and the sudden shift from in-person to remote learning. Furthermore, some students and faculty had not previously navigated distance education, hence, further intensifying this unprecedented event. Nearly all students experienced angst and apprehension because of the pandemic, including personal safety concerns, possibly having their preferred modality of enrollment of FtF or hybrid immediately transitioned to primarily remote learning, potentially learning a modern technology platform to access classes, or lacking required equipment and Wi-Fi—all of these realities may have been especially challenging for first-generation college students (FGCS).

As Mates et al. (2021) and Montacute (2020) point out, in the academic year 2020-21, FGCS from working-class families were expected to be twice as likely as those from middle-class families to lack access to the internet, learning devices, or a suitable study location.

Consequently, the obstacles that FGCS experienced, along with safety matters related to the pandemic, only heightened stress levels. In response to the pandemic and previous barriers, many institutions responded by providing resources at a near record pace. Accordingly, some FCGS could rely upon their family for support, as well as their institution since many colleges made it abundantly clear they intended to address students' concerns. As such, higher education institutions acknowledged that migrating FtF courses to the online setting would present hurdles, including the need to provide adequate professional development for instructors (Adedoyin & Soykan, 2020; Xie et al., 2021). For that reason, distance education teams at higher education institutions focused more effort to offer courses that were informed by distress and anchored on compassion for students and instructors (Davidson, 2020; Harris et al., 2020; Imad, 2020; Xie et al. 2021). Thereby, training, workshops, and professional development were examined using the framework of humanizing pedagogy (Freire, 1970; Xie et al., 2021). The process of constructing a condition or setting that urges mindfulness of individuals who are present in it is known as humanizing (DuCharme-Hansen & Dupin-Bryant, 2005; Xie et al. 2021). Increased community interaction between instructors and students is necessary for humanized online learning (Xie et al., 2021), and as Akyol & Garrison (2019) emphasized, a meaningful experience occurs within a community through interaction of three main elements consisting of teaching presence, social presence, and cognitive presence. Consequently, as the pandemic continues and many classes continue to be offered online, some FGCS have benefitted from the institutional support and the type of professional development instructors participated in to redesign their online courses.

Barriers

When it comes to engaging with academia and transferring into higher education, FGCS experience greater difficulties and challenges than most traditional students, which has an impact

on their academic achievements (Goldman et al., 2022; Oyserman & Destin, 2010; Stephens et al., 2012). Overwhelmingly, FGCS are more likely to come from minority groups, with 53% to 38% of Hispanic students and 45% to 40% of Black students which is significantly greater than their White peers (Goldman et al., 2022; Nomi, 2005; Saenz et al., 2007). Moreover, FGCS have less first-hand experience with attending college, specifically the significance of an educational journey (Grodsky & Riegle-Crumb, 2010; Mcdossi et al., 2022). For instance, FGCS are less likely to receive the same type of guidance and support from family members pertaining to enrollment and what to anticipate once on campus, even though they are undoubtedly motivated by their family to attend college (Hamilton et al., 2018, Mcdossi et al., 2022; Pascarella et al., 2004).

In contrast to continuing-generation college students— a college student who has at least one parent with a bachelor's or higher degree (Redford & Hoyer, 2017)—FGCS have lower levels of social equity, or professional and personal relationships, which bring productive advantages (e.g., previous understanding of the higher education system, contacts for internships or career prospects, or networking opportunities) (DeRossett et al., 2021; Peabody, 2013). Also worthy of note, in comparison to their more affluent peers, students from low socioeconomic households are less likely to perceive extracurricular activities as relevant during their college years or even prospective professions (Mcdossi et al., 2022; Stuber, 2009). Conversely, and particularly for individuals who must depend on employment or who lack financial support, participation in other campus-wide social events can be perceived as a setback (Mcdossi et al., 2022). Together with inequities grounded in cultural capital, social capital and network structures also potentially limit FGCS' social integration at their institutions (Mcdossi et al., 2022). Besides, FGCS are likely to view extracurricular participation as a privilege or even a burden

compared to focusing a high priority on academics and becoming a role model in their families and communities (Hurst, 2010; Jehangir, 2010: Lee & Kramer, 2013; Mcdossi et al., 2022). This perspective—in the matter of extracurricular activities—could be particularly significant given that many FGCS have succeeded in graduating from underprivileged high schools with less challenging academic pathways (Cataldi et al., 2018; Horn & Nuñez, 2000; Jack, 2020; Mcdossi et al., 2022).

Not to mention, FGCS inclusion may also be impeded by the monetary and psychological demands of college attendance (Mcdossi et al., 2022). Increasing student debt, rising living expenses on or near campuses, and escalating tuition fees (Furquim et al., 2017; Goldrick-Rab, 2021; Houle, 2014; Mcdossi et al., 2022) which presumably requires disadvantaged students to maintain employment while attending college (Bozick, 2007; Chen & Carroll, 2005; Choy, 2001; Horn & Nuñez, 2000; Mcdossi et al., 2022). It is common for FGCS to have a full- or part-time job as opposed to non-FGCS, making it difficult to reside on campus—at a four-year university—or build relationships with other students or faculty (Goldman et al., 2022; Pike & Kuh, 2005; Terenzini et al., 1996).

Institutional Support

Immediately following the decision to shift nearly all classes to remote learning, because of the need to social distance and the need to remain safe from exposure to the pandemic, institutions urgently stepped up by first providing training, workshops, and professional development for all faculty to learn the institution's learning management system (LMS) and to migrate FtF classes to the online setting. All this logistical training was coupled with the importance of creating an inclusive and humanizing approach to online courses to ensure increased student well-being (Blignaut et al., 2021; Khene, 2014). Additionally, institutions

explored support options for students including laptops, Wi-Fi hotspots, open educational resources (OER), and teaching materials (i.e., textbooks) in the public domain provided at no cost to ensure a seamless transition to the remote setting. Equally important, institutions were able to offer financial assistance to students to address costs of food, housing, childcare, and other education-related expenses through the Higher Education Emergency Relief Fund, established by the CARES Act (CARES, 2020; Funk, 2021). Moreover, in a year of turmoil and primarily online instruction, institutions ensured that course materials—as much as feasible—were available for free which immediately helped students and reduced student inequality; for these reasons, this support should remain in place since it will also help future students (Mates et al., 2021).

To support FGCS, and other underrepresented minority students, Barber et al., (2021) contend that institutions of higher education could implement policies and best practices which allow for more flexibility, such as fewer synchronous classes, evening classes, and even minimizing time when students should have their teleconferencing camera on during virtual classes. Mates et al. (2021) recommend additional sources to support FGCS, specifically concerning access to financial aid and other forms of assistance. These authors found that only 28% of FGCS knew where to locate financial resources already placed within the college.

Benefits of Online Instruction

Despite the challenges of transitioning from FtF to online instruction, FGCS discovered some advantages within the online learning environment. While some aspects of education will always need to be provided in-person, as people are social by nature, much may be delivered at a distance, as has been evident during this pandemic (Kirkham, 2021). Clearly, there are classes that most likely will need to be delivered in-person such as kinesiology, biology—or other

science labs—athletics, or ceramics. Classes, such as history, political science, or English, may continue to provide options for FtF and online delivery. Furthermore, blending delivery techniques may offer even greater flexibility and convenience, as well as cost savings for both the student and the institution. This instructional modality can also improve and enrich the learning experience since digital delivery enables a more accurate measurement of student involvement, resulting in safer and more efficient responses to support students and facilitate greater engagement, effectiveness, and accessibility (Kirkham, 2021).

Mates et al. (2021) believe FGCS also need a way to socialize with other students, outside of lectures, which may include arranging a time and place for them in a module to connect with one another or communicate with faculty or staff members. Therefore, COVID-19 has demonstrated that working from home and communicating with friends and coworkers, via the internet, may have been simple, quick, and effective. Conversely, instructors teaching FtF classes have time constraints in greeting students, delivering lectures, allowing for small group work, and wrapping up class. Consequently, in this setting, students may not have the ability to connect with their classmates during FtF classes and following a FtF class many students rush out to their next class, study group, work, or other personal responsibilities.

Indeed, if faculty attend training, workshops, and professional development to learn and implement online instruction through use of the Community of Inquiry Framework, it leaves little doubt that previous negative perceptions of online instructions may improve. Shackleton and Mann (2021) found that:

> It was widely acknowledged that, if done correctly, online teaching and learning could significantly improve access and inclusion. Some academics and learners viewed the increased flexibility provided by online teaching and learning as an educational opportunity, pointing to the fact that students can access the content whenever it is convenient for them, they can actively participate in their own

> education, and that instructors devote more time and care to preparing the material for online learning than for in-person instruction. (p. 153)

Without COVID-19, and the ensuing abrupt shift from FtF to primarily online instruction, it would have taken years, if not decades, for faculty members and nearly all students on college campuses to learn how to access, teach, and study in an online environment. Prior to the pandemic, students had the option to enroll in FtF, online, or hybrid classes, and instructors could mostly teach classes in whichever modality they preferred. It would be advantageous, to both institutions and students, to build on the beneficial trends of online teaching and learning.

Strengthen Online Offerings. The pandemic highlighted educational institutions' insufficient resources and the social marginalization of students and the consequences that limited access to and availability of the internet and other cutting-edge technology had on the institutions' adaptability and students' capacity to participate in online instruction (Adnan & Anwar, 2020; Zhong, 2020). As a result, there were numerous lessons learned that have the potential to close equity gaps, meet student needs, and improve perceptions toward online instruction. As such, many of the pandemic requirements will continue to be beneficial, and with creativity, knowledge, and resilience being encouraged across society, there may be considerable progress and positive change in the years ahead (Kirkham, 2021). Barber et al. (2021) suggest that as colleges continue to offer COVID-related remote learning, it is vital to examine how discrepancies in distant learning settings may affect vulnerable student populations, and to strive to close those gaps so that all students have equal access to remote learning. Moreover, Ewing (2021) found that some students benefit from FtF instruction whereas others will prefer online courses—as a result, colleges may need to come up with innovative approaches to meet all students' learning needs after the COVID-19 pandemic. Since some students prefer to complete their higher education in distance education as the pandemic progresses with other variants, the

response from institutions should include developing training and workshops for faculty and students. Furthermore, online instruction should seek to humanize the online educational experience with teaching presence, social presence, and cognitive presence.

Even before COVID-19, higher education institutions across the country were expanding online instruction modalities (Allen & Seaman, 2014; Gurley, 2018; Horvitz et al., 2015). One reason for this expansion was that online and hybrid courses allowed college students access and flexibility. Consequently, distance education—in its multiple formats—has steadily shown its increased significance given its social bias, which includes a perspective brought by the flexibility of this educational approach for those who previously could not have attended educational institutions because of a lack of time, availability, or physical distance—it now provides the possibility of access to students who were not at the universities and other institutions (de Oliveira et al., 2018). Access and flexibility are essential for students who cannot attend FtF classes because of employment demands, caretaking responsibilities, lack of transportation, mobility, or other physical limitations. Hence, online instruction provides a learning modality for underserved students, especially FGCS, to access and complete higher education programs. Prior to the pandemic, as higher education online instruction continued to expand, a 2014 Online Learning Consortium survey of over 2,500 United States colleges and universities found that 70.8% of leaders in academia stated that online learning would be vital to their institution's sustainability mission and vision (Marshall et al., 2017).

Furthermore, before COVID-19, institutions recognized distance education as a strategy to increase enrollment beyond local recruitment pools of individuals who were unable to travel to campus, provide flexibility in course offerings for local students, alleviate the lack of available on-campus classrooms, and manage budgetary demands (Allen & Seaman, 2016; Gasell et al.,

2022). Higher education institutions need to grasp the enormous opportunity of online learning as an instructional platform because of the advantages of online learning, which offers educational access and relevant education to all demographics and socioeconomic levels, irrespective of time and place (Ayu, 2020). Moreover, Elango et al. (2008) assert that online learning is the only modality for education to remove inequality obstacles, to provide students with the possibility to become 21st century learners, and to allow students to learn in a format that corresponds to their needs and ways of learning (as cited in Ayu, 2020).

Despite the introduction of online learning, most academics and proponents of online instruction were unable to see beyond the new technologies and continued to adhere to established, well-known pedagogical strategies of teaching on campuses (Anderson et al., 2005; Salmon, 2005). Considering the pandemic recent events, along with economic hardships, both instructors and students have become mindful of how online learning approaches enable learning from anywhere, at any time, even in a challenging situation, thus, discouraging students from physically traveling to university and college campuses (Maatuk, et al., 2022). Consequently, maintaining and building a robust online presence should be prioritized to support marginalized students, including FGCS, while they attain their higher education goals since they may need to maintain employment, care for family members, and account for reliable transportation, or the physical ability to attend classes on campus.

Distance Education

Even prior to the pandemic, more students enrolled in online courses (Allen & Seaman, 2015; Cole et al., 2017; U.S. Department of Education, 2014), followed by many academic conversations comparing the advantages and disadvantages of online instruction (Cole et al., 2017). A recent study on online learning in U.S. higher education revealed growth rates for

students taking at least one online course at 25.9% in 2012, 27.1% in 2013, 28.3% in 2014, and 29.7% in 2015—this indicates that the number of students taking at least one online course increased slightly yet consistently each year (Allen & Seaman, 2017; Choo et al., 2020). FtF learning consists primarily of in-the-moment synergies between students and instructors; therefore, this modality requires instructors' presence in the same physical space as students, which is not always practical nor preferred (Yu, 2020). Indeed, online instruction and learning differ from FtF instruction and learning in many ways, but their distinction is best understood in terms of the lack of a group comprehensive physical experience (Roth et al., 2021).

The shift from traditional FtF to online enrollment occurred because of the pandemic bringing many changes and challenges for students. Cole et al. (2017) point out, similar to FtF classes, students enrolled in online courses must adjust to their instructors, course material, as well as other students in the class; however, students must also adapt to the online course format and the learning management system (Cole et al., 2017). Yet, as the world witnessed, it was possible to offer nearly every program fully online, but it should also be noted that simply offering programs completely online does not translate into successful learning environments for everyone involved, including students, staff, faculty, and administrators. Offering programs completely online was not a novel idea. As a matter of fact, to meet the demand for flexible learning in 2013, 64.2% of higher education institutions offered completely online programs (Allen & Seaman, 2013; Delmas, 2017). In addition to flexibility of online courses, Rovai (2002) emphasizes the need for distance education programs to concentrate efforts on community building, recognizing that a sense of community engages and sustains students' interest (as cited in Demlas, 2017).

There are many benefits for both the institution and students to schedule programs completely online; however, despite the accessibility that online learning provides for adult students, there are disadvantages related to higher education institutions' persistent challenges to retain students (Delmas, 2017). Table 1 below illustrates that with the unexpected mandatory transition to online instruction in the spring of 2020, CCC enrollment declined significantly across the state. While distance education is not a new instructional modality, the drop in enrollment may have been attributed to the complete remote-learning transition. Additionally, this may have also been hindered by a lack of high-capacity IT (Information Technology) connectivity, a lack of tech-savvy instructors, and a lack of resources to provide all students with the required online access in safe and calm environments (Mshigeni et al., 2021; Sahu, 2020).

Table 1: California Community Colleges Statewide Full Time Equivalent Students (FTES)

	Spring 2020	Fall 2020	Spring 2021	Fall 2021	Spring 2022	Fall 2022
Total FTES	451,575.97	442,357.85	410,098.43	407,003.11	363,739.14	418,968.87

Note. From "Full Time Equivalent Students (FTES) Summary Report." California Community Colleges Chancellor's Office - Data Mart. https://datamart.cccco.edu/Students/FTES_Summary.aspx

Building community in online courses is necessary to engage students in class. When students are motivated to log into their online courses and collaborate with other students, they open the possibilities of comprehending course content and being successful in program completion. Distance education research has illustrated that a sense of community improves students' academic performance (Delmas, 2017; Garrison et al. 2000; Palloff & Pratt 2007; Rovai, 2002). Instructors can design their courses to establish community between themselves and students, as well as for students to interact with one another. Palloff and Pratt (1999) asserted that the foundation of distance education is community (as cited in Delmas, 2017). Furthermore, research has illustrated that in online instruction, perceptions of learning and contentment are

correlated to perceived social presence (Boston, et al., 2009). The following qualifies this contention:

> Even though the instructor only performs a planned set of tasks to indicate availability and assistance during an online course, the essence of presence is not one-dimensional. In addition to simply being present, presence is a mindset that deepens interaction between instructors, students, and the content. The presence mindset involves a planned sequencing of efficient methods that allow the instructor and students, in an online course, to collaboratively create an intellectual environment (Orcutt & Dringus, 2017).

Since Spring 2020, instructors have had opportunities to attend an overabundance of training, webinars, podcasts, and other shared resources to improve online instruction and to develop online courses. The organization, interactions, methods, and evaluation of an online course are all planned and designed as aspects of the instructional design process (Boston et al., 2009; Garrison et al., 2001). A few examples include developing curriculum content with presentations and lecture notes, uploading both audio and video lectures, and combining individual- and small-group learning activities with a specified time to complete assignments (Boston et al., 2009; Garrison et al., 2001; Garrison & Arbaugh, 2007). It is paramount for instructors to design online courses with opportunities for students to engage actively in small group activities with clear instructions, models, and guidelines. In the academic setting, instructors might need to rethink their courses to provide students the chance to interact in online and FtF classes alike (Boston et al., 2009).

Theoretical Framework

While online teaching and learning have opened many possibilities for students and faculty prior to and during the COVID-19 pandemic, a structure for online courses has always been needed. Garrison, Anderson, and Archer (1999) developed the Community of Inquire (CoI) Framework, which includes three key elements: teaching presence, social presence, and

cognitive presence. Teaching presence addresses the design and organization of the course before it begins. Faculty design their courses with many opportunities for students to interact and to engage in content discourse. Additionally, faculty facilitate course discussions and provide direct instruction. Social presence is an extension of face-to-face (FtF) social interactions where students reveal themselves and learn about one another. In distance education students may not realize their peers are "real people" because they may only interact using computer-mediated communication (CMC). Students build community through social presence that promotes higher-order thinking leading to cognitive development. Consequently, cognitive presence, the third key element of CoI, is the most essential element in improving critical thinking. Critical thinking is promoted in cognitive presence as students engage in problem solving, examine their individual reflection in collaborative discussions, reflect upon other students' views, and apply their newly gained knowledge academically and professionally. Since the CoI is a leading model for online teaching and learning, I have selected it as the theoretical framework to explore FGCS' online perceptions during the COVID-19 pandemic.

Community of Inquiry

The Community of Inquiry (CoI) Framework, developed by Garrison, Anderson, and Archer, is the leading model to guide research in online teaching and learning in higher education (Garrison & Arbaugh, 2007; Shea et al., 2010). CoI identifies elements that are essential prerequisites for a successful experience in higher education (Garrison et al., 1999); namely, (a) teaching presence, (b) social presence, and (c) cognitive presence (see Figure 1 below). In distance education, students typically log into a Learning Management System (LMS) with expectations of finding accessible content and finding an instructor to communicate with should any questions arise. Commonly, in online courses, students engage in conversations using

a discussion board tool to examine and explain a topic provided by the course instructor. Garrison, Anderson, and Archer also developed the CoI Framework to explore how online discussion boards and written language encourage critical thinking. These researchers believe that higher-order learning experiences are managed best within a community of inquiry with three interactive elements between instructors and students and students with other students (Arbaugh, 2007). To move beyond engaging in a simple cursory discussion and inquiry, the CoI

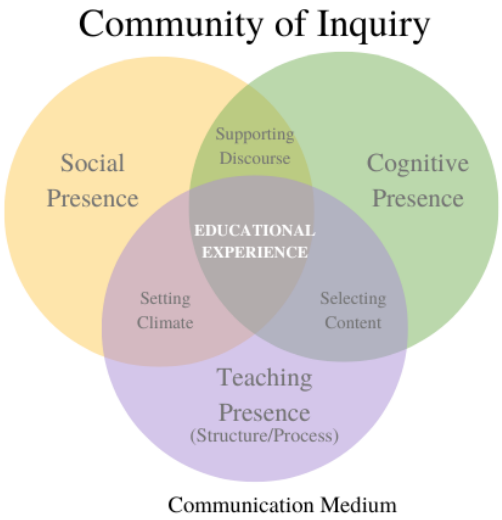

Figure 1: Critical Inquiry in a Text-Based Environment: Computer Conferencing in Higher Education

establishes a community of learners to grapple with the content and concepts, thus, implementing higher-order thinking, integrating, and applying new knowledge in an educational setting. The dynamic structure of the CoI Framework is also described as the "interaction" between these three presences. As such, the CoI Framework illustrates how each of the three presences

develops and progresses, therefore, depicting a universal experience in education (Akyol et al., 2009).

Teaching Presence. In a traditional FtF class, an instructor is physically present for each class session. If an instructor is not present in a FtF class, students are usually permitted to leave until the next class session. Contrary to FtF classes, in online courses an instructor is not physically present yet plans and prepares the course materials before class begins; then, students log into the class. Additionally, unlike a FtF class, if an online instructor does not appear to be present through regular and substantive interaction, or participation in class discussions, students are still expected to log into the LMS to access the class content and complete and submit assignments in a self-paced manner. Teaching presence in the CoI Framework consists of three elements: (a) design and organization of instruction, (b) facilitating discussions, and (c) direct instruction (Anderson et al., 2001; Arbaugh, 2007). Similarly, instructional leadership and the design and organization of content and activities include, but do not constitute, the capacity for teaching presence. Instead, teaching presence is built through practices such as introducing discussion topics (i.e., opening discussions) and encouraging dialogue through communicative functions such as acknowledging, prompting, evaluating, and threading conversations (Xin, 2012). However, the social conditions that allow discussions to flow productively do not just happen in educational forums; rather, they need the teacher's deliberate and attentive ingenuity. For example, as students begin to participate in discussion boards, instructors implementing CoI will prompt students to notice any similarities or differences in student responses or may redirect them should they stray from the topic. The teaching presence in the CoI is identified as design and preparation, discourse facilitation, and direct instruction (Xin, 2012). Therefore, teaching presence in online environments should mirror the FtF instructor who arrives to class with a

lesson planned to facilitate students in small- and whole-group discussions and provide direct instruction. During the design and organization of courses, instructors may create narrated presentations for students to view followed by small group discussion boards to answer a guiding question or prompt. The teaching presence both sustains the social relationships of contact and advances knowledge of the topic at hand (Xin, 2012).

Social Presence. In FtF classes students expect and some may enjoy interaction with one another. There are many collaborative learning strategies FtF instructors implement, such as Think-Pair-Share where students think about a new concept individually, then turn to a partner where each will discuss their point-of-view, so when the instructor brings the class together students may feel more confident participating in a whole class discussion. Another small-group collaborative learning strategy—like Think-Pair-Share—is a small group of students (typically not more than five) working through a new concept or skill until they collectively make new meaning or understanding. In the CoI social presence, participants preserve their characteristics within the community to reveal themselves as "real people," such as they would view themselves in a FtF class (Arbaugh, 2007; Garrison et al., 1999; Shea et al., 2010). In distance education, it can be simple to lose sight that, behind the computer-mediated communication (CMC), there is a living and breathing person who brings in past experiences and unique attributes. Equally important in distance education, as in the FtF setting, students reveal who they are and through interactions they are seen as "real people." When students have several opportunities to engage in paired groups, small groups, and whole group discussions, they will learn about one another and build a community. Within the social community, students will reflect on other students' insight or questions in addition to their individual understanding and questioning. As students

interact in online courses, within the social presence element of CoI, they engage in higher-order thinking.

In online learning, social presence has been researched and found to serve the community of learners indirectly facilitating the steps of critical thinking and the development of cognitive development (Arbaugh, 2007). Xin (2012) reported that social presence must be developed by actual acts of communication that fulfill different social, pedagogical, and cognitive functions. According to this author, three key components define social presence: affective speech, open communication, and cohesion of the community. Social presence contributes directly to the success of learners' educational experience when group interactions are engaging and personally fulfilling (Arbaugh, 2007). In FtF classes students have a set amount of time to interact verbally and reflect upon content. On the other hand, an advantage of text-based communication—in distance education—permits time for reflection. As a result, there may be a preference for text-based communication as compared to oral communication to meet higher-order cognitive learning objectives (Arbaugh, 2007).

Currently, research asserts that while social presence alone will not lead to critical discourse in online learning, it is difficult for critical discourse to develop without the social presence. Increased socialization among students in online courses motivates students to interact, thereby promoting cognitive presence. Consequently, social presence creates the foundation for critical thinking, this may only happen when an instructor, through teaching presence, organizes a class to provide the conditions for cognitive presence (Arbaugh, 2007).

Cognitive Presence. In many FtF classes, students meet regularly and, most likely, engage in analyzing, discussing, and reviewing course content. Cognitive presence, in the CoI Framework, is the main element for success in higher education, and it is an essential element to

develop critical thinking which is commonly purported to be the objective of higher education (Garrison et al., 1999). Cognitive presence is developed as students reflect on their interactions and discussions with other students in class (Akyol et al., 2009; Arbaugh, 2007). Garrison et al. (1999) also assert that in distance education cognitive presence is developed in four phases: (a) an issue or problem is presented that requires further investigation; (b) an examination of individual reflection and collaborative reflection and discussion; (c) students construct meaning from their reflection and peer collaboration; and (d) academic and personal application of newly acquired knowledge follow. In distance education, as students engage in many of the collaborative learning strategies found in the FtF setting, they recall their background knowledge and experiences and share their thoughts and opinions as these relate to the content—this is where the "real person" is revealed. As students engage and consider other students' thoughts and opinions, they have time to reflect individually on their initial understanding and may build upon such understanding or may form new inquiries with respect to previously held beliefs and perceptions. Students will reconcile their learning and apply their newly formed understanding, both professionally and intellectually.

The focus of most research on the CoI uses coding schemes to analyze cognitive, social, and teaching presence individually as it applies to online discussions—as a result, there are few studies that simultaneously examine the three main elements (Garrison et al., 1999; Xin, 2012). Many of the studies use the CoI Survey to measure the effectiveness of each of the three elements. In general, the three elements of CoI apply the same to both FtF or online environments (Xin, 2012). Higher education institutions should prepare faculty teaching online courses by providing ongoing professional development to learn and implement the use of the CoI Framework since it is the guiding model for online learning to promote students' cognitive

ability through social presence and teaching presence. To ensure that faculty members understand and implement the CoI, they must be offered continuous professional development support. As a result of COVID-19, sustained professional development for FtF instructors transitioning to fully online instruction was evident and essential in Spring of 2020 with the global exodus of teachers— spanning every grade level—shifting from the FtF setting to distance education. Moving forward, professional development must consider supporting faculty in online instruction in addition with technological support.

Literature Review Summary

Widespread campus closures because of the pandemic increased academic pressures on FGCS since they no longer had access to essential college amenities like quiet spaces to concentrate on their studies, meals, free Internet, on-campus jobs, and counseling services (Evans, 2020; Fischer, 2020; Jeong et al., 2021; Megan, 2020). For these reasons, many institutions stepped up to meet students' needs to ensure access to continue their studies and other supports including free or loaned devices, free groceries, campus Wi-Fi hotspots in parking structures, for some student employees—whenever possible, continued online employment, and online counseling and other services. Additionally, faculty, who had not previously taught their course in the online setting, hastily participated in training to learn the institution's LMS with the purpose of migrating their FtF class to online instruction. While this was a monumental event, Seaman et al. (2018) noted that the percentage of online students at the undergraduate and graduate levels had grown significantly each year from 2012 to 2016. Admittedly, online learning is advantageous for institutions and students because it offers higher education the possibility to provide access to students who might not be able to frequently travel to campus, and online education provides students flexibility and greater likelihood to finish their courses

and degrees (Park & Kim, 2020). Despite the benefits of online instruction, there has always been a need for a framework for these courses, particularly while conducting research. The Community of Inquiry Framework has given researchers investigating online learning a useful tool and method (Garrison & Arbaugh, 2007).

CHAPTER THREE: METHODOLOGY

In March 2020, schools, colleges, universities, and other educational institutions across the United States transitioned most FtF classes and support services to the online setting to slow the spread of the COVID-19 virus among students and staff (Sahu, 2020). As a result, students and faculty had approximately two weeks to shift from FtF classes to primarily online instruction. Soria et al. (2020) point out that FGCS were impacted more than continuing-generation college students—a student in college whose parent or parents hold a bachelor's degree or higher (Redford & Hoyer, 2017)—with financial difficulties during the pandemic, including loss of income from family members, loss of earnings from on- or off-campus employment, increased housing and technological costs, food and housing insecurity, lack of safe surroundings (i.e., physical, emotional, or substance dependency related environments), and elevated rates of mental health concerns. As such, additional research is needed to examine FGCS learning experiences during COVID-19 since they may have been significantly affected by the unforeseen transition from FtF to online instruction. Therefore, it is imperative to learn directly from FGCS students how their perceptions of online instruction may have changed in relation to how online courses were developed and organized and how their relationships with instructors and classmates affected their learning experiences.

Research Questions

This study was guided by the following central inquiry: The following overarching question will guide the study: Did first-generation college students' perception of online instruction change during the pandemic as a result of how online courses were structured and their relationships with instructors and classmates? The following sub-questions further guided me in answering the central question:

1. How did online course design impact first-generation college students' learning experiences during the pandemic?
2. How did online instructor and peer relationships influence first-generation college students' learning experiences during the pandemic?

Table 2 below provides at-a-glance view of research questions, data source, data analysis, and instrumentation. Additionally, a brief description of the theoretical framework is presented as a reminder to the reader about research guiding principles.

Table 2: Research Questions

Study Phase	Research Questions	Data Source	Analytical Strategy
One	How did online course design impact first-generation college students' learning experiences during the pandemic?	Anonymous Survey	Qualtrics JASP
Two	How did online instructor and peer relationships influence first-generation college students' learning experiences during the pandemic?	Interviews and open-ended survey question (Q_25)	Coding (Saldaña, 2016)

Theoretical Framework Guiding Principles

The Community of Inquiry Framework (CoI) (Garrison et al., 2000) has garnered the most attention as a model for online instruction research because it recognizes the essential factors for a successful online academic experience, including teaching presence, social presence, and cognitive presence (Akyol & Garrison, 2019). The CoI Framework attempts to understand students' educational experience from a process viewpoint rather than as a static model. For example, the teaching presence element aims to support and improve social and cognitive presence in students' interest in achieving their academic objectives (Garrison et al., 2000). Therefore, the CoI Framework guided my research to determine if the structure of online courses with continuous instructor communication and feedback and opportunities to connect

and collaborate with classmates affected FGCS' learning experiences during the pandemic. Specifically, Garrison et al. (2000) insist that the presence of an instructor is necessary for effective social and cognitive presence and, eventually, for building a constructive community of inquiry.

The goal of this proposed study was to learn how online instruction during the ongoing COVID-19 pandemic may have influenced FGCS' interactions and experiences with their instructors and peers, as well as how co-construction of course content may have affected their perceptions of online instruction.

Positionality

As a first-generation college student, from a low-income, Hispanic family, I experienced firsthand the challenges identified by FGCSs in higher education institutions. My parents did not attend college, nor did they discuss the possibility that I might attend college after graduating from high school. Moreover, I did not complete courses in high school in preparation to transfer to college, did not meet regularly with a school counselor, and I did not ever imagine myself on a college campus. Therefore, the following year after graduating high school, I was married, and a few years later, I had my first daughter. It took a tragic family event, precisely a decade following high school graduation, to prompt me to pursue higher education because I realized that I needed to ensure my and my children's—at that point, three daughters—financial security. Even as I considered attending college, I was at a loss as to how to enroll in classes, and I was at a loss concerning the significance and requirements of earing an associate's, bachelor's, or master's degree.

Fortunately, a close friend—a secondary math teacher—explained that I needed to sign-up at my local community college, located in San Diego County, to complete an assessment

placement exam for math and English. Then I would be able to enroll in classes. Since it had been ten years since I graduated from high school, I placed in the remedial math and English classes, one level down from the transfer level. I was now on my way to earning a degree even though I had absolutely no idea about the different disciplines or which major was best for me. Nor did I have any plans to pursue any specific type of career—this was merely a financial backup plan, should I need it in the future. I can still remember enrolling in classes after reading through the college catalog and finding the *General Education Plan Requirements* to earn an associate degree or transfer requirements for a CSU—California State University—or UC—University of California. I read the college catalog thoroughly, and every course description sounded interesting. After I enrolled in classes, I printed my schedule, loaded my three daughters into my car, drove down to the college campus, and walked the campus to find my classes because I was quite nervous about attending my first college class. Over the years, my children have walked several college campuses with me, from a community college, UC, and CSU. My daughters collected thousands of steps, up and down many flights of stairs, all so I could confirm where to find my classes.

The first day of my college career arrived, and I had a backpack full of textbooks, notebooks, binders, and plenty of pencils and pens. I stepped into a Political Science class, and I knew at that exact moment that I was where I belonged—on a community college campus—because of the instructor's approach of teaching the course, the lively discourse, and the instructor's support. It took me fifteen years to earn a bachelor's degree because of family responsibilities, a divorce, employment, marriage, and a growing family with two additional daughters, one of whom was born with Down syndrome. After earning a master's degree, it took just a few years to land my dream job as a full-time faculty at a community college located in

Southern California. I have taught FtF and in the online setting for nearly fifteen years. I was eager to complete additional requirements to teach online, so I regularly participate in advanced training to make certain that my courses are up to date, and I participate in most professional development, training, or webinars that teach technology-based software and teaching strategies to support students.

Furthermore, while I completed my Single-Subject English teaching credential and Reading Specialist Certificate, I developed my teaching philosophy based on Larry Brendtro, Martin Brokenleg, and Steve Van Bockern's (2002) Circle of Courage model that asserts every child deserves the chance to experience belonging, mastery—of content—independence, and generosity. Throughout my education, I felt like an outsider because I did not speak the language of academia. I did not have parents who graduated from college, a college fund, or personal funds to depend upon, nor the basic know-how in the matter of higher education requirements and procedures. Additionally, my experience of having a high-functioning special needs daughter and advocating every step of the way throughout her education to establish inclusive opportunities in mainstream classes, all of this contributed to developing my priority as an instructor to assure that *all* students are welcomed and know that they belong. Hence, I know firsthand the difficulties, barriers, and sense of isolation that FGCS experience while attempting to navigate higher education.

When the pandemic demanded the need to transition most FtF classes to online instruction, I personally understood the challenges that FGCS would experience in the online teaching and learning modality; thus, using the CoI Framework would allow me to understand how FGCS' perceptions of online teaching and learning may have changed during the pandemic. As a means of establishing reflective thinking—to remain objective—I took notes as the research

was being conducted, contemplated on my academic experiences, and analyzed how those perspectives might affect how I interpreted the findings (Creswell & Creswell, 2018). Furthermore, I kept discussions of my personal comments from my experiences to a minimum to prevent compromising the significance of the content or methodology (Creswell & Creswell, 2018).

Methodology

Research Design

This study followed an explanatory sequential mixed-methods design to understand how FGCS' perceptions of online teaching and learning have changed after more than two years of predominantly online instruction due to the COVID-19 pandemic. Creswell & Creswell (2018) assert:

> An explanatory sequential mixed methods research first conducts a quantitative investigation, then analyzes the results, and finally expands upon on the data to provide a more in-depth qualitative analysis. Since the qualitative data significantly explains the initial quantitative research findings, it is regarded as explanatory, and it is regarded as sequential because the initial quantitative phase is followed by the qualitative phase. (p. 52)

An explanatory sequential mixed-methods design was selected because survey research explains reality using statistical data or the distribution of factors within a population or phenomenon (Merriam & Tisdell, 2015). The survey, as the quantitative part of the research, collected anonymous responses—not including the participants who agreed to voluntarily participate in a confidential, semi-structured interview, that revealed pertinent data on the subject of students enrolled at the institution and perceptions and experiences relating to the immediate shift from FtF classes to online instruction. The anonymous survey gathered feedback from enrolled students at the institution who met the criteria to participate to ascertain their experiences with interactions with their instructors and classmates in their online courses during the pandemic.

Next, confidential, semi-structured interviews—the qualitative part of the research—with participants who meet the criteria and volunteered to participate provided an opportunity for an in-depth view into FGCS' perceptions of online instruction and how their perceptions may have changed throughout the pandemic. Moreover, since the objective of qualitative research is discovering how people construct, interpret, and give meaning to their experiences (Merriam & Tisdale, 2015), it involved in-depth qualitative data such as interviews. The key purpose of qualitative research includes understanding how people interpret their experiences, define the process of meaning-making—as opposed to the result or product—and explain how people create their own meanings (Merriam & Tisdale, 2015).

For the quantitative phase of the study, the Community of Inquiry (CoI) Survey Instrument was used to collect preliminary data from students who met the participation criteria. From the initial survey respondents, a smaller group of potential study participants was selected as part of the qualitative research. The CoI Survey Instrument was disseminated via the campus messaging application to all students who were enrolled in at least one class during Spring 2020 and Fall 2022, various campus programs and clubs, and faculty Canvas announcements. Students voluntarily participated in the survey by accessing a Qualtrics survey link in their campus email, personal email, or Canvas announcement. The survey results were analyzed utilizing a CoI lens in connection with aspects of teaching presence, social presence, and cognitive presence. Specifically, the survey gathered general information, that did not pre-suppose specialized knowledge about the CoI Framework, such as …

- Regular communication and feedback from instructor
- Participation in courses
- Opportunities to interact and collaborate with classmates

- Student collaboration and sharing background knowledge
- Students co-constructing new knowledge with or from their classmates
- Developing relationships from interaction
- Sense of belonging from potential instructor and/or peer relationships

The survey was available to potential study participants, who met the participation criteria, during a 30-day period. Additionally, I invited six FGCS for a one-on-one, semi-structured interview. The purpose of the interviews was to hear directly from these individuals about how their perceptions of online instruction changed or remained the same during the ongoing COVID-19 pandemic. Therefore, I applied active listening strategies during the interviews that required more attention and focus than daily conversation (Seidman, 2019). Furthermore, I refrained from the inherent inclination to speak for significant portions of time while I also remained prepared to intervene when a directional cue was necessary (Seidman, 2019). An advantage of conducting one-on-one, semi-structured interviews is that the researcher engages in an extended conversation with study participants to learn about their experiences and how they make meaning of their experiences, which can be connected to the experiences of those in the same population (Seidman, 2019).

The Zoom interviews were scheduled around the participants' and researcher's availability. Participants were given an Informed Consent Form (see Appendix D) before the interview, including consent to be recorded. The interviews were audio- and video-recorded, also using Zoom's closed-caption feature, thus, allowing automatic transcription of all voice recordings. Zoom's capability capture and save interviews securely without external software is one of its primary advantages (Archibald et al., 2019). All study participants' identifying information was removed from recorded interviews and then it was stored on a password-

protected computer to maintain confidentiality. Participants had the option of turning their camera on or off and they had the capability to withdraw from the interview, or refrain from answering any questions, without adverse consequences. Participants were emailed the interview questions in advance of the scheduled interview, and questions were placed, one at a time, in the Zoom Chat tool as they were asked during the interview.

The interviews offered an opportunity to gain insight into FGCS' perspectives on the overall online teaching and learning during the COVID-19 pandemic. Learning directly from FGCS' views, specifically looking for what changed or not, became the primary focus on the qualitative part of the research (Merriam & Tisdell, 2015). A qualitative researcher's objective is to understand how people make meaning or how they interpret their experiences and the world around them (Merriam & Tisdell, 2015). A few advantages of a collecting data from an individual include the ability to respond and be flexible in the moment to verbal and non-verbal cues to interpret data, clarify and encapsulate information, or confirm directly with participants to ensure that interpretations are correct and to investigate unexpected comments (Merriam & Tisdell, 2015).

Research Site

The data for this study were collected at a two-year, middle-sized California Community College (CCC) in Southern California, which is fully accredited and offers university transfer programs, career education, and professional advancement courses. During the 2020-2021 academic year, there were 22,669 enrolled students. The college demographics include 49% Hispanic, 17% Black, 17% White Non-Hispanic, 6% Asian, 4% two or more races, 2% Filipino, 0.18% American Indian and Alaskan Native, 0.16% Pacific Islander, and 5% unknown, and more than half of the students, 52%, are between 17-24 years old, and 64% are female (State of

California, 2022). At the district level, FGCS represented 56% of the Fall 2019 semester enrollment (Fast Facts, 2022). Whereas, at the research site—a campus in the district—FGCS accounted for 40% of the Fall 2019 semester enrollment (Characteristics of All Enrolled, 2022). Notably, FGCS are less financially stable than continuing-generation students with $41k median parental income for FGCS vs. $90k parental income for CGCS (About the Center for First-generation, 2022).

Phase 1: Quantitative Data Collection—Community of Inquiry Survey

Participants. In the quantitative phase of the study, the Community of Inquiry (CoI) Survey Instrument data was collected from participants who met the following criteria:

- 18+ years old
- Enrolled in at least one class at the institution between Spring 2020 through Fall 2022
- Agreed to voluntarily participate with the knowledge that the results will be analyzed and discussed in the researcher's study

The survey, and attached letter (see Appendix A), was distributed via the campus messaging application, campus programs and clubs, and faculty Canvas announcements. The survey collected as many responses as possible to develop the initial pool from which six FGCS were selected. Additionally, participants had 30-days to complete the survey, with reminders sent each week thereafter. Since the survey did not require participant identification, it remained confidential, and survey respondents remained anonymous unless they chose to participate in the interview phase. Potential study participants electing to be interviewed had the opportunity to provide their contact information, including their name and email address. Furthermore, these survey respondents—within the 30-day window—could start, stop, return to the survey, or opt-out of the survey at any time.

***Survey Instrumentation*.** The Community of Inquiry Survey (CoI) Instrument (Garrison, 2009), a validated tool used in multiple research studies, was utilized. The quantitative survey included each of the framework's three presences—teaching, social, and cognitive—to gain an overall understanding of FGCS's perceptions during the transition from FtF to online learning during the COVID-19 pandemic. The survey utilized the Qualtrics platform that consisted of a 5-point Likert scale with the following rankings: Strongly Agree, Somewhat Agree, Neither Agree Nor Disagree, Somewhat Disagree, and Strongly Disagree.

***Quantitative data analysis*.** Survey responses were examined using data filtering features embedded in Qualtrics. First, the data was reviewed to indicate the number of survey participants who completed the survey and those who did not (Creswell & Creswell, 2018). Next, the researcher described the process to identify response bias (Creswell & Creswell, 2018). Response bias is the term used to describe how non-responders affect survey findings (Crewell & Creswell, 2018; Fowler, 2014). The survey results were then uploaded to JASP—Jeffrey's Amazing Statistics Program—a free open-source software for statistics, to produce descriptive and inferential analysis of the data for each of the study's independent and dependent variables (Creswell & Creswell, 2018). Moreover, the survey results were analyzed to determine any correlations based on the research questions. Finally, the findings of the statistical data were presented in tables and figures (Creswell & Creswell, 2018).

Phase 2: Qualitative Data Collection—Student Interviews

***Study Participants*.** In the qualitative phase of the study, semi-structured interviews were conducted with participants who expressed their willingness to take part in an interview. An email and informed consent form was sent to the participants who met the following criteria:

- Completed the CoI survey

- Age of 18+
- Enrolled in at least one class at the institution from Spring 2020 through Fall 2022
- First-generation college student
- Willingness to participate in an interview via the Zoom platform

Qualitative data was analyzed to understand FGCS' perceptions of their online experience during the pandemic. The interviews provided an opportunity to thoroughly examine how the pandemic affected FGCS' perspectives of online learning. Using Zoom video software, six interviews were conducted, recorded, and transcribed.

Interviews. Birks et al. (2008) contend that to create a shared knowledge of how events under study affect reality in a social space, the researcher must enter the environment of their participants. Therefore, participants were encouraged to convey their overall experiences by responding to open-ended questions included in the semi-structured interviews about transitioning from FtF classes to online instruction between Spring 2020 to Fall 2022 semesters. All interviews were conducted using Zoom, a cloud-based video conferencing service. Prior to the interviews, participants received an email invitation (see Appendix C) and an informed consent form to complete. Selected participants received the interview questions prior to the interview, so they had time to prepare. A password-protected desktop computer and pseudonyms for the participants were used to conceal participants' identities and assure confidentiality.

Qualitative data analysis. Interviews were captured with audio and video recordings and transcripts using Zoom. Immediately following each interview, the researcher engaged in memo-writing since this made it possible for the researcher to connect with the data in a way that would be challenging otherwise (Birks et al., 2008). After memo-writing immediately following each interview, each audio and video recording were reviewed together with the transcript to make

any needed corrections to the transcripts. After the transcripts were updated to accurately align with the recorded interview, the researcher utilized Dedoose—a cloud-based application that implements encryption and password protection of data to begin coding the transcripts. The first iteration of data coding is seldom accomplished satisfactorily, so a second and third iteration was performed to further organize, group, reinforce, and affirm the main characteristics of the qualitative data record for developing categories, themes, and concepts, as well as for understanding the significance and/or developing theory (Saldaña, 2016). The researcher continued memo-writing after each iteration of coding because memos enabled the researcher to immerse themselves in the data, examine the implications of the data, retain consistency, and preserve the research process moving forward (Birks et al., 2008).

Validity, Reliability, and Data Trustworthiness

Creswell and Creswell (2018) explain that validity strategies should be routinely included into research studies. Further, the authors advise as a systematic approach for research proposals is to highlight and discuss more than one way to verify the validity of the findings. Thus, the interview transcripts were reviewed following the audio and video recordings to ensure the transcript correctly reflected the participant responses. Next, the coding and memo-writing of the transcripts were performed multiple times to ascertain the themes and sub-themes. Moreover, member-checking was implemented to determine the reliability of the qualitative findings by presenting the final report or specific statements or themes to participants and asking them if they agreed they were correct (Creswell & Creswell, 2018).

Limitations of the Study Design

Since the COVID-19 pandemic was ongoing at the time of this research, the survey was only distributed electronically, and interviews were only conducted via the Zoom platform to

make certain that the participants and researcher remained safe. While all people experience emotions, acknowledging them in research offers profound insight into the participants' opinions, views of the world, and home environments (Saldaña, 2016); however, non-verbal cues may not have contributed to the study since participants may have chosen to turn off their web-camera—or may not have had a web-camera. Therefore, the researcher focused on any of the participant responses and listened for any verbal intonation variation, and follow-up questions were asked to reinforce an accurate understanding of what the participant was conveying. Furthermore, technological or audio connections, Wi-Fi, may have interfered with the interviews. As such, interviews may have been lengthened to account for the disruption, or the interview would have been rescheduled. Moreover, because of the researcher's lack of oversight, with an online survey, and participants complete anonymity, there was a higher probability that some participants may have purposefully mischaracterized themselves, participated in the study multiple times, or provided hasty, untruthful responses (Birnbaum, 2004; Johnson, 2005; Konstan et al., 2005; Nosen & Woody, 2008; Reips, 2000, 2002a, 2002b; Skirtka & Sargis, 2006). Hence, the researcher closely examined the results, more than once, to identify any duplicated responses—and removed the duplicated survey(s)—as for any uncertainty concerning the authenticity of the responses, the surveys were uploaded to the JASP software in two sets and presented accordingly with an explanation concerning the trustworthiness of the responses.

Methodology and Research Design Summary

As a result of the COVID-19 pandemic, many nations around the world transitioned most of their FtF courses and support services at their academic institutions to the online setting to halt the spread of the virus (Mushtaque et al., 2021). As for FGCS, one evident assumption was that the online shift would increase pre-existing inequities, positioning FGCS at a disadvantage

(Mates et al., 2021). Additionally, since instructors are not physical present in online classes, students may feel there are insufficient interactions with instructors clearly differentiating between FtF and online instruction and student-instructor interaction that may have a negative impact on a student's academic learning outcomes (Park & Kim, 2020). In response to the disadvantages of online instruction, instructors must develop an environment that motivates student feedback and engages students in active and effective interactions with the instructor, the material, and other learners in response to their individual experiences in the online classroom (Mahle, 2011; Zacharis, 2015). Student experience and perceived learning are greatly influenced by collaborative activities including communication with instructors and active conversation among course participants (Swan, 2001). The CoI's methodology is founded on the idea that three fundamental components—teaching presence, social presence, and cognitive presence—interact to support learning within the community (Garrison et al., 2000). Therefore, the objective of this study was to gather firsthand knowledge from FGCS as to how their perspectives of online instruction may have changed throughout the pandemic in relation to how their online courses were designed and organized and ongoing discussions and interactions with instructors and their peers with whom they may have formed relationships. Moreover, the findings may provide insight pertaining to how online instruction reflects an equitable approach to education and the ease of learning via the internet; thus, making it possible to meet previously underserved students (Caruth & Caruth, 2013).

CHAPTER FOUR: FINDINGS

The purpose of this study was to learn directly from first-generation college students how, if at all, their perceptions of online instruction changed during the COVID-19 pandemic that first arrived on academic campuses in the Spring 2020 semester, at a global level, and only recently, on May 11, 2023, the federal COVID-19 Public Health Emergency declaration expired (End of the Federal COVID-19, 2023). The COVID-19 pandemic was unprecedented since nearly all students, ranging from Pre-K to post-graduates, were required to immediately—within an approximate two-week period—transition from in-person instruction to mostly all online instruction.

The following overarching question guided the study: Did first-generation college students' perception of online instruction change during the pandemic as a result of how online courses were structured and their relationships with instructors and classmates? The following sub-questions further guided me in answering the central question:

1. How did online course design impact first-generation college students' learning experiences during the pandemic?
2. How did online instructor and peer relationships influence first-generation college students' learning experiences during the pandemic?

The Community of Inquiry (CoI) Framework, that consists of three key elements: teaching presence, social presence, and cognitive presence, was applied to both phases of the data collection. First, the CoI survey instrument was utilized to collect responses from any student, 18-years or older, who was enrolled in at least one class at the research site between Spring 2020 and Fall 2022. The survey responses were then analyzed using JASP—Jeffrey's Amazing Software Program—to perform descriptive and inferential statistics. Next, the open-ended survey

question and six individual interviews were examined using Dedoose, a web application, to code the qualitative responses followed by analyzing the themes and sub-themes that emerged.

Review of Theoretical Framework

Communities of inquiries have long been viewed as the standard in higher education, but little was understood about the features of an online learning environment or how online learning communities could be constructed—particularly, the interest and complexity related to how to establish and maintain a community of learners in the online setting (Akyol & Garrison, 2019). It is important to keep in mind that the Community of Inquiry (CoI) Framework is a process model that attempts to describe both the characteristics of an online learning environment as well as its basic components of teaching presence, social presence, and cognitive presence (Garrison et al., 2010). First, to achieve individual relevance and educationally advantageous learning outcomes, teaching presence is defined as the planning, facilitation, and guidance of cognitive and interpersonal interactions (Garrison & Arbaugh, 2007). Next, Garrison & Arbaugh (2007) explain that social presence develops through time from basic conversation, interaction, to focused academic discussion, discourse, and thus achieving a sense of collaboration. Lastly, Garrison et al. (2001) conceptualized cognitive presence in terms of a practical inquiry model developing a four-phase procedure, including: (1) a triggering event where a topic or issue is selected for further investigation; (2) an exploration where students delve deeper into the subject through critical reflection and discussion with their peers; and (3) an integration where students create meaning from the concepts they developed during inquiry. The Community of Inquiry Framework recognized the essential factors of teaching presence, social presence, and cognitive presence in an academic experience that might be examined collectively to comprehend their

interdependencies; thus, this framework tries to understand the educational experience from a process viewpoint rather than as a static model (Akyol & Garrison, 2019).

Data Collection and Analysis

Two phases of data collection were included in this study. The first phase included a twenty-nine-question CoI survey instrument (see Appendix B) distributed to all students who were enrolled in at least one class during the Spring 2020 and Fall 2022 semesters. Additionally, the researcher invited her current, Spring 2023, students to complete the survey and other programs and clubs across campus and other faculty shared the survey with students. In the second phase, the researcher conducted individual interviews with students who met the following criteria: 1) completed the survey; 2) agreed to voluntarily participate in an individual interview; 3) self-identified as first-generation college student; and 4) at was least 18-years old.

Phase I: Quantitative Data Findings

There was a total of one thousand five hundred and one (n=1,501) survey responses collected during the thirty-day timeframe the survey was available. After removing 352 incomplete responses, 4 indicating they did not agree to participate in the survey, 27 specifying they were 17-years old or younger, 41 noting they were not enrolled in at least one class at the research site between Spring 2020 and Fall 2022, and 22 duplicate responses, there were a total of one thousand fifty-five (n=1,055) survey responses uploaded to JASP to conduct descriptive and inferential statistical analysis.

The enrollment status reflected 36% first-generation college students, 63% non-first-generation college students, and 1% who did not indicate enrollment status. Participants between the ages of 18 to 29-years old consisted of 44%, 28% were between 30 to 39-years old, and 26% were 40-years old or older. Next, participants self-identifying as female comprised of 71%, 20%

male, 1% non-binary, 2% classified as other participants, and 6% who preferred not to answer. Finally, participants indicating their race and ethnicity as Hispanic represented 29%, 17% Latino(a), 12% African American, 12% White Non-Hispanic, 6% Asian, 5% Black, 1% American Indian, Filipino, and Pacific Islander, 9% of two or more races, and 6% who declined to state.

Survey: Statistically Significant

The survey (Q_5) revealed a small effect size (ρ=0.001, ν=0.123) illustrating that first-generation college students enrolled and successfully completed more classes during the pandemic (see Figure 2 below). During the abrupt transition with students previously having a choice to enroll in FtF, online, or hybrid classes to mostly online classes, FGCS found that mostly online course offerings provided an increase in course offerings which resulted in the ability to enroll and complete more classes. As such, students were motivated to either return to college or continue their current academic plan to transfer or complete a program. FGCS found accessibility to higher education courses at their home campus and other local campuses since they were able to enroll at multiple sites since most courses were offered online. Orme (2021) reported that first-generation college students, who participated in her study, expressed their ability to adapt to the online learning environment with fewer obstacles and overcome challenges first-generation college students frequently encounter, such as imposter syndrome and difficulty accessing resources. Moreover, House et al. (2019) pointed out first-generation college students' attempt to succeed in a setting where their efforts might be overlooked demonstrate greater resiliency and grit.

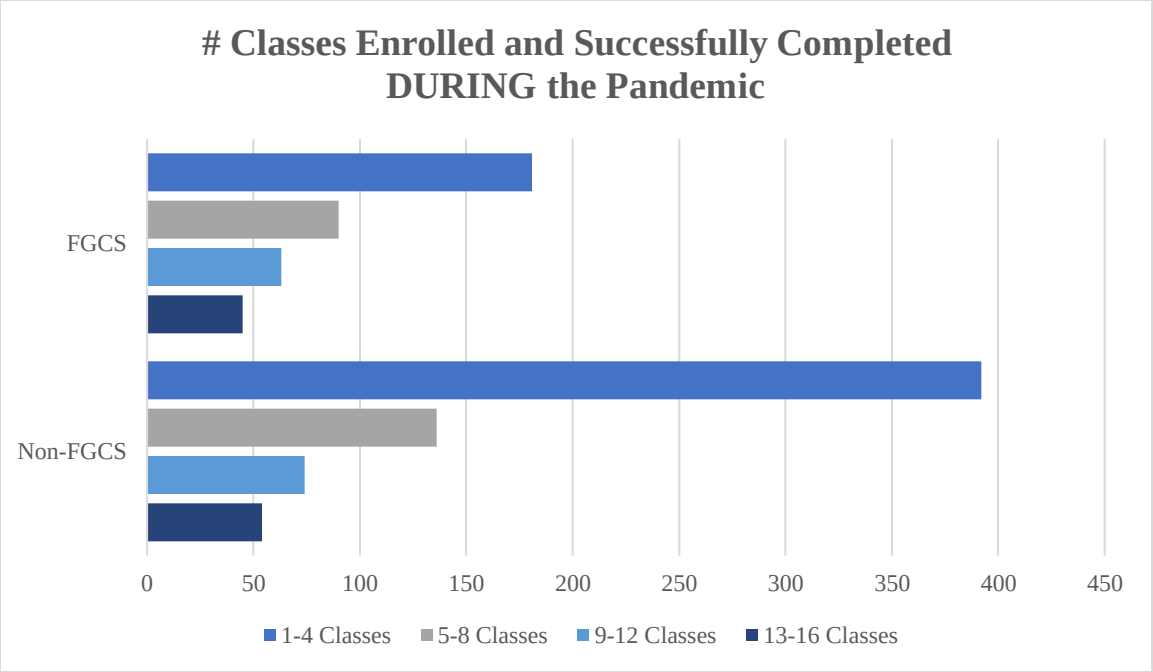

Figure 2: # of Classes Students Enrolled and Completed During Pandemic

Survey: Open-Ended Response—Enrollment

There were one thousand fifty-five 1,055 (n=1,055) survey responses; however, 121 participants did not add a response to Q_25. An additional 245 responses were removed from the data set because the response did not offer any insight into the study or the response was neutral (i.e., "I saw no differences," "no affect at all," or "n/a"). There were six hundred eighty-nine (n=689) open-ended survey responses analyzed after removing blank responses and responses that did not apply to the research study. The enrollment status reflected 39% first-generation college students, 61% non-first-generation college students. The age of the participants consisted of 46% of the participants who were 18 to 29-years old, 29% who were 30 to 39-years old, and 25% who were 40-years old or older. Next, there were 73% female, 19% male, 1% non-binary, 1% other participants, and 6% who preferred not to answer. Finally, the race and ethnicity of the survey participants included 31% Hispanic, 18% Latino(a), 11% African American, 11% White

Non-Hispanic, 6% Asian, 5% Black, 1% American Indian, 2% Filipino, 10% two or more races, and 5% who declined to state.

The open-ended survey question (Q_25) asked, "How did the COVID-19 pandemic affect how things worked out in your online classes?" The responses confirmed that first-generation college students enrolled in more classes and returned to college (see Table 3 below) because institutions increased the number of online course offerings; online classes provided flexibility with FGCS' employment schedule and family caretaking responsibilities; they removed transportation barriers and other costs associated with attending classes; and they were able to attend online classes from the safety and comfort from their homes. All these conditions appeared to have provided access to higher education.

Table 3: Enrollment Responses

FGCS' Q_25 Survey Quotes	Age	Gender	Race/Ethnicity
I don't need to go to classes, I can take more classes and got more study time	18 to 29	Female	Asian
During the pandemic there wasn't much to do due to quarantine, so I had a lot more time for my online classes which encourage to take even more and complete my ADT in 2 years.	18 to 29	Male	Hispanic
Great. I used the pandemic to get a good start on my education.	40 and older	Female	White Non-Hispanic
In fact, it inspired me to enroll in online courses. Online classes reduced my nervousness and helped me feel more self-assured.	30 to 39	Female	Hispanic
Gave an opportunity to go back to school and be able to take care of my children	40 and older	Female	Hispanic
It gave me the opportunity to take more classes than I could have in person. I loved how flexible the college was and it helped me academically.	30 to 39	Male	White Non-Hispanic
It made it easier to complete my courses	30 to 39	Female	Hispanic
I was able to work at my own pace and more classes were available for me to take online.	18 to 29	Female	Hispanic
It kept my education going no matter what	40 and older	Female	Latino(a)

Table 3: Enrollment Responses (continued)

FGCS' Q_25 Survey Quotes	Age	Gender	Race/Ethnicity
I actually enrolled in MORE classes because more were offered than before. Thus, I was able to accomplish more in less time.	40 and older	Prefer not to answer	Latino(a)
Covid 19 is actually what caused me to enroll in college. Since online learning was made more accessible it motivated me to start.	18 to 29	Male	Hispanic
Started to take more online classes then in person	30 to 39	Female	White Non-Hispanic
It led to me taking an enormous [number] of classes due to the accessibility	18 to 29	Male	White Non-Hispanic
It actually saved me a lot of time and money. I was able to enroll in more classes as a result while still learning just as much, if not more than I did with in person classes	18 to 29	Male	African American
I felt I was able to get more of an education from the online courses. I was able to attend more courses than I would have before the Pandemic.	40 and older	Female	White Non-Hispanic
As a single mother of two young children online courses allowed me to attend more courses per semester than I would have if I had to go into an in-person class.	40 and older	Female	White Non-Hispanic
I was able to enroll in WLAC during the Covid-19 pandemic. I was not enrolled before. All my classes have been online	18 to 29	Female	Latino(a)
I had the opportunity to take additional classes online which were not available online before which helped me graduate on time. I enjoyed online courses because of the flexibility and reduced time and cost of travel.	30 to 39	Male	Hispanic
The pandemic encouraged me to take more classes online	18 to 29	Female	Hispanic
I say it was more so positive. I got to spend more time at home and be with my family. I felt that I could take the classes at my own pace and as a student who had an internship as well, online classes made the internship easier to complete.	18 to 29	Female	Hispanic
I was able to take more online classes	30 to 39	Female	Hispanic
It was overall better, easier, convenient I was able to learn at a faster pace than if I were to be in person	18 to 29	Prefer not to answer	Two or more races
It worked out for me by tackling classes I didn't want to take in person. I took classes that I was not ready to take in person, such as math	18 to 29	Female	Latino(a)

Table 3: Enrollment Responses (continued)

FGCS' Q_25 Survey Quotes	Age	Gender	Race/Ethnicity
I was able to take more classes and feel motivated to finish faster	18 to 29	Female	Latino(a)
I was able to take more classes that might not of been offered online	30 to 39	Male	Hispanic
Online classes were made more accessible during the pandemic which was something positive for me because I am unable to attend college in person because I am full time mom	30 to 39	Female	Hispanic
It was great in the way that more classes were online and as someone who struggles to be on time, I was able to focus on the course load rather than the drive/parking	18 to 29	Non-binary	Two or More Races
Allowed me to take more classes, I did well in them.	18 to 29	Male	White Non-Hispanic
Made it 10x easier to take an online class and have professor and time options	18 to 29	Female	Hispanic
I personally think it worked out better for me. I had more online options than ever before and as a working parent it helped me and I didn't have to worry about babysitting or leaving my home.	40 and older	Female	Latino(a)
The pandemic made it possible for me to attend college. Had it not been for the ramp up in online offerings due to covid, I would not have been able to attend at all	40 and older	Male	White Non-Hispanic
More availability of classes	30 to 39	Female	White Non-Hispanic
Perfect, more options to take classes based on my work schedule	30 to 39	Female	Latino(a)
After the pandemic there were more online classes and options available and it worked out well for my schedule	18 to 29	Female	Hispanic
Better selection for available classes.	18 to 29	Male	Two or More Races
For me [it] was an advantage to take online classes during the pandemic, I was able to enroll in another community college. For me was an advantage because I didn't have to go to two campuses in the same day to have my classes.	40 and older	Female	Hispanic
I was able to take classes at LA City college ELAC and WLAC without having to go into the neighborhood and drive there. I would not have even attempted to go to others besides ELAC had it not been for the pandemic	40 and older	Female	Hispanic

Table 3: Enrollment Responses (continued)

FGCS' Q_25 Survey Quotes	Age	Gender	Race/Ethnicity
It mostly worked better for me. I realized how I could expand my learning by taking course at a different community college that was offered online.	18 to 29	Female	Hispanic
Covid-19 even though it was a time of despair for some people, it was a way for me to finally put my foot down and start taking the courses I needed to get my degree.	40 and older	Female	White Non-Hispanic
Was able to finish my degree	40 and older	Male	Hispanic
Covid 19 forced online classes to be more comprehensive and available. Helped me earn my degree.	18 to 29	Female	Two or More Races
It gave me more motivation to finish my degree.	18 to 29	Male	Hispanic

Even though FGCS enrolled and completed more classes during the pandemic, they did express both the difficulty and effortlessness in transitioning to mostly online classes. The open-ended survey response (Q_25) illustrated that some FGCS found the shift to mostly online classes difficult (see Table 4 below); yet other FGCS effortlessly transitioned to mainly online classes (see Table 5 below). Factors to consider concerning how FGCS transitioned to primarily online classes may include that some students had previous experience in online classes and others found benefits of online classes. There were some students who had little to no prior experience enrolling in online classes, and others who had previous enrolled in online classes and knew where to find the institution learning management system—LMS—how to log into the LMS, update notifications as far as class announcements and grades, submit assignments, find class grades, and how to communicate with instructors and classmates.

Table 4: Difficult Online Transition

FGCS' Q_25 Survey Quotes	Age	Gender	Race/Ethnicity
It affected me in quite a negative way because it was hard to keep up, although I was at home I had other things to take care of including my siblings and my mom.	18 to 29	Female	African American

Table 4: Difficult Online Transition (continued)

FGCS' Q_25 Survey Quotes	Age	Gender	Race/Ethnicity
It was very difficult the initial transition. My professor wasn't too tech savvy, and it was hard to concentrate with so much going around in my personal life	18 to 29	Female	Hispanic
It was a very difficult transition. None in our conversation seemed real or to be taken seriously. Communication was very poor.	18 to 29	Female	Latino(a)
I took fewer classes because the workload was so much different than before	18 to 29	Female	Hispanic
It was trying at first but doable.	30 to 39	Female	Two or more races
I was a student at WLAC during the abrupt transition from in-person to online instruction in March 2020, I felt disconnected from most of my classmates—group assignments went terribly—I ended up doing most of the work, and the conversion to online instruction was messy, most students didn't show up to zoom classes, etc.	18 to 29	Female	Decline to state
Tough at first, but the professors helped me along the way.	30 to 39	Male	Two or More Races

Although, some students found the transition difficult because of personal responsibilities, data appear to show they did not understand the technology involved with online classes, and they found assignments and conversations in the online setting challenging. Conversely, students who had not previously enrolled in online classes, did not know where to find the institution LMS, how to log into the LMS, how to update notifications to receive an alert when an instructor added a class announcements or updated grades, how to submit assignments, how to review class grades, nor how to communicate with instructors and classmates using the embedded messaging applications. Conversely, other students found the transition to online instruction effortless because they had previous experience and they had additional time for their studies.

Table 5: FGCS Effortless Online Transition

FGCS' Q 25 Survey Quotes	Age	Gender	Race/Ethnicity
It didn't affect anything because I already [had taken] classes online	30 to 39	Female	Black
It didn't affect anything, I was able to do all my work and on time on my online classes, I felt like I even had more time to do my work.	18 to 29	Female	Latino(a)
It did not affect me at all. I found it to be easier	40 and older	Female	African American
I'm very introverted so learning online was very easy for me. I was able to realize that my passion was English literature, so I changed my major to that. I had a lot of thinking and reflection to do and I became a better person. For some people, Covid pandemic was something negative but for me it was a time to take advantage and become a better version of myself and online classes gave me the time and opportunity to do so now I'm transferring this fall.	18 to 29	Female	Latino(a)

Survey: Open-Ended Response—Course Design

Instructor Online Teaching Experience. The first consideration on the subject of course design, during the COVID-19 pandemic, was that practically all instructors had approximately two weeks to redesign their FtF classes to online classes. In particular, some instructors, who needed to restructure their FtF classes to the online setting, had never taught in the online setting, so they had to learn the institution's LMS—how to create modules, assignments, discussion boards, quizzes, and more—how to learn video conferencing web applications, such as Zoom, to maintain class meetings, and to learn how to use testing software, such as Proctorio. Similarly, whether it is a FtF or online class, the instructor, who designs the course, determines the pacing, teaching strategies, assignments and assessments, and checks for understanding. Therefore, some instructors had a monumental task to embark on in an unheard-of timeframe—not to mention testing positive for COVID or caring for an ill family member. As such, some FGCS mentioned the inexperience of their instructor in the online setting during the

pandemic as the table below (see Table 6) illustrates and how it affected them during the transition.

Table 6: Instructor Online Teaching Experience

FGCS' Q_25 Survey Quotes	Age	Gender	Race/Ethnicity
When the pandemic first hit and we were forced to convert to online. I noticed that many of my professors where not able to completely convert their class online. Honestly, I think grading was more lenient.	18 to 29	Female	Hispanic
It made a lot of teachers that weren't able to switch over to online class harder. They were new at the online class rules and it made it difficult to understand the curriculum.	18 to 29	Female	African American
Some professors were clearly not prepared for the changed venue and this negatively affected my experience.	30 to 39	Male	American Indian
There were some occasions when students were disrupting and the professors were not technologically savvy to stop it. That would affect understanding the material at times.	30 to 39	Female	Hispanic
It was very difficult the initial transition. My professor wasn't too tech savvy and it was hard to concentrate with so much going around in my personal life	18 to 29	Female	Hispanic
A lot of professors were not prepared for the switch to online and learning was a difficult adjustment	18 to 29	Male	African American
I felt like you can definitely tell between the good professors and the not-so-good professors by their work ethic. Most professors were struggling as we all were. However, I felt as if the ones who did not take the initiative to give extra support did not care or they did not receive the support they needed for their workload and it showed.	18 to 29	Female	Latino(a)
Thanks to the Pandemic many professors had to be trained on how to teach a Synchronous or an Asynchronous class. I felt the teaching improved,	40 and older	Female	White Non-Hispanic
More professors were forced to be more online savvy than ever before, even if they already had an online class.	30 to 39	Female	Hispanic

Note. This table includes a previous quote as quotes apply to multiple themes.

Difficulty Understanding Online Course Content. FGCS reported that they had difficulty understanding their online class assignments and testing software as Table 7 below describes. There are many ways an instructor can set up online assignments, discussion boards, quizzes, and assessments. For example, in an LMS, assignments have settings for dates for assignment to become available, due dates, lock dates, and limits to move forward in a module if an assignment is not submitted. Furthermore, there are some disciplines that require a hands-on application to grasp a particular concept. Moreover, testing software or applications have other parameters that students may not be familiar with to complete an assessment. Thus, it is understandable that FGCS found some online class material unclear or incomprehensible.

Table 7: Difficulty Understanding Online Course Content

FGCS' Q_25 Survey Quotes	Age	Gender	Race/Ethnicity
I couldn't keep up with the work	18 to 29	Female	African American
The first semester, I did worse than usual because I was not used to testing at home, and the testing was too similar to in-person tests; however, my environment was very different and distracting. Also, I felt like I could not learn some topics as well online and would have done better with in person discussions with the instructor and peers.	18 to 29	Female	Two or More Races
I am someone who struggles in math, so the pandemic definitely made new obstacles and the subject a bit harder for me.	18 to 29	Female	Hispanic
I personally hate online classes; I have great difficulty learning that way. But my only two options were to either halt my education a few more years until the pandemic was over, or jump online with the test of the world.	30 to 39	Male	Two or More Races
If affected me because online was more difficult understanding some professors and not doing hands-on especially in science classes. At the end it turned out good students got as much help.	18 to 29	Female	Hispanic

Table 7: Difficulty Understanding Online Course Content (continued)

FGCS' Q_25 Survey Quotes	Age	Gender	Race/Ethnicity
The Covid-19 affected how things worked out on online classes due to the learning experience being completely different which made it a bit difficult. Online and in person are two completely different things. It was manageable but a bit difficult at first for online classes.	18 to 29	Female	Hispanic
No interaction and teacher instruction was difficult [to understand].	40 and older	Female	Hispanic
It was hard to understand the instructions of some assignments and also with internet it was hard since sometimes it would go off	18 to 29	Female	Latino(a)
There were many aspects of the online class that were confusing, and I had to figure it out on my own.	40 and older	Female	Decline to State
I couldn't learn much	18 to 29	Female	Hispanic
The pandemic caused a great amount of stress overall, as a result, it became difficult completing assignments at times.	40 and older	Male	African American
We lost the object of the class. The students don't follow the class. The learning curve wasn't present, a boring class, everyone was cheating on the test, I pay the same price for an online class than [in-person] when i just could learn 10% of everything. Took me more time reading at home to understand every concept. Was terrible! I will never take an online class [They] are terrible.	30 to 39	Female	Latino(a)
I had to learn everything from zero while surviving a pandemic and not understanding professors.	18 to 29	Female	Latino(a)
It was harder to keep track of classes.	18 to 29	Female	Latino(a)
It was harder to concentrate at home and when needing help, it was hard to understand the teacher when you're not face to face.	18 to 29	Female	Latino(a)
COVID-19 pandemic affected my focus on courses, my grades since I had to get used to online, and it is actually pretty hard to learn online, at a professor's speed, most of the time the material we learn is self-taught through readings, there's no more lectures or hands on, so might as well just read and learn by oneself.	18 to 29	Female	Latino(a)

Table 7: Difficulty Understanding Online Course Content (continued)

FGCS' Q_25 Survey Quotes	Age	Gender	Race/Ethnicity
It changed the way courses with a lab component were presented. Instead of hands on learning we did labs using things such as labster. Test taking was sometimes stressful, I would worry about having to scan documents and submitting by the deadline and hoping electronics worked smoothly.	30 to 39	Female	Latino(a)
It made things more complicated and was bit challenging	18 to 29	Female	Hispanic
It changed a lot of things. Some professors didn't have presentations. Some would post an assignment, give you directions, and it was practically up to you to figure it out. Having online discussions isn't the same as talking to someone in person. I think we became more distant.	18 to 29	Female	Latino(a)
I began taking classes less seriously. "Zoom school" (pejorative) became somewhat of a joke. That type of learning style was not helpful to myself and appt of other students I took classes with.	30 to 39	Male	Latino(a)
It felt like more work was piled on. Also it was hard to stay engaged in the zoom meetings.	18 to 29	Female	Latino(a)
It was too much work, right when I was catching up, I was given more homework. This was too hard for me plus people at home had no respect.	40 and older	Female	Two or More Races

Note. This table includes a previous quote as quotes apply to multiple themes.

Access to Ask Questions. Despite FGCS finding some course material difficult to understand, they also disclosed that they were able to connect with instructors to ask questions (see Table 8 below). The pandemic was a unique experience since most people endured lockdowns; therefore, it was likely that instructors were online updating courses, engaging in professional development, and communicating with students. Prior to the pandemic, instructors may not have taught any online courses, so it was not expected that they would be online as often as instructors teaching hybrid, some, or all their courses online. As a result, students would plan on connecting with instructors during FtF class sessions which is typically two, maybe three, days a week. Thus, students would tend to only have a few days each week to ask instructors

questions. Moreover, FtF classes typically allow time for instructors and students to engage in whole class or small group discussions where students can directly ask instructors clarifying questions. Similarly, many online classes include discussion boards in which students can ask instructors questions with reference to the concepts or skills they are currently learning. Moreover, online classes include messaging embedded in the LMS and they may also have other messaging applications that students can use to contact their instructor to ask questions.

Table 8: Access to Ask Instructors Questions

FGCS' Q_25 Survey Quotes	Age	Gender	Race/Ethnicity
It changed a lot of things. Some professors didn't have presentations. Some would post an assignment, give you directions, and it was practically up to you to figure it out. Of course, if you had a question, they were there to help you. Even then it was difficult to learn. Having online discussions isn't the same as talking to someone in person. I think we became more distant.	18 to 29	Female	Latino(a)
It worked out well, less of commuting and more encouraging to speak with professors and classmates with a better environment and focus to continue studying	18 to 29	Other	Latino(a)
Personally, I think it worked better because there was more attention that the professor invested in the class. I have always taken online classes prior to Covid and their time is always split because they teach in person as well but during Covid it felt much more helpful and useful!	18 to 29	Female	Hispanic
After adjusting and learning to use the online system of canvas I felt things worked out positively especially with help with great professors such as [instructor's name] who would take the time to assist students whenever they asked for help.	18 to 29	Female	Hispanic
I personally think online classes were a little more helpful because I was able to work on my assignments at my own paste and connected with my professors a little more	18 to 29	Female	Two or More Races
I was more comfortable with asking question in person than online.	18 to 29	Female	Latino(a)

Table 8: Access to Ask Instructors Questions (continued)

FGCS' Q_25 Survey Quotes	Age	Gender	Race/Ethnicity
You also could have a conversation with your teachers because they have to focus on every other student in the class	18 to 29	Female	Latino(a)
I even went to office hours more than before as professors would have zoom office hours, it gave a big flexibility that if I was working, I could take my break and ask my professor about a certain topic.	18 to 29	Female	Latino(a)

Note. This table includes previous quotes as quotes apply to multiple themes.

FGCS affirmed on the survey (Q_14) that they found online discussion boards were a good way to communicate with both classmates and instructors (see Figure 3 below). Discussion boards, in the online setting, replicate an in-class discussion based upon the week's topic. Therefore, students can engage in conversations with classmates and instructors to talk about class material and ask classmates and instructors questions. Comparable to FtF classes in which a student asks a question and an instructor responds, on a discussion board a student asks a question and everyone in the class can read the question and instructor's response.

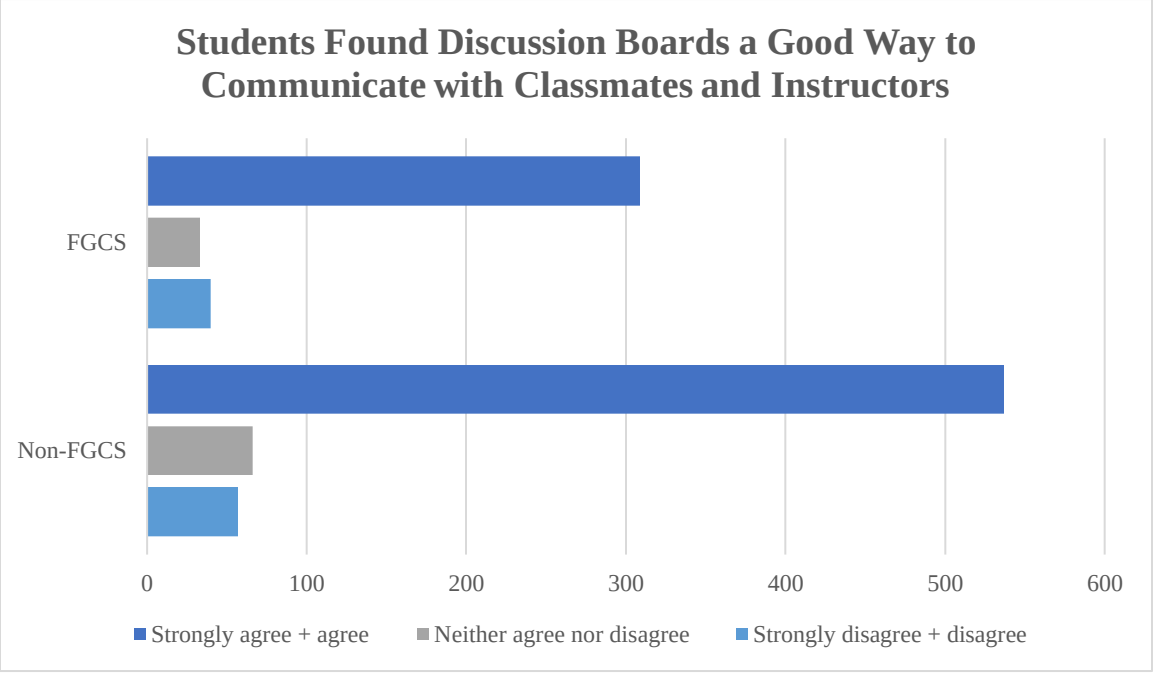

Figure 3: Online Discussion Boards Communication

Survey: Open-Ended Response—Relationships

Even though there was a lack of interaction, which may have made it difficult to get to know instructors and classmates, students conveyed that instructors were compassionate as they experienced similar difficulties such as learning how to navigate the institution LMS or other online tools like Zoom and instructors also experienced similar illnesses related to the COVID-19 virus, loss of family members, and caretaking responsibilities. Students expressed an absence of social interactions with their instructors and classmates (see Table 9 below). As a result, many students felt isolated, distant, and found communicating with instructors and classmates challenging.

Table 9: Instructor and Classmates Lack of Interactions

FGCS' Q_25 Survey Quotes	Age	Gender	Race/Ethnicity
It affected my ability to actually concentrate and feel like I was learning because the online environment was just different than an in-person class. When being in person I felt like I could learn and have that ability of working together not only with my classmates and my professor but online made it seem like you were on your own	18 to 29	Female	Two or More Races
I wasn't able to interact with my teacher and classmates in person.	30 to 39	Female	Hispanic
COVID-19 pandemic affected Human interaction	40 and older	Male	Hispanic
No student interaction	18 to 29	Female	Hispanic
It completely changed my experience during community college. Until then I had only taken a few classes on campus and when COVID hit I had to take all classes online. And this was basically my experience in community college: online classes. The face-to- face interaction and class participation decreased but on the other hand it was very convenient not having to go to school	18 to 29	Male	Latino(a)
It changed a lot. I didn't really have to communicate with anyone the work was just straight forward	18 to 29	Female	Hispanic
I think we became more distant.	18 to 29	Female	Latino(a)
I felt nervous about the computer aspect and nervous about responding without seeing faces	40 and older	Female	African American

Table 9: Instructor and Classmates Lack of Interactions (continued)

FGCS' Q_25 Survey Quotes	Age	Gender	Race/Ethnicity
Not able to ask face to face questions and certain times needed help but professor's office hours were not available	40 and older	Male	Latino(a)
I was confused more and not seeing the teacher to have face to face conversations made it hard to know if they care about my education	18 to 29	Female	Decline to State
harder to interact with instructional teams	18 to 29	Female	Asian
No. Interaction and teacher instruction were difficult.	40 and older	Female	Hispanic
It was difficult for me to participate and interact with the class being online because you can't tell people expressions or see how they would react to comments	30 to 39	Female	African American
It was challenging to communicate with some of my Professors and fellow classmates. There were times when I had to wait a few days to get a reply back from them, or general feedback.	18 to 29	Female	Latino(a)
Most instructors do not respond to their email in a timely manner.	40 and older	Female	Decline to State
It affected my overall learning. I'm more of a visual, hands-on learner which means I need to physically be there and hear you near or I won't be able to comprehend so working alone talking to my professor online not being able to voice my concerns and questions regarding class and needing help and having to wait it affected everything!!	18 to 29	Prefer not to answer	Pacific Islander
Professors didn't always respond quickly to questions which could be frustrating.	30 to 39	Female	Latino(a)
If we had more direct contact, such as zooms, it would have helped with understanding exactly what the expectations were. Some instructors made it difficult to understand what they were asking us to do.	40 and older	Female	African American
It was difficult trying to schedule a time where I could do a zoom call with other classmates	18 to 29	Prefer not to answer	Hispanic
I never saw my instructor face at all even in zoom. That made it really uncomfortable plus it was really hard to get a hold of him that I [failed] his class.	40 and older	Female	Hispanic

Table 9: Instructor and Classmates Lack of Interactions (continued)

FGCS' Q_25 Survey Quotes	Age	Gender	Race/Ethnicity
I prefer to study online, and mostly have been welcomed by my instructors, I do however feel like I never get a response in online discussions (this could be because I typically respond late because I procrastinate often.) I like that online classes allow me to take the time to think and reflect on what I am learning. I feel like I have the opportunity to be heard. But I also feel like I get less feedback online from other students. Feedback varies from instructor to instructor. I find that instructors who have a strong grasp on Canvas, and online courses in general do great in explaining prompts and laying out coursework.	30 to 39	Prefer not to answer	Decline to State
It affected teamwork assignments, project presentations now involving more technology knowledge than before. Learning the new technology was added knowledge.	30 to 39	Female	Latino(a)
It was harder to concentrate at home and when needing help, it was hard to understand the teacher when you're not face to face.	18 to 29	Female	Latino(a)
I took fewer classes so that I wouldn't be too stressed out because sometimes I couldn't reach the professor	30 to 39	Female	Black
I was a student at WLAC during the abrupt transition from in-person to online instruction in March 2020. I felt disconnected from most of my classmates - group assignments went terribly - I ended up doing most of the work, and the conversion to online instruction was messy, most students didn't show up to zoom classes, etc.	18 to 29	Female	Decline to State
I wish we did not have group work when online, some people live out of state, work full time, kids etc. [It is] hard to coordinate times and some people end up doing most of the work while others did little and it wastes time	40 and older	Female	Decline to State
Person interaction was greatly missed	40 and older	Prefer not to answer	Hispanic

Note. This table includes previous quotes as quotes apply to multiple themes.

While online instruction, during the pandemic, was isolating and distant because of a lack of interactions with students and instructors and students with their classmates, there were instances of relationships and community building (see Table 10 below).

Table 10: Instructor and Classmates Interactions

FGCS' Q_25 Survey Quotes	Age	Gender	Race/Ethnicity
I found professors to be more flexible about student health absences and seemed to be more understanding about unexpected circumstances	18 to 29	Female	Asian
I also believe that a lot of my classmates felt a family like sense in our classes. We had great communication amongst ourselves to where we would ask for the help from each other if we did not quite get what the professor meant, or we would ask for clarification from the professor.	40 and older	Female	White Non-Hispanic
It worked out well less of commuting and more encouraging to speak with professors and classmates with a better environment and focus to continue studying	18 to 29	Other	Latino(a)
The teachers were excellent, and the communication was excellent.	40 and older	Female	Hispanic
Some teachers were more understanding about how the pandemic was affecting people.	18 to 29	Female	Latino(a)
For my Spanish class she was break us down into groups allowing us to get to know each other and brainstorm without being interrupted by other groups	30 to 39	Prefer not to answer	Hispanic
I personally think online classes were a little more helpful because I was able to work on my assignments at my own pace and connected with my professors a little more	18 to 29	Female	Two or More Races

Note. This table includes a previous quote as quotes apply to multiple themes.

Survey: Open-Ended Response—Enrollment Preference

Disadvantages of Online Instruction. Students identified several disadvantages of online instruction such as new methods for assessments, lacking a quiet space to study or log into a synchronous class, distractions at home, seeking employment or extended hours of employment. Moreover, students expressed the difficulties of remaining motivated without

interaction with their instructors and classmates, and they did not have the in-person, real-time support they experienced on campus (see Table 11 below).

Table 11: Disadvantages of Online Instruction

FGCS' Q_25 Survey Quotes	Age	Gender	Race/Ethnicity
The first semester, I did worse than usual because I was not used to testing at home, and the testing was too similar to in-person tests; however, my environment was very different and distracting. Also, I felt like I could not learn some topics as well online and would have done better with in person discussions with the instructor and peers.	18 to 29	Female	Two or More Races
It was a change from being on campus to having to adjust to home where distractions are at reach	18 to 29	Female	Hispanic
Difficult to get internet and quiet space.	18 to 29	Female	Latino(a)
It was difficult because of the lack of environment. Since I was at home, there were constantly a load of distractions	18 to 29	Male	Latino(a)
Covid-19 pandemic affected how things worked out in my online class because instead of having to do it in class with the rest of my peers, I was stuck at home with a different environment having the challenge to deal with the background noise in my household	18 to 29	Female	Two or More Races
I wanted to go to an actual classroom where I can see my professor and a place where I don't get distracted such as in my home.	18 to 29	Female	Latino(a)
It was very difficult the initial transaction. My professor wasn't too tech savvy and it was hard to concentrate with so much going around in my personal life	18 to 29	Female	Hispanic
Sometimes distraction	18 to 29	Female	Hispanic
Because the classes were online asynchronous, I felt I could take more, but this was counterproductive because I not able to pass all the courses I took or ended up dropping courses and getting Ws. Online classes while they don't require you to assist lectures at a certain time one has to manage their own time in order to watch pre-recorded material and such which may end up taking more time due to at home distractions.	18 to 29	Female	Hispanic

Table 11: Disadvantages of Online Instruction (continued)

FGCS' Q_25 Survey Quotes	Age	Gender	Race/Ethnicity
One of the biggest challenges I had was not having a place where I could take my class without interruption as all of us where at home, I don't have my own room so having a place where I can fully be like in a classroom was difficult.	18 to 29	Female	Latino(a)
I lost interest because I wasn't going to school and felt disconnected	18 to 29	Female	Latino(a)
It felt like more work was piled on. Also it was hard to stay engaged in the zoom meetings.	18 to 29	Female	Latino(a)
No motivation	18 to 29	Male	Hispanic
I was not able to focus	40 and older	Female	Hispanic
Concentration, it was a bit hard to concentrate.	30 to 39	Female	Hispanic
Being in an online class was harder for me to focus at home	18 to 29	Female	Latino(a)
It was harder to concentrate at home and when needing help, it was hard to understand the teacher when you're not face to face.	18 to 29	Female	Latino(a)
I was able to do my work whenever, so I had more of any open schedule, however I did have more of an opportunity to procrastinate which at times made it so my work wasn't as good as I wanted it to be.	18 to 29	Female	Latino(a)
Fatigue and difficulty staying focused with distractions around me.	30 to 39	Female	Hispanic
It was just trying to find the time to do work and read the book while maintaining a job that was like 10ths long.	18 to 29	Male	Latino(a)
It affected my ability to actually concentrate and feel like I was learning because the online environment was just different then an in-person class. When being in person I felt like I could learn and have that ability of working together not only with my classmates and my professor but online made it seem like you were on your own.	18 to 29	Female	Two or More Races
There were many aspects of the online class that were confusing, and I had to figure it out on my own.	40 and older	Female	Decline to State
I had to learn everything from zero while surviving a pandemic and not understanding professors.	18 to 29	Female	Latino(a)

Table 11: Disadvantages of Online Instruction (continued)

FGCS' Q_25 Survey Quotes	Age	Gender	Race/Ethnicity
You have to learn to be independent in order to succeed in an online class.	18 to 29	Male	Decline to State
COVID-19 pandemic affected my focus on courses, my grades since I had to get used to online, and it was actually pretty hard to learn online, at a professor's speed, most of the time the material we learn is self-taught through readings, there's no more lectures or hands on, so might as well just read and learn by oneself.	18 to 29	Female	Latino(a)

Note. This table includes previous quotes as quotes apply to multiple themes.

Advantages of Online Instruction. Even though students discovered there were disadvantages of online instruction, they also realized there were advantages of online instruction including the accessibility of higher education while maintaining employment or other personal obligations, there was an increase in online course offerings, so students had the opportunity to enroll at several colleges to complete their degree or program in a timely manner. There was also the advantage of not commuting to campus—either taking public transportation options or spending hours in traffic (see Table 12 below).

Table 12: Advantages of Online Instruction

FGCS' Q_25 Survey Quotes	Age	Gender	Race/Ethnicity
They made academic easier for me to understand, given that it was all online it was all still very informative and functional for me to learn	18 to 29	Female	Hispanic
School became more accessible with my work schedule and transportation was not an issue.	30 to 39	Female	Hispanic
Online learning made learning more accessible	18 to 29	Male	Hispanic
Covid 19 is actually what caused me to enroll in college. Since online learning was made more accessible it motivated me to start.	18 to 29	Male	Hispanic
It led to me taking an enormous [number] of classes due to the accessibility	18 to 29	Male	White Non-Hispanic
It was more accessible and easy to add to my schedule.	30 to 39	Female	Latino(a)
It made more online classes accessible asynchronous/synchronous and I prefer these classes	18 to 29	Female	Latino(a)

Table 12: Advantages of Online Instruction (continued)

FGCS' Q_25 Survey Quotes	Age	Gender	Race/Ethnicity
It actually made things better, because we had more access to online classes and computers.	40 and older	Female	Hispanic
Provided more flexibility.	18 to 29	Female	Hispanic
It gave me the opportunity to take more classes than I could have in person. I loved how flexible the college was and it helped me academically.	30 to 39	Male	White Non-Hispanic
It was more flexible knowing I was a commuter and didn't have to come on campus for a 30-min class	18 to 29	Female	Hispanic
The online class is good for me because of flexibility	40 and older	Male	White Non-Hispanic
WLAC has always had flexibility so online was something I was very used to doing	40 and older	Female	Hispanic
It made it a lot easier due to flexibility of time and transportation.	18 to 29	Female	Two or More Races
Taking online classes during the pandemic worked out great for because I was able to work full time and manage my own school schedule.	30 to 39	Female	Latino(a)
It was easier to learn on my own pace.	30 to 39	Female	White Non-Hispanic
During Covid-19, taking online classes made it more convenient for me to complete my classes.	30 to 39	Female	African American
Made things more convenient	18 to 29	Male	African American
I appreciated the convenience of being able to rewatch lectures and submit assignments at my convenience	18 to 29	Female	Latino(a)
It completely changed my experience during community college. Until then I had only taken a few classes on campus and when COVID hit I had to take all classes online. And this was basically my experience in community college: online classes. The face-to-face interaction and class participation decreased but on the other hand it was very convenient not having to go to school.	18 to 29	Male	Latino(a)
It was a lot more convenient to take courses since I didn't have a car or license at the time. Not having to bike to school was a blessing in disguise.	18 to 29	Male	Hispanic

Note. This table includes previous quotes as quotes apply to multiple themes.

Adapted to Online Instruction. While students experienced the disadvantages and advantages of online instruction, they also began to adapt to the online setting. Some of the ways they had to adjust was how they engaged in lectures through synchronous classes or accessing

recorded lectures—sometimes the lecture was with their instructor and other times it was an antiquated lecture by a different instructor. Purchasing or renting books was an adjustment, too, as students were required to buy or rent books online rather than walk into the campus bookstore (see Table 13 below).

Table 13: Adapted to Online Instruction

FGCS' Q 25 Survey Quotes	Age	Gender	Race/Ethnicity
It was a change from being on campus to having to adjust to home where distractions are at reach.	18 to 29	Female	Hispanic
Because I am a hands-on learner, online classes and learning through a computer monitor made it harder to adjust to my studies. Although I passed all my classes it took me some time to get the hang of being an online an online student.	30 to 39	Female	Hispanic
The Covid-19 affected how things worked out on online classes due to the learning experience being completely different which made it a bit difficult. Online and in person are two completely different things. It was manageable but a bit difficult at first for online classes.	18 to 29	Female	Hispanic
It was hard in the beginning but was able to adjust.	40 and older	Female	Hispanic
It was different but I learned how to adapt	40 and older	Female	Hispanic
It affected the way I had to order books, find time to manage to be online for my classes while balancing my other priorities, and online classes was actually the best option.	30 to 39	Female	Hispanic
It took more adapting to online classes and how they work.	18 to 29	Male	Latino(a)
Changed the format of learning and lectures	30 to 39	Male	Latino(a)
Tough at first, but the professors helped me along the way.	30 to 39	Male	Two or More Races
I challenge my self this semester with him and so far everything is good	40 and older	Female	Hispanic
At first there was a bit of confusion but as the semester progressed, class processes became easier to follow.	30 to 39	Male	Latino(a)
It affected teamwork assignments, project presentations now involving more technology knowledge than before. Learning the new technology was added knowledge.	30 to 39	Female	Latino(a)

Table 13: Adapted to Online Instruction (continued)

FGCS' Q_25 Survey Quotes	Age	Gender	Race/Ethnicity
It affected teamwork assignments, project presentations now involving more technology knowledge than before. Learning the new technology was added knowledge.	30 to 39	Female	Latino(a)
Things were obviously a lot less hands-on and took away the "normal" college experience that I looked forward to. I've always been autonomous and self-sufficient anyways so the change did not really affect my grades.	18 to 29	Male	African American

Note. This table includes previous quotes as quotes apply to multiple themes.

Prefer In-Person Instruction. Students clearly stated that they preferred in-person classes for many reasons such as learning modalities, they want real-time interaction with instructors and classmates, and they were unable to completely learn the class material in the online setting (see Table 14 below).

Table 14: Prefer In-Person Instruction

FGCS' Q_25 Survey Quotes	Age	Gender	Race/Ethnicity
I did not like online classes so passing them was difficult	18 to 29	Female	White Non-Hispanic
I realize that I learn best in-person.	30 to 39	Female	Latino(a)
Because I am a hands-on learner, online classes and learning through a computer monitor made it harder to adjust to my studies. Although I passed all my classes it took me some time to get the hang of being an online an online student.	30 to 39	Female	Hispanic
I personally hate online classes. I have great difficulty learning that way. But my only two options were to either halt my education a few more years until the pandemic was over, or jump online with the test of the world.	30 to 39	Male	Two or More Races
I enrolled in less class because I'm more of an in-person learner. I'm not a big fan of online work but I also didn't want to get overwhelmed with so much work and miss any assignments, so I enrolled in fewer classes.	18 to 29	Female	Hispanic
I wasn't able to attend classes in person. I am the student that prefer having the instructor in person.	40 and older	Male	Latino(a)

Table 14: Prefer In-Person Instruction (continued)

FGCS' Q_25 Survey Quotes	Age	Gender	Race/Ethnicity
It affected my overall learning I'm more of a visual hands on learner which means I need to physically be there and hear you near or I won't be able to comprehend so working alone talking to my professor online not being able to voice my concerns and questions regarding class and needing help and having to wait it affected everything!!	18 to 29	Prefer not to answer	Pacific Islander
I wanted to go to an actual classroom where I can see my professor and a place where I don't get distracted such as in my home.	18 to 29	Female	Latino(a)
Not good at online classes but take them any way, because of time being lost.	40 and older	Male	African American
We lost the object of the class. The students don't follow the class. The learning curve wasn't present, a boring class, everyone was cheating on the test, I pay the same price for an online class than [in-person] when i just could learn 10% of everything. Took me more time reading at home to understand every concept. Was terrible! I will never take an online class [They] are terrible.	30 to 39	Female	Latino(a)
It changed because I preferred in person classes, and I did most of my classes online	30 to 39	Female	Hispanic

Note. This table includes previous quotes as quotes apply to multiple themes.

Prefer Online Instruction. Students reported they preferred online instruction because they had the ability to enroll in more classes, they still interacted with instructors and classmates, they had more flexibility to pursue higher education while maintaining personal responsibilities, and, during the pandemic, they could continue their education in the safety and comfort of their home. FGCS enjoyed online classes, and some did indicate a shift in preference from in-person classes to online classes (see Table 15 below).

Table 15: Prefer Online Instruction

FGCS' Q_25 Survey Quotes	Age	Gender	Race/Ethnicity
It was better for me. I was able to take more classes because I could study from home instead of driving out of my way for classes.	30 to 39	Female	Two or More Races

Table 15: Prefer Online Instruction (continued)

FGCS' Q_25 Survey Quotes	Age	Gender	Race/Ethnicity
It actually worked out for me since the study material/lectures from online classes are very organized and zoom worked very well. I learned a lot and I enjoyed taking those courses.	18 to 29	Female	Asian
There was an adjustment period but after a few weeks things normalized and I enjoyed the classes online. The teachers were excellent, and the communication was excellent.	40 and older	Female	Hispanic
To be honest it was easier for me and better	18 to 29	Female	White Non-Hispanic
This was my first college class we met on zoom for class and in study groups it made me feel much more comfortable and relaxed. It was a wonderful experience for my intro to college!	40 and older	Other	Two or More Races
It affected the way I had to order books, find time to manage to be online for my classes while balancing my other priorities, and online classes was actually the best option.	30 to 39	Female	Hispanic
I am truly happy that colleges kept the online courses after the Pandemic was over. I just needed to have good time management skills to stay on top of my assignments, but I extremely enjoyed my online courses.	40 and older	Female	White Non-Hispanic
During the pandemic I was forced to take online classes and that helped me greatly.	30 to 39	Female	Latino(a)
Personally, I think it worked better because there was more attention that the professor invested in the class. I have always took online classes prior to Covid and their time is always split because they teach in person as well but during Covid it felt much more helpful and useful!	18 to 29	Female	Hispanic
I really enjoyed taking online classes.	18 to 29	Female	Asian
It was perfect! I had more time to focus	30 to 39	Female	African American
I had the opportunity to take additional classes online which were not available online before which helped me graduate on time. I enjoyed online courses because of the flexibility and reduced time and cost of travel.	30 to 39	Male	Hispanic
I personally think online classes were a little more helpful because I was able to work on my assignments at my own paste and connected with my professors a little more	18 to 29	Female	Two or More Races

Table 15: Prefer Online Instruction (continued)

FGCS' Q_25 Survey Quotes	Age	Gender	Race/Ethnicity
I loved it. Online classes really helped me as a full time employee and mother	30 to 39	Female	African American
Honestly it worked better for me, I was able to learn things at a better pace, I didn't feel the need to be perfect because I would get judged in person. I was giving it the truest version of myself.	18 to 29	Female	Hispanic
I was able to do work at a pace that was more comfortable for me, since it was online	18 to 29	Female	Two or More Races
it worked better because I had more time to do personal and school work	18 to 29	Female	Latino(a)
I've always taken online classes and I enjoyed it	30 to 39	Female	Hispanic
Nothing, because I preferred online classes over in person because I feel that I could get my work done faster and in a reasonable time. I felt like it was less work in a way and I was able to complete the work at my own pace which I like.	18 to 29	Female	Asian
online classes are the easiest for me since I am a stay at home mom and this is more convenient for me.	18 to 29	Female	Hispanic
Honestly I would prefer more only school. It allowed as a mother of 3 to actually make time for it.	30 to 39	Female	Two or More Races
It made more online classes accessible asynchronous/synchronous, and I prefer these classes	18 to 29	Female	Latino(a)
I prefer online classes, I find that I have a better time studying free from distractions (like other students constantly talking in class, and harassment/bullying from other students.) My performance with online classes has been mostly great	30 to 39	Prefer not to answer	Decline to State
I prefer to study online	30 to 39	Prefer not to answer	Decline to State
They're ok. I like it better online classes	30 to 39	Non-binary	Latino(a)

Note. This table includes previous quotes as quotes apply to multiple themes.

Shift in Preference During the Pandemic. Some students indicated that they had a change in preference from in-person to online instruction (see Table 16 below).

Table 16: Shift in Preference During the Pandemic

FGCS' Q_25 Survey Quotes	Age	Gender	Race/Ethnicity
Now, I would rather take an online class than in person.	30 to 39	Female	Latino(a)
It changes my perspectives and was easy to take classes online and learn how to use the computer better.	40 and older	Female	Hispanic
I found out online classes are better than in person classes	40 and older	Female	White Non-Hispanic
Only having the option to do online helped me realize I prefer online.	18 to 29	Female	Hispanic

Phase II: Qualitative Data Findings

There was a total of six (n=6) individual interviews. Each participant interviewed met the criteria of completing the CoI Survey, which included being at least 18-years old, first-generation college student, and enrolled in at least one class at the institution—research site—during Spring 2020 and Fall 2022, and voluntarily agreed to participate. The age of the interview participants consisted of 83% of the participants were 18 to 29-years old and 17% were 30 to 39. Next, there were 83% female and 17% male participants. Finally, the race and ethnicity of participants included 33% Latino(a), 17% African American, 17% American Indian, 17% Asian, and 17% Black participants. Table 15 below provides an overview of each participant who participated in an individual interview.

Table 17: Interview Participants' Demographics

Pseudonym	Age	Gender	Race/Ethnicity
Isaiah	18 to 29	Male	African American
Savannah	30 to 39	Female	American Indian
Haruka	18 to 29	Female	Asian
Tristan	18 to 29	Male	Black
Juliana	18 to 29	Female	Latino(a)
Kharissa	18 to 29	Female	Latino(a)

I developed an interview protocol (Appendix E) for individual semi-structured interviews with the purpose of hearing directly from first-generation college students about their perceptions of online instruction during the pandemic, especially in connection to online course design and the relationships they formed with instructors and classmates. Four hundred twenty-two participants selected, on the CoI survey, that they were willing to participate in an individual interview via Zoom for this study; however, 20 had blank responses for contact information, and 21 were duplicates. Therefore, there were a total of 401 participants willing to participate in an individual Zoom interview. First, I added students' names to an online spinning wheel selector. Next, I emailed students an email to invite them to participate in an interview (Appendix C). Then, when students responded to the email stating they were interested in scheduling an interview, I emailed the consent form (Appendix D) and dates and times to participate in an interview.

Overall, I emailed 19 students over a 30-day period. There were a total of 6 students who responded to the email, completed the consent form, and confirmed a date and time for an interview. Zoom, a video conferencing application, was utilized to conduct semi-structured interviews. The individual interviews each consisted of 60 to 75 minutes. Interview questions (Appendix E) were organized in three sections—the first section asked how online classes were organized; the next section asked about relationships with instructors and classmates; and the last asked preference of enrollment in either in-person or online classes. The interviews were recorded on Zoom and transcripts were automatically generated. I wrote notes, as needed, during the interviews, then immediately downloaded the interview recording and transcripts. After memo-writing, immediately following each interview, each audio and video recording was reviewed together with the transcript and any needed corrections were updated to the transcripts.

After the transcripts were updated, I emailed the transcript to the participants for their review and any feedback. Then, I uploaded the transcripts to Dedoose—a cloud-based application that implements encryption and password protection of data to begin coding the transcripts. I completed several iterations of data coding to organize, group, reinforce, and confirm the main attributes of the qualitative data record to develop categories, themes, and concepts, as well as to understand the significance of a developing theory (Saldaña, 2016). The developing themes and sub-themes are noted below in Figure 4. Next, I viewed the recorded interviews and made any necessary updates on the transcripts.

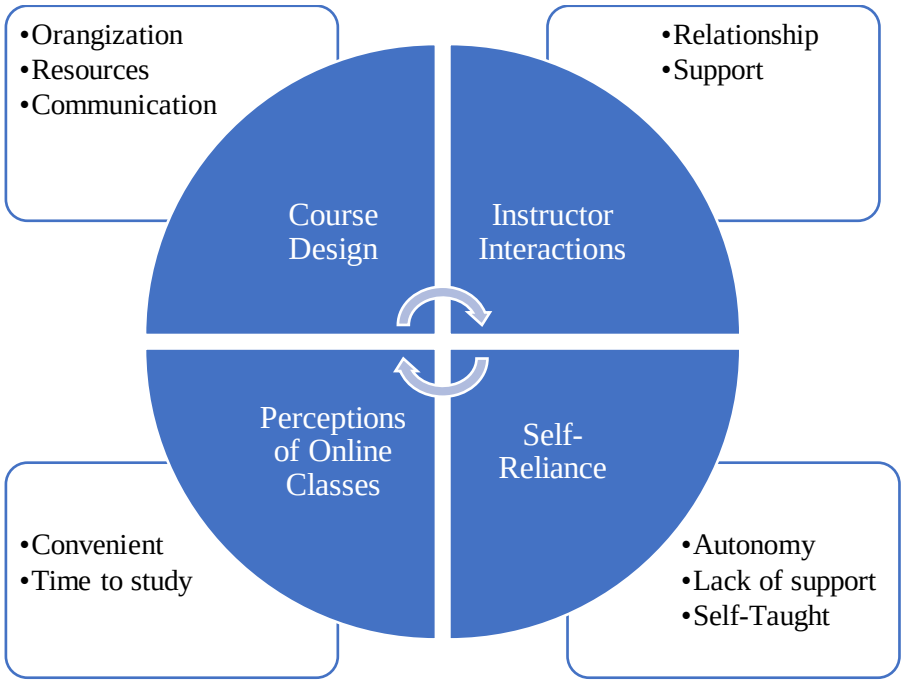

Figure 4:Developing Themes and Sub-Themes

Developing Themes

The qualitative coding illustrated the following developing themes: 1) course design; 2) instructor interaction; 3) self-reliance; and 4) perceptions of online classes. Each of the developing themes includes two to three sub-themes. The research overarching question and sub-questions are examined in the themes and sub-themes, in addition to first-generation college

students' self-reliance. The first theme focuses on course design as it relates to the instructors' setting up, organizing, and providing resources on the learning management system (LMS)—the specific LMS that was utilized was Canvas. The second theme centers on interactions with instructors. The third theme recognizes first-generation college students' resilience through their self-reliance during the pandemic. Finally, the fourth theme addresses first-generation college students' perceptions of online classes.

Developing Theme One: Course Design

The first theme is an example of teaching presence in the Community of Inquiry Framework (Garrison et al., 1999). Prior to beginning online courses, instructors determine how to set up, structure, and organize their in-person and online classes. When teaching presence is evident in an online course, it most likely promotes student participation as opposed to using an interactive tool in online learning; hence, perceived teaching presence may be strengthened through any other tools, instructional strategies, or activities that may, in turn, increase student engagement in online learning (Park & Kim, 2020). Nearly all the students interviewed shared examples of exemplary online course design.

Sub-theme: Organization

The first sub-theme is organization. Examples of activities teaching presence in an online course include creating Power Point presentations and lecture notes and uploading them to the course, as well as uploading other activities such as audio and video mini-lectures, sharing personal perspectives into the course content, developing a schedule of individual and group activities, and adding instructions on how to use the modality effectively (Garrison & Arbaugh, 2007). All but one of the students interviewed expanded upon how their online classes were organized and structured. For example, Savannah shared:

> My Sociology professor was so organized that it almost seemed liked her Canvas, like you know, had literally seemed like it was like a programing bot. Everything was outlined, and she actually gave you a weekly study guide and it had questions that you had to fill out on your own, but that structure of, okay, do the reading, and there was literally a slide that said, 'do the reading,' and it just kind of walked you through each step.

Savannah's remark appears to portray an instructor who tended to all the minutiae of planning and organizing the course with study guides and step-by-step instructions to prepare for and complete assignments.

Juliana, another interview participant, also commented on how the modules in a class were structured. She exclaimed in amazement: "I don't know how this professor figured it out, but you have to finish one assignment to go to the other one." This helped Juliana stay organized and focused as she further clarified: "I see this, and I mentioned this because I found really organized, and I knew what, if I'm, I was missing something I had to finish it… I wasn't able to miss no assignments because it will not let me go down unless I finish that one." Throughout the shift from in-person classes to mainly online instruction, there was a plethora of professional development to assist instructors in learning all of the features and tools that the LMS provided, and many instructors engaged in training to learn and utilize the tools in the LMS.

Kharissa noticed that her instructors implement the available tools, stating, "I think they did well in using the tools that were available on Canvas, so all of the online classes that I had, I guess they were organized pretty much in the same way." Students noticed the structure and consistency between their online classes as they had probably not seen, nor noticed previously to the pandemic. Kharissa pointed out, "So, I guess, yeah, it was, they used all the tools that were available on Canvas, and I think they did well in doing that." Some of the tools in the LMS included organizing modules by weeks, units, or topics. Within the modules, instructors can include content pages, presentations, recorded lectures, assignments, quizzes, and discussion

boards. Moreover, some instructors structured modules in a similar pattern throughout the semester so students would know what to expect from week-to-week. Savannah, another interview participant, acknowledged, “I had a really easy time with that class just because of the structure that she provided, and it was a template, but it was something for me to work off of.” The arrangement of modules helped students keep track of classes and assignments. Kharissa elaborated, “Oh, I like the, personally, I like the module feature because I like how they would put lessons on there, and it was all organized in chronological order, so, it would show things like things that were due for week one, things that were due for week 2, week 3, and so forth.” Other interview participants further corroborated the Organization sub-theme.

Tristan also noticed the LMS organization, and expressed, “Yes, in terms of organization, I think mapping out like the agenda for the class. What was expected in the syllabus, that was very helpful. And then, in certain classes each week all the assignments were listed.” The online courses during the pandemic reflected the hours of designing, planning, and organizing as Tristan shared:

> For me, it helped me stay motivated. With everything being self-paced, having everything already set up for you like, for example, each week, okay, here they list assignments. There's a breakdown. They allowed me to stay engaged with the course. I didn't like zone out. It didn’t get mundane or boring, and sometimes when I wanted to do extra work, that possibility was there. Also, how to prepare for the exams. Like going back each week, like I said, since there's the breakdown. Okay, here's the page number, here are the helpful links that helped with my studying.

Since online classes were organized, students were able to focus on the content and successfully complete their classes. Isaiah revealed, “I was very much engaged every class time I was finished to then participate in the way it was organized it's very convenient; the way the assignments were organized on Canvas.” Isaiah talked about synchronous classes and the similarity of online instruction and in-person instruction, he specified, “We still had [to] raise

your hand function so that people to turn their cameras on and we still had our quizzes on Canvas, and I just really enjoyed that structure, and it felt very it still felt very classroom like, even though I was in my room." Lastly, Savannah made a clarifying distinction: "the classes I've been most successful in have been the ones where the professors lay out the foundation for the week, like we usually have a weekly reminder of, 'Hey, you know, this is what we're going to cover this week,' and you know if they have a set pattern of how they want you to do the work." The structured organization of online classes provided consistency for students since they understood and became familiar with the patterns and organization that instructors implemented during the pandemic.

Sub-theme: Resources

The second sub-theme addresses the resources included in online classes. In addition to designing and organizing online courses, instructors also ensured that students had access to resources to support them to meet the learning outcomes. For example, Tristan mentioned, "There were helpful videos to prepare for the homework. There were videos to prepare for midterms and that allowed the class to be organized and I didn't feel rushed with the assignments. In some classes, you can even get ahead. So, that was helpful as well." In addition to instructional videos, instructors included PowerPoints, learning activities, and lectures. Juliana shared, "We would have access to everything—PowerPoint exercises and practice them as much as we can." While this is like in-person classes, students have the ability to return to the module resources to repeatedly review and participate in learning activities. For example, Juliana explained, "some of interactive activities that he would post for all of us like just matching stuff, and it was part of the what we just saw in the lecture and the quiz before but it was like I'm reinforcement of the first thing is we already did and he would post a certain videos." Kharissa

also noted, “There's a place where you can, I think it's called the modules, and you can access presentations, on there, or other lectures, and then there's also a place where you can contact your professor in case you have, like, any questions or anything.” Equal to class presentations, class lectures were included in the modules; therefore, students had the ability to repeatedly watch lectures, or pause and go back should they need to hear an instructor’s information again. Juliana pointed out, “She was amazing. She had everything. We just need to go through the lectures if we have questions from the video that she posted so we could do everything in our time.” The view is the teaching presence has a substantial impact on student contentment, how students view their academic performance, and sense of community (Garrison & Arbaugh, 2007). As Savannah expressed, “but it just was a really good foundation because she had a mixture of recorded lectures, she gave live lectures, she provided not just the reading but interactive websites, though there was again a lot of organization and in different ways since that did rely on kind of self-learning and videos.”

Developing Theme Two: Instructor Interactions

Students may experience a sense of belonging and significance if they are able to openly communicate with the instructor and receive their active and welcoming comments within a system for online learning (Luo et al., 2017). As such, to increase student participation, interactions with the instructors appear to be the key component (Lee et al., 2019). Thus, as noted, the second developing theme is instructor interactions. Participants who were interviewed discussed the topic of their instructors at length. They mentioned the access and availability to communicate with their instructors and the ability to ask questions in real-time and electronically. Furthermore, the participants mentioned the relationships they had with their instructors as this was a unique period time in which both instructors and students were

encountering similar situations with the pandemic as far as the fear of the virus, becoming ill, or taking care of ill family members. Equally important, students recognized the support they received from their instructors during the pandemic. Again, this moment in time was unlike any recent time that instructors and students connected outside of the academic setting.

Sub-theme: Communication

In most in-person classes, it is typical for an instructor to check for understanding and ask students open-ended questions or ask students if they have any questions they would like to discuss before class ends. There are students who engage with instructors in a classroom and ask questions; however, there are some students who are reluctant, intimidated, or shy to ask questions. For instance, Juliana claimed:

> It was easier for me to ask questions when we come to the class, and I will review like the lecture beforehand, and I would see oh! I don't quite understand this right now, and even after the professor like try talk about it and explain it. I say, like they're in understanding. I was more comfortable with me. Oh, just put the hand on the Zoom and say, oh, I have a question, or say in a chat, oh can you repeat this one more time, or can you explain it some a different way? And the professor will go through it like we'll see, or we will. Also, you have a question, and I would say yes, and he will try to explain it. So, I felt more comfortable asking questions.

Juliana brought up a point that most likely was an innovative way to for instructors and students to communicate that was a result of the pandemic and instructors and students learning how to navigate online conferencing platforms such as Zoom. Zoom, and other online conferencing platforms, provided a way for students to raise their hands and ask a question, yet the student could, in a sense, remain anonymous if they did not have their camera on during class. The other feature of typing a question in the chat may have also encouraged students to ask questions. Isaiah also mentioned, “And, also, like being able to ask like questions for help in like the chat and asking like, oh, I'm a little confused, and like them being able to assist. I think that

aside from the breakout room that's also like one thing I felt more interactive." Hence, students had access to engage in conversations with instructors online in many ways than they had previous to the pandemic—such as, electronically through email, communication messaging within the LMS, real-time in synchronous online classes by using the tool to raise a hand or typing a question in the Zoom chat.

The students also mentioned that their instructors took additional time to talk with them and answer questions. Unlike in-person classes that have a set ending time with another class beginning in the classroom and students heading out to their next class or leaving campus, online classes, in some cases, provided additional time for instructors and students to engage in conversations. Case in point, Haruka illustrated such circumstances stating:

> Office hour at the after-class lecture, so the teacher would say, 'Okay, that's it. Have good day. Any question? You guys can stay later.' That's a good chance, because if in live in-person lecture the lecture room usually taken by the next class, so the professor or student have to like, move out the room right away, or like only have 5 min to clean up, and then there's ten students in the line.

Furthermore, Haruka recounted, "they have plenty of time like right after the live lecture. They say they ask student if they want anyone have question to stay over, want discuss it, and if they're, like, if the professor also on short time they're gonna ask those students to like go extra office hours like in that same day evening, so that's very convenient." This illustrates the additional instructor interaction with students since they may have had time, in the moment, to stay in the online setting and clarify class material, or they provided additional office hours to engage with students, in a timely manner. Savannah supported this interaction by adding, "I think, for me, it was, you know, they always entered, promptly, respectfully, if I ever had any questions. and they always kind of, like, you know, if you need any more, you know, come back." Moreover, Juliana described:

> Since I was able to ask more questions and voice out more of oh, can you repeat this, or can you do this one more time? And he will, my professor will say, oh, that's fine like I'll repeat it one more time, and that will be other times the professor would like were you able to understand it. At the end of the class, he would say, like, oh, can you stay over so we can go over it if you didn't really understand this, and I will say, yeah, that really helped me a lot. Thank you, I was not understanding this and just thank you for being able to do what I ask for when I ask you, because I really was not understanding at all.

It appears instructors were willing to spend additional time, in the online setting, to interact and communicate with their students to ensure they grasped the class concepts. Furthermore, students recognized their instructors' efforts to communicate with them and answer their questions.

Consequently, students were grateful and formed a connection with their instructors. Juliana conveyed this sentiment: "I feel closer, because they do really want me to learn and I will read all of them, and I will really appreciate just for them to take 2 times just to write, 'Good job. You're doing great. Just fix this thing next time you can do better there.'" Juliana continued to explain, "I just feel that those affirmative things really help me too, and those feedback, when I would do something that could be really improve on." Along with that, Savannah discussed her conversations with an instructor sharing, "I was very vocal, and so it almost kind of felt like a conversation between me and her the whole time, with maybe a comment here and there from someone else. So, I just got to know her because I spent a lot of time working with her, trying to figure things out, and I took her again for the next class." As a result, it is possible to include the interactions with the instructor aspect, which includes interactive behaviors such as asking for additional assistance from the instructor or having a question about the material being taught, as a key indicator of student participation in online learning (Lee et al., 2019).

Sub-theme: Relationship

The pandemic highlighted a different type of relationship between instructors and students. Tristan described it best, "What was going on during the time with the pandemic and

what we're learning I felt like extra time was taken to connect with the students to make it more applicable to what's going on with their lives and stuff I've learned I'm still using that today." This builds upon the communication sub-theme where students frequently mentioned the addition time instructors provided to engage in conversation. Juliana also noticed:

> The whole situation of Covid that we, as students, we weren't the only one struggling with stuff. I had some professors that they have family members that they got sick. I personally got sick, too, and I felt closer to my instructors in a way that they can understand what I was going through, and I was also relate to what they were going through because they were learning to how to manage the whole online learning even though I do have experience with online learning before them it was new and for them teaching me.

The pandemic brought instructors and students together in a distinct manner since most people across the globe were experiencing similar situations on the topics of quarantine, isolation, illness, and caretaking—basically, negotiating new norms for daily life. Haruka supported this by stating, "for my experience for my class they kind of freely sharing more, and also at their convenient space you like teaching too there, so some of my teacher like the teaching at their own home in their favorite spot, like yard they feel, sometimes they feel, free to share about the tree, the cats is running around. I would love to hear that." Perhaps for the first time, students could glimpse into their instructors' physical, personal space. Likewise, instructors could catch sight of their students' personal spaces. Haruka noticed, "they are more open to share about themselves." Juliana had a similar experience, noting, "I have several professors that they would talk at the beginning for like five minutes during the class say, oh, this happened today, I went walking. What [did] you guys do today like I, are you guys handling well, and they are, so it's gave more resources for us they were given us. Oh, this is tutoring hat you can log in this is how you go, you guys log in, you can make an appointment to for them to tutor." Instructors may have also shared about their personal lives prior to the pandemic and some instructors and

students may have shared similar interests; however, the pandemic brought instructors and students together in way that most instructors and students could empathize with one another.

The online setting, while it may feel distant at time, did keep instructors and students connected. Kharissa mentioned, “I think them having like a Zoom meetings basically keeps me connected with them.” Student interactions with their instructors united them. Savannah noticed:

> I was also very surprised that even after I finished through a course, you know, they're willing to assist if I have a question about the next class I should take, or, you know, if they have any suggestions where to do community service, so, yeah, I personally got to know my professors, and I felt most comfortable talking to them as far as, yeah, that goes. Yeah, even a professor, I didn't have, I felt comfortable.

The relationships formed extended beyond the one class. Savannah also mentioned a personal situation with an instructor:

> I shared, like, my challenges because that was marking a year of having my father passed, so I needed, I asked for an extension from the assignment and she very much was really understanding and empathetic, and she kind of shared her personal experience with it and she checked in on me and it was just very real and personal and it was a reminder that, like, even that instructors are people, they're not just robots and, yeah. Her encouragement really made me feel like, okay, I'm in the right place, and I'm doing what I need to be doing, so, yes, that was really, that was the first time, kind of, someone with authority, a professor kind of shows your human side, not just the professional and it was very kind that was good.

In many instances, the distance of the online setting closed a gap between instructors and students together, to form reciprocated relationships. Juliana indicated, “I actually would think I was able to get closer to my professors. I was kind of intimidated before to walk up to a professor. That's me personally.” Thus, the online setting launched common ground for instructors and students to build relationships.

Sub-theme: Support

Beyond communicating with students and building relationships, instructors also provided a support structure for students. In other words, instructors bolstered their support for

students during the pandemic. Kharissa pointed out, “I think the ones that made themselves easily accessible. It would give us a lot of resources, like, they would, they would how do I say, post announcements and tell us, letting us know when they, when you could reach out to them, or how to reach out to them. I think those were, they, they were just always involved, right.” Moreover, Juliana added:

> They will list all the resources that we have like therapy. Just if we were struggling with having wi-fi or to pay for wi-fi, for Internet to do that would give us all those resources for us to be able to attend class just the simple mile that they will go just for us to shows that we have resources to continue doing our class to finish our class at all because some of the students they were struggling that they were they didn't have wi-fi they had to go either to Starbucks, but with the whole quarantine, it was something that they would put in their last address too. So those things that are professors, most of my professors did really help me to feel more connected to them, and that they care for my learning, too.

Juliana illustrates how instructors acknowledged the many resources students required to continue their education and the efforts instructors took to connect students to the needed resources. Haruka, “So, student ask question because they confuse, or they want to learn more about the topic so the teacher, usually very genuine, just answer what they know, and explore, and maybe ask them to go for extra office hours, and they both look up the topic together.” Instructors typically open office hours to support students outside of class, yet students consistently reported that instructors offered additional hours and additional support.

Instructors also provided support during synchronous classes. Tristan acknowledged, “For some classes, I did like, we had breakout rooms. I thought that was helpful and occasionally the professor would join. So, it wasn’t just like, okay, just go talk to your classmates. The professor would come in as well. He or she was participating in the chat as well if we had any questions.” Thus, instructors encouraged students to engage in small group discussions, but they

did not leave them on their own. Instead, instructors would return to the breakout rooms and check-in to provide additional support. Isaiah described his experience as follows:

> Feeling like you're still having a conversation in person as compared to like you can tell like this is Zoom, it felt very normal. And I think that's for me, the connection for me. It's for it to feel very normal, or even when it didn't feel normal, it still feeling that connection from how interested they are making a topic. How interesting they are in this topic and also, like their friendliness as well was also there, and also, like being understandable for like deadlines and that kind of stuff.

Isaiah makes it clear that students had a connection with their instructors, and they understood that instructors were invested in completely supporting them during the pandemic. Juliana sums it up best by explaining, "So, I would say, as well as long as I continue finding good professors that they know how to interact with students and how to provide resources, I will continue taking them [online classes]."

Developing Theme Three: Self-Reliance

First-generation college students have a clear sense of what they want to achieve, they are relentless in their resolve to improve moving forward, and they adapt well to a variety of situations (Hands, 2020). The pandemic highlighted instructor interaction and support; however, it also illuminated the need to rely on self-determination when there was a lack of support. In this way, FGCS may have been prepared for the shift to online learning because of their motivational character and capacity for optimism in the face of challenges and changes, even as they were going through a pandemic which was particularly unnerving (Hands, 2020).

Sub-theme: Autonomy

In contrast to the support students described in the interviews, they also shared experiences of being on their own. Juliana recollected, "You guys are doing all by yourself. I'm like, yes, it's so much different from us being in person and in online because I'm doing

everything by myself." In-person, students would regularly see their instructors and classmates, so they had opportunities to ask clarify questions or hear about resources from the instructors or their classmates. However, in the online setting, during the pandemic, if students enrolled in a class that did not have a supportive instructor, they were left on their own to figure out anything that might arise. For example, Savannah explained, "the instructor didn't have any recorded lectures. It was just his office hours were his lecture time, and other than that, you were stuck with—it was the textbook and you." As such, Savannah realized she had to, "prioritize and balance and also it's realizing that sometimes if I needed more help I had to pick and choose which one [class] I was prioritizing…That was hard for me to adjust to, but I had to, because, you know, I wasn't going to get to everything if I didn't make that choice of, okay, I've given this enough time. I'm still struggling, so I need to do something different." Even though Savannah's account of only having her textbook to rely upon and prioritizing her studies, her determination to adjust and move forward is evident. To illustrate further, Tristan echoed Juliana and Savannah's experiences sharing, "It was just kind of me just teaching myself. Like I just paid for a course and I'm all by myself, but I actually had a professor. Some of them, they weren't very responsive in their emails as well."

Sub-theme: Lack of support

At times, students had to adapt and learn the course material on their own. Yet, they did not give up—they were resilient even though they did not have the instructional support they needed. Tristan explains:

> I felt like they didn't care. I felt like they knew that everything was going to be self-pace and it almost felt like they put everything on the student and they just kind of like, oh, well. They used the self-pace as an excuse. Like, yes, we've got to learn on our own, and we have to stay with the topics. At the same time, you still have to teach. You have to have a structure for the class. It wasn't that—it was kind of like you signed up for the class, and you were on your own after that.

> You didn't hear from the teacher at all. Just the day of the midterm and on the final. There weren't any study guides. It wasn't helpful at all. It was kinda like, oh, I gave you the PowerPoints, go back and look at that.

Kharissa confirms Tristan's comment describes this sub-theme: "The ones that didn't have any Zoom meetings, they would just post, what is it, assignments on Canvas and it was just up to you to complete it and that was it there wasn't really anything to build a connection." Kharissa further notes, "I think it's the ones that didn't have any online class. I mean, I mean, sorry the ones that didn't have any Zoom meetings. I think I felt the less connection with them because they, again they would just post an assignment, and it was up to you to turn it in and that was about it." Savannah disclosed:

> You just kind of, it's white noise after a while, but, yeah, I was definitely reminded and suggested by my brother to make sure you read the syllabus, print it out, keep it for each class, like you need that and I didn't realize that importance until I did and, yeah, so that that's also something that I'm really grateful for because, yeah, like, you know, our first-generation, we didn't have, like our parent to, like, give us these tips that I'm blessed enough, for I had a brother, and I have a sister, but my brother has been the one that has really helped me with little tips like that, like, you know, print it have in front of you, so you know, when it's yours.

Finally, Kharissa pointed out, "They would just post and, how do I say, an assignment and then again, yeah, you just had to follow the instructions and get it done."

Sub-theme: Self-taught

In the circumstances in which students lacked the needed academic support required to comprehend the class content, they instead, through their resiliency, taught themselves. Savannah begins by stating, "so I very much had to teach myself and learn how to look for other sources that were beyond the professor's office hours." Savannah expanded by explaining:

> I realized that not every professor will have more fluff or support, you know, in the sense, and it's not that they're not providing you the tools it's just you have to be willing to learn a different way and so that worked for me, and, so, the

> professors that were straightforward, that had really this, ‘This is what you’ve got to do, you’ve got to do the work.’

It is a fact that students are required to complete assignments on their own; however, they first need an instructor to plan activities and provide time to engage in the class material prior to expecting students to thoroughly understand the class concepts. Tristan pointed out, “So, for those classes it was, it was not engaging at all. I felt like I was teaching myself. I felt alone. I didn't know any of my classmates. It wasn't very welcoming, and a kind of maybe not really caring too much about the class, but because I'm really motivated, I had to push myself even more.”

In addition to not having an instructor teach the class material, there were instances in which third-party software was required for the class and students had to, at times, figure out the software of their own. Tristan realized, “There's just a lot of things out of our hands, and there wasn't anyone to really help us with that. It's kind of like, okay, well, you’ve got to contact that third party.” Tristan appeared frustrated since he expressed, “There's nothing I can do, but it was still required in the syllabus that you have to go to here, you have to do this. It's like, okay, we're trying, but it's not working, so can we try to accommodate something else? But it wasn't like that for certain classes. It was like, no, you have to, you kind of got to figure it out.”

Developing Theme Four: Perceptions of online classes

Although O’Bryant (2023) argues the negative effects of the pandemic are substantial, many students also reported beneficial effects that colleges should consider as they move past the pandemic. The pandemic was immensely challenging for most students as the participants described in the interviews. However, the beneficial effects included individual wellness, additional time devoted with family, more self-reliance and management, more outdoor endeavors, and innovative ways to endure (O’Bryant, 2023). The participants interviewed for

this research study specifically mentioned the convenience of online classes and increased time to study.

Sub-theme: Convenience

The main point the participants interviewed reported in connection with online classes was the convenience of enrolling in online classes—even if they had previously preferred in-person classes. Concerning future enrollment, Kharissa shared:

> I would want to continue taking online classes and I do I do prefer in-person classes because it's just not the same right, but the reason I would rather take online classes is because it's more convenient. I don't have to worry about getting ready or being late. Just worrying about traffic or anything like that like I already have, I don't know, like everything's at my fingertips, so it's just easier to just get on online.

Even though Kharissa prefers in-person classes, she plans on continuing to enroll in online classes because of the ease of getting ready to walk out the door, running behind schedule and walking into a class late, or stressing about traffic. Instead, she only needs to have access to her device and internet, and within minutes she is connected to a synchronous class, her instructor, and her classmates. Juliana provides another example of the convenience of online classes as she explains, “I can be cooking, and I can watch my video for my lecture, or I can start reading and prepare for my class later, even if I have a set time to meet. I have more control my personal life, too, and my education, too. I take more control. I think that's what it is. I take more control.”

Likewise, Isaiah shared, “I was about to take a shower, and you know completely forgot that I had a class and I think it was like 5 minutes before the start of the class, and I was like, what time is it? Oh, I have a class; let me log in, convenient. As compared to if that were in person based off where I'm living. I'm like oh, I won't make it on time. But if I might get there it would have been late.” Equally, Savannah expressed, “Yes, I will continue taking online classes, and I think that that's just for the convenience of not having to travel, and so, for me, that for my

other obligations of nixing, the need to drive in L.A." Another point Isaiah recounted on the topic of the convenience of online classes:

> There's, also, the time span, we had for like taking exams, for like being able to take it from this day from this time to this time it was more flexible, as more as compared to like being in person. So, I think it was, really how convenient it was, but I was still learning the same way as I did…and being able to compare, like that in person, experience to the online and still able to like, connect with people.

Thus, the convenience did not compromise the learning outcomes, nor the connection with his instructor and classmates. Juliana noted, "online classes gave me flexibility to do things that I couldn't do before," and Savannah disclosed, "I've tried signing up for in-person classes, and they've gotten dropped because not many people sign up for them, so if that continues, I'm obligated to finish off with online classes." In sum and most poignantly, Isaiah concluded,

> Before the pandemic, I did not take online classes, and I was not interested in that at all. I didn't see how it was going to be helpful, but when I took it that shifted and during that time everyone was like, I didn't like the online classes. Some people said that like, yeah, I like the semester off from classes, but I even took more classes which I'm like I'm at home. It's convenient. I don't have to leave, and I don't worry about that transportation and like it could be a different way even the one where there was no meeting online at all, but, like with classmates or the professor, it was still great. Like I still was able to learn a lot, and the thing was like, Wow! Like a lot of things can be flexible, and you don't have to feel like you know, even also, like if you're feeling sick, you know it's like feel pressure to like leave. You can't really move, but you're like, okay, I can still join the class online. And I really think like that's what I enjoyed about the most, and also like seeing how flexible things could be for books, for assignments, like sites, and so like it's shifted. It went from, oh, now, I'll never take an online class to I'd be very much interested in an online program.

Sub-theme: Time to Study

Besides the convenience of online classes, the time students retained by not preparing to leave their residence, or struggle with traffic, instead, they used the time to study. Juliana excitedly revealed, "I was able just to sit down, concentrate, and to repeat the video as many times as I wanted to. I was able even if it was a 15-minute video. I could spend an hour just re-

watching it trying to understand." In the same manner, Savannah affirmed, "the benefit of online is you could replay a lecture, so you, if you have a recording, and if you miss the concept or, you know, you get distracted or what not, yeah, you can always go back to that and have that recording." Prior to the pandemic, Juliana recounted the steps she took to attend classes on campus, "I had to take a bus and a train before I had a car, so I had to wait like an hour and a half before me, going back, going to campus and then I have to be it was cold, it was raining, or it was so windy that you have to bring all these layers, and then your backpack is heavy, and then you have to eat." During the pandemic, Juliana recounted:

> I read my book. I sat the whole day just reading the book and after like at night I would watch the video that I have to watch for that book and then I could just start working next morning on the on the assignment that I had to do. I could focus the whole day just reading the book and really taking notes, taking my time and then I just knew I had to watch a video to the other topics that would explain more of what we just read. For me, it was fascinating because I was able to focus on certain things on certain things at one time.

Juliana sums up how she spent her time during the pandemic, "I can be cooking, and I can watch my video for my lecture, or I can start reading and prepare for my class later, even if I have a set time to meet. I have more control my personal life, too, and my education, too. I take more control. I think that's what it is. I take more control."

Chapter Summary

This chapter included the quantitative findings from an online survey and qualitative findings from six semi-structured, individual interviews with first-generation college students who were enrolled in at least one class at the research site institution between Spring 2020 and Fall 2022. The survey responses were analyzed using JASP to complete descriptive and inferential statistics, identify any statistically significant results, and determine the significance of Spearman's Correlations (see Appendix F). On the qualitative part of the research, each

interview was video- and audio-recorded and transcribed. The transcripts were then uploaded to Dedoose for coding to identify any developing themes and sub-themes. Each study participant was emailed the same interview questions and each study participant had the same time allotment for the interview. There were some participants who were concise, and others thoroughly shared their experiences. The themes included 1) course design, 2) instructor interactions, 3) self-reliance, and 4) perceptions of online classes. The themes connected with the overarching research question and the sub-questions.

Chapter Five will address each developing theme.

CHAPTER FIVE: DISCUSSION

This study examined first-generation college students' perceptions of online instruction during the pandemic. First, the Community of Inquiry (CoI) survey instrument was utilized to gather responses from participants, who were at least 18-years old, and enrolled in at least one class at the institution between Spring 2020 and Fall 2022; the survey also included an open-ended question asking participants to provide accounts of their experiences in the context of how the pandemic affected their online classes. Second, six individual, semi-structured interviews were held with participants who are first-generation college students, completed the CoI survey, at least 18-years old, and voluntarily agreed to participate. This final chapter provides a review of the statement problem, the significance of the study, research questions, theoretical framework, and methodology. The study findings are also discussed as they relate to the research questions. In closing, implications, potential areas for further research, limitations, and final reflections will be discussed.

Overview of the Statement Problem

In March 2020, over 1,100 colleges in the United States directed students to return home, they canceled graduation celebrations, and they discontinued nearly all in-person classes (Kiebler and Stewart, 2021; Smalley, 2020). By mid-to-late March of 2020 most higher education institutions in the U.S. immediately transitioned to emergency remote teaching (ERT) (Colclasure et al., 2021; Crawford et al., 2020). The shift from in-person to online learning presented first-generation college students with even more barriers, as compared to other students, from a socialization aspect because it attempted to diminish potential social connections with their peers (Mates et al., 2021). Furthermore, the separation from classmates that online students experienced, especially first-generation college students, may have

discouraged them from asking for assistance or support or even just asking a simple question (Stone & O'Shea, 2019). Moreover, the swift transition to online instruction during the abrupt shift in instructional modalities did not give instructors, especially the inexperienced instructors, adequate time to develop an online course that was as effective as their face-to-face course (Hodges et al., 2020; Walsh et al., 2021). Thus, faculty training and experience in online teaching may be essential considerations when examining the pandemic ERT from a faculty viewpoint because of the necessity to quickly adjust to online instruction during an emergency (Walsh et al., 2021).

Purpose of the Study

The purpose of this study was to explore first-generation college students' (FGCS) perceptions of online instruction during the transition from in-person instruction to mainly online instruction. FGCS may have benefited from online courses that established a sense of community utilizing the components of the Community of Inquiry (CoI) Framework—teaching presence, social presence, and cognitive presence (Garrison et al., 1999). First, in the matter of how instructors set up and structured their online course, how they facilitated online discussion, and how they provided clear instructions. Next, as it relates to how FGCS interacted with their instructors and classmates, revealing their personality and characteristics.

Research Questions

The following overarching question guided the study: Did first-generation college students' perception of online instruction change during the pandemic as a result of how online courses were structured and their relationships with instructors and classmates? The following sub-questions further guided me in answering the central question:

1. How did online course design impact first-generation college students' learning experiences during the pandemic?
2. How did online instructor and peer relationships influence first-generation college students' learning experiences during the pandemic?

Research Question One

The teacher is of course an artist, but being an artist does not mean that he or she can make the profile, can shape the students. What the educator does in teaching is to make it possible for the students to become themselves—Paulo Freire

The data collected for this explanatory sequential mixed-methods study provided candid recollections from first-generation college students relating their experiences in online classes during the pandemic. Research question one explored the relationship between online course design and FGCS' learning experiences during the pandemic. FGCS' responses in the open-ended survey question illustrated that some of their instructors had difficulty transitioning to the online settings. For example, an American Indian male student, 30 to 39-years-old, wrote, "Some professors were clearly not prepared for the changed venue and this negatively affected my experience." Another student, Hispanic female student, 18 to 29-years-old, noted, "It was very difficult the initial transition. My professor wasn't too tech savvy and it was hard to concentrate with so much going around in my personal life." Another example is from an African American male student, 18 to 29-years-old, who pointed out, "A lot of professors were not prepared for the switch to online and learning was a difficult adjustment." Finally, a Latino(a) female student, 18 to 29-years-old, explained, "It changed a lot of things. Some professors didn't have presentations. Some would post an assignment, give you directions, and it was practically up to you to figure it out. Having online discussions isn't the same as talking to someone in personal. I think we became more distant."

The semi-structured, individual interviews revealed similar experiences. To begin, Kharissa shared, “I had one class that had assignments that were due out of order, so some assignments were supposed to, like, they weren't supposed to be open until the week after, but for some reason the professor kind of got the dates mixed up and had them due earlier than they were supposed to, and that kind of, uh, it just, it wasn't well organized in that sense.” Juliana expressed:

> It has to do with my professor being in the older generation trying to get ahold, how to manage Canvas because we were using Canvas and them[sic] they weren’t using the Canvas before so they were trying to learn how to use Canvas, how to introduce the lectures, how to post the grades, how to do the quizzes. So, they were trying to manage and learn with some of the students who had to do those kinds of things too, and make sure that when we will do the quizzes it was fair and we were honest with our test that we were taking the test. So it was, I would say yes, one of my classes they weren’t managing, well, they were unorganized because it came all sudden for them because it was in the transition where they say next week we are going to transition to online learning and school will be closed. So, it was a big learning curve for all of them, for all of them.

On the other hand, Juliana said, “Some of them, they already have prior knowledge teaching online. They also have higher knowledge how to use Canvas.” Isaiah disappointedly recalled:

> I ended up dropping it because it wasn't even on Zoom. It was just because some professors like in person they would after class, they would post lectures. They would post the lectures online. So, there was no teaching from this professor. It was only office hours and the lecture, even the way the site was set up, and everything was posted was in such a way that it was difficult to look at, number one; difficult to know what was going on. It also, it wasn't even his recorded lecture. It was the recorded lecture from a previous professor on our site that he just posted and those lectures were from lectures that had been recorded in class, so it wasn't like, here is our like, we're going to, there's a problem. Here's what supply and demand is. It was like a professor in a lecture hall where you can hear echo that was posted for us to listen to, and I was like, I have to do a different professor, and I dropped the class, and I've been angered in that sense.

Savannah reported:

> I first decided to take a math class, and that was really interesting because that is very kind of hands-on, in my opinion, and the instructor didn't have any recorded lectures. It was just his office hours were his lecture time, and other than that, you

> were stuck with—it was the textbook and you, and I am not a math person, so I very much had to teach myself and learn how to look for other sources that were beyond the professor's office hours and I learned very quickly that I needed assistance, so, I learned about the school's learning center and tutoring and just kind of going through online resources.

Isaiah also shared:

> A lot of professors, but I forget what their names were, and there was this professor he posted like audio, so we couldn't even see his face. Also, some people had a difficult time really on the setting up like record video and utilize Zoom so like that was, understandable like it was the first time it wasn't something they were used to, and they were also like, okay, this is gonna be for like, maybe a few weeks that will be done, but it went on for a year, plus and that was just and he only figured out audio.

Conversely, Savannah shared, "It just was a really good foundation because she had a mixture of recorded lectures, she gave live lectures, she provided not just the reading but interactive websites, though there was again a lot of organization and in different ways since that did rely on kind of self-learning and videos." Isaiah recalled a positive experience, stating, "I think it was just set up in a way where it felt interactive going into it. I was like a bit skeptical like was it gonna work where we're still able to like gain knowledge from the course, interact with each other like I would be in a normal class? And I think I like the way the professor really, the way she set it up in a way where it was interactive." Finally, Savannah described, "I think for me, the classes I've been most successful in have been the ones where the professors lay out the foundation for the week, like we usually have a weekly reminder of, "Hey, you know, this is what we're going to cover this week," and you know if they have a set pattern of how they want you to do the work."

FGCS indicated that the initial transition from in-person classes to online classes—because of the pandemic—was challenging since some instructors were unfamiliar teaching in the online setting. Typically, college employees who train instructors to teach online classes have

a reasonably small group of instructors and they start preparing their courses six to nine months ahead of the class beginning (Walsh et al., 2021). As a result of the immediate, unplanned shift from in-person class to online instruction across colleges, institutional support teams became overwhelmed and short on time and resources (Hodges, et al., 2020; Walsh et al., 2021). Thus, instructors had approximately two-week time to learn the institution LMS, video and audio-conferencing platforms, and migrate their face-to-face classes to the remote setting. It was a strenuous and stressful situation for instructors, students, and support staff. In contrast, there were experienced instructors, who had previous experience teaching online, so they were prepared to effortlessly transition any in-person classes to online classes. Consequently, students had the ability to engage in course content and interact with instructors and classmates.

Research Question Two

Research question two examined the relationship between online instructor and peer relationships and FGCS' learning experiences during the pandemic. FGCS' responses in the open-ended survey question pointed out both the lack of interactions with their instructors and classmates and how it affected them as well as the connections and community they experienced. For instance, a Hispanic female, 30 to 39-years-old, insisted, "wasn't able to interact with my teacher and classmates in person." Another response from a Hispanic male student, 40-years or older, claimed, "COVID-19 pandemic affected Human interaction." A Hispanic female, 40-years or older, wrote, "I never saw my instructor face at all even in zoom. That made it really uncomfortable plus it was really hard to get a hold of him that I failed his class." A Hispanic—who preferred not to answer gender—18 to 29 years-old, wrote, "It was difficult trying to schedule a time where I could do a zoom call with other classmates." A Hispanic—who

preferred not to answer gender—40-years or older, wrote, “Person interaction was greatly missed.” A female student with two or more races, 18 to 29-years old, explained:

> It affected my ability to actually concentrate and feel like I was learning because the online environment was just different then an in person class. When being in person I felt like I could learn and have that ability of working together not only with my classmates and my professor but online made it seem like you were on your own.

Another student indicated, “No student interaction” from a Hispanic female, 18 to 29-years old. A few students included comments in connection with their instructors, stressing, “Professors didn’t always respond quickly to questions which could be frustrating” from a Latino(a) female, 30 to 39-years-old, and a female, 40-years or older, affirmed, “Most instructors do not respond to their email in a timely manner.”

Contrastingly, a Latino(a) female student, 18 to 29-years old, insisted, “It worked out well less of commuting and more encouraging to speak with professors and classmates with a better environment and focus to continue studying.” A further example from a Hispanic female student, 18 to 29-years-old, confirmed, “Personally I think it worked better because there was more attention that the professor invested in the class. I have always took online classes prior to Covid and their time is always split because they teach in person as well but during Covid it felt much more helpful and useful!” Moreover, a Hispanic female student, 40-years or older, explained, “The teachers were excellent and the communication was excellent.” Another student, Hispanic—who preferred to not answer their gender—30 to 39-years-old, shared, “For my Spanish class she was break us down into groups allowing us to get to know each other and brainstorm without being interrupted by other groups.” Finally, a White Non-Hispanic female student, 40-years or older, declared, “I also believe that a lot of my classmates felt a family like sense in our classes. We had great communication amongst ourselves to where we would ask for

the help from each other if we did not quite get what the professor meant, or we would ask for clarification from the professor."

The semi-structured, individual interviews revealed similar experiences. Specifically, Kharissa confirmed, "Basically that loss of connection right there that made me feel disconnected from my instructor." Yet, there were a few examples of students taking the initiative to connect with students. For example, Savannah explained, "for a lot of my classes I was able to create group chats. Group chats are very helpful and it allowed me to actually feel like I'm talking to someone like I'm still in school. So yeah, the group chats were helpful." Tristan provided another instance of students creating group chats when he mentioned:

> Typically, the first day someone would just message that, some people sent out an email I think in Canvas to everyone like, "Hi, my name is..." For my last class, we created a group chat, a study guide as well. So, all my classes it was like that. So that was really helpful. One of them it was with the Canvas, but for the most part it outside. Sometimes, we exchanged phone numbers, but we did Whatsaps as well.

Finally, Isaiah pointed out the need for instructors to design courses in such a way that students have the ability to interact, highlighting:

> I felt like for online classes if you want it to be, if you want the students to do their best, if you want everyone to interact especially for classes like interact, like you need to interact more. You have to change the way it like you organize the class and interact with the students and it can be it has to be more engaging because even if people turn their cameras on, they can still be doing something else.

Implications

This study has provided essential, firsthand accounts from first-generation college students as a result of the sequential mixed-methodology data to support maintaining or increasing online course offerings, providing training for instructors to continue improving online courses, training to utilize embedded communication applications in the LMS to cultivate

connections between instructors and students and students with their classmates, and, lastly, exploring utilizing open educational resources to ensure access to class textbooks at no cost to students.

Online Course Offerings

Several low-income first-generation college students typically need to balance the autonomous demands of education along with the interconnected obligations of household responsibilities (Covarrubias et al., 2019; Telzer & Fuligni, 2009a, 2009b; Vasquez-Salgado et al., 2015). Often, FGCS' obligations include full-time employment to support their families and caretaking responsibilities of children and other family members. Moreover, FGCS may need to use public transportation, making the journey to campus grueling. Hence, increased online course offerings provide equitable access for FGCS to seek higher education while also meeting their personal obligations as it was clearly conveyed in the open-ended survey response when a Latino(a) male student, 18 to 29-years old, asserted, "Covid 19 is actually what caused me to enroll in college. Since online learning was made more accessible it motivated me to start."

Professional Development

Instructor knowledge and preparation in online instruction may be significant aspects when considering the COVID-19 ERT from an instructor viewpoint because of the necessity to quickly adjust to online teaching during an emergency (Walsh et al., 2021). Instructors who did not have training prior to the pandemic found it more difficult to engage students and cultivate the sense of community (Walsh et al., 2021). A Latino(a) female, 18 to 29-years old, pointed out on the open-ended survey:

> I felt like you can definitely tell between the good professors and the not-so-good professors by their work ethic. Most professors were struggling as we all were. However, I felt as if the one's who did not take the initiative to give extra support

> did not care or they did not receive the the support they needed for their workload and it showed.

On the other hand, Savannah, from the individual interviews indicated, "my Sociology professor was so organized that it almost seemed like her Canvas, like you know, literally seemed like it was like a programming bot." The discrepancies between the instructor's online course design training highlights the need to follow the 41 criteria in eight categories in the Quality Matter's (QM) rubric that outlines the requirements that must be accomplished based on an instruction design perspective on higher education and presupposes that clearly defined outcomes, objectives, and assessments are the foundation for student success in higher education (Swan et al., 2014). Implementing training for instructors based on a rubric, such as the QM rubric, would provide consistency for students enrolling in online courses. Furthermore, the pandemic illustrated the difficult transition for both instructors and students to suddenly shift from FtF to online instruction; therefore, on-going training for all instructors would likely make certain of a seamless shift when the next emergency, like COVID-19, arrives and mandates an immediate migration to the online setting.

Another vital element for success in the online setting is interaction between students and instructors; therefore, the ability to use technology tools and applications is essential for both instructors and students (Garad et al., 2021). The comments from the open-ended survey response clarified, "COVID-19 pandemic affected Human interaction" from Hispanic male, 40-years or older, and an Asian female, 18 to 29-years old, added, "harder to interact with instructional teams." Yet, a Latino(a) female, 18 to 29-years old, insisted, "Of course, if you had a question they were there to help you." Juliana, a student interviewed, agreed, "It was easier for me to ask questions." Learning management systems include communication tools with a messaging inbox, chat option, and other embedded communication applications, aside from

discussion boards. Hence, instructors should also receive training on how to utilize these communication tools to interact with students and to encourage students to interact with classmates. Online instruction will continue to be challenging and inaccessible without a solid understanding of these interaction technologies (Garad et al., 2021).

Considerations for Future Research

The CoI survey data and individual interviews with first-generation college students during the pandemic highlighted enrollment trends, the lack of instructor and peer interaction, instructor empathy, yet the perspectives were from one viewpoint—the students. Therefore, future research should examine post-COVID-19 enrollment patterns at higher education institutions, teaching strategies to promote interaction between instructor and students and students with their classmates, instructor empathy, and, lastly, how the pandemic affected instructors' perceptions on online instruction.

First, future research should examine any potential long-term effects on college enrollment as it pertains to a possible shift in preference for online instruction. All students should have access to higher education, and for some students, including first-generation college students, online courses are the best option to manage their studies in addition to other obligations—not to mention the potential transportation barriers. Moreover, students who indicated they preferred in-person instruction may have shifted their preference which future exploration may produce essential data for institutions to return to pre-pandemic enrollment levels as they may have a better understanding of which courses to offer online, or which courses to increase offering in the online setting. Next, to address the lack of interactions, researchers should explore instructional methodologies and communication applications to support regular and substantive interaction between instructors and students and students with their classmates.

Teaching strategies may include how to design and facilitate discussion boards. Additionally, communication applications should be examined since that provides an accessible tool to connect instructors and students, especially since they are embedded in institutions' LMSs.

Also, instructor empathy with their students should be explored to learn from instructors and students how it affected relationships, a sense of community, and learning outcomes. Furthermore, it would be beneficial to learn how instructors' empathy toward their students persisted throughout the pandemic and after the pandemic ceased to require mostly all online course offerings. Moreover, it would be instrumental to learn how instructor empathy affected students learning experiences. Finally, since this study focused only on students' perceptions of online instruction, further research should examine how the pandemic affected instructors' perceptions of online instruction. Research should focus on both experienced online instructors, prior to the pandemic, and instructors who had little to no online instruction experience.

Limitations

To keep the participants and researcher safe during study, since the pandemic had not officially ended, the survey was only provided electronically, and the interviews were only held using the Zoom platform. Some of the survey responses were duplicated, but they were removed prior to analyzing the data. There was only one interview in which the participant did not turn on the video-conferencing camera, so any non-verbal cues were unseen. Additionally, there was only one interview that had limited technological difficulties at the start of the interview; however, audio settings were utilized to ensure that the researcher and participant were able to hear one another.

Positionality

As a first-generation college student, from a low-income, Hispanic family, I have had personal experiences with the challenges, barriers, and feeling of isolation that FGCS experience when attempting to enter higher education identified by the FGCS in this study. To begin, my parents did not attend college; therefore, I was unable to seek any guidance from my parents regarding the subject of higher education even though they were my social network. This aligns with Savannah's experience, a participant in an individual interview, statement, "you know, our first-generation, we didn't have, like our parent to, like, give us these tips." Likewise, when Savannah shared, "I actually started my journey right after I had lost my father," I, too, began my pursuit to earn a bachelor's degree only after the sudden, tragic loss of my father.

When the pandemic required the transition from FtF classes to online instruction, I understood precisely the barriers that FGCS would experience in the online teaching and learning setting. Therefore, I utilized the CoI Framework so I might further understand how FGCS' perceptions of online teaching and learning may have changed during the pandemic. To remain objective, I implemented reflective thinking; thus, I took notes as the research was conducted, I took into consideration my academic experiences, and I analyzed how those perspectives might affect how I interpreted the findings (Creswell & Creswell, 2018). Moreover, I did not disclose my personal experiences to avoid jeopardizing the relevance of the material or methodology (Creswell & Creswell, 2018).

Conclusion

The Community of Inquiry Framework—teaching presence, social presence, and cognitive presence—defines the online collaborative learning experience within a community of inquiry as aspects related to teaching presence, social presence, and cognitive presence—it is a

framework intended to facilitate relevant online conversations (Garrison et al., 1999; Janus et al., 2021). The COVID-19 pandemic, however, launched instructors, students, and staff into a type of abyss in distance learning. In most cases, first-generation college students met this challenge with resiliency.

The objective of this study was to learn directly from first-generation college students how, if at all, their perceptions of online instruction changed during the pandemic. Even though there was a learning curve for both instructors and students as nearly everyone shifted to online teaching and learning, FGCS revealed their resiliency to adapt to online instruction. Moreover, while FGCS found it challenging to interact with their instructors and classmates, at times, they found it more comfortable asking instructors questions and they took the initiative to utilize communication applications to connect with classmates. Students also conveyed that instructors were compassionate as they, too, were experiencing difficulties much like students pertaining to learning how to navigate the institution's LMS or other online tools like Zoom and instructors were experiencing similar illnesses related to the COVID-19 virus.

This study determined that FGCS found higher education accessible; hence, they enrolled and completed more courses, or they returned to access higher education. Additionally, FGCS found the flexibility of online classes made it possible to maintain their employment—or increase hours—and manage any family caretaking and other personal responsibilities. They also found online classes convenient and enjoyed remaining in the comfort and safety of their homes. An additional advantage for FGCS enrolling in online classes was avoiding time in traffic and finding a parking space once they arrived on campus. As a result of the time saved driving to campus, battling traffic, searching, sometimes endlessly, for a parking space, FGCS instead used the time for their studies. FGCS enjoyed online classes, and some did indicate a shift in

preference from in-person classes to online classes. What innovations, advancements, and creative concepts will arise from this anguish and struggle in considering the COVID-19 pandemic?—What moment in history will people reminisce and say, “This is the moment that marked the invention of a new technology, the acceleration of an existing one, a change to the way individuals live or work, the creation of some great body of literature, or the development of another aspect of our culture, our society, or our lives?” (Kirkham, 2021).

APPENDIX A: INVITATION TO PARTICIPATE IN THE STUDY

(Survey)

Dear Participant,

My name is Jeanene Ames, and I am a doctoral candidate at the University of California, San Diego and California State University, San Marcos, Joint Doctoral Program in Educational Leadership. I am conducting research to learn about students' perceptions of online learning during the ongoing COVID-19 pandemic. I will use the Community of Inquiry Survey (Garrison, 2009) for the first phase of my explanatory sequential mixed-methods study. Students enrolled at our college any time during Spring 2020 – Fall 2022 are invited to participate in this survey.

The 29-question survey should take you approximately 10-15 minutes to complete. You are not required, but encouraged, to complete the survey. My final dissertation will include the findings of this confidential study.

Thank you for your interest and willingness to participate. The survey link for this study will expire in one month.

Respectfully,
Jeanene Ames, M.A.
Email: ames010@csusm.edu

Chair
Manuel P. Vargas
Professor of Educational Leadership
School of Education
California State University, San Marcos
https://www.csusm.edu/soe/graduate/edleadership/index.html

APPENDIX B: SURVEY INSTRUMENT

Q1
Dear Student,

My name is Jeanene Ames, and I am a doctoral candidate at the University of California, San Diego and California State University, San Marcos, Joint Doctoral Program in Educational Leadership.

I am conducting research to learn about students' perceptions of online learning during the COVID-19 pandemic.

Students enrolled at West Los Angeles College any time during Spring 2020 – Fall 2022 are invited to participate in this survey.

The 29-question survey should take you approximately 10-15 minutes to complete. You are not required, but encouraged, to complete the survey.

My final dissertation will include the findings of this confidential study.

Thank you for your interest and willingness to participate.

The survey link for this study will expire in one month.

Respectfully,
Jeanene Ames, M.A.
Email: ames010@csusm.edu

Chair
Manuel Vargas
Professor of Educational Leadership
School of Education California State University, San Marcos
https://www.csusm.edu/soe/faculty/directory.html

Q2 I agree to participate in this survey and I understand that the survey's findings will be used in the researcher's dissertation.

- Yes, I agree to participate in this survey and I understand that results will be used in the researcher's dissertation (1)
- No, I do not agree to participate in this survey (2)

Q3 I was enrolled in at least one (1) class at West Los Angeles College between Spring 2020 and Fall 2022.

- Yes (1)
- No (2)

Q4 How many online classes had you enrolled in and completed with a passing grade of at least a "C" before the COVID-19 pandemic?

- 1-4 (1)
- 5-8 (2)
- 9-12 (3)
- 13-16 (4)

Q5 How many online classes have you enrolled in and completed with a passing grade of at least a "C" during the COVID-19 pandemic?

- 1-4 (1)
- 5-8 (2)
- 9-12 (3)
- 13-16 (4)

Q6 What is your age?

- 17 or younger (1)
- 18 to 24 (2)
- 25 to 29 (3)
- 30 to 34 (4)
- 35 to 39 (5)
- 40 to 49 (6)
- 50 or older (7)

The following questions have been modified from the CoI Survey Questions

Q7 I understood directions from my instructors about how to participate in online discussion boards.

- Strongly agree (1)
- Somewhat agree (2)
- Neither agree nor disagree (3)
- Somewhat disagree (4)
- Strongly disagree (5)

Q8 My instructors explained class topics in a way that helped me to express my opinions in online discussion boards and on assignments.

- Strongly agree (1)
- Somewhat agree (2)
- Neither agree nor disagree (3)
- Somewhat disagree (4)
- Strongly disagree (5)

Q9 My instructors encouraged me to participate in online class discussion boards.

- Strongly agree (1)
- Somewhat agree (2)
- Neither agree nor disagree (3)
- Somewhat disagree (4)
- Strongly disagree (5)

Q10 My instructors' efforts improved my feelings of belonging in online classes (belonging is defined as feeling welcomed, included, and part of the class).

- Strongly agree (1)
- Somewhat agree (2)
- Neither agree nor disagree (3)

- Somewhat disagree (4)
- Strongly disagree (5)

Q11 My instructors continually gave me feedback that helped me understand my strengths and weaknesses about the purpose and goals of my online classes.

- Strongly agree (1)
- Somewhat agree (2)
- Neither agree nor disagree (3)
- Somewhat disagree (4)
- Strongly disagree (5)

Q12 Getting to know other students in my online classes made me feel like I belonged (belonged is defined as feeling welcomed, included, and part of the class).

- Strongly agree (1)
- Somewhat agree (2)
- Neither agree nor disagree (3)
- Somewhat disagree (4)
- Strongly disagree (5)

Q13 I was able to form different opinions about several students in my online classes.

- Strongly agree (1)
- Somewhat agree (2)
- Neither agree nor disagree (3)
- Somewhat disagree (4)
- Strongly disagree (5)

Q14 Discussion boards are a good way to communicate with other students and instructors in online classes.

- Strongly agree (1)
- Somewhat agree (2)
- Neither agree nor disagree (3)
- Somewhat disagree (4)
- Strongly disagree (5)

Q15 I felt comfortable participating in online class discussion boards.

- Strongly agree (1)
- Somewhat agree (2)
- Neither agree nor disagree (3)
- Somewhat disagree (4)
- Strongly disagree (5)

Q16 It was easy for me to have conversations with my classmates in online classes.

- Strongly agree (1)
- Somewhat agree (2)
- Neither agree nor disagree (3)
- Somewhat disagree (4)
- Strongly disagree (5)

Q17 I wasn't worried about upsetting my classmates in online classes when I disagreed with them because we had come to trust each other.

- Strongly agree (1)
- Somewhat agree (2)
- Neither agree nor disagree (3)

- Somewhat disagree (4)
- Strongly disagree (5)

Q18 I had the feeling that my classmates in online classes acknowledged my opinions.

- Strongly agree (1)
- Somewhat agree (2)
- Neither agree nor disagree (3)
- Somewhat disagree (4)
- Strongly disagree (5)

Q19 I think that participating in online discussion boards gave me a feeling of working together with my classmates.

- Strongly agree (1)
- Somewhat agree (2)
- Neither agree nor disagree (3)
- Somewhat disagree (4)
- Strongly disagree (5)

Q20 I found that using online discussion boards was a good way to understand many of my classmates' opinions.

- Strongly agree (1)
- Somewhat agree (2)
- Neither agree nor disagree (3)
- Somewhat disagree (4)
- Strongly disagree (5)

Q21 I was able to respond to online discussion board questions by using my opinions and new ideas from other classmates.

- Strongly agree (1)
- Somewhat agree (2)
- Neither agree nor disagree (3)
- Somewhat disagree (4)
- Strongly disagree (5)

Q22 Activities in my online classes helped me to do better on my assignments.

- Strongly agree (1)
- Somewhat agree (2)
- Neither agree nor disagree (3)
- Somewhat disagree (4)
- Strongly disagree (5)

Q23 Thinking about assigned class readings and participating in online discussion boards helped me to completely understand class assignments.

- Strongly agree (1)
- Somewhat agree (2)
- Neither agree nor disagree (3)
- Somewhat disagree (4)
- Strongly disagree (5)

Q24 Did the COVID-19 pandemic change how you enrolled in online classes?

- Yes, I took fewer classes (1)
- Yes, I enrolled at a different college (2)
- Yes, I did not enroll in any classes (3)
- No, I enrolled in the same number of online classes as I did before the pandemic (4)

Q25 How did the COVID-19 pandemic affect how things worked out in your online classes?

Q26 I identify my enrollment status as—select all that apply:

- First-Time Student—defined as a student enrolled for the first time after high school (1)
- First-Time Transfer Student—defined as student enrolled at West Los Angeles College for the first time and who transferred from another college or university (2)
- First-Generation College Student—defined as a student whose parents did not attend college (3)
- Returning Student—defined as a student enrolled at West Los Angeles College after an absence of one or more fall or spring semesters (4)
- Continuing-Generation College Student—defined as a student in college who has at least one parent or legal guardian who has earned a college degree (5)

Q27 I self-identify as:

- Cis Female (female at birth) (1)
- Cis Male (male at birth) (2)
- Non-binary (4)
- Transgender (5)
- Other (6)
- Prefer not to answer (7)

Q28 I identify my race/ethnicity as:

- African American (1)
- Alaskan Native (2)
- American Indian (3)
- Asian (4)
- Black (5)
- Filipino (6)
- Hispanic (7)
- Latino(a) (8)
- Pacific Islander (9)
- White Non-Hispanic (10)
- Two or More Races (11)
- Decline to State (12)

Q29 Are you willing to participate in an individual interview on Zoom for this study?

- Definitely not (1)
- Definitely yes (2)

Q30 Please provide your most current and best way of reaching you including your name, email address, and telephone number.

APPENDIX C: INVITATION TO PARTICIPATE IN THE STUDY

(Interviews)

Dear Participant,

My name is Jeanene Ames and I am a doctoral candidate at the University of California, San Diego and California State University, San Macros, Joint Doctoral Program in Educational Leadership. Thank you for completing the Community of Inquiry Survey. I am conducting research to learn how first-generation college students' perceptions of online teaching and learning during the ongoing COVID-19 may have changed.

I am contacting you to invite you to participate in an interview because you indicated on the survey that you are a first-generation college student and that you were enrolled in at least one class at our institution between Spring 2020 and Fall 2022. If you decide to participate, you will be invited to a Zoom interview to share your experiences in your online classes and with the institution.

I will use pseudonyms in place of students' names and the interviews will not be shared with anyone else, but only used for the purpose of my research. It is essential for instructors to hear directly from students what successes and challenges they have experienced in online classes and with the institution over the 2+ years.

If you have any questions about this process, please free to contact me by email at ames010@csusm.edu or leave a message at (310) 287-4508. If you are willing to participate, sign the consent form.

I look forward to hearing back from you.

Respectfully,
Jeanene Ames, M.A.
Email: ames010@csusm.edu

Chair
Manuel P. Vargas
Professor of Educational Leadership
School of Education
California State University, San Marcos
https://www.csusm.edu/soe/graduate/edleadership/index.html

APPENDIX D: CONSENT FORM TO PARTICIPATE IN RESEARCH

Invitation to Participate
My name is Jeanene Ames, and I am in my final year of the UCSD and CSUSM doctoral program for educational leadership. I am currently investigating how first-generation college students' perceptions of online learning were impacted by the COVID-19 pandemic.

This objective of this study is to understand how first-generation college students' participation and interactions with instructors and other students, during the pandemic, may have changed their opinion of online instruction. This research is significant to examine since first-generation college students may have been less likely than most other students to continue their education or successfully complete classes in the online setting throughout the pandemic. You are invited to participate in this study since you identify as a first-generation college student—that is a student whose parents did not attend college.

Description of Procedure
After you read and sign the consent form, I will contact you within 5-days to arrange a 60-75 minute interview. The following steps will be followed in this research:

- Interview: The interview includes a minimum of 60-minutes responding to approximately sixteen questions and reviewing your rights as a study participant.

Recordings and Transcripts
All interviews will be captured on both audio and video**.** The interview transcripts will be available for participants to check for accuracy. The transcripts will be delivered to the participants through secure email and returned following the participants' review.

Risks
The risks of participating in the research are minimal, consisting of:

- Becoming bored or tired during the interviews
- Becoming irritated or anxious responding to certain interview questions
- The possibility of confidentiality being compromised if an unauthorized person is present during interviews

Safeguards
To minimize risks, the following safeguard will be followed:

- The interview questions have been thoughtfully designed to be as brief as possible, and participants will be notified of the process in advance. At any point throughout the interview, participants have the option to pause, take a break, or end it altogether.
- Prior to the interview, participants will receive the interview questions to allow time to review them and choose not to answer any question that they have concerns answering. Participants will be directed to counseling options in their communities and the college in the event of a significant emotional response

Benefits
The primary investigator believes that your sincere participation will provide a significant understanding of first-generation college students actual experiences of online instruction during the pandemic, even though it will have little to no direct value for you.

Voluntary Participation
Your participation is completely voluntary and at any time may be withdrawn. You may also stop at any time if the length of the interview surpasses your availability. There will not be any unfavorable consequences, if you decide to not participate.

Questions and Contact Information
The Institutional Review Board (IRB) at California State University San Marcos has given its approval for this project. If you have any questions regarding the study, please contact Jeanene Ames, the primary investigator, at ames010@csusm.edu or (310) 287-4508, or Dr. Manuel Vargas, the primary investigator's chair, at mvargas@csusm.edu. Call the IRB at (760) 750-4029 with any inquiries you may have regarding your rights as a participant. A copy of this form will be provided to you to keep on hand.

- I agree to participate in the study
- I agree to be audio recorded
- I agree to be video recorded

Participant's Name:_____

Participant's Signature: _____

Date: _____

Primary Investigator's Signature: _____

Date: _____

APPENDIX E: INTERVIEW PROTOCOL

I would like to ask you about your thoughts and feelings based on the online classes you took during the pandemic. **Specifically, the online classes you have taken since Spring 2020.**

First, I will ask you about the way your online classes were organized.

1. What do you think one or more of the classes did well in terms of organization?
2. Tell me about how the organization of the class or classes helped you?
3. What do you think one or more of the classes did not do well in terms of organization?
4. Tell me about how the organization of the class or classes hindered you?
5. Can you think of other ways that online classes could be improved?

Now, I would like to know more about your interpersonal relationships in the online classes you took during the pandemic.

First, I have questions about your thoughts and feelings about your relationships with your online instructors.

1. In general, do you feel like you got to know your instructors well?
2. Can you give me a few examples of classes in which you felt a connection with the instructor?
3. Tell me why you felt this connection. What did the instructors do to make you feel connected?
4. Can you give me a few examples of classes in which you did not feel a connection with the instructor?
5. Tell me why you felt disconnected from the instructor.
6. Can you think of some other ways that online instructors' connection with their students be improved?

Now, I have questions about your thoughts and feelings about your relationships with the students in the online classes you took during the pandemic.

1. In general, do you feel like you got to know your classmates well?
    a. If yes, how did you get to know your classmates?
    b. If not, why not?
2. In general, what could instructors do to help students get to know one another better?

Finally, a few questions about your preference of enrolling in in-person or online classes.

1. Before the pandemic, did you take online classes?
    a. If not, why not?
    b. If yes, why?
2. Going forward, do you want to continue taking online classes?
    a. If not, why not?

    b. If yes, why?
3. What aspects of in-person classes would you like to see more of in online classes?

APPENDIX F: STATISTIC ANALYSIS TABLES

Statistical Significance Data

Demographic	Survey Question	P-Value	Cramer's V
FGCS			
	Q5: How many online classes have you enrolled in and completed with a passing grade of at least a "C" during the COVID-19 pandemic?	<.001	0.123
Gender			
	Q12: Getting to know other students in my online classes made me feel like I belonged (belonged is defined as feeling welcomed, included, and part of the class).	<.001	0.145
Age			
	Q8: My instructors explained class topics in a way that helped me to express my opinions in online discussion boards and on assignments.	<.001	0.106
	Q10: My instructors' efforts improved my feelings of belonging in online classes (belonging is defined as feeling welcomed, included, and part of the class).	<.001	0.115
Race/Ethnicity			
	Q8: My instructors explained class topics in a way that helped me to express my opinions in online discussion boards and on assignments.	0.031	0.101
	Q10: My instructors' efforts improved my feelings of belonging in online classes (belonging is defined as feeling welcomed, included, and part of the class).	0.007	0.116
	Q11: My instructors continually gave me feedback that helped me understand my strengths and weaknesses about the purpose and goals of my online classes.	<.001	0.150
	Q12: Getting to know other students in my online classes made me feel like I belonged (belonged is defined as feeling welcomed, included, and part of the class).	0.025	0.104

Demographic	Survey Question	P-Value	Cramer's V
	Q13: I was able to form different opinions about several students in my online classes.	0.011	0.112
	Q14: Discussion boards are a good way to communicate with other students and instructors in online classes.	<.001	0.136
	Q16: It was easy for me to have conversations with my classmates in online classes.	0.029	0.102
	Q19: I think that participating in online discussion boards gave me a feeling of working together with my classmates.	0.025	0.103
	Q20: I found that using online discussion boards was a good way to understand many of my classmates' opinions.	<.001	0.138
	Q21: I was able to respond to online discussion board questions by using my opinions and new ideas from other classmates.	<.001	0.138

Spearman's Correlations: Course Design

Survey Questions	Demographics	Spearman's rho	P-value
Q7: I understood directions from my instructors about how to participate in online discussion boards.	All participants	0.626	<.001
Q8: My instructors explained class topics in a way that helped me to express my opinions in online discussion boards and on assignments.	FGCS	0.700	<.001
	Non-FGCS	---	---
Q8: My instructors explained class topics in a way that helped me to express my opinions in online discussion boards and on assignments.	All participants	0.617	<.001
Q11: My instructors continually gave me feedback that helped me understand my strengths and weaknesses about the purpose and goals of my online classes.	FGCS	0.607	<.001
	Non-FGCS	0.621	<.001

Survey Questions	Demographics	Spearman's rho	P-value
Q20: I found that using online discussion boards was a good way to understand many of my classmates' opinions. Q22: Activities in my online classes helped me to do better on my assignments.	All participants	0.614	<.001
	FGCS	0.622	<.001
	Non-FGCS	0.610	<.001
Q20: I found that using online discussion boards was a good way to understand many of my classmates' opinions. Q23: Thinking about assigned class readings and participating in online discussion boards helped me to completely understand class assignments.	All participants	---	---
	FGCS	---	---
	Non-FGCS	0.613	<.001
Q22: Activities in my online classes helped me to do better on my assignments. Q23: Thinking about assigned class readings and participating in online discussion boards helped me to completely understand class assignments.	All participants	0.677	<.001
	FGCS	0.679	<.001
	Non-FGCS	0.673	<.001

Spearman's Correlations: Instructor Interaction

Survey Questions	Demographics	Spearman's rho	P-value
Q8: My instructors explained class topics in a way that helped me to express my opinions in online discussion boards and on assignments. Q11: My instructors continually gave me feedback that helped me understand my strengths and weaknesses about the purpose and goals of my online classes.	All participants	0.617	<.001
	FGCS	0.607	<.001
	Non-FGCS	0.621	<.001
Q8: My instructors explained class topics in a way that helped me to express my opinions in online discussion boards and on assignments. Q9: My instructors encouraged me to participate in online class discussion boards.	All participants	---	---
	FGCS	---	---

Survey Questions	Demographics	Spearman's rho	P-value
	Non-FGCS	0.617	<.001
Q8: My instructors explained class topics in a way that helped me to express my opinions in online discussion boards and on assignments.	All participants	0.635	<.001
Q10: My instructors' efforts improved my feelings of belonging in online classes (belonging is defined as feeling welcomed, included, and part of the class).	FGCS	0.625	<.001
	Non-FGCS	0.648	<.001
Q11: My instructors continually gave me feedback that helped me understand my strengths and weaknesses about the purpose and goals of my online classes.	All participants	0.648	<.001
Q10: My instructors' efforts improved my feelings of belonging in online classes (belonging is defined as feeling welcomed, included, and part of the class).	FGCS	0.662	<.001
	Non-FGCS	0.645	<.001

Spearman's Correlations: Student Interaction

Survey Questions	Demographics	Spearman's rho	P-value
Q12: Getting to know other students in my online classes made me feel like I belonged (belonged is defined as feeling welcomed, included, and part of the class).	All participants	0.610	<.001
Q13: I was able to form different opinions about several students in my online classes.	FGCS	---	---
	Non-FGCS	0.621	<.001
Q12: Getting to know other students in my online classes made me feel like I belonged (belonged is defined as feeling welcomed, included, and part of the class).	All participants	0.619	<.001
Q16: It was easy for me to have conversations with my classmates in online classes.	FGCS	0.605	<.001
	Non-FGCS	0.620	<.001
Q12: Getting to know other students in my online classes made me feel like I belonged	All participants	0.625	<.001

Survey Questions	Demographics	Spearman's rho	P-value
(belonged is defined as feeling welcomed, included, and part of the class).			
Q19: I think that participating in online discussion boards gave me a feeling of working together with my classmates.	FGCS	0.647	<.001
	Non-FGCS	0.608	<.001
Q14: Discussion boards are a good way to communicate with other students and instructors in online classes.	All participants	0.623	<.001
Q19: I think that participating in online discussion boards gave me a feeling of working together with my classmates.	FGCS	0.641	<.001
	Non-FGCS	0.617	<.001
Q14: Discussion boards are a good way to communicate with other students and instructors in online classes.	All participants	0.615	<.001
Q20: I found that using online discussion boards was a good way to understand many of my classmates' opinions.	FGCS	0.672	<.001
	Non-FGCS	---	---
Q16: It was easy for me to have conversations with my classmates in online classes.	All participants	0.630	<.001
Q18: I had the feeling that my classmates in online classes acknowledged my opinions.	FGCS	0.616	<.001
	Non-FGCS	0.638	<.001
Q16: It was easy for me to have conversations with my classmates in online classes.	All participants	0.667	<.001
Q19: I think that participating in online discussion boards gave me a feeling of working together with my classmates.	FGCS	0.645	<.001
	Non-FGCS	0.679	<.001
Q17: I wasn't worried about upsetting my classmates in online classes when I disagreed with them because we had come to trust each other.	All participants	0.655	<.001

Survey Questions	Demographics	Spearman's rho	P-value
Q18: I had the feeling that my classmates in online classes acknowledged my opinions.	FGCS	0.644	<.001
	Non-FGCS	0.661	<.001
Q18: I had the feeling that my classmates in online classes acknowledged my opinions. Q19: I think that participating in online discussion boards gave me a feeling of working together with my classmates.	All participants	0.709	<.001
	FGCS	0.681	<.001
	Non-FGCS	0.723	<.001
Q18: I had the feeling that my classmates in online classes acknowledged my opinions. Q20: I found that using online discussion boards was a good way to understand many of my classmates' opinions.	All participants	0.626	<.001
	FGCS	0.632	<.001
	Non-FGCS	0.624	<.001
Q18: I had the feeling that my classmates in online classes acknowledged my opinions. Q21: I was able to respond to online discussion board questions by using my opinions and new ideas from other classmates.	All participants	0.616	<.001
	FGCS	---	---
	Non-FGCS	0.643	<.001
Q19: I think that participating in online discussion boards gave me a feeling of working together with my classmates. Q20: I found that using online discussion boards was a good way to understand many of my classmates' opinions.	All participants	0.719	<.001
	FGCS	0.722	<.001
	Non-FGCS	0.717	<.001
Q19: I think that participating in online discussion boards gave me a feeling of working together with my classmates. Q21: I was able to respond to online discussion board questions by using my opinions and new ideas from other classmates.	All participants	0.660	<.001
	FGCS	---	---

Survey Questions	Demographics	Spearman's rho	P-value
	Non-FGCS	0.701	<.001
Q20: I found that using online discussion boards was a good way to understand many of my classmates' opinions.	All participants	0.720	<.001
Q21: I was able to respond to online discussion board questions by using my opinions and new ideas from other classmates.	FGCS	0.722	<.001
	Non-FGCS	0.719	<.001

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