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Liberal Arts Colleges And Covid-19: A Quantitative Study Of Student Perceptions And Experiences During The Pandemic

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LIBERAL ARTS COLLEGES AND COVID-19:
A QUANTITATIVE STUDY OF STUDENT PERCEPTIONS AND EXPERIENCES
DURING THE PANDEMIC

A Dissertation

Presented to the

The Faculty of the School of Education

The College of William and Mary in Virginia

In Partial Fulfillment
Of the Requirements for the Degree
Doctor of Philosophy

By
Ashleigh M. Brock
November 2021

LIBERAL ARTS COLLEGES AND COVID-19:
A QUANTITATIVE STUDY OF STUDENT PERCEPTIONS AND EXPERIENCES
DURING THE PANDEMIC

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Dedication

To my daughters, Emma Grace and Hannah Michelle: may you grow up to be smart, brave, and kind. Know that nearly anything is possible with passion, purpose, and hard work. I love you.

And to you, Mom, for inspiring me to never, ever give up.

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Having completed a dissertation, I now understand that while the process can be profoundly lonely, one is never actually doing the work alone. I have reached this educational milestone in part due to the unyielding support and love of a village of people who sustained me through several of the most difficult years of my life.

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Table of Contents

Chapter 1: Introduction	2
Understanding the Student Experience	3
Consequences for Institutions	5
A Parallel Crisis	7
Statement of the Research Problem	9
Statement of Purpose and Research Questions	10
Conceptual Framework	11
Mezirow's Disorienting Dilemma	12
Schlossberg's Transition Theory	13
Organizational Adaptation	17
Key Elements of Liberal Arts Colleges	20
Understanding Transition for Students and Institutions	21
Significance of the Study	21
Definition of Terms	22
Summary	24
Chapter 2: Literature Review	25
Contextualizing Liberal Arts Colleges	25
Brief History and Defining Qualities	26
Establishing a Definition	31
Struggles and Crises	34
LAC Financial Model and Enrollment Challenges	34

Curricular Challenges and Market Positioning	37
The Debate Over Outcomes.....	39
Positioning LACs as Learning Organizations.....	42
College Student Experiences with Campus-Wide Crises	45
Natural Disasters	46
Severe Acute Respiratory Syndrome Epidemic.....	52
Understanding Institutions in the Wake of Crises	54
A Case for Considering Personal Effects of Disaster	54
Emerging COVID-19 Pandemic Research	57
Considering National Data.....	57
Institutional Operating Modes During Fall 2020.....	59
Evaluating the Pandemic Experience.....	61
U.S. and International Research.....	64
The Urgency of Mental Health	64
The Transition to Online Education.....	66
Summary	68
Chapter 3: Methods	70
Research Questions	70
Selection of Quantitative Methodology	71
Study Population and Participants	72
Data Source	74
Data Collection and Instrumentation	75
Instrument Items	76

Fall 2020 Educational Circumstances.....	77
Pandemic Disruption.....	78
Liberal Arts College Elements.....	79
Sense of Belonging	79
Participant Demographics.....	81
Validity, Reliability, and Piloting the Survey	82
Data Analysis	84
Methods Applied to Research Question 1	84
Methods Applied to Research Question 2	85
Delimitations and Limitations.....	86
Delimitations.....	86
Limitations	87
Limitations of Dataset.....	89
Chapter 4: Results	90
Preliminary Screening.....	90
Sample Characteristics.....	91
Testing Reliability of the Liberal Arts College Elements.....	95
Research Question 1	99
Research Question 1a.....	100
Testing Assumptions for ANOVAs	101
Testing LACE Scores and Course Delivery Modes	102
LACE Items and Fall 2020 Living Arrangements.....	104
LACE Composite Scores and Student Demographics.....	106

Testing the LACE Items With Student Pandemic Disruption	109
Summary of Research Question 1 Findings.....	113
Research Question 2	114
Fall 2020 Circumstances, Sense of Belonging, and Intent to Graduate.....	115
Fall 2020 Course Delivery Modes	115
Fall 2020 Living Arrangements	118
Sense of Belonging, Intent to Graduate, and Demographic Characteristics.....	119
Summary of Research Question 2 Findings.....	121
Statistical Results Summary	122
Chapter 5: Discussion	124
Study Sample, Data Collection, and Researcher Positionality	125
Discussion of Results.....	127
Elements of a Liberal Arts College Experience.....	128
Fall 2020 Situational Factors	129
The Impact of Course Delivery Mode	130
Liberal Arts Experience at Home	132
Student Demographics	133
Quantifying Pandemic Disruption	136
Belonging in a Time of Disconnection	138
Fall Situational Factors and Sense of Belonging	139
Student Demographics and Sense of Belonging.....	140
Commitment to Graduation	142
COVID-19 and Organizational Adaptation	143

Domain Defense.....	144
Domain Offense	145
Domain Creation	146
Implications for Future Research and Practice	148
Implications for Future Research.....	148
Implications for Practice	151
Conclusion	157
References	160
Appendices.....	183
Appendix A: Survey Instrument	183
Appendix B: Survey Invitation and Reminder Email Drafts	190
Vita.....	192

List of Tables

Table 1. <i>Institutions Comprising Study Population</i>	73
Table 2. <i>Characteristics of the Sample</i>	92
Table 3. <i>Demographic Comparison by School</i>	93
Table 4. <i>Learning Modes in Fall Semester 2020</i>	95
Table 5. <i>Liberal Arts College Elements (LACE): Survey Items and Purpose</i>	97
Table 6. <i>Liberal Arts College Elements (LACE): Reliability Results</i>	98
Table 7. <i>Liberal Arts College Elements (LACE) Composite Variable Summary</i>	98
Table 8. <i>Fall 2020 LACE Scores by Course Delivery Mode</i>	103
Table 9. <i>LACE Scores by Course Delivery Mode in Fall 2020</i>	104
Table 10. <i>Liberal Arts College Elements (LACE) Scores by Fall 2020 Living Arrangements</i> ..	105
Table 11. <i>Participant Responses to Racial Identity Survey Item</i>	108
Table 12. <i>COVID-19 Disruption Scale: Visual Binning Results</i>	110
Table 13. <i>Fall 2020 LACE Score Means by Reported Pandemic Disruption</i>	111
Table 14. <i>Predicted Post-Pandemic LACE Score Means by Reported Pandemic Disruption</i> ..	112
Table 15. <i>MANOVA Results: Sense of Belonging and Fall 2020 Course Delivery Modes</i>	116
Table 16. <i>Sense of Belonging and Intent to Graduate by Fall 2020 Course Delivery Mode</i>	117
Table 17. <i>MANOVA Results: Sense of Belonging and Fall 2020 Living Arrangements</i>	119
Table 18. <i>Belonging and Intent to Graduate Scores by Fall 2020 Living Arrangements</i>	119
Table 19. <i>Belonging and Intent to Graduate Scores by Racial Identity</i>	120
Table 20. <i>MANOVA Results: Sense of Belonging and Racial Identity</i>	121
Table 21. <i>Statistical Results Summary</i>	123

List of Figures

Figure 1. <i>Visualizing Schlossberg's Transition Theory</i>	14
Figure 2. <i>Frequency Distributions of COVID-19 Disruption Scale</i>	110
Figure 3. <i>Mean LACE Composite Scores Over Time: Returning Students</i>	113

Abstract

The COVID-19 pandemic substantially disrupted normal operations at liberal arts colleges (LACs) across the United States, as well as the lives and educational trajectories of their undergraduate students. This dissertation collected data from 775 undergraduate LAC students enrolled in two colleges in the U.S. South during the spring 2021 semester about their fall 2020 semester pandemic college experiences. The purpose of this study was to elicit students' perspectives on their LACs and the college experience during the pandemic— as well as their reported sense of belonging and intent to graduate from their current institution— in order to identify potential short- and long-term implications for LACs. This study identifies seven key liberal arts college elements that students reported consistently valuing before and during the pandemic. A majority of study participants indicated the LAC elements would be more important to them after the pandemic than before it. Despite a range of classroom experiences that included both online and hybrid options, as well as variations in living arrangements including living at home, participants consistently reported moderate to strong sense of belonging to their college communities, and more than 90% of participants intend to graduate from their current institutions. These findings contrast with the substantial personal disruption students reported was due to the pandemic, with a mean score of 7.5 out of 10 on a COVID-19 disruption scale for all participants. Implications for practice and recommendations for future research are offered to support LAC faculty, staff, and administrators seeking to learn from the pandemic student experience.

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CHAPTER 1

INTRODUCTION

In March 2020, for the first time since World War II, a global crisis struck the whole of higher education; a novel coronavirus, which came to be known as COVID-19, began its dark march across the United States, unfurling a national public health crisis in its wake. In January 2020, the United States had reported just 11 confirmed cases of COVID-19. As of November 2021, the United States has documented nearly 46 million cases of COVID-19 and more than 746,000 Americans have died due to the virus itself or related complications (Johns Hopkins University & Medicine, 2021). This swift escalation of COVID-19 cases over the course of 2020 and 2021 has massively disrupted traditional college and university academic calendars and generated a great deal of panic across higher education. Beginning in March 2020, colleges and universities across the country made rapid decisions to shutter campuses and pivot to online learning (Fain, 2020). Never in the modern era has an existential threat impacted so many institutions, so fast, and so indiscriminately—from community colleges to the Ivy League, institution leaders and governing boards faced a series of decisions for which most were completely unprepared.

The decisions university and college leaders made beginning in March 2020, layered with the personal impacts of COVID-19 on individuals and families, undoubtedly interrupted the continuum of the college experience for many students enrolled in United States higher education institutions. Early research on the impacts of COVID-19 has shown a range of

responses on the part of college students and their families to the pandemic (University of Southern California-Dornsife Center for Economic and Social Research [USC-Dornsife], 2020). During summer 2020, only 2% of returning college students reported they would not be enrolling for the Fall 2020 semester, and 3% indicated plans to transfer. Of those who enrolled in higher education in March 2020, 23% indicated increased family responsibilities during the pandemic, and 28% reported a desire to be close to home (USC-Dornsife, 2020). The enrollment picture darkened considerably for students and institutions once the Fall 2020 semester got underway. The National Student Clearinghouse Research Center (NSCRC, 2020) found the undergraduate population nationwide shrank by 4%, and incoming first-year enrollment decreased by 16.1% across all sectors of American higher education and by 11.8% among private, nonprofit colleges. First-year students reported interrupting their college-going plans for a number of reasons, including not wanting to take their classes online, fears about travel to parts of the U.S. considered COVID-19 hotspots, and the financial and personal strains of the pandemic on themselves and their families (NSCRC, 2020). Given the ongoing nature of the crisis, students likely continued experiencing changes in their personal and academic lives throughout the 2020-21 academic year and beyond, with ripple effects and lasting impacts for U.S. colleges and universities.

Understanding the Student Experience

The pandemic has transformed the day-to-day experiences of college and university students currently enrolled in U.S. colleges and universities. Terms like “Covid parties,” referring to gatherings where students intentionally seek to spread the virus, and “Zoom fatigue,” feelings of exhaustion associated with hours of online learning and interaction, have become part of a new lexicon that aids the public in understanding what it is like to attend colleges and

universities during this unprecedented time (Farr, 2020). And while media coverage of the pandemic's effects on college campuses was widespread, researchers have just begun gathering empirical data to help higher education researchers and educators understand how students are navigating their college experiences during the pandemic and processing the ways their institutions have adapted to academic life with the virus. Early empirical indicators, however, make clear the pandemic has negatively affected college students in a host of ways. A Dartmouth study (Huckins et al., 2020) focused on student mental health found college students were more depressed and anxious during the Spring 2020 semester than during similar time frames in other academic years. Sedentary behavior also increased dramatically since the public health crisis began according to smartphone sensing data collected in the study (Huckins et al., 2020). A Gallup and Lumina Foundation poll (2020) found one third of students enrolled in college during Fall 2020 considered withdrawing from courses, citing reasons that most frequently included emotional stress and COVID-19.

Research has also demonstrated the pandemic's disproportionately negative effects on low-income communities and communities of color when compared to Whiter, wealthier demographic cohorts (Millet et al., 2020; Price-Haygood et al., 2020). These disparities are the result of many interconnected factors, including: uneven access to healthcare, including preventative care in the United States; the proportion of low-income and racial minority communities working in higher-risk sectors of the economy during the pandemic; housing insecurity and higher individual housing unit occupancy among disadvantaged groups; and persistent income, educational, and wealth gaps among racial and socioeconomic groups (Centers for Disease Control and Prevention [CDC], 2020a). The USC-Dornsife (2020) study data parallel national research regarding negative effects of the pandemic on college students of

color and low-income students, who in general were much more likely to decrease the number of classes taken in fall 2020 as compared to wealthier and White counterparts. Black and Hispanic students were the most likely among racial groups to say COVID-19 would impact their ability to complete their college degree, and Black and first-generation students were the least likely groups to report their institutions' student support services were adequate during the Fall 2020 semester (Gallup & Lumina Foundation, 2020). These data suggest first-generation, low-income college students and students who identify as members of underrepresented racial groups may experience different or more pronounced negative effects on their college experiences when compared to their White and mid-to-upper income peers.

The COVID-19 pandemic has undoubtedly presented many college students with significant personal challenges that must be managed while they pursue their degrees. Some students have navigated personal obstacles during the pandemic—such as falling ill themselves, experiencing parental or personal job loss, or becoming responsible for the care of family members, children, or partners—while others have experienced few or no negative personal experiences directly related to the pandemic. The degree to which COVID-19 has affected college students personally may influence both their navigation of the pandemic college experience as well as how they respond to their institutions' contingency plans for learning, though no studies have yet investigated this potential relationship.

Consequences for Institutions

In addition to its effects on students currently enrolled in U.S. colleges and universities, the COVID-19 pandemic has universally disrupted U.S. higher education institutions, forcing many colleges and universities to evaluate and make dramatic changes to continue to operate. Higher education institutions lost more than 400,000 employees, or roughly 10% of its

workforce, between February and September 2020, the largest workforce reduction recorded in higher education since the U.S. Bureau of Labor Statistics began collecting its data in the 1950s (Bauman, 2020). As on-campus operations were reduced or halted entirely beginning in March 2020, hundreds of colleges and universities were forced to implement online-only education for the first time and move majorities of faculty and administrative professional staff to fully remote work, with inadequate technological resources in place to buttress such changes (McMurtrie, 2020). Higher education as an industry is well-known for being slow to change and adapt to new technologies, making adaptations necessitated by the pandemic a herculean challenge for many institutions (Blumenstyk, 2020). In the absence of the COVID-19 pandemic—a potential once-in-a-lifetime occurrence—such transformative operational changes would likely not have taken place in the near term, particularly among elite institutions with little impetus for major modifications to their operations.

The pandemic initiated a proverbial shock to the system of U.S. higher education, prompting changes that, while difficult, have also introduced institutions to newfound capabilities, pedagogical methods, and service delivery options, many of which may be accompanied by significant cost savings (Blumenstyk, 2020). In an industry plagued by financial struggles and facing foreboding demographic trends regarding the college-bound population in the U.S. (Grawe, 2018), the pandemic may offer institutions new ways of thinking about how they operate and deliver on their educational missions. The possibilities for institutional improvements and transformations brought about by the pandemic warrants close examination of individual institutions' operating conditions and whether the pandemic has altered their current students' behaviors and decision-making. These observations in combination—lessons gleaned from emergency operational changes and their resulting impacts on both students' experiences

and behaviors and the overall financial health of colleges and universities—will aid leaders in higher education institutions in determining how best to move beyond the pandemic and build back more resilient to crises and disasters.

Careful examination of institutional responses and adaptations to the pandemic, made in haste to sustain educational missions and operational viability in the short-term, may present longer term implications and opportunities regarding where colleges and universities should invest and seek to build resilience for a post-pandemic future. And while higher education administrators and leaders may fervently hope COVID-19 is a once-in-a-lifetime disruption, how they work and learn from their own pandemic responses will aid institutions when other types of crises—including natural disasters, school shootings, and other infectious disease events—inevitably occur.

A Parallel Crisis

For American institutions of higher education, the COVID-19 pandemic has compounded significant ongoing challenges facing leaders in all post-secondary educational sectors. Public opinion polling indicates more than half of all Americans believe U.S. higher education is headed in the wrong direction, citing reasons such as rising tuition costs and a failure to prepare graduates for the workforce (A. Brown, 2018). While more Americans than ever in history are graduating from college according to data from the U.S. Census Bureau (Wilson, 2017), the economy awaiting college graduates has tightened in the aftermath of the 2008 Great Recession, depressing the labor market and making it difficult for many bachelor's degree recipients to find jobs (Selingo, 2017). Many college graduates in the last few decades have also paid an exorbitant cost for their degrees, while accumulating crushing student loan debt they will carry throughout their lives (Strassmann, 2019). The average debt per bachelor's degree recipient in 2019 was

\$28,800 (Ma et al., 2020). As a result of these realities, public opinion toward U.S. higher education is trending negative, and colleges and universities have become favored, proverbial punching bags for politicians and pundits alike, especially as the U.S. grapples with its unprecedented levels of economic inequality and uncertainty (A. Brown, 2018). This toxic mix of realities for American colleges and universities, combined with declining U.S. birth rates that in 2025 will begin to substantially impact the number of high school graduates planning to enroll in higher education (Grawe, 2017), has left many institutions facing dire circumstances and some with no options at all beyond closure or merger. According to research tracking major closings, mergers, and acquisitions in higher education, more than 60 colleges and universities across the United States have closed or merged since 2016 (Education Dive, 2020).

Although these pressures are felt across higher education, they are perhaps most acute in the 4-year private college sector of American higher education, in which most American liberal arts colleges (LACs) are situated (Eide, 2020). For the purposes of the current study, I have adopted the following definition of *liberal arts college*: a small higher education institution that enrolls primarily undergraduates, anchored by a core liberal arts curriculum and an emphasis on close student-faculty interaction in a residential campus environment. LACs, by and large, are small enterprises reliant on consistent enrollments and their resulting student tuition, room and board fees in order to remain in operation. The combination of existing economic and demographic challenges, including tuition prices continually rising faster than inflation with little sign of abating, has left many LACs with difficult choices, such as cutting academic programs, adding professional or vocational degrees to generate revenue, and increasing enrollment size (Eide, 2020). These types of operational changes, while potentially lifesaving to small schools struggling against mounting challenges, can fundamentally shift the character and academic core

of liberal arts colleges. And the COVID-19 pandemic, for many of these institutions, is accelerant on a fire of problems with only difficult solutions.

Statement of the Research Problem

As a field, higher education has only just begun to grapple with understanding the COVID-19 pandemic and the ways in which it has disrupted and continues to disrupt the academic and co-curricular experiences of college students and institutional operations across the country. Due to its scale, no prior disaster in modern times provides researchers with a proxy for considering the pandemic's effects on students and their colleges and universities. At the time of writing in summer 2021, COVID-19 vaccines are being distributed but overall vaccination rates across the United States have plateaued, and the total case numbers, positivity percentages, and daily death tolls are trending higher as the U.S. faces its fourth pandemic surge (Martinez, 2021). As such, university and college leaders in the short-term will continue to live with COVID-19 as crucial context for their work, while simultaneously seeking to identify the ways it is impacting the campus communities they are charged to lead. For LACs in particular, the stresses created by the pandemic compound many of the challenges that existed before the pandemic. These small, enrollment-driven institutions that prize in-person educational delivery and residential campus environments face significant threats from the pandemic and its aftereffects, which have substantially altered their students' experiences during the 2020-2021 academic year. The need for research about college students during the pandemic will remain critical in order to effectively serve current students and enable their persistence, deliver on educational missions, and build stronger, more resilient institutions for a post-pandemic future. And in particular, research centered in LAC settings that aims to learn from the massive disruption of the COVID-

19 pandemic in order to identify short- and long-term paths to creating more resilient and sustainable institutions will be critically important in the months and years ahead.

Statement of Purpose and Research Questions

The purpose of this study was to understand in real time students' perspectives of their liberal arts colleges, as well as their sense of belonging to and intention to remain at their current school, during the COVID-19 pandemic to forecast potential short- and long-term implications for this niche of higher education. Students who were enrolled in LACs during the pandemic almost certainly navigated college environments and experiences that differed substantially from their pre-pandemic college life and those experiences are likely to vary as the pandemic continues. I investigated whether students' perspectives about their LAC experiences, the reported sense of belonging and indications of their plans to remain at their current institutions differ significantly across demographic characteristics, including race, socioeconomic status, and country of origin. In line with research literature on individual and college student experiences of disruption due to natural disasters, I also considered whether students' self-identified degree of personal disruption caused by the COVID-19 pandemic is related to their LAC perceptions, sense of belonging, and plans to graduate from their current school. In so doing, I sought to identify potential retention challenges for LACs during and after the pandemic. Given the critical nature of enrollment projections for small colleges, understanding the potential retention impacts of the pandemic—and the broader implications for retention of students during major crises or disruptions—these data may prove significant for LAC leaders. Conclusions drawn from this study are intended to assist LACs in building stronger and more resilient institutions for a post-pandemic future. To this end, I explored the following research questions:

RQ1. To what degree do current students value key elements of their LAC experience during the COVID-19 pandemic?

RQ1a. Do student perspectives about their liberal arts college experiences during the pandemic differ significantly based on (a) their Fall 2020 educational circumstances (e.g., school operating status, living situation); (b) the demographic groups to which they belong; or (c) the level of personal disruption they report the pandemic has caused?

RQ2: To what degree do LAC students report a sense of belonging and intention to remain at their current institutions during the COVID-19 pandemic?

RQ2a. Does students' reported sense of belonging differ based on their (a) Fall 2020 educational circumstances or (b) demographic characteristics?

RQ2b. Does students' reported intention to remain at their current institution differ based on their (a) Fall 2020 educational circumstances or (b) demographic characteristics?

The goal of answering these questions is to assist institutions in understanding their students' experiences during the COVID-19 pandemic in real time; to forecast potential near-term effects regarding student retention; and to consider what lessons can be learned from the ongoing response to the pandemic to inform efforts to build stronger, more effective, and more resilient LACs after the pandemic has ended.

Conceptual Framework

Students enrolled in LACs during the pandemic are, to some degree, students in transition. To understand the implications of the pandemic more fully for higher education institutions, it is important to further consider how students are experiencing the transitions

imposed by this crisis. Students may have experienced a spectrum of changes unique to both their institutions and personal circumstances that subtly or more dramatically shifted patterns of thought, beliefs, and perspectives during and beyond the pandemic. Similarly, LACs are institutions in transition during the pandemic, forced to reckon with untenable conditions for undergraduate education and consequential operational decision-making with the potential for short- and long-term effects. To better understand and interpret data collected from LAC students in this study and identify implications for liberal arts institutions themselves, I offer a conceptual framework that incorporates theoretical and conceptual elements to understand both students and institutions experiencing transition and change during the pandemic: Mezirow's (1978) transformative learning theory, Schlossberg's (1981) transition theory, and Cameron's (1984) concept of organizational adaptation. I also offered a construct for understanding the key elements of LAC experiences, which current students may have experienced as altered, muted, or unavailable during the pandemic.

Mezirow's Disorienting Dilemma. For students enrolled in LACs, the pandemic represented a disruption to their undergraduate college experiences, which may have resulted in changes of varying magnitudes based on their individual circumstances. Mezirow's (1978) theory of transformative learning offers insights into how adult learners learn and grow when they encounter shifts in their patterns of thought typically resulting from a range of life changes. The theory of transformative learning emerged from a qualitative study of women returning to college or the workplace following a prolonged absence, in which Mezirow (1978) sought to identify factors that made the transition easier or more difficult. The original theory has evolved over time into using a framework of 10 phases, beginning with a *disorienting dilemma*.

Mezirow (1978) posited that the learning and growth process is spurred by individuals' encounters with *disorienting dilemmas*, which are “marker events” that trigger the learner to reevaluate their assumptions, beliefs, or self-knowledge and evolve to new understandings of themselves and the world around them (p. 14). For LAC students enrolled in undergraduate institutions, the COVID-19 pandemic presented a possible disorienting dilemma, a marker event which may trigger reconsideration or evaluation of existing assumptions, assertions, and beliefs about their educational experiences. The concept of a disorienting dilemma provided a useful framing for interpreting the perspectives of LAC students as they experienced and evaluated the new educational realities presented to them during the COVID-19 pandemic.

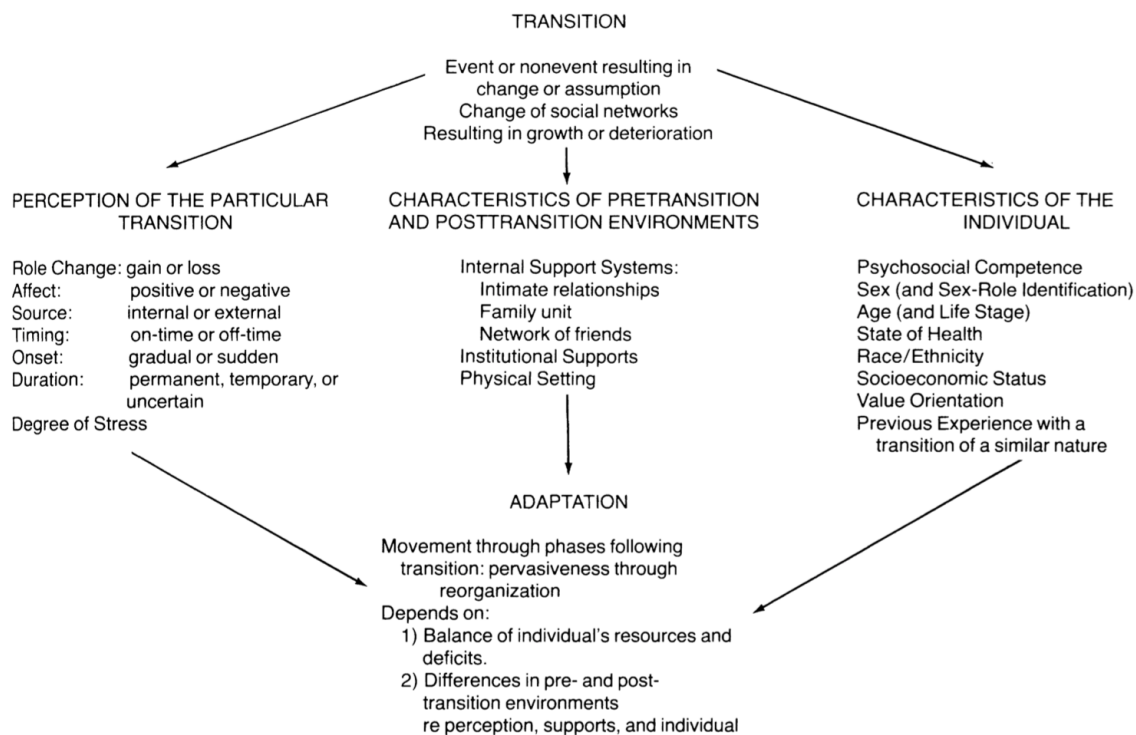
Schlossberg's Transition Theory. In addition to grappling with the ways in which the pandemic may be shaping or changing their college experiences, LAC students likely also found themselves facing transitions: from in-person to online education; from close relationships nurtured in person with friends, faculty mentors and supportive staff to those cultivated virtually; to how they view themselves as learners in new contexts created by the pandemic. Schlossberg (1981) noted people moving through life continually experience changes and transitions, and those changes can result in new behaviors, perspectives, and beliefs. Second, changes that result from periods of transition can create different outcomes for individuals based on how they choose or are able to adapt, even if the events themselves are markedly similar (Schlossberg, 1981).

Even the same person experiencing the same type of change or transition may react differently at different points in life. Each LAC student brings to the pandemic college experience their unique skills, abilities, and challenges, which will affect how they navigate transitions brought on by COVID-19. And because LACs are primarily enrollment-driven

entities sustained by the choices students make to attend them (Eide, 2020), leaders of institutions need to understand their students' experiences and what is most important to them during times of disruption. Schlossberg's (1981) transition theory identified three sets of factors that affect the relative success or failure of an individual to adapt to the new circumstances generated by a transition: how the individual characterizes the transition, the individual's personal characteristics, and the characteristics of the individual's environment before and after the transition (See Figure 1).

Figure 1

Visualizing Schlossberg's Transition Theory



Note. From "A Model for Analyzing Human Adaptation to Transition," by N. K. Schlossberg, 1981, *The Counseling Psychologist*, 9(2), p. 5 (<https://journals.sagepub.com/doi/pdf/10.1177/001100008100900202>). Copyright 1981 by SAGE Social Science Collections. Reprinted with permission.

Characteristics of the Transition. Schlossberg (1981) asserted most transitions could be described using a common set of variables: role change, affect, source, timing, onset, duration, and degree of stress. These characteristics are briefly defined here, with hypothetical examples relevant to the current study. *Role change* refers to the perceived gains or losses in terms of position or status experienced by the individual during a transition (e.g., residential college student to distance learner). *Affect* is used to refer to how an individual *feels* about the transition, on a continuum of positive to negative feelings (e.g., feelings of sadness upon leaving campus to study from home, or positive feeling associated with a reduction in stress in a remote learning environment). *Source* refers to whether the transition was instigated internally or via external forces (e.g., deciding to opt into online learning even as your campus continues in person, or the campus determining all students must study remotely). *Timing* describes whether transitions are perceived by individuals as on-time or off-time, based on the internal social and cultural cues (e.g., how the transition to remote education might be perceived by a graduating senior with only a month remaining on an LAC campus, versus a first-year student with 3 or more years remaining). The pace of the transition, from gradual to sudden, is labeled its *onset* (e.g., Students are informed of the need to vacate their university housing within a short window of time due to an outbreak, versus a decision mid-semester to pursue remote education the next semester). Transitions also typically have a *duration*, from permanent, to temporary, or uncertain (e.g., in the absence of a vaccine for COVID-19, students' current educational situations may be characterized as permanent, temporary, or uncertain, depending on their individual feelings and circumstances). Finally, *degree of stress* refers to the resulting individual stress from a transition, compounded by individual perceptions of the aforementioned factors.

Environmental Characteristics. Student transition experiences are also contextually bound, and thus the environments students inhabit also affect their adaptation during a transition, according to Schlossberg (1981), who identified interpersonal support systems, institutional supports, and physical setting in describing components of environments. Students' *interpersonal support systems*, such as family, friends, and mentors, can have a profound effect on their ability to successfully navigate change and transitions. In the pandemic context, students who have strong interpersonal supports may be better equipped to navigate changes to their educational experiences than their peers with less support. *Institutional supports* include the ways institutions with which individuals are affiliated provide support to them during transitions. Examples of institutions in this context are religious and community organizations, political groups, social welfare groups, and educational institutions. Institutional supports are particularly of interest when considering students enrolled at LACs during the pandemic, as the degree and quality of support provided by colleges can affect student ability to navigate the changes they experience educationally and personally. *Physical setting* includes climate and weather, urban or rural locations, and other aspects of the setting in which a change taking place can affect an individual's ability to adapt (Schlossberg, 1981). Across the country, where LACs are physically located, as well as where students may have had to move to to study remotely, may play a role in their adaptation to ongoing changes and transitions.

Individual Characteristics. In addition to factors related to the transition itself and the environment in which it occurs, Schlossberg (1981) also asserted personal characteristics—such as race, socioeconomic status, gender, age, physical and mental health, personal values and beliefs, and experience navigating similar experiences—can also affect an individual's ability to navigate and adapt to change. College students bring these personal characteristics with them to

their institutions, which can act as lenses on how they see their worlds. Thus, these characteristics are worthy of consideration when collecting data on the LAC student experience during the pandemic.

Organizational Adaptation. Liberal arts college students were not alone in experiencing an array of transitions put into motion by the COVID-19 pandemic; the institutions they attended also underwent transformative changes difficult to imagine prior to the pandemic. To understand how institutions can position themselves to learn organizational lessons from the pandemic experience, Cameron's (1984) concept of *organizational adaptation* is useful. Cameron (1984), building on research in organization theory and management studies, defines organizational adaptation as "modifications and alterations in the organization or its components in order to adjust to changes in the external environment," with the purpose of restoring equilibrium to institutional conditions (p. 123). Organizational adaptation does not only refer to reactive responses to a changing external environment, but also anticipatory or proactive moves made to prepare for discontinuities between the institution and its environment (Cameron, 1984). A focus on change motivators emerging in the external environment differentiates organizational adaptation from the concept of organizational development, which focuses on changes made to individuals and organizational culture (Cameron, 1984).

The concept of organizational adaptation was linked to the perceived precarity of liberal arts colleges nearly 4 decades ago, when the *Journal of Higher Education* dedicated an entire issue in 1984 to the future of LACs in the changing higher education landscape. Then, as now, LACs were understood to be facing significant threats to their long-term viability from the external environment, including economic turbulence, changing college-going demographics, and changes in vocational interests among college students (Zammuto, 1984). And while the

challenges LACs face in 2021 and during the COVID-19 pandemic are not precisely analogous to the conditions upon which Cameron (1984) opined when writing about organizational adaptation, the concept remains useful in understanding the change moment in which LAC leaders find themselves.

For the purposes of the current study, the strategic choice approach to organizational adaptation was deployed to understand how LACs may adapt during and after the COVID-19 pandemic (Cameron, 1984). The strategic choice approach to understanding organizational adaptation recognizes the significance of external environmental factors on organizational change but also recognizes “a variety of strategies are available to managers that can modify the environment and determine the success or failure of adaptation” (Cameron, 1984, p. 127). Given LACs are most typically private entities within internal governance structures allowing for decision-making and organizational change, leaders and managers do exert significant control over proactive and reactive responses to environmental changes and threats. The COVID-19 pandemic is perhaps the greatest external environmental threat LACs writ large have ever faced, and independently, these institutions are empowered to adapt and change in the wake of it.

In an in-depth case study of six U.S. tobacco companies, Miles and Cameron (1982) found organizations facing extremely hostile and turbulent external environments were most successful in adapting to meet the moment when they implemented three strategic choices in sequence: a *domain defense*, in which organizations seek to enhance their own legitimacy in order to buffer it from a hostile external environment; a *domain offense*, in which organizations seek to expand their areas of strength and expertise in order to capitalize on weaknesses in their environment or market; and *domain creation*, in which organizations seek to minimize risks and threats by diversifying their offerings into less turbulent areas of the market where they have

expertise or development potential. As defined, these strategic choices provide a useful lens for LACs considering both their short- and long-term responses to the COVID-19 pandemic in order to remain viable and sustainable.

Cameron (1984) noted organizations pursuing a strategic choice approach have to decide whether organizational adaptations occur and are implemented incrementally or “in a revolutionary way,” in which major changes affect many organizational components at once (p. 129). In general, higher education institutions are known to be resistant to large-scale changes and tend to take both a long view and more incrementalistic approach to adaptation and needed change (Kezar, 2005). The scope and scale of the COVID-19 pandemic, however, may make it difficult or impossible for higher education institutions, and particularly LACs, to adapt incrementally, and instead force the kinds of revolutionary change and adaptations with the potential to transform institutions.

Cameron (1984) encouraged organizational leaders facing change to embrace a “Janusian” mindset, a concept based on the Roman myth of Janus, the god of beginnings, transitions, dualities, frames, and endings. Janusian institutions, in crisis, demonstrate the flexibility necessary to cope with unpredictable environmental events and the ability to both look backward at themselves before the crisis while simultaneously looking ahead and how to best adapt and respond. While initially, organizational adaptation is meant to re-establish equilibrium and stabilize institutions undergoing change or crisis, Janusian institutions may also be capable of capitalizing on the state of flux to cultivate innovation and organizational learning. Amidst and after the pandemic, LACs able to adopt a Janusian mindset may fare better and recover more quickly than those adhering to a more rigid orthodoxy in a time of extreme industry-wide turbulence.

In the current study, I will seek to apply the concept of organizational adaptation (Cameron, 1984) and Miles and Cameron's (1982) sequence of possible strategic choice responses to the existential threat the COVID-19 pandemic poses to some LACs, using student data to draw conclusions about domain defense, domain offense, and domain creation actions these institutions may consider to both successfully adapt in the short term and build resilience for a post-pandemic future in the long term. The COVID-19 pandemic is positioned conceptually as an existential threat to LACs, emerging from the external environment with the potential to spark revolutionary change and transformational organizational adaptations that, if harnessed by institutional and sector leaders, could shape a new and more sustainable model for liberal arts colleges.

Key Elements of Liberal Arts Colleges

While the COVID-19 pandemic has introduced some degree of uncertainty and instability for all liberal arts college campuses, part of understanding LAC institutions during this crisis requires establishing what is known about them as unique organizational entities. In Chapter 2, I provide a detailed historical overview of LACs in the United States, as well as summarize the challenges, crises, and opportunities they have faced as a micro-sector within American higher education over decades. Review of the scholarship on both the history and contributions of LACs within higher education led to the identification of a set of key elements broadly characterizing most of these institutions. And while these characteristics are not only found at liberal arts institutions, for the purposes of the current study, I assert students who enroll in LACs, to the exclusion of myriad options in the American higher education landscape, are seeking all or some of these elements in their college experiences. Thus, the ways in which the pandemic has altered the state of or limited institutions' ability to offer some or all these key elements may have a

resulting effect on students' perceptions of their LAC experiences; the potential effects, as such, are worth studying. Though they will be addressed and grounded in the literature in Chapter 2, the seven identified elements of an LAC experience warrant inclusion in my conceptual framework: (a) a broad liberal arts curriculum all undergraduates experience; (b) a focus on on-campus residential life; (c) low student-to-faculty ratio in academic classes; (d) close mentoring relationships between students and faculty; (e) the availability of extracurricular and social opportunities for students; (f), the availability of high-quality, high-impact educational practices (e.g., undergraduate research); and (g) an appealing residential campus environment (e.g., architectural features, quality facilities, and emphasis campus beauty). These elements of LACs are used in my methodology to answer my research questions.

Understanding Transition for Students and Institutions

Taken together, Mezirow's (1978) concept of a disorienting dilemma, Schlossberg's (1981) factors affecting transition, organizational adaptation concepts originating from Cameron (1984) and Miles and Cameron (1982) and defining what is meant by "liberal arts colleges" provide a useful conceptual framework for considering both how LAC students are approaching the changes and transitions prompted by the pandemic and their institutions' adaptations and responses to it. This understanding of students' transition experiences, and the resulting institutional adaptations and responses during the pandemic, aided in my interpretation of results and identifying implications for LACs seeking to build toward a more resilient post-pandemic future.

Significance of the Study

This study was designed to contribute to the emerging body of literature about the pandemic college experience from the perspective of current students, with a particular focus on

LACs in the southern United States. While national studies by the U.S. government and both federal and non-profit agencies were emerging at the time of writing, residential LACs represent a distinct niche in higher education, one where students are seeking a particular type of experience altered—in some cases significantly— by the COVID-19 pandemic. Further, focusing specifically on the U.S. South provided a regional point of reference for studying the pandemic college experience in the geographic context of American higher education. This dissertation provides data and insights to leaders of liberal arts institutions from students experiencing the outcomes of their COVID-19 contingency planning efforts. With these results, I offered implications for practice for LAC leaders navigating current public health circumstances, as well as those considering the long-term implications of the pandemic for building stronger, more resilient liberal arts institutions in the future. Further, data about LAC student experiences collected from those currently enrolled during the pandemic provide future researchers with a basis for considering longitudinal effects of this period, when LAC students have graduated and moved on to their careers. Insights gleaned from LAC students in this study are intended to be useful to leaders of other types of higher education institutions who are seeking data on the institutional characteristics that matter most to students when their college educational environments are disrupted by crises.

Definition of Terms

Drawn from literature focused on the key topics under study in this dissertation, the following definitions of key terms used throughout the study are offered:

- COVID-19: An abbreviation for the infectious Coronavirus disease 2019, a new coronavirus first discovered in Wuhan, China in December 2019 (CDC, 2020b).

- Disorienting Dilemma: A life event that triggers individual reevaluation of thoughts, beliefs, perspectives, and/or self-knowledge (Mezirow, 1978).
- Learning Organization: An organization “skilled at creating, acquiring, and transferring knowledge, and at modifying its behavior to reflect new knowledge and insights” (Garvin, 1993, p. 80).
- Liberal Arts College (LAC): A small higher education institution enrolling primarily undergraduates, anchored by a core liberal arts curriculum and an emphasis on close student-faculty interaction in a residential campus environment. LACs are well-known for seven hallmark features: (a) a broad liberal arts curriculum all undergraduates experience; (b) a focus on on-campus residential life; (c) low student-to-faculty ratio in academic classes; (d) close mentoring relationships between students and faculty; (e) the availability of extracurricular and social opportunities for students; (f), the availability of high-quality, high-impact educational practices (e.g., undergraduate research); and (g) an appealing residential campus environment (e.g., architectural features, quality facilities, and emphasis campus beauty).
- Organizational Adaptation: Modifications and alterations in the organization or its components in order to adjust to changes in the external environment, with the purpose of restoring institutional equilibrium (Cameron, 1984).
- Sense of belonging: the “psychological sense that one is a valued member of the college community” (Hausmann et al., 2007, p. 804); the sense of affiliation and identification with a college community (Hoffman et al., 2002).

- Students: In the current study's context, unless referenced otherwise, the term "student" will be used to identify current full-time, degree-seeking undergraduate students attending liberal arts colleges.
- Transition: A moment when an event or non-event changes one's assumptions about oneself and the world, thus requiring a corresponding change in one's behavior and relationships (Schlossberg, 1981).

Summary

The COVID-19 pandemic has affected every sector of U.S. higher education, including liberal arts colleges, in myriad ways. Emerging research has demonstrated the pandemic's impacts on students in various educational contexts across the country and around the world. No research to date, however, had focused specifically on LAC students and how they were evaluating institutional responses and adaptations of their learning environment and experiences during the pandemic at the time of this writing. The purpose of this study was to understand whether and to what degree the COVID-19 pandemic altered students' perspectives of their LACs, as well as their sense of belonging to and intention to remain at their current institutions, to forecast potential short- and long-term implications for institutions. The resulting analysis gleaned key insights to assist LAC leaders, administrators, and faculty in building stronger, nimbler more resilient liberal arts colleges capable of responding effectively to future crises and campus- or sector-wide disruptions.

CHAPTER 2

LITERATURE REVIEW

The purpose of this study was to understand students' perspectives about their liberal arts colleges (LACs) during the COVID-19 pandemic, as well as their reported sense of belonging to and intention to remain at their current school, to identify potential short- and long-term implications for institutions. This chapter reviews existing literature relevant to the research topic. The chapter is organized into three sections meant to provide background and context about LACs, examples of college student and institutional experiences navigating crises, and major findings emerging from study of the first 6-12 months of the pandemic. First, the chapter puts LACs into context, including defining their key characteristics, reviewing the struggles and crises faced by the sector over its history, and considering challenges faced in the modern era. Next, the ways in which researchers have studied college students' experiences with crises are explored, using massive disruptive events such as natural disasters to draw relevant comparisons to COVID-19. Finally, the chapter provides an overview of emerging studies about college students and institutions during the COVID-19 pandemic, making relevant connections to the current study.

Contextualizing Liberal Arts Colleges

In the current study, I argued liberal arts colleges and the experiences of their students are worthy of study during the COVID-19 pandemic, separate from other sectors of higher education. Liberal arts colleges represent a proportionally small subculture within American higher education. Among the more than 4,300 higher education institutions in the U.S., only 13%

are classified as LACs (Carnegie Classification of Institutions of Higher Education, 2018), and only approximately 2% of all graduates of U.S. colleges and universities emerge from LACs (Zemsky, 2013). As such, the experiences of students in LAC environments are somewhat unique when compared to the undergraduate experience at other types of higher education institutions. Further, evidence suggests these institutions are slowly vanishing or shifting their curricular focus away from the liberal arts over time (Baker et al., 2012; Breneman, 1990), due to a range of challenges that have plagued LACs for decades. While not intended to be exhaustive, this section provides a brief overview of the history of LACs in the United States, a definition for the term “liberal arts college” and some of the key features characterizing them and summarizes the ongoing challenges they face. This background was critical to this study to understand the magnitude of the COVID-19 pandemic crisis for all LACs, situated within an ecosystem of their existing challenges, and to underscore the need for transformation within the sector as it recovers from the pandemic.

Brief History and Defining Qualities

Rooted in a form of education that emerged centuries ago in Western Europe and further refined in England in the late 16th and early 17th centuries, the American LAC model is a 4-year, free-standing residential college awarding the baccalaureate degree with an academic experience rooted in a broad liberal arts curriculum (Pfnister, 1984). Beginning formally in the United States with the establishment of Harvard College in 1636 and then William & Mary in 1693, American LACs proliferated across the country for centuries, emerging primarily from a range of religious orders seeking to educate and train ministers (Thelin, 2011). Minimal government regulation on college and university charters resulted in “an almost bewildering number of new colleges” by the end of the 1820s (Pak, 2008, p. 37). Indeed, between 1800 and

1850, the number of colleges in the United States increased tenfold, as did student attendance (C. Burke, 1982).

Although the most prominent form of American higher education for nearly two centuries, several historical pivot points shaped the LAC trajectory over time. Publication of the Yale Report of 1828, an institutional memorandum that lives in infamy, stated a case for retaining classical requirements in its college curriculum and extolling the advantages of a liberal education to strengthen both “the discipline and the furniture of the mind” (Yale College, p. 7). Though its purposes have been subject to historical debate over time (see Geiger, 2000; Pak, 2008), the Yale Report undoubtedly cemented the ideals of a classical curriculum and a tolerance for only gradual curricular change rather than wholesale reinvention or innovation in America’s colleges.

The emergence and establishment of land-grant universities in the early to mid-1800s began to bifurcate U.S. higher education, making LACs and their retention of a curriculum rooted in the classics distinctive from these new comprehensive institutions, which were founded to respond to a range of immediate needs in regions and states (e.g., agriculture, manufacturing; Pfnister, 1984). The post-World War II period and the GI bill marked significant pivot points for American LACs, as a wave of veterans returned from war to enter colleges and universities across the country (Thelin, 2011). Some LACs grew larger or evolved to meet the explosive demand of returning GIs, but many more former soldiers enrolled in universities large enough to accommodate them. Third, as demand for higher education grew across the U.S. and across an increasingly diverse student population during the mid-twentieth century, LACs—the foundational model on which American higher education was built—became a more narrowed, but distinctive niche in a diverse landscape of institutional types.

Among all American higher education institutions, only LACs are distinguished by a near-exclusive focus on 4-year baccalaureate education in a residential campus setting that prioritizes and emphasizes high-quality teaching (Breneman, 1990). Chopp et al. (2013) described LAC missions as two-fold, providing “holistic educational formation for young adults and [serving] the democratic good of associative living” (p. 2). As such, LAC mission statements tend to focus strongly on development of the whole student, prizing the development of critical thinking and cognitive complexity to graduate active citizens ready to contribute to broader society (Chopp et al., 2013).

Liberal arts colleges tend to enroll relatively small numbers of students compared to other types of U.S. institutions—around 2,500 or fewer—who complete a curriculum grounded in the arts, social sciences, physical sciences, and the humanities (Astin, 1999; Breneman, 1990; Chopp et al., 2013). These colleges typically offer a small total number of majors in comparison to other sectors of higher education and tend to—although do not exclusively—eschew major subjects that could be construed as vocational in nature, such as business or engineering (Astin, 1999; Breneman, 1990; Zemsky, 2013). And as opposed to most other American higher education sectors, LACs tend to employ majority full-time, tenure-track or tenured professors with terminal degrees who prioritize teaching undergraduates as their primary role (McPherson & Schapiro, 1999). Liberal arts colleges also less frequently house graduate and professional programs, which in other sectors of higher education provide teaching assistants to reduce the weight of undergraduate course loads for faculty. The educational model for American LACs is further distinguished from other types of institutions by its economic structure, which relies heavily on enrollment of full-time, traditionally aged (18-24 years old) undergraduates, the majority of whom live on campus (Astin, 1999). Though small in scale, their unique combination of

undergraduate on-campus residential life and fully credentialled faculty teaching small classes make LACs one of the most expensive higher education models in the United States (McPherson & Schapiro, 1999).

Beyond characteristics of their student and faculty bodies, LACs are also well-known for producing strong learning outcomes for undergraduates. Astin (1999) asserted “residential liberal arts colleges, and highly selective liberal arts colleges in particular, produce a pattern of consistently positive student outcomes not found in any other type of American higher education institution” (p. 77). These outcomes—which include graduation and retention rates, rates of admittance to graduate schools, and levels of student satisfaction with their institution, among others—are related to unique LAC characteristics. Research has demonstrated the practices and conditions most commonly found at LACs have a compensatory effect on student learning for academically at-risk students, women, and students of color (Pascarella et al., 2005). And although liberal arts characteristics are not confined to LACs only and can be found in other institutional types, students who attend LACs are more likely than their peers at other types of schools to experience them, and their associated positive outcomes (Pascarella et al., 2005).

In a study of student outcomes across institutional types, Astin (1999) found the positive effects on student outcomes largely dissipated once environmental or explanatory variables were accounted for, including institutional size, residential setting, and a strong faculty focus on students. In other words, residential LAC environments were found to create conditions most conducive to attaining desired student outcomes:

The liberal arts college’s positive effects on the student’s chances of completing a bachelor’s degree and on student satisfaction with the faculty and the quality of instruction would appear to be attributable primarily to the following qualities: small size,

a residential program, a strong faculty commitment to student development, trust between students and administrators, and generous expenditures on student services (Astin, 1999, p. 85).

Many LACs also tend to incorporate a broad range of high-quality, high-impact educational practices that support student learning and development, such as internships, undergraduate research opportunities, and community engagement experiences. Liberal arts colleges can be further characterized by frequent student-faculty and student-to-student interactions, a strong emphasis on diversity, frequent use of courses focused on writing and research, and student involvement in faculty research (Seifert et al., 2008). And while other sectors of higher education, including comprehensive universities, may exhibit some of these characteristics, LACs most consistently incorporate all of them, creating positive outcomes for their undergraduates.

While many of the characteristics of LACs relate to institutional size, structures, resources, and faculty, a less concrete but no less important aspect of these institutions is the campus environment, and the resulting sense of place created by LACs for students. Liberal arts colleges tend to emphasize sense of place, creating physically attractive campus environments often located in non-urban areas (Koblick & Graubard, 2000; Pope & Oswald, 2012). These primarily residential campus environments are established with intent, meant to imbue “an intense, complex learning and living community [where] the majority of students not only reside on the campuses in which they take classes but also participate in and are responsible for a rich community life” (Chopp et al., 2013, p. 9). Patton (2020), president of Middlebury College, wrote that this intangible, but undeniable sense of place has enabled LACs to weather the COVID-19 pandemic in unexpected ways, noting “the powerful sense of place that permeates

[LAC] campuses” has proved advantageous, particularly for rural LACs who have adapted their landscapes in coordination with the communities in which they reside (p. 1). And though she was describing conditions on her campus, the ways Patton (2020) described the benefits of the built campus environment aligns with a broad understanding of LAC campuses:

We can use the outdoors more readily for physically distant recreation and socializing.

We have more control over our student population because it is smaller, and we can communicate more efficiently. We can take more advantage of creative thinking in small groups, which have a larger effect on the college climate. And we have more personal connections with the organizations in our surrounding communities. (p. 1)

Patton (2020) noted LAC students seem to demonstrate “a yearning to dwell together in a particular landscape” and long “to be together in a shared environment” (p. 1). Given LACs’ strong emphasis on the importance of campus environment, it seems likely students who choose to enroll in these institutions are indeed seeking out this type of intentional campus environment specifically.

Establishing a Definition

Given the description of features most commonly found at LACs, one might think defining “liberal arts college” would be easy to do. In fact, the Carnegie Classification of Institutions of Higher Education (2018), one of the most referenced classification tools in American higher education, does not classify institutions specifically as LACs in an eponymous category any longer. In 1994, Carnegie began classifying institutions by the highest degree conferred, and LACs were grouped into Baccalaureate Colleges I and II (Ferrall, 2011). The Carnegie classifications changed yet again in 2001 and radically increased the total number of categories, spreading LACs across 15 categories based on the percentage of degrees awarded in

arts and science fields. In 2006, Carnegie created its Baccalaureate Arts and Sciences and Baccalaureate Diverse Fields categories, in addition to other classifications based on enrollment, size and setting (Baker et al., 2012). These changes were in part a response to the fact that many schools identifying as LACs were adding graduate education programs, which prompted their reclassification into the master's institution category, an action viewed as deleterious by many LACs (Jaschik, 2006).

Carnegie's complicated scheme of categories does not make it easy to quickly identify which institutions qualify as LACs (Ferrall, 2011). More often in the current context, LACs are identified by rankings organizations using myriad subjective criteria to rank institutions, such as U.S. News and World Report's National Liberal Arts Colleges category and the Wall Street Journal/Times Higher Education U.S. College Rankings. U.S. News and World Report (n.d.) defines LACs very simply, as institutions "emphasiz[ing] undergraduate education and award at least half of their degrees in liberal arts fields of study" (p. 1). In its U.S. College Rankings, the Wall Street Journal/Times Higher Education (2020) uses a variety of characteristics to define its LAC category, including: an emphasis on undergraduate study that includes a wide range of subjects, small student populations, small class sizes, faculty and staff who focus on teaching more than research, and status as private non-profit institutions charging the same tuition for both in- and out-of-state students.

In some ways, the inability to identify a single, widely used definition of "liberal arts college" reflects the ongoing evolution of small colleges that adhere to a liberal arts curriculum. Breneman (1990) used the former Carnegie Classifications of Liberal Arts I (awarding more than half of all undergraduate degrees in the arts and sciences) and Liberal Arts II (less selective than Liberal Arts I, and award less than half of degrees in arts and sciences fields) categories to

identify the 212 institutions that met his criteria for study. Baker et al. (2012) attempted to replicate Breneman's (1990) study and found only 130 institutions remained that met the original criteria, confirming what Breneman had originally hypothesized: LACs were indeed evolving and changing, with some ceasing to exist and others no longer fitting an LAC definition. The reasons for institutional recategorization away from the LAC category were nearly as diverse as the institutions Baker et al. (2012) studied, though transitions to more professionally oriented curricula and absorptions of small colleges into larger, comprehensive institutions were common.

For the purposes of the current study, I have adopted a somewhat broad definition of "liberal arts college," rooted in their historical significance in American higher education, reflective of the body of research on their evolution over time and accounting for the more mainstream definitions deployed by widely used rankings organizations. A *liberal arts college* is a small higher education institution enrolling primarily undergraduates, anchored by a core liberal arts curriculum and an emphasis on close student-faculty interaction in a residential campus environment. I further characterize liberal arts colleges by identifying seven key elements seen more consistently among LACs than any other type of institution in American higher education: (a) a broad liberal arts curriculum all undergraduates experience; (b) a focus on on-campus residential life; (c) low student-to-faculty ratio in academic classes; (d) close mentoring relationships between students and faculty; (e) the provision of a wide-range of extracurricular and social opportunities for students; (f), the availability of high-quality, high-impact educational practices (e.g., undergraduate research); and (g) an appealing residential campus environment (e.g., architectural features, quality facilities, and emphasis on campus beauty). This definition of LACs and accompanying key elements were used in the formation of

survey questions in the current study meant to assess students' liberal arts college experience during the COVID-19 pandemic.

Struggles and Crises

Though the previous section has perhaps painted a rather positive picture of liberal arts colleges that suggests a rationale for their endurance as a niche in American higher education over time, LACs have faced and continue to face persistent challenges and threats to the long-term viability of the educational model. Indeed, for nearly half a century, LACs have been framed as on the brink of decline or disaster, the subject of innumerable think pieces, journal issues, and higher education conference laments (Chopp et al., 2013; Ferrall, 2011; Zemsky, 2013). Unique institutional struggles notwithstanding, LACs in general face consistent ongoing challenges related to their financial models and enrollment, curricula, and post-college outcomes. Each of these topics is worthy of its own literature review but will be summarized briefly here to support the framing of the current study.

LAC Financial Model and Enrollment Challenges

Tuition costs in American higher education have continually risen at a rate much faster than inflation over the past several decades. The Commonfund Institute's (2019) Higher Education Price Index—which tracks costs associated with employee salaries, benefits, operational services, supplies, and utilities for U.S. colleges and universities, including baccalaureate colleges—had increased by nearly 350% since 1983. The pressures associated with rising costs are especially acute for small LACs, for which the retention of highly qualified faculty and professional staff for a small total number of students is an educational priority; personnel and benefits costs have risen much faster than any other category tracked by the Higher Education Price Index (Trombella, 2011). The hallmarks of LACs described in the

previous section, including maintaining small classes with full-time faculty, intentionally built and maintained residential environments, and provision of generous co-curricular and extracurricular offerings, make LACs extremely expensive to operate. When paired with daunting demographic data that indicates a coming population decline in American high school graduates forecast for the mid-2020s, many LACs are facing brutal competition for tuition dollars coming from an ever-smaller applicant pool (Grawe, 2017).

Given these grim financial and demographic realities, every liberal arts college, to some degree, must tackle the same basic problem: provision of the LAC experience, in line with consumer and institutional expectations about what an LAC provides, is and will continue to be extremely expensive as compared to other educational delivery approaches in higher education, so how will it be paid for? While a small overall percentage of private LACs benefit from substantial endowments and corresponding dividends, most LACs have one revenue source over which they have control—student tuition and fees. Tuition revenue constitutes the majority of LAC operating budgets, thus making enrollment of students—and particularly, the right balance of students able to pay full tuition versus those needing financial aid—critical to LACs’ financial survival. Baker and Baldwin (2015) found among the 82 former LACs who no longer met the definition in their replication of Breneman’s (1990) study, many had been subsumed by larger schools in response to fiscal crises. Since 2009, 39 colleges classified as baccalaureate colleges by Carnegie have closed or merged (R. Brown, 2021).

The competition to enroll academically qualified students who seek to be among the 2% of all undergraduates enrolled in American LACs is ferocious, such that many institutions continue to see a rising gap between their published sticker price and the net tuition revenue acquired from each student enrolled. The average reduction in sticker price per student is known

as an institution's *discount rate*, though individual applicant determinations of discount rate are made to weigh each student's attractiveness to the institution, family assets, and degree of external financial aid available to them (Zemsky, 2013). Financial aid budgets become the battlefield on which LACs' biggest financial challenges play out; when colleges cannot find enough qualified applicants willing to pay full price, discounts are offered to entice enrollment (McPherson & Schapiro, 1999). Beginning in the 1990s, many LACs saw their average discount rates rise faster than their sticker prices as they competed to enroll students, a trend that has continued and is likely to intensify as birth rates in the U.S. decline. This trend leaves residential LACs especially vulnerable to financial hardship, as their smallness, and limited resources in the face of increasing demands for new technology, student services, and financial aid make it increasingly difficult to compete (Lang, 1999).

As LAC tuition has risen to keep pace with or move ahead of the increasing expenses of college goods and services, so too has public skepticism about the cost of higher education increased. In 2011, 57% of Americans polled indicated U.S. higher education fails to provide students with good value for the money families spend on tuition and educational expenses (Taylor et al., 2011). Since 2012, the percentage of Americans who believe colleges and universities have an overall negative effect on the way things are going in the U.S. has increased by 12% (Parker, 2019). Among all adults surveyed in 2018, 84% credited the high cost of college tuition as reasoning for asserting higher education is moving in the wrong direction in the U.S. (Pew Research Center, 2018). And while these polling data are aimed generally at higher education in the U.S., their results are felt acutely among LACs where enrollment decisions make or break institutional operating budgets, as students and parents discern which college options provide the best value for the cost.

Curricular Challenges and Market Positioning

In addition to ongoing financial and enrollment struggles, LACs have long struggled to define the value proposition of a liberal arts curriculum in a higher education marketplace that has evolved to value most highly the vocational prospects of college graduates. The tension between LACs' commitment to a core curriculum grounded in the liberal arts and market forces has been at issue for decades (Breneman, 1990; Zemsky, 2013) and H. Hawkins (1999) would argue, began with the Morrill Act of 1862 and the creation of early American state colleges and universities. As land grant institutions began to differentiate themselves from traditional colleges steeped in the liberal arts tradition, so too did LACs begin to transition away from their religious identities and toward a sense of purpose that revolved around the preservation of the liberal arts and sciences (H. Hawkins, 1999). The resulting debate about the value of a liberal arts education has raged ever since, in research articles and dissertations, op-ed pages, and most critically, over kitchen tables among parents and students making college decisions.

What makes an LAC, both culturally and in terms of the ways rankings organizations and classifying bodies such as Carnegie define them, is the institution's fidelity to a liberal arts curriculum, one that both provides a breadth of courses across the arts, humanities, social and physical sciences, and to varying degrees, requires all students to complete courses across that curriculum. This dedication to a liberal arts curriculum is both what distinguishes LACs in the higher education marketplace, as well as hamstringing them in the face of 21st-century challenges. Liberal arts colleges can be constrained by their liberal arts offerings as they compete with colleges and universities that provide many more courses and majors, as well as professional and graduate degrees. Liberal arts curricula tend not to be responsive to changes in market demand and require LACs to offer many majors for students—and thus, many full-time faculty and

academic staff—even when those majors may have no or limited enrollments, to remain true to their liberal arts identities (Breneman, 1994). Centering and prioritizing an institution’s liberal arts curriculum against the headwinds of market forces and changing demand among prospective students and parents can force LACs into dire circumstances.

These dire circumstances often force a choice for many LACs: evolve the curriculum so the institution can survive, or watch enrollments decline until the institution is no longer economically viable. Breneman’s (1990) study and Baker et al.’s (2012) reprisal of it, indicate many LACs chose the former option rather than the latter, and evolved away from their liberal arts core to stay viable. In his examination of institutions that once met LAC criteria but later failed to do so, Breneman (1990) reported some had become “small professional colleges” (p. 6), thus evolving away from their liberal arts missions and identities, and losing their distinctive purpose. The evolution of LACs toward more professional or vocational curricula results in institutions that “cling to that historical [liberal arts] identity in their mission statements and promotional literature” (Baker et al., 2012, p. 51) while providing an education that looks quite different, including more degrees offered in professional fields than arts and sciences disciplines.

Research also identifies other fates for LACs that evolved away from core liberal arts curricular identities. Baker et al. (2012) found the institutions no longer classified as LACs were sometimes subsumed by other, larger institutions to survive, becoming branch campuses or colleges with specific degree foci. Still others experienced what Baker et al. (2012) referred to as “upward drift” (p. 52), by introducing more graduate-level programs and thus moving into new institutional classifications. Other LACs have leveraged their institutional brands to explore programs abroad, creating new offerings in countries such as China, where educational demand exceeds what local institutions can meet (Zemsky, 2013). International programs or branch

campuses can, if done well, provide revenue streams to sustain a liberal arts “main” campus, but these types of strategies are not without risk. Zemsky (2013) cited the example of Antioch College, an LAC overtaken by the very branch campuses developed to sustain and fortify it.

Despite the challenges posed by offering and sustaining a core liberal arts curriculum in a 21st-century marketplace, LACs can and still do succeed in their educational missions, and manage to attract students away from other, perhaps more practical, less expensive, or vocational post-secondary options. Those institutions that have managed to persist despite myriad threats posed by market forces, though likely still enrollment driven, are graduating students who have successfully navigated a liberal arts curriculum. The COVID-19 pandemic, however, represents the most significant existential threat many LACs have ever faced, and institutions may have to make difficult curricular choices as a result. In November 2020, Guilford College, a small LAC in Greensboro, North Carolina, cut nearly one third of its faculty members and half of its majors to resolve a \$7 million structural budget deficit (Whitford, 2020). The financial and enrollment circumstances of American LACs will likely determine whether liberal arts curricula are expanded or limited coming out of the pandemic.

The Debate Over Outcomes

Though implied in summarizing LAC curricular challenges, the struggle most LACs face regarding demonstrating their value in terms of post-college outcomes merits attention as its own significant challenge. The stratification of the higher education landscape over the past 50 years has resulted in the incredible growth of vocational and technical education, as well as the development of open-source courses aimed at attaining credentials without having to commit to expensive college tuition, room, and board. These developments are largely driven by the American economic system and an accompanying shift in public opinion toward a shared belief

that the purpose of college—primarily—is to land students a job after graduation (DeLucchi, 1997). The debate over the perceived value of a liberal arts education received the attention of a full issue of the journal of the American Academy of Arts and Sciences in 1999, where researchers, faculty, current and former administrators and presidents sought to diagnose the crux of LACs’ challenges moving into the 21st century; most frequently, conclusions centered on the ability of LACs to demonstrate their value to students and parents (Hersh, 1999; McPherson & Schapiro, 1999; Neely, 1999). In a less academic gesture responding to the same concern, the Obama Administration’s Education Department developed the College Scorecard, meant to “hold colleges accountable for cost, value, and quality” and help students choose schools most consistent with their career goals (U.S. Department of Education, 2013, p. 1). By focusing on perceived monetary value of the degree, scholars and critics have pinpointed LAC majors as the problem; a pervasive belief that one’s major in a liberal arts subject will not lead to a job after college.

Of all the struggles and challenges LACs face, the tension between academic offerings and post-college outcomes was most frequently cited by Breneman (1990), then Baker et al. (2012) in their studies of institutional drift away from liberal arts missions. In the cases of many institutions Breneman (1990) identified as no longer fitting into the liberal arts category, most were “threatened by mission creep, a tendency toward responding to market forces and offering more professional programs and degrees, or becoming ‘small, professional colleges’” (p. 6). Breneman further noted “as liberal arts colleges evolve in response to economic pressures, they lose their distinctive purpose” (p. 5). Between Breneman’s (1990) original study and Baker et al.’s (2012) replication, the economic pressure only intensified, especially following the Great Recession of 2008, and thus more LACs moved away from the liberal arts classification.

Frighteningly, the COVID-19 pandemic has brought with it an economic recession many magnitudes larger in current and projected future effects than the Great Recession (Sheiner, 2020), and thus is likely to usher in anew the debate over whether an LAC education is worth it when it comes to post-college opportunities.

And yet, the perceived economic mismatch between studying the disciplines offered at LACs, expected post-college outcomes attainment, and the corresponding narrative created about value as students and parents evaluate college options is somewhat farcical when interrogated using earnings data. Research demonstrates LACs prepare students well, and even better than some other types of vocational or technical education, for a sound economic future. A longitudinal study of the return on investment of an LAC education (Carnevale et al., 2020) found the median ROI 40 years after enrollment in an LAC to be \$918,000, while the median ROI at all other types of institutions was \$723,000. Only graduates of doctoral universities with the two highest levels of research activities, which include some of the best-known universities in the nation (e.g., Harvard, MIT), earned a higher average ROI than LACs 40 years after enrollment. Among the most selective LACs, the median ROI over 40 years is even higher: \$1.13 million and falling only just below the \$1.14 million return on doctoral universities in the highest research classification (Carnevale et al., 2020). Research has also demonstrated LAC graduates, while entering the workforce with lower salaries than peers with professional or pre-professional degrees, close that earnings gap over time and outpace those peers at peak earning age of 56 to 60 (Humphreys & Kelly, 2014). Another study found liberal arts graduates experience the most rapid wage growth of any major in their late 30s and early 40s, and those wages are often boosted by graduate degrees (Weise et al., 2019).

While earnings studies challenge the arguments waged over decades about the perceived value of a liberal arts education following graduation, researchers have also found other significant positive outcomes among LAC students. Astin (1999) found attendance at private LACs increased students' likelihood of graduating with a bachelor's degree and improved their reported satisfaction with faculty and quality of instruction. Using data from the Wabash National Study of Liberal Arts Education, Seifert et al. (2008) concluded LAC experiences has positive effects on graduates' intercultural effectiveness, inclination to inquiry, overall well-being, and leadership qualities. There is evidence to support that these types of effects are in part a product of LAC institutions' small size and on-campus residential environment (Astin, 1999; Ludlow, 1996). Research also indicates, however, even when controlling for environmental factors such as enrollment size, LACs tend to produce graduates with greater openness to diversity and challenge, and better writing, reading comprehension, and critical thinking skills as compared to students from research universities and regional institutions (Pascarella et al., 2005). Ferrall (2011) asserted LACs, though tiny in terms of overall enrollment in higher education, disproportionally produce leaders in every field, including 27% of all U.S. presidents. Given the complexities students face upon the conclusion of their undergraduate education and launch into post-college life, the value of the skills and capabilities LAC graduates reportedly gain as a result of attending these institutions should not be underestimated.

Positioning LACs as Learning Organizations

While there is evidence to demonstrate the value—intellectually, economically, and personally—of the undergraduate education provided by American liberal arts colleges, the challenges articulated in this section are persistent and likely to worsen due to the economic conditions created by the COVID-19 pandemic. It is thus imperative for LAC presidents,

trustees, administrators, and faculty to position their institutions as learning organizations, prepared to capitalize upon what pandemic can teach about campus operations and where efficiencies and innovations might fortify their educational delivery model. Learning from the pandemic, however, will require LAC leaders to think differently about their institutions and consider new possibilities, which historically has not been a strength of this sector of higher education, or of higher education institutions in general. Zemsky (2013) pointed out American higher education institutions are “pretty much stuck where they were in the 1980s—largely unable to control their costs, locked in competition for their students” (p. 16). This characterization is especially applicable to LACs because the educational model centers on undergraduate teaching and high-touch, personal relationships with full-time faculty, in addition to significant resource allocations to student support services (Astin, 1999; Ferrall, 2011). Zemsky (2013) further asserted it would take a “dislodging event of sufficient magnitude” (p. 16) to force higher education to really consider needed reform and change, by generating a force across the industry to move institutions as no one institution would likely move independently. The COVID-19 pandemic represents a once-in-a-lifetime dislodging event for higher education, and for liberal arts institutions in particular. If LACs cannot leverage the systemic shocks the pandemic has caused to generate changes needed to counter longstanding challenges, they may not get another chance to do so. And those LACs able to harness possibility and innovation in this moment are likely to gain ground and competitive advantage in the post-pandemic higher education landscape.

To capitalize on the disruption caused by the pandemic, LAC leaders will need to position their institutions as what Garvin (1993) referred to as *learning organizations*, which are “organizations that are skilled at creating, acquiring, and transferring knowledge, and at

modifying behavior to reflect new knowledge and insights” (p. 80). Though writing about an academic study of corporate business leaders, Garvin (1993) specifically identified universities as an example of organizations that tend to be the antithesis to this definition, noting many do not qualify as learning organizations because they are effective at creating or acquiring new knowledge but much less effective at applying it to their own organizations. To become learning organizations, LACs must become skilled at five primary activities: systemic problem solving, experimenting with new approaches, learning from their own experiences and history, learning from the experiences of others, and transferring knowledge quickly and efficiently across their organizations (Garvin, 1993). Because the pandemic has created a raft of intractable financial and operational circumstances, LACs may be incentivized to engage in these activities in order to translate what they are learning in the moment to the broader problems and challenges they face as institutions.

Positioning LACs as learning organizations, even or perhaps especially during the pandemic, may be beneficial but is by no means an easy feat. Kezar (2005), in a literature review of organizational learning as a discipline and the concept of learning organizations as applied to higher education, noted one of the biggest challenges higher education faces in applying these principles is their shared governance model. In corporate entities, top-down hierarchies make it easier, in theory, to inculcate processes and practices across an organization; higher education’s combination of an administrative hierarchy with a self-governing faculty body make colleges and universities places where organizational learning concepts are often viewed with suspicion and incredulity. Birnbaum (2000) noted misguided leadership attempts to apply business principles, and the resulting failures typical of such attempts, remind us “how complicated universities are, how little we know about how they work, and how well intentioned, but misguided attempts to

rationalize their affairs could lead to confusion rather than improved effectiveness” (p. 63). And while this caution is noteworthy, LACs are perhaps better positioned than any other institutional type in American higher education to be exceptions to this general characterization. Liberal arts colleges are typically smaller organizations than most other types of higher education institutions, and the distance between the top of the organizational hierarchy and the bottom, so to speak, is much smaller. LAC boards, presidents, and senior administrators often by necessity work side by side with faculty, staff, and students on institution-wide initiatives and committee work to engender organizational improvements and change. When considering the additional pressure of the pandemic, LACs—with their primary focus on undergraduate education— may be better positioned to band together as learning organizations to make change than larger, more diffuse institutions with broad missions.

College Student and Institutional Experiences With Campus-Wide Crises

Design of the current study required not only developing a deep understanding of liberal arts colleges, but also a probing examination of research about college students and institutions undergoing and responding to institution-wide crises. To support the aims of the current study, literature focused on large-scale crisis situations—especially those affecting whole campus populations—was reviewed in order to frame the study’s research questions and consider needed survey items. Given the staggering death toll of COVID-19 and its near universal disruption of American life, no U.S. or global crisis of analogous scale is available for comparison in the modern era. As such, this portion of the review focused on crises that have universally affected whole communities, including campuses and college students, to provide needed insights in how best to study students and institutions navigating crisis conditions; namely, catastrophic natural disasters such as Hurricane Katrina, and the 2002 SARS epidemic. Further, a case will be made

for specifically examining proximity to crises or disasters when researching their effects on students and institutions.

Natural Disasters

Natural disasters such as hurricanes and earthquakes have the potential to disrupt or halt altogether the operations of college campuses, as well as profoundly disrupt the lives of both students and employees. And while natural disasters are not a new phenomenon, in recent years, colleges and universities have experienced the impact of enormous, devastating storms, including Hurricanes Katrina, Rita, and Floyd, as well as Superstorm Sandy, and their destructive force on institutional operations and students' educational pursuits. This section will focus on the impact of natural disasters, and particularly of storms like Hurricane Katrina, on higher education institutions and their students to draw useful comparisons to the crisis of the COVID-19 pandemic for American colleges and universities.

On August 29, 2005, Hurricane Katrina made landfall on the U.S. Gulf Coast as a Category 5 hurricane, inflicting devastation and infrastructural paralysis along hundreds of miles of coastline as well as inland in southern states and killing nearly 1,500 people (Louisiana Department of Health and Hospitals, 2006). Hardest hit were Louisiana and Mississippi, states which also happen to be home to many colleges and universities. Gulf Coast colleges and universities initially incurred at least \$1.4 billion in physical losses from Hurricanes Katrina and Rita (which made landfall in the same region in September 2005) combined, in addition to more than \$220 million in lost tuition revenue (Mangan, 2006). As many as 100,000 college and university students were displaced by Katrina during the Fall 2005 semester, some permanently, and campuses across the region were forced to close down for weeks, the full semester, or longer (Perry, 2020). In these ways, September 2005 and the aftermath of Hurricanes Katrina and Rita

present the most analogous example of an all-encompassing crisis for higher education institutions, one that for at least institutions in the southern U.S., caused disruption and devastation felt universally in campus communities. Ripple effects of the storms were also felt across higher education, as students from the affected region migrated across the country, some returning home and others re-enrolling at institutions accepting students who had been displaced (Perry, 2020). And while the magnitude of the COVID-19 crisis on higher education is exponentially greater, Hurricane Katrina and other natural disasters like it present lessons to be learned about both students and institutions experiencing and recovering from ubiquitous disaster situations.

Disruption and Dislocation

Individual exposure to a disaster such as a hurricane is a complex, multi-faceted phenomenon, which makes its systematic study by researchers difficult (Norris & Wind, 2009). Nevertheless, a significant body of research exists about the effects of hurricanes and other types of disasters on college and university communities (see Davis et al., 2010; DiPietro, 2018; Doyle et al., 2017; Gill et al., 2006; Gutierrez et al., 2005; Krane et al., 2007; Watson et al., 2011). For college and university students, natural disasters can force evacuations, dislocation, and relocation, not to mention potentially physical and psychological trauma.

In a study designed to examine the effects of Katrina's disruption on students, Davis et al. (2010) studied New Orleans-area college students forced to move away from their home university as compared to students who were not displaced to consider the effects of their displacement. Displaced students reported significantly more symptoms of depression and post-traumatic stress disorder (PTSD) than their non-displaced peers in the months following the disaster (Davis et al., 2010). Similarly, Kessler et al. (2008) found having to relocate because of

Hurricane Katrina was a significant predictor of participants' psychological distress and post-traumatic stress levels.

These findings regarding the deleterious effects of dislocation on college students were echoed in studies of other storms, including hurricanes in central Florida that impacted colleges and universities there (Gutierrez et al., 2005), the aftermath of Hurricane Floyd on students and community members in North Carolina (Van Willigen et al., 2005), and the L'Aquila earthquake in Italy's impact on university students (DiPietro, 2018). COVID-19 has similarly forced massive dislocation and relocation for college students across the U.S. and around the world; findings from natural disaster studies suggest this movement may result in negative personal, academic, and psychological effects for students.

When natural disasters force movement and migration among college students, the institutions they leave behind are also significantly impacted (Fischer, 2005; Kiernan, 2005; Shaw, 2016, 2017), especially those with tuition dependent annual operating budgets. For example, Beggan (2011) estimated nearly \$500,000 in tuition and fees were lost by Lamar University in the aftermath of Hurricane Ike in 2008, when 150 students left the institution and did not return. The University of New Orleans faced a \$15 million budget deficit due to lost tuition revenue following Katrina, resulting in a layoff of more than 60 faculty (Mangan, 2006). Echoes of this phenomenon are visible during the COVID-19 pandemic for higher education writ large and for individual institutions. Nationwide, college and university enrollments declined by 2.5% in fall 2020, nearly twice the rate of decline from the previous year before the pandemic began; first-time first-year student enrollment declined by 13.1% (Sedmak, 2020). As with the case of natural disasters, these reductions in enrollment due to COVID-19 have massive consequences for institutions, especially small colleges and universities. The state of Wisconsin,

for example, estimated private college and university losses totaling more than \$245 million due to the pandemic (Kremer, 2020). The Wisconsin Association of Independent Colleges and Universities president noted “being tuition dependent, if there’s an enrollment drop of any significance at all [due to the pandemic], that can deeply affect our colleges’ ability to operate” (Kremer, 2020, p. 1). College and university leaders are looking to lessons learned from disaster recovery as they consider how to reconcile budget deficits and enrollment declines during the pandemic.

Demographic Differentiations

In addition to the significant disruption caused by natural disasters to students and institutions, research has demonstrated the resulting effects of such disasters differ for individuals based on their demographic characteristics, including gender, race, and socioeconomic status. In a review of studies following both man-made and natural disasters, Kimerling et al. (2009) found women were at greater risk for post-disaster mental health symptoms when compared to men, including PTSD, depression, and grief reactions, a finding echoed in studies of college populations following natural disasters (Gill et al., 2006; Gutierrez et al., 2005; Van Willigen et al., 2005). Poverty or low socioeconomic status was also associated with a higher risk of experiencing post-disaster psychological distress among individuals (Norris et al., 2002).

One’s racial identity can also be an important factor when considering how individuals cope following a natural disaster. Research has found racial and ethnic minority groups experience disproportionate negative effects following natural disasters as compared to their White counterparts (Davidson et al., 2013; A. O. Hawkins et al., 2009; Perilla et al., 2002). Findings on racial differentiation of outcomes when studying college students specifically,

however, were mixed regarding potential effects. For example, several studies have found students of color experienced greater negative effects post-disaster than their White peers (Gill et al., 2006; Gutierrez et al., 2005; Van Willigen et al., 2005), whereas neither Doyle et al. (2017) nor Davis et al. (2010) identified significant differences in negative effects among racial minority groups and White students in the wake of natural disasters. These findings, along with the research mentioned regarding socioeconomic status and gender, support the collection of demographic data via the current study's survey questionnaire, to consider whether differential effects are present during the COVID-19 pandemic for college students based on their personal characteristics.

The College Environment During and After Disasters

When a natural disaster strikes, many college and university students may find themselves far from home, and thus disconnected from personal resources and networks of support if they are unable to evacuate or successfully relocate. And interestingly, researchers have found both positive and negative effects on academic outcomes post-disaster that seem to relate to the uniqueness of the college environment. For example, Van Willigen et al. (2005) compared North Carolina college students to full-time residents in a community after Hurricane Floyd, and found students reported fewer detrimental effects from the storm than those residing in the same town but unaffiliated with the institution; the researchers suggested this might be due to the efforts of the institution to protect students from the effects of the disaster. Similarly, Davis et al. (2010) suggested because college students have access to institutionally provided resources and strong networks of social support, they may be better able to cope with and recover from natural disasters. Doyle et al. (2017), in reflecting upon their findings regarding the academic outcomes of college students post-Superstorm Sandy in 2012, suggested because

residential college students may not experience the same levels of trauma associated with damage or loss to personal property when studying away from home, the effects of natural disasters on their academic performance may not be as significant as expected.

Timing of the disaster, however, may also matter when it comes to college student outcomes and academic performance. Hurricane Katrina made landfall days or weeks into many southern U.S. institutions' academic semesters. As a result, some students were able to relocate, transfer, or re-settle at their institutions quickly following the storm, perhaps minimizing the academic effects such disruption would otherwise cause (Krane et al., 2007). In the case of two powerful earthquakes that hit New Zealand in 2010, then 2011, researchers found college students who experienced the earthquake that hit toward the beginning of an academic term, versus those surveyed following the earthquake that struck later in the next term, developed better adaptive coping strategies, in part because they had more time to do so prior to final exams (Wilkinson et al., 2013). As such, it seems likely the disruption caused by COVID-19 mid-semester for college students in spring 2020 may have had different levels of impact on their academic performance and outcomes than those first-year students who enrolled in Fall 2020, once institutions had settled into a new normal for the first full pandemic semester.

As a result of reviewing these findings on the college environment and disaster timing, the current study included several survey items designed to gather information about participants' unique situations during the pandemic, as well as their ability to reflect on the wider disruption over the past year on their residential LAC experiences. Participation in the study was limited to students who were enrolled at least one full semester prior to spring 2020, to ensure participants are able to compare and contrast their "new normal" with previous experiences at the same institution.

Severe Acute Respiratory Syndrome Epidemic

In addition to natural disasters, the 2002 Severe Acute Respiratory Syndrome (SARS) epidemic provides another body of research literature to assist in understanding college students and institutions in the midst of or recovering from a disruptive crisis. Given the parallels in institutional responses and student experiences during the SARS epidemic, studies of interest located during this review are highlighted.

SARS is a viral respiratory disease that occurs in humans, and like COVID-19, is a type of coronavirus. These viruses cause infection in the lower respiratory tract, resulting in acute lung injury, difficulty breathing, and in some cases, septic shock, and organ failure (Zhu et al., 2020). An epidemic of SARS occurred in China and other parts of Asia beginning in 2002. The epidemic resulted in nearly 8,100 known cases and 774 deaths, and while these numbers seem paltry when compared to the COVID-19 pandemic, SARS had “a profound impact on the daily life of people living in the affected areas [in China] as well as society as a whole” (Main et al., 2011, p. 412). Main et al. (2011) examined Beijing college students’ coping and support-seeking behaviors and the resulting effects on stressors during the epidemic. The researchers were particularly interested in the psychological effects of epidemic response, including lockdowns and isolation, on undergraduates’ ability to cope and manage their stress. Students’ practice of active coping was found to mitigate stress during the epidemic (Main et al., 2011), mirroring similar findings among Hong Kong undergraduates in 2003 (Cheng & Cheung, 2005). An examination of college students’ experiences during the epidemic in Japan (Zheng et al., 2005) also indicated negative psychological effects, including increased fear, worry, and depression, symptoms that were associated with students’ demographic factors such as age and nationality. These findings of negative psychosocial effects during the SARS epidemic, and potential

associations to demographic characteristics, are similar to those identified in aforementioned natural disaster research (Gill et al., 2006; Gutierrez et al., 2005).

The SARS epidemic resulted in a coordinated response effort in China that significantly restricted college students' movements and ability to participate in classes or other activities, creating significantly more discretionary time than in a typical academic year (Yang et al., 2011). Somewhat surprisingly, students at one large Chinese university did not perceive the epidemic control measures as resulting in major changes to their daily lives or activities, and some even reported improvements in attitudes and behaviors (Yang et al., 2011). Researchers proposed these positive effects might be explained in part by student motivation to protect themselves from infection and institutional provisions of resources to support their wellness during quarantine. In these studies, results suggest institutional decisions and actions can contribute to students' ability to effectively manage their stress and stay healthy (Main et al., 2011; Yang et al., 2011).

A thorough search of news coverage and research articles did not yield any results specific to systematic study of the SARS epidemic and response in higher education institutions in China, where SARS originated and outbreak numbers were most significant, or those in other Asian nations that experienced significant effects during the epidemic. In the United States, national and higher education-focused media outlets have provided constant coverage and analyses of sector- and individual institution responses to campus crises of all sorts, including daily coverage of the COVID-19 pandemic. It is possible Chinese language industry publications dedicated to secondary education exist, but I was unable to locate any that might provide insights into how colleges and universities navigated changes or reforms following the epidemic for the purposes of this review.

Understanding Institutions in the Wake of Crises

In disaster- and epidemic-focused literature, higher education institutions themselves and the administrative and operational response to disasters were not often referenced directly; the research focus was typically on college students, except for recommendation sections that discussed what institutions could be doing to support students in the wake of disaster (Davis et al., 2010; Doyle et al., 2017; Gill et al., 2006). Shaw (2016, 2017), who worked in the division of campus life at an institution in New Orleans during and after Hurricane Katrina, centered her disaster recovery research on institutions from an organizational development and leadership perspective but in general, this sort of inquiry appears uncommon in higher education literature. The absence of research focused on taking what is known about college students' experiences during disasters and crises and using it to evolve and adapt institutions, and corresponding studies examining the effects of those organizational changes over time, leaves institutions in the current moment with little empirical data or findings on which to consider changes post-pandemic. This gap in the literature presented an opportunity for the current study to focus more squarely on institutions themselves amidst an ongoing crisis to determine directions for change rooted in data about the student experience.

A Case for Considering Personal Effects of Disaster

Across the literature identified on natural disasters and crises, researchers often effort to examine participants' level of disaster exposure or proximity in order to understand whether those who have experienced the most direct effects report different outcomes than those less exposed to the event (Chan & Rhodes, 2014; Davidson et al., 2013; Di Pietro, 2018; Gill et al., 2006; Norris & Wind, 2009; U.S. Department of Health and Human Services, 2004). Identifying individual disruption caused by a disaster or crisis event offers a critical lens for understanding

its impact on participant responses to research questions. Examination of the individual impacts of disasters is still relatively new, as research on the subject did not become widespread until the 1990s (Raphael & Maguire, 2009). During the 1990s, the number and quality of journals focused on disasters and related trauma also increased. This section of the review will draw from disaster studies and when possible, those situated in higher education contexts, to build the case for why studying participants' personal experiences resulting from the COVID-19 pandemic, and the degree to which the pandemic has disrupted their lives, is valuable for this study and for institution leaders to consider.

Researchers define a “disaster” as a potentially traumatic event that has an acute onset and is collectively experienced by many people at once (McFarlane & Norris, 2006). Though the disaster literature does not specifically offer examples of researchers applying this definition to epidemics or pandemics, the economic, infrastructural, and public health devastation of the COVID-19 pandemic across the U.S. and around the world certainly fits McFarlane and Norris's (2006) definition. Shaw Bonds and Njoku (2020) drew this comparison directly in March 2020, stating, “Remember, that [the pandemic] is, by definition, a disaster—both for your campus and in the personal lives of students and colleagues” (p. 1). Meta-analyses of the disaster trauma literature found adults' level of exposure to disaster—compounded by any secondary stressors (e.g., pre-existing mental health issues, financial troubles) and diminished access to mental health support and other resources often resulting from disaster conditions—was associated with more adverse individual outcomes (Norris, Friedman, & Watson, 2002; Norris, Friedman, Watson, Bryne et al., 2002). Further, disasters characterized by high mortality are likely to result in substantial psychological issues for individuals (Norris & Wind, 2009). The number of deaths caused by a disaster has been found to be strongly associated with psychopathy and to uniquely

explain 20% of the variance in the disaster's effect size across studies (Rubonis & Bickman, 1991). As of this writing, the death count associated with the COVID-19 pandemic has exceeded 620,000 across the United States, the most of any country in the world, with more than 36.7 million reported infections (Johns Hopkins University & Medicine, 2021). When compared to other diseases, outbreaks, and even wars, only the Spanish Flu pandemic of 1918 killed more people (an estimated 675,000) in the U.S. than COVID-19 (Gould & Brueck, 2020).

Given these staggering numbers, it stands to reason many Americans have experienced a range of personal effects resulting from the COVID-19 pandemic, even if they themselves have not fallen ill. Understanding the degree to which individuals report they have been affected by the pandemic may assist in interpreting how they are experiencing other parts of their lives, including attending college. Kaiser et al. (1996) asserted college students may be at greater risk for psychological issues following a disaster because the higher education environment tends to generate significant academic, social, and other kinds of demands; in the case of the current study, many students attending college in person may be far from home, and thus disconnected from additional familial or other supportive resources for navigating pandemic stress and challenges. More recent studies, however, posit because college students have access to resources provided by their institutions during disasters, they may demonstrate more resilience and quicker recovery from effects than other populations (Davis et al., 2010; Doyle et al., 2017). LAC environments are often characterized by significant resources dedicated to student support, and their campuses are typically primarily residential, placing a greater burden on LACs to provide for students in the wake of disaster than perhaps other institutional types. As the COVID-19 pandemic is an ongoing crisis in the United States, and thus participants in the current study are undoubtedly experiencing direct or indirect effects at the time of survey

questionnaire completion, the current study sought to build on existing disaster literature by attempting to ascertain the degree of disruption participants report the COVID-19 pandemic has generated in their lives.

Emerging COVID-19 Pandemic Research

Because the COVID-19 pandemic is an ongoing crisis for higher education, research about its effects on students and institutions continued to emerge on an ongoing basis as this study took place. Thus, this section of the review reflects on and summarizes data and research that emerged in real time during the current study, gleaned themes, insights, and outcomes related to the focus of the current study. Studies focusing on both college students and higher education institutions are included for review.

Considering National Data

Since COVID-19 began impacting college campuses across the U.S. in March 2020, researchers have sought to capture data about the impact of the virus on various aspects of the college experience. Most pressingly and tied to the challenges LACs were facing before the pandemic, researchers have sought to understand the impacts of the virus on students' decisions regarding continuing enrollment, and decisions among first-time students regarding whether to enroll in college at all. For public and private colleges alike, students' enrollment decisions are critically important to institutional operations. In 2009, net tuition and fees accounted for 22% of total revenue at public colleges and universities, and 40% total revenue at private institutions (U.S. Government Accountability Office, 2012). Enrollment pressure is especially acute among small colleges. For example, 738 colleges and universities enrolling 1,000 students or fewer reported more than 85% of their revenue came from tuition (Reynolds et al., 2016).

The NSCRC (2020) has monitored enrollment data and student decision-making over the course of the pandemic and provided monthly update reports throughout Summer and Fall 2020. With 76% of all U.S. colleges and universities reporting, postsecondary enrollment dropped in Fall 2020 by 3.3% overall in fall 2020, and by 4.4% for undergraduate education, with the most precipitous drop occurring among community college students (down 9.5%; NSCRC, 2020). Among first-time, first-year undergraduate students, enrollment declined by 13% overall during Fall 2020, with the steepest declines occurring among Native American (-9.6%) and Black students (-7.5%). Among rural private colleges, in which LACs are overrepresented, enrollment declined by nearly twice the rate of urban institutions (-3.1% versus -1.7%). The National Association of Independent Colleges and Universities (NAICU, 2020) reported as of October 2020, enrollment across 292 private, nonprofit colleges and universities was down 2%, including an 8% decline among Pell grant eligible students. Enrollment declines have been even more precipitous among international students. Using data from more than 700 institutions, Baer and Martel (2020) reported one in five international students were studying online from abroad and international student enrollment overall in the U.S. decreased by 16% during the fall 2020 semester; first-time international student enrollment fell by almost half (43%) at the surveyed institutions, and nearly 40,000 international students reported they were deferring their enrollment to a future term (Baer & Martel, 2020). These findings are very concerning for institutions not only because of the potential significant loss of tuition revenue, but because underrepresented students appear to be most at risk of not continuing higher education or not enrolling at all.

These drastic declines in enrollment have pushed many already financial unstable institutions to the edge, resulting in the most significant stress test of higher education

institutions in the modern era. A survey of college presidents conducted in summer 2020 (Turk et al.) found 43% were concerned about the long-term viability of their institutions, a sentiment much more acute among private college and university presidents, nearly half of whom identified financial viability as their top concern. Of those presidents who responded, 61% indicated they had implemented hiring freezes and freezes on salaries and other forms of compensation for their employees (Turk et al., 2020). Four-year baccalaureate institutions were more likely than public and community college presidents to have already taken financially focused actions such as hiring freezes, demonstrating the intensity of the pandemic's impact on the sector. More than half of the presidents surveyed further indicated their enrollments had declined when compared to Fall 2019. Though the decisions made by institutions to survive the pandemic crisis are reflected in these presidential observations, it seems likely the sector will continue struggle even long after the pandemic ends to re-establish what Shaw (2017) referred to as "organizational equilibrium" (p. 103) or returning the institution to operational normalcy. And for some institutions, reestablishing equilibrium will not be an option; 11 colleges have closed or merged with other institutions since the pandemic began (Education Dive, 2020).

Institutional Operating Modes During Fall 2020

Enrollment and financial challenges undoubtedly contributed to institutional decision-making about how colleges and universities operated during the Fall 2020 semester, in addition to the enormity of pandemic health and safety concerns. Understanding the mode of operations and educational delivery during the Fall 2020 semester provides a critical perspective for the current study, as any operating status not considered fully residential has likely never been experienced by students enrolled at LACs. Davidson College's *College Crisis Initiative* (2021) has used publicly available college and university reopening plans from 1,442 institutions to map

the operational statuses of schools across the country, which can be subdivided by Carnegie Classification. Among the 469 baccalaureate colleges categories, where LACs reside, included in the tracker, 175 were primarily or fully in person, and another 135 were operating in a hybrid instructional mode, amounting to 66% of all colleges during Fall 2020. When disaggregated further within the baccalaureate college category, among private colleges, a full 80% operated in hybrid, primarily in-person, or fully in-person modes for instructional delivery, demonstrating how campuses have prioritized an on-campus, residential experience even during a global pandemic for these institutions. By way of comparison, 60% of master's colleges and universities and 49% of doctoral universities operated in hybrid, primarily, or fully in-person mode for instructional delivery (College Crisis Initiative, 2021).

Along with operating in a hybrid or modified in-person status for educational delivery comes institutional decision-making regarding tuition and fees. Many institutions, particularly private colleges and LACs, continued to charge the same amount of tuition, despite delivering some or most courses online via what one student described as “glorified Skype” (Hubler, 2020, p. 1). Most LAC students are not accustomed to online course delivery, as the LAC sector is well-known and sought after for its in-person, residential educational experiences. As such, when institutions began offering variations on the traditional residential experience in order to comply with public health guidelines, a common refrain among students and parents was the fall 2020 semester experience was not equivalent to the cost of tuition (Hubler, 2020). Some institutions, such as Franciscan University (Ohio), Williams College (Massachusetts), and Lafayette College (Pennsylvania), offered tuition reductions and financial incentives to keep students enrolled and to respond to market demands (Hubler, 2020). Many more institutions continued charging their standard tuition, room and board rates, even in the altered landscape of LAC attendance during

the pandemic (Dickler, 2020). As the pandemic continues into a second academic year, it remains to be seen whether students and families will continue to pay for an educational experience many deem as a poor alternative to what they believed they were promised at the time of enrollment.

Evaluating the Pandemic Experience

While national data collection has largely been focused on key issues to the sector of higher education, such as enrollment (Baer & Martel, 2020; NAICU, 2020; NSCRC, 2020) and leadership decision-making (Turk et al., 2020), several national surveys have also collected student evaluations of their institutions' response efforts concerning the pandemic and its effects on the overall college experience. It is clear the pandemic has significantly altered the student experience, though results regarding whether alterations were altogether negative are mixed.

Given many institutions across the United States operated in new or altered ways to remain open during the pandemic, data on how students experienced college, both with regard to academics and co-curricular programming, are essential, especially as institutional leaders look to a second semester of pandemic operations. A November 2020 study ($n = 1,143$) of college students' Fall 2020 semester experiences across the U.S. (Lundquist et al., 2020) found the COVID-19 pandemic had significantly impacted students' overall satisfaction with the fall semester. One third of students surveyed expressed dissatisfaction with their academic coursework, institutional communications, and student services offered during the pandemic (Lundquist et al., 2020). An additional third of participants indicated they felt their institutions' reopening plans were too risky given the pandemic's conditions. Respondents also reported significant worries regarding their ability to pay for college, a concern expressed even more strongly by first-generation students (77%) and students of color (73%) than the participant pool

as a whole (68%; Lundquist et al., 2020). The concerns and tensions represented in these data suggest colleges and universities will face an ongoing challenge aligning their educational and co-curricular programs and services with the expectations of their students.

Several surveys of the Fall 2020 semester appear to indicate students' living situations and class years were related to how they evaluated their overall college experiences. Among nearly 43,000 students who were predominantly undergraduates living in on-campus or near-campus housing during the fall 2020 semester, approximately 85% characterized their college or university's COVID-19 response as adequate or effective, and nearly three-quarters of respondents reported even in a more restrictive residential environment, they still felt a sense of community (American Campus Communities [ACC], 2020). Interestingly, Lundquist et al. (2020) reported similar findings even among students who lived away from their campuses during the Fall 2020 semester. Among participants, 46% lived away from campus and yet reported a nearly equal sense of belonging to those who were living on campus during Fall 2020 (Lundquist et al., 2020). The students who appeared most at risk of both dissatisfaction and attrition based on the fall semester experience were those who began the semester on campus, but for personal or institutional reasons, had to re-locate off-campus or to their homes; these students reported the poorest student success outcomes, the lowest satisfaction with the overall experience, and the least likelihood to re-enroll at their current institutions as compared to those living on-campus or away from campus consistently during the fall semester (Gallup & Lumina Foundation, 2020; Lundquist et al., 2020). Given many institutions across the country were forced to transition to fully remote learning during the fall semester due to campus COVID-19 outbreaks, these findings suggest student populations that underwent forced transition may be at greater risk for dissatisfaction and institutional departure.

In addition to evaluating living experiences, researchers were also attentive to students' evaluations of fall semester teaching and learning, some of which by necessity had to occur online. Students surveyed by ACC (2020) reported a relatively high degree of satisfaction with their professors' course delivery during the pandemic, and 76% indicated they were satisfied with the level of access and support professors provided. Students who experienced primarily in-person classes prior to the pandemic then transitioned to fully remote education, however, drove down quality ratings for instruction overall in a Gallup and Lumina Foundation (2020) poll, which also found fully online students gave low ratings regarding their own well-being and sense of belonging during fall 2020. Nearly 80% of students reported online learning and completion of coursework was harder than in-person learning, with nearly 57% reporting difficulty maintaining motivation and focus for classwork (ACC, 2020). These findings were echoed in a fall semester survey of students enrolled in the U.S. and Canada (Top Hat, 2020), which found 68% of respondents were not learning as effectively online as they believed they would have in person, and more than half expressing concern about their ability to obtain passing grades during the fall term.

Large polls and survey research (ACC, 2020; Gallup & Lumina Foundation, 2020; Lundquist et al., 2020; Top Hat, 2020) provide useful, big-picture assessments of the college student experience during the COVID-19 pandemic, while also giving college and university leaders a sense of how observations on their own campuses reflect or do not reflect national data. When considering individual institutional adaptations and responses at small LACs, however, these broad national trends may not be incisive enough to serve as an effective basis for institutional decision-making, particularly for colleges facing dire financial consequences if their choices do not align with students' needs. In reviewing national data, there no identified

references to the state of LACs during the pandemic, or how data might be disaggregated to understand whether prevailing national trends applied to this smaller niche within higher education. This absence of focus presented an urgent need for data collection among LAC populations during the pandemic; I posited that while findings might be similar to what has been observed nationally, new insights and observations unique to LACs were also possible, given the unique characteristics of the LAC setting. The current study sought to fill this information gap to support liberal arts institutions and leaders through this turbulent time with real-time data gathered from LAC students.

U.S. and International Research

Nearly two years into the COVID-19 pandemic, researchers have begun executing projects about college and university students navigating the pandemic in real time. This section summarizes emerging research literature that provides useful insights and relevant research approaches that support the design of the current study.

The Urgency of Mental Health

In reviewing the emerging research, particularly publications in late 2020, it is clear researchers around the world recognized the urgent need for study of students' mental and physical health during the COVID-19 pandemic. Students who have been significantly impacted by anxiety, depression, and other psychological challenges may be unable to function as they otherwise would in an academic community, and thus psychosocial studies have primacy in this urgent moment (Cao et al., 2020; Copeland et al., 2020; Islam et al., 2020; Odriozola-Gonzalez et al., 2020; Qiu et al., 2020; Son et al., 2020; Sundarassen et al., 2020). In the U.S. and around the world, researchers are asking important questions about how realities of the pandemic, including prolonged periods of isolation and quarantine (Copeland et al., 2020; Islam et al.,

2020; Sundarassen et al., 2020), are affecting students' mental health and thus their academic performance and engagement in college.

Anxiety and depression among college students presented higher education institutions with significant challenges well before the pandemic began (Mistler et al., 2012). Data from the National College Health Assessment (American College Health Association, 2011) indicated about 30% of college students reported depression had limited their ability to function at some point in the previous year. College and university counseling directors surveyed (Mistler et al., 2012) reported anxiety has the predominant presenting concern among college students, and on average, nearly one-quarter of college counseling center clients were taking psychotropic medications to ameliorate psychological symptoms. In general, and agnostic of geographic location, the pandemic and the living and working conditions it has created have resulted in even higher levels of anxiety, stress, and depression among college students, a population already plagued by mental health challenges. Son et al. (2020) found 71% of college students at a large public university in the south reported increased stress and anxiety due to the pandemic during the fall semester, and specific concerns such as worry about their own health and that of family members (89%), disturbed sleep patterns (86%), and increased worry about academic performance (82%). Similar findings regarding detrimental psychological effects were mirrored abroad in Bangladesh (Islam et al., 2020), Malaysia (Sundarassen et al., 2020), and China (Cao et al., 2020). In several studies, deleterious psychological effects among students were universal, even when data were demographically disaggregated (Cao et al., 2020; Copeland et al., 2020; Islam et al., 2020).

Though the current study did not focus specifically on psychological outcomes related to the COVID-19 pandemic, several important findings from these studies on student mental health

informed aspects of the study. Islam et al. (2020) found students who were living at home while taking their courses were nearly three times as likely to experience depression as compared to those who lived apart from their families; these findings were noted as contrary to previous research, in which living with one's family (often a significant support system) tended to boost overall mental health. Because of the health and economic devastation caused by the pandemic, many families were "in a traumatized situation" (Islam et al., 2020, p. 8), undoubtedly making conditions difficult at home for students trying to pursue their degrees. A study in China, however, found just the opposite; college students who were living at home with their families reported less anxiety than those living alone during the pandemic while completing coursework (Cao et al., 2020). These conflicting findings about the impact of one's living situation on mental health and academic performance while in college during the pandemic informed survey items in the current study focused on ascertaining details of students' living and educational circumstances during the Fall 2020 semester. And, as mentioned in the above section on proximity to the pandemic, research regarding the level of disruption caused by the pandemic as a factor in overall outcomes assessment (Copeland et al., 2020), informed decisions in the current study survey's items related to the pandemic's personal effects on students.

The Transition to Online Education

Another area of immense research activity is emerging about the pandemic-induced emergency transition to online education from in-person learning at colleges and universities. Understandably, researchers are interested in how this transition affected student learning, particularly in the latter half of the Spring 2020 semester, and how students are perceiving the pedagogical effectiveness of their professors in this moment. A few national surveys reviewed in the previous section (ACC, 2020; Gallup & Lumina Foundation, 2020; Top Hat, 2020)

investigated specifically the perceived quality and effectiveness of online education during and after the abrupt transition in March 2020, findings of which were mixed. For students who were either primarily on campus or completely online, for example, in the fall semester, tended to rate their professors' teaching and their overall learning experiences more positively than their peers who were forced to transition home at some point during the fall (Gallup & Lumina Foundation, 2020).

At the time of this review, the majority of studies identified with specific focus on online teaching and students' experiences with it during the pandemic were internationally based and investigated the attending anxieties and challenges generated by the transition and overall experience (El Firdoussi et al., 2020; Goncalves et al., 2020; Hussein et al., 2020; Tartavulea et al., 2020; Wang & Zhao, 2020). As with the national polling data on this subject, results among these research studies were mixed in terms of students' reported perceptions and outcomes related to online teaching during the pandemic. For example, several studies reported students and professors felt online teaching was less effective and engaging than in person learning (El Firdoussi et al., 2020; Tartavulea et al., 2020), while still others noted several positive effects, such as recognition of online education as a tool to sustain college trajectories (Hussein et al., 2020). Many of these studies conclude with recommendations focused on online tools and training opportunities, primarily for faculty, but also for students, to increase digital literacy and classroom preparation.

The implications in studies with a focus on pandemic online education, when not directly stated, was often that institutions needed significant investments in information technology infrastructure, faculty development opportunities, and student support services in order to increase online teaching effectiveness. Several studies also noted because institutions have

demonstrated their ability to deliver education in hybrid or online learning modes, online education is unlikely to be eliminated even after the pandemic ends, and even among institutions whose instructional delivery method was entirely in-person before the pandemic (El Firdoussi et al., 2020; Tartevelea et al., 2020). Embedded in these types of results and recommendations are profound implications for LACs, many of which may have had no prior infrastructural supports to support pedagogical development or student learning efficacy in online education. Further, in environments where resources were already constrained or being reduced due to enrollment pressures, LACs will require significant infusion of resources to support faculty and students alike online post-pandemic to sustain the ongoing need for some hybrid or online learning, or concomitantly, to respond to potential demand from students who have now experienced positive outcomes associated with it.

Summary

In this review of the literature, I sought to ground the current study in three areas of research I believe are critical to answer the proposed research questions. First, by focusing on the history, defining characteristics, and challenges faced by liberal arts colleges, I sought to demonstrate the importance of studying LACs and their students during the pandemic crisis specifically and apart from other types of institutions. Because no analogous crisis exists with the exception of the Spanish Flu pandemic of 1918—for which there was no available higher education research literature to examine—to rival the COVID-19 pandemic, I surveyed literature on natural disasters and epidemics to identify key research findings and strategies to inform the current study and survey questionnaire design, including the importance of considering study participants' self-reported level of disruption caused by the pandemic as a lens for interpreting effects. In the course of this review, I also tracked emerging national survey data and U.S. and

international research about colleges and universities and their students during the pandemic, seeking relevant survey instruments, research designs, and insights from findings to inform the current study. While no existing survey or scale was identified in this process to replicate in the current study, key concepts (e.g., the importance of students' living situations during crises, collection of important demographic data) identified were used to craft the current study's survey questionnaire.

Inevitably, research continuously emerged as the current study's data collection and analysis took place. I monitored and incorporated emergent findings as appropriate during the execution of this study. The current study adds to the emerging pandemic literature about the college student experience by both asking students to thoroughly assess that experience, as well as reflect on and evaluate the ways in which their institutions have sought to mitigate and respond to the pandemic's conditions. In doing so, the intention was to apply real-time student data to identify implications for practice recommendations for research that speak to broader institutional questions about what LAC responses to the pandemic mean for the future of these institutions.

CHAPTER 3

METHODS

The purpose of this study was to understand students' perspectives of their liberal arts colleges during the COVID-19 pandemic, as well as their reported sense of belonging to and intention to remain at their current school, to identify potential short- and long-term implications for liberal arts institutions. This study sought to fill a gap in the emerging literature on the COVID-19 pandemic by focusing specifically on the experiences of students attending liberal arts colleges across the southern United States, recognizing the challenges this particular niche of higher education faces. This chapter describes the quantitative methodology selected to pursue this line of inquiry, the survey questionnaire constructed to collect student data, and the statistical methods selected to address each of the study's research questions.

Research Questions

This study aimed to understand current liberal arts college students' perspectives on their educational experiences in the context of the COVID-19 pandemic, to identify implications that may help institutions consider how best to build stronger, more resilient colleges in a post-pandemic future. To this end, I sought to answer the following research questions:

RQ1. To what degree do current students value key elements of their liberal arts college experience during the COVID-19 pandemic?

RQ1a. Do student perspectives about their liberal arts college experiences during the pandemic differ significantly based on (a) their Fall 2020 educational

circumstances (e.g., school operating status, living situation); (b) the demographic groups to which they belong; or (c) the level of personal disruption they report the pandemic has caused?

RQ2. To what degree do LAC students report a sense of belonging and intention to remain at their current institutions during the COVID-19 pandemic?

RQ2a. Does students' reported sense of belonging differ based on their (a) Fall 2020 educational circumstances or (b) demographic characteristics?

RQ2b. Does students' reported intention to remain at their current institution differ based on their (a) Fall 2020 educational circumstances or (b) demographic characteristics?

The goal of answering these questions was to both assist institutions in understanding their students' experiences during the COVID-19 pandemic in real time, as well as to consider what lessons can be learned from ongoing response to the pandemic to inform efforts to build stronger, more effective, and more resilient liberal arts colleges after the pandemic has ended.

Selection of Quantitative Methodology

For this study, I used a quantitative, non-experimental research design in pursuit of the stated research questions. Quantitative research is appropriate when analyzing the nature of relationships among numerical variables and seeking to understanding numerical variable effects and interactions (Creswell, 2014). This study examined relationships among numerical variables identified through a choice-based survey focused on students' experiences during the COVID-19 pandemic, therefore, a quantitative methodological approach to analyzing data was appropriate. Selection of quantitative methods also situates the current study within an emerging body of

quantitative research about students' behaviors and decisions about navigating the college experience during the ongoing pandemic.

Study Population and Participants

The population of interest in the current study comprises second-, third-, fourth- or otherwise final-year undergraduate students enrolled in one of two LACs during the COVID-19 pandemic. Specifically, this study examined data collected from current, baccalaureate degree-seeking college students enrolled in one of two LACs located in the southern United States (Table 1). To be clear about the delimitations of the study population, it is important to define both “liberal arts college” and “college students,” as the higher education sector contains extremely diverse students and types of institutions. In this study, LACs are defined as small higher education institutions enrolling primarily undergraduates, anchored by a core liberal arts curriculum and an emphasis on close student-faculty interaction in a residential campus environment. For the purposes of this study, “college students,” “students,” and “LAC students,” to which this study often referred and used interchangeably, are defined as full-time, baccalaureate degree-seeking undergraduate students enrolled in a liberal arts college. To participate in this study, these students are further defined as in their second, third, fourth, or otherwise final year of enrollment at their current institution and were enrolled in their current institution during the Fall 2019 academic semester. This enrollment qualifier is critical, as the study sought to understand students' evaluations of core LAC institutional characteristics based on their experiences at their institution both at enrollment and during the academic fall semester prior to the COVID-19 pandemic.

Table 1*Institutions Comprising Study Population*

Name	Total Full-Time Degree-Seeking Undergraduates	Students of Color	International Students	Women
Southern College	1,192	25%	1%	51.9%
Mid-Atlantic College	2,981	25%	10%	51.8%

Locating the Study

College students in this study are distinguished by their enrollment in one of two LACs located in the southern United States. The average enrollment of full-time degree-seeking undergraduates at the selected institutions was 2,086, with a total enrollment of 4,173. Higher education institutions, including LACs, opted for a range of approaches to reopening in fall 2020 (Turk et al., 2020), including in-person, hybrid (a combination of in-person and online course delivery), or online (campus closed and all courses and activities delivered remotely). The participant institutions were purposefully selected to align with the study's stated purpose and research questions. One of the institutions—Southern College—delivered its Fall 2020 semester courses completely online, a drastic departure from continuing students' prior experiences at this school. The second institution, Mid-Atlantic College, operated in a hybrid status during Fall 2020, with the majority of enrolled students living on campus for the Fall 2020 semester. By purposefully selecting LACs where operating modes both differed between institutions while also presenting substantively different academic and personal experiences for students, data collected may illustrate, to some degree, the significance of pandemic-necessitated changes to campus operations.

In addition, the U.S. South presented a unique context for understanding the experience of LAC students during the COVID-19 pandemic. The United States first began to see surging COVID-19 cases in the Pacific Northwest and urban centers such as New York, New York, in Spring 2020 (Shaner, 2020). As higher education institutions began the great wave of campus closures and pivots to remote learning in March 2020, many colleges and universities were located in places that had not yet felt the pandemic's effects, including many southern states where COVID-19 cases did not begin to surge until early Summer 2020. Schools in the U.S. South, including LAC institutions, were nonetheless engulfed in the wave of campus closures due to the pandemic. A second wave of COVID-19 infections, which peaked in July 2020, ravaged southern states such as Florida, Georgia, and Texas, which had not enforced widespread public health measures like closing businesses and mandatory mask wearing (Meyer & Madrigal, 2020). Given the nonuniform public health and policy response to COVID-19 across the United States and in general, the delay many southern states experienced both in surging virus cases and in broad-based public health responses and mandates, the U.S. South is a unique and rich geographic area from which to draw data about LAC students' experiences during the pandemic.

Data Source

Data for this study were sourced via the distribution of an online survey questionnaire I constructed and distributed to students currently enrolled in the two LACs selected for this study. With research approval from William & Mary's Education Institutional Review Committee (EDIRC), I partnered with each campus to identify prospective participants that met my study's eligibility criteria. Given I was unable to locate any existing studies focused on the experiences and perspectives of LAC students during the COVID-19 pandemic, my study was in part exploratory, seeking to observe and report the characteristics of the resulting sample.

Data Collection and Instrumentation

Qualtrics^{XM} survey software was used to develop the online survey. The survey was distributed via an invitation email containing succinct information about the study's purpose and the incentive offered to participate in April 2021 (Appendix B). The first item in the online survey requested participants' informed consent to participate in the research study and a verification of their age. Two email reminders were sent to participants prior to the survey close date. Participants who chose to share an email address via the last item of the survey were entered into a raffle to win a \$50 Visa gift card.

In quantitative research, to the extent possible it is ideal to use existing instruments for which validity and reliability have been established and documented (Creswell, 2014; Rudestam & Newton, 2014). Although a variety of surveys have emerged to track and understand aspects of the college student experience across higher education during the COVID-19 pandemic, no existing survey instrument was available upon undertaking this line of inquiry focused specifically on students enrolled in U.S. liberal arts colleges. Thus, the survey questionnaire was drafted in consultation with advising faculty, institutional effectiveness professionals, and committee members, taking into account emerging survey instruments tied to COVID-19 research projects (Global Strategy Group, 2020; Lundquist et al., 2020; Skinner & Lansford, 2020). Rudestam and Newton (2014) noted only "in rare instances" when unable to locate an existing measure should a student seek to design their own instrument, as failures to adequately test validity and reliability may reduce the scientific value of the study's outcomes (p. 98). Taking these risks into account, I determined the pandemic crisis warranted survey design to collect data in a time with conditions that—hopefully—will not be replicable again for this generation of college students.

Instrument Items

The survey instrument (see Appendix A) consisted of six sections meant to collect the types of data needed to answer the research questions: screening criteria; information about participants' Fall 2020 educational circumstances (e.g., living circumstances, experience with online coursework); an assessment of the COVID-19 pandemic's disruption on participants' personal lives; participant evaluation of seven LAC characteristics and their relative importance before, during, and as predicted after the pandemic; participant self-assessment of sense of belonging to their institution and intention to remain and graduate; and participant demographic information. These survey sections generated the collection of independent and dependent variables needed to complete the statistical analyses selected to accompany each research question.

The first section of the survey questionnaire included items meant to screen for any participant who, despite the pre-screening process of identifying prospective students with institutional effectiveness teams, may not meet the criteria for the study. Full text of the IRB-approved consent form appeared first when accessing the survey, including a notation that students who proceeded were both consenting and indicating they were 18 years old or older. The two additional screening criteria involve enrollment information. Participants were required to be in their second, third, fourth, or otherwise final year of their undergraduate education in order to be eligible for study; first-year students and graduate students were routed to an end-of-survey message thanking them for their interest but indicating their ineligibility. Participants were also asked to verify they were enrolled for the Fall 2019 semester at their current institution. In order to be eligible, students needed to have a comparative experience from a full

academic semester at their current institution, as the disruption of the COVID-19 pandemic began in March 2020, mid-spring semester for institutions in the study.

Fall 2020 Educational Circumstances. In order to understand the various aspects of participant pandemic experiences at LACs, a series of survey items were included to collect data about their enrollment characteristics. Participants were asked to identify their LAC by name in a survey item. Several items were included that identify aspects of students' fall 2020 educational circumstances, including course delivery mode (e.g., fully online, hybrid, or fully in person). This item was included to assess whether participants in each classification of Fall 2020 semester delivery differed significantly based on their demographic characteristics or in how they evaluate elements of their LAC experience or institutional response to the pandemic. Emerging research is also demonstrating among all classifications of residential status, students who began their semester by living on campus and were then forced to relocate are the least satisfied with their college experiences during the pandemic (Lundquist et al., 2020). Further, on-campus residential education is a hallmark of the LAC experience (Astin, 1999; McPherson & Schapiro, 1999), and thus an important lens through which to consider participant responses to survey items regarding their perspectives about aspects of their LACs and how those institutions have responded to the pandemic. Last, participants were asked to indicate whether they had taken an online course prior to the onset of the COVID-19 pandemic. Because small, in-person classes are a hallmark of LACs (Astin, 1999), it was possible participants in this study had never taken an online course prior to the pandemic. Research demonstrates learning effectively online takes skill-building, self-direction, and practice (Song & Hill, 2007), an absence of which can lead to both student and instructor frustration (Trammell & LaForge, 2017). As this study explored the population characteristics of LAC students during the pandemic, it was important to consider whether prior

experience with online learning or lack thereof was related to how students responded to other survey items.

Pandemic Disruption. While emerging research about college students during the COVID-19 pandemic has identified potential differential effects among demographic groups (Lundquist et al., 2020; NSCRC, 2020), in the course of reviewing the literature, a single study was identified that included detailed statistical items aimed at measuring the degree of personal disruption students are experiencing as a direct result of the pandemic. In a study of University of Vermont first-year undergraduates, Copeland and colleagues (2020) incorporated a question into their survey that sought to evaluate students' response to the COVID-19 pandemic, citing Skinner and Lansford's (2020) then-unpublished questionnaire. Skinner and Lansford (2020) had developed a questionnaire to characterize individual responses to the pandemic by measuring students' confidence in state and federal government response, their hopes for the future post-pandemic, the occurrence of COVID-19 for them personally or those they knew well, and the perceived level of disruption of COVID-19 on their daily lives. The instrument also includes a question asking respondents to rate how much the COVID-19 pandemic has been disruptive to individuals personally on a scale of 1-10, considering daily routines, work, and family life (Skinner & Lansford, 2020), which was used as a model for the pandemic disruption item in the current study's survey.

Because the pandemic is ongoing and research is emerging rapidly, there were no additional extant, validated items or instruments available to measure personal impacts of the pandemic on individual respondents. The items in the pandemic disruption section of my instrument are thematically similar to some elements of the two surveys mentioned (Copeland et al., 2020; Skinner & Lansford, 2020), including measures of the pandemic's effects on physical,

mental, and financial health, effects on the academic experience, and overall sense of personal disruption caused by the pandemic.

Liberal Arts College Elements. The survey questionnaire's fourth section comprises items that measure participants' evaluation of the seven elements of the LAC experience as outlined in the conceptual framework and literature review of this study, and to assess whether the degree of importance ascribed to each item has changed over time. Because these items emerged from the literature on LACs and were selected purposefully to represent experiences core to the LAC educational environment, they will be grouped together during data analyses. Further detail about the Liberal Arts College Elements (LACE) and reliability testing conducted will be detailed in Chapter 4.

Survey participants indicated on a scale of not at all important to extremely important the degree to which they valued each of the seven LACE items at four moments in time: at the time they decided to attend their current institutions, during the Fall 2019 semester, during the Fall 2020 semester, and a post-pandemic prediction. Only participants with at least one semester remaining at their current institutions were asked to anticipate how important they believe the LACE will be to them in Fall 2021, intended to invite imagining a return to normalcy on their college campus and consideration of whether the pandemic experience altered their perceptions of each LACE item's importance.

Sense of Belonging. The fifth survey section is designed to collect data regarding students' sense of belonging to their current institutional community and their intention to remain at that institution to complete their undergraduate education, using a sense of belonging subscale adapted from Hausmann et al.'s (2007) study. The psychological need to belong is a fundamental human motivation that can powerfully affect individual behaviors (Baumeister &

Leary, 1995). For decades, researchers have posited college students' reported sense of belonging to their institutional community is linked to their persistence and retention (Hausmann et al., 2007; Hausmann et al., 2009; Hoffman et al., 2002; Hurtado & Carter, 1997). Hausmann et al. (2009) found sense of belonging to a university community is a significant determinant of students' commitment to their university, and thus an indicator of their likelihood to persist and actual persistence. In the current study, sense of belonging items were used as a proxy for understanding potential retention effects during and after the pandemic for liberal arts colleges.

During the COVID-19 pandemic, many behaviors researchers have identified as predictive of students' sense of belonging, such as involvement in student organizations and activities (Astin, 1984), have been significantly limited or eliminated to prevent the spread of the virus. The degree to which students have been able to engage with their peers and faculty, and the quality of such engagements, has also been limited or significantly altered during the pandemic. LAC environments, indeed, are built to encourage these types of quality interpersonal interactions, particularly in the classroom. The changes necessitated by the pandemic to classrooms, including moving to fully online course delivery, residential living, and other aspects of the college experience represent a significant departure from what LAC students are accustomed to; the resulting turbulence for students may be creating feelings of disconnection, which ultimately may affect whether students remain enrolled, transfer, or drop out.

Although to date, the feared enrollment declines precipitated by the pandemic have not been as drastic for private, 4-year colleges, among which institutions in the current study are located (Korn, 2020), much uncertainty remains for higher education as the pandemic continues. Vaccine distribution progress in the U.S. triggered early optimism among students regarding a possible return to normalcy on their home campuses during the 2021-2022 academic year;

however, vaccine distribution has been uneven and plagued by challenges across the U.S. (Berezow & Dinerstein, 2021) and plateaued in July 2021 (Martinez, 2021). For college students whose ages typically place them in a low-risk category for illness or side effects from COVID-19, failures in the vaccine roll-out and administration may negate its potential ameliorating effects for higher education institutions (L. Burke, 2020). Thus, the sense of belonging and intent to return items were used to capture the degree to which prevailing uncertainty about when the campus experience will “go back to normal” in how students are thinking about staying, departing, or stopping out in the next academic year.

Participant Demographics. Emerging research is demonstrating current college students’ experiences during the pandemic may differ based on their demographic characteristics (Lunquist et al., 2020; USC-Dornsife, 2020). In order to put these emerging findings into context within the current study, the survey questionnaire requested demographic information about each participant, including race, Pell eligibility, and citizenship status. Additionally, participants were asked to indicate whether they are international students, as international student enrollment has decreased across all higher education sectors due to conditions created by the pandemic (Baer & Martel, 2020).

The pandemic is also having disproportionately negative effects on college enrollments among low-income students. Community colleges, which serve more low-income students than any other sector of higher education, saw a nearly 20% decline in enrollments during fall 2020 (NSCRC, 2020). While data collected from private, 4-year colleges show much smaller enrollment declines overall, averaging about 2.5% (NSCRC, 2020), my survey instrument gathered information about participants’ socioeconomic status via a Pell eligibility item in order

to determine whether the negative impacts observed in community college settings for low-income students are replicated in U.S. liberal arts colleges.

Validity, Reliability, and Piloting the Survey

Because the survey developed for the current study consisted of new items relevant to the ongoing COVID-19 pandemic, piloting the survey with current LAC students before broader dissemination was critical to pre-testing its validity and reliability. Suskie (1996) suggested collecting evidence on validity in the development of a survey when the findings could lead to major changes, be disputed, include questions to which participants may not respond truthfully, or undergirds a study that is expansive or substantial in significance. As this survey was deployed in a dissertation study, in which the findings may be impactful or even controversial in the view of participating institutions, seeking evidence on its validity before multi-institution deployment was appropriate.

A valid questionnaire or survey measures accurately what the researcher intends for it to measure, and ensures inferences made from resulting data are as accurate as possible (Suskie, 1996). Content validity refers to whether items in a survey measure the content they were designed to measure (Creswell, 2014). I sought to establish content validity by soliciting a diverse group of colleagues—including administrators, faculty, dissertation committee members, and student leaders—to read the survey and provide feedback to improve and strengthen its clarity. To further establish content validity, in February 2021, I administered the survey questionnaire online to a convenience sample of LAC undergraduate students enrolled at one of the participating institutions. The students completed the survey and provided feedback on the items it contains via an open-text feedback item at the survey's conclusion. Their feedback assisted me in further editing the survey items, corresponding instructions, and item order, and

helped me to understand “how questions are being processed and understood, how answers are being formed, and whether the surveyor’s intent for each question is being realized” (Dillman et al., 2014, p. 244). Participants in the sample were also invited to participate in one-on-one conversations with me about the instrument to elicit additional, more detailed feedback. Information gathered via these attempts to establish validity for the survey informed and strengthened the survey for distribution.

To further establish validity, I conducted an in-depth literature review on both LACs and emerging literature in higher education with a focus on COVID-19. This review informed the survey items I designed concerning the seven elements of the LAC experience, as well as how I sought to measure the disruption caused by the pandemic (Copeland et al., 2020; Skinner & Lansford, 2020). To assess students’ reported sense of belonging, I adapted a sense of belonging subscale adapted from Hausmann et al.’s (2007) study on the subject. By using existing data and research studies in this way, I attempted to hedge against the challenges to validity that come along with administering a new survey instrument.

A well-designed survey is also reliable, meaning it elicits reliable data when administered (Suskie, 1996). The following steps were taken in survey design prior to the pilot stage in order to ensure the survey is as reliable as is within the control of the researcher: (a) attention was paid to a carefully crafted cover note inviting participants to complete the survey and specifying clearly and succinctly the importance of the study (Appendix B); (b) survey items were constructed to be as clear and as short as possible to limit possibilities for confusion in interpretation, or skipping items due to length; (c) clear directions are given wherever necessary to guide participants; and (d) the survey is designed for completion in fewer than 10 minutes to encourage participants to complete the full questionnaire.

Data Analysis

Survey data were analyzed using IBM SPSS Statistics software. In this section, I describe the statistical methods I used for each of the study's research questions. Before conducting any statistical analyses, collected data were carefully screened and cleaned to check the dataset for errors using SPSS procedures for both the categorical and continuous variables (Pallant, 2010). I calculated descriptive statistics in order to accurately describe the sample and determine whether variables violate any assumptions related to the statistical techniques I used; for example, I checked the shape of distribution for my continuous variables in order to assess their normality and check for outliers (Pallant, 2010; Tabachnick & Fidell, 2019). During these preliminary descriptive analyses, I confirmed the appropriateness of use of the planned statistical analyses for each of my research questions, as well as generated tables to describe the key characteristics of my sample. I also tested the seven LACE items for each of the four time periods—at admission, during fall 2019, during fall 2020, and predicted post-pandemic—for their internal validity, in order to determine how best to proceed with their use in the analyses for the first research question.

Methods Applied to Research Question 1

The first research question asked, “to what degree do current students value key elements of their liberal arts college experience during the COVID-19 pandemic?” and was delineated further by a follow-up question: Do student perspectives about their liberal arts college experiences during the pandemic differ significantly based on (a) their Fall 2020 educational circumstances (e.g., school operating status, living situation); (b) the demographic groups to which they belong; or (c) the level of personal disruption they report the pandemic has caused? In order to answer these questions, several statistical analyses were performed using the

dependent variables generated by the four survey items associated with students' evaluations of the seven elements of their LAC experiences at different points in time.

I established the first research question to determine whether participants at three distinct points in time—when they chose their colleges, during the Fall 2019 semester (pre-pandemic), and during the Fall 2020 semester (during pandemic)—value the core elements of their LAC experience differently. A one-way, repeated measures ANOVA was used to compare participants' responses to the LAC characteristics questions on the three discrete points in time identified. Repeated measures ANOVA were deployed similarly to compare demographic groups' LACE responses over time. A second repeated measures ANOVA was used to focus specifically on returning students, who were asked to score LACE items' importance at a fourth point in time—an imagined, post-pandemic future semester.

When comparing the mean scores of different groups, one-way analyses of variance (ANOVA) are appropriate (Pallant, 2010). To answer RQ1a, the independent variables generated by items in the fall 2020 circumstances section (e.g., living situation) were used to determine whether groups differed significantly in their evaluation of the LACE items. Independent variables from the demographic section (e.g., race, gender identity) were also used similarly in ANOVAs and independent samples t-tests, as appropriate for the number of groups comprising the selected independent variables.

Methods Applied to Research Question 2

The second research question focuses specifically on students' evaluations of how their institutions have responded to the COVID-19 pandemic, asking, “to what degree do LAC students report a sense of belonging and intention to remain at their current institutions during the COVID-19 pandemic?” Two sub-questions focus on whether students' reported sense of

belonging (RQ2a) and their reported intent to remain at their current institutions (RQ2b) differ based on their Fall 2020 educational circumstances or demographic characteristics. The sense of belonging section of the survey instrument generated dependent, continuous variables via Likert-scale items. To answer the research question, the independent variables produced in the demographics and Fall 2020 circumstances sections were used in combination with the dependent variables produced in the sense of belonging items to explore relationships among these variables using both ANOVAs and MANOVAs, as appropriate.

Delimitations and Limitations

Though the parameters of the current study have been described in this and previous chapters, further elaboration is needed regarding delimitations I imposed, as well as limitations beyond my control and assumptions made in undertaking the research effort.

Delimitations

A series of delimitations have been applied to the study in order to address the selected research questions. As described previously, the current study limited eligible participants to those currently enrolled full-time in liberal arts colleges. This delimitation was made in order to isolate the effects of the COVID-19 pandemic to a specific subset of the current college student population in the U.S.; because only 2% of all students enrolled in American higher education attend LACs, I determined a specific focus on this population would be a unique and useful contribution to the emerging COVID-19 literature.

In addition to their enrollment at an LAC, I further delimited participants to those who attended their current institution for at least one full semester prior to the spring 2020 semester in order to ensure participants were capable of comparing pandemic institutional conditions in their college setting to those experienced prior to the onset of the COVID-19 pandemic. This decision

relates specifically to gathering data related to the seven core characteristics of LACs identified in the literature review, and to seek understanding of how students' perceptions of the importance of these characteristics to them personally may have changed from prior semesters when experienced during the conditions brought on by the pandemic. Participants must also be in their second, third, fourth, or otherwise final year as a full-time degree-seeking undergraduate, as first-year students do not meet the previous criteria of being able to compare experiences year-over-year.

Last, participants are delimited by their enrollment in one of two LACs located in the U.S. South. This decision was informed both due to convenience and access, and due to evidence indicating southern states' governments and public health apparatuses responded differently in terms of public health restrictions and safety protocols than other parts of the U.S. I thus determined there was potential research value in grouping institutions together from the same geographic region of the U.S.

Limitations

Though carefully designed and proposed, several limitations on the current study warrant documentation. First, the survey instrument used to collect participant data was administered as an online survey, soliciting participants broadly from across undergraduate populations at the two participating institutions. As such, I had limited control over how the study was perceived by prospective participants—or the faculty and staff who might encourage (or discourage) them from participating. Though a series of template email messages was developed to invite participation and encourage completion within the data collection window, it is possible the survey arrived in participant inboxes during stressful periods of exams, or when individual institutions may have been experiencing unique public health threats or changes, as well as other

situational factors I could not effectively anticipate. All of these potential timing issues may have impacted the number of students who chose to participate in the survey, though I worked closely with the participating institutions to mitigate these issues. Additionally, the study and analyses relied on self-reported data, meaning the data were obtained directly from the participant rather than another source (Gonyea, 2005). Self-reported data are limited by an inability to verify or authenticate individuals' responses.

Second, research is already demonstrating the disproportionately negative impacts of the COVID-19 pandemic on certain groups, including those who are caregivers for family or dependents (Global Strategy Group, 2020), and those who are Pell eligible and thus face potentially more significant financial challenges than their more affluent peers (Lundquist et al., 2020). These challenges may have affected, to some extent, the willingness or ability of participants in these or other demographic groups (e.g., international students) experiencing greater levels of stress brought on by the COVID-19 pandemic to participate in the study. Participation may also have been affected by a general unwillingness among eligible participants to engage with a task not deemed essential to their academic or co-curricular activities, as ample reporting suggests college students are experiencing technological fatigue and burnout (Nadworny, 2021; Sreenivasan et al., 2021). To attempt to mitigate these factors collectively, I offered an incentive, in the form of a gift card raffle, for survey completion to encourage robust participation.

Third, the ongoing nature of the COVID-19 pandemic presents a significant limitation to the study overall. Because empirical research studies are rapidly emerging across disciplines concerning challenges college students and institutions are facing during the pandemic, the research as outlined and the methods proposed will by necessity be revisited and refined while

the research itself is underway, perhaps more so than if the topic selected and associated research questions were not focused on a crisis unfolding in real time. I have attempted to incorporate new data and emerging research as it has become available and to the extent doing so was possible within the constraints of completing this dissertation project.

Limitations of Dataset

In addition to the limitations associated with the study framework and the survey instrument, as data were collected several potential limitations associated with the dataset also emerged. The sample varied from the study population in particular ways. First-generation students, women, and Pell-eligible students are slightly overrepresented in the sample as compared to the population. International students were slightly underrepresented. The sample includes second-, third-, fourth-, and otherwise final year undergraduates; the amount of time these groups have had on their campuses differs, and thus presents a potential limitation when evaluating their perceptions of their LAC experiences during the COVID-19 pandemic (e.g., fourth-year students have significantly more pre-COVID experiences on their campuses than second-year students). To account for these differences, I bundled second- and third- year students together in some of the following analyses and tests to determine whether they differed statistically from students who were preparing to graduate. Though the participating institutions provided demographic information pertinent to my research questions for eligible participants, I was unable to obtain population-level demographic data from the institutions. As such, I was not able to use statistical methods, such as chi-square goodness of fit tests, to assess the alignment between population and demographics, and thus used frequencies instead, which is not optimal and thus a limitation of this dataset and study.

CHAPTER 4

RESULTS

The purpose of this study was to understand students' perceptions of their liberal arts colleges, as well as their sense of belonging to and intention to remain at their current school, during the COVID-19 pandemic in order to forecast potential short- and long-term implications for institutions. This chapter focuses on the results of quantitative data analyses associated with each of the study's research questions. First, details of the preliminary data screening and an overview of the sample's demographics are discussed. Then, the analyses conducted for each research question, along with summaries of their results, are provided. The chapter concludes with a summary statement.

Preliminary Screening

The initial data collected for analysis consisted of 857 cases. Before the data analysis was conducted, the data were screened for errors and missing values. First, frequencies and descriptive statistics were calculated for each variable in the dataset, which allowed me to identify issues in the data that could cause problems when the selected analyses were conducted. Initial screening identified a group of 82 cases who ceased response to the survey items following the pandemic disruption section of the survey, providing no data for the liberal arts college elements, sense of belonging, or the demographic item sections. These 82 cases were removed for the purposes of this analyses, as the sections of uncompleted data represent significant components of how the research questions were analyzed. Following removal of these 82 cases, 775 cases were retained for further screening. The dataset was re-examined using

frequencies for categorical variables and descriptive statistics for continuous variables to check for errors; no value errors were identified. In terms of missing data, no single variable in the dataset was missing more than 2% of cases, with the exception of the demographic variable Latinx Identity (5.9%). Thus, all variables were retained for analysis, as no patterns were identified in the missing data nor was any variable missing a total percent of cases that would be concerning for the study's proposed analyses.

Sample Characteristics

The total population (N) eligible to participate in the current study included 2,794 full-time, continuing undergraduate students enrolled at one of two liberal arts colleges in the southern United States. Full details of the sample selection process can be found in Chapter 3. The current study's sample (n) comprised 775 respondents for a 27.7% overall response rate. The response rate differed between the institutions included in this study. Mid-Atlantic College's response rate was 22.2% and Southern College's rate was 44.4%. I believe this rather substantial difference can be accounted for in a few ways. In consenting to participate as an institution in the study, each school offered a slightly different mechanism for soliciting participants that may have made a difference in response rates. At Southern College, my solicitation letter was sent on my behalf via the institutional research office; therefore, prospective participants received the invitation from a Southern email address, rather than an address from outside their institution. At Mid-Atlantic College, I was unable to send the solicitation message through an internal source; the invitation instead came from me directly to eligible participants' email addresses, which may have reduced response rate. It is also worth noting that Mid-Atlantic College was experiencing significant campus unrest and protests among its students during the collection period in March

and April 2021, which may have also affected eligible participants' willingness to participate in the survey at that time.

The sample was majority White (72.3%), female (61.7%), and primarily U.S. citizens (93.5%; see full sample demographic breakdown in Table 2. Because gender was not used as a factor in this analysis, gender breakdown is not included in this table). To determine whether the sample was representative of the total eligible population, frequencies for each participating institution's demographic variables in the sample were collected and compared to the total eligible population's demographic characteristics, as reported by each institution's office of institutional research (Table 3).

Table 2

Characteristics of the Sample

		Sample ($n = 775$)	
	Variables	<i>N</i>	%
Class Year	Second year (sophomore)	286	36.9
	Third year (junior)	257	33.2
	Fourth year (senior)	229	29.5
	Fifth or otherwise final year	3	0.4
Fall 2020 Course Delivery	All classes in person	89	11.5
	Some in person, some online (hybrid)	331	42.7
	All classes online	355	45.8
Fall 2020 Living Arrangements	On campus housing	433	55.9
	Off campus, but close by	106	13.7
	Permanent residence	221	28.5
Race	Asian	67	8.6
	Black	53	6.8
	Multiracial	50	6.5
	Total Students of Color	203	26.2
	White	560	72.3
Pell Eligibility	Eligible for Pell Grants	230	29.7
	Not eligible for Pell Grants	539	69.4

Variables		Sample ($n = 775$)	
		N	%
Citizenship Status	International Student	31	4.0
	U.S. Citizen	725	93.5

Note. Some demographic information collected was excluded for the purposes of this study's analysis, if not pertinent to the research questions. See Appendix A to review the full list of demographic survey items.

Table 3

Demographic Comparison by School

Demographic Category	Demographic Variable	Total Eligible Population ($N = 2,794$)			
		Southern College		Mid-Atlantic College	
		($N = 694$) Population %	($n = 308$) Sample %	($N = 2100$) Population %	($n = 467$) Sample %
Race	Asian	1.2	4.9	7.3	11.1
	Black	4.9	7.8	6.6	6.2
	Multiracial	22.0	5.2	4.5	7.3
	White	47.0	75.6	59.1	70.0
	Total Students of Color	28.1*	23.7*	18.4*	27.8*
Pell Eligibility	Eligible for Pell Grants	28.2	38.0	N/A	24.2
Citizenship Status	International Student	0.1	1.3	8	5.8

*Some categories do not sum to 100%, due to different categorizations used at each institution and in the current study's demographic survey items.

The study sample, in most respects, aligned demographically with the population sample, but Chi-square goodness of fit tests were run to test this alignment further. A chi-square goodness of fit test indicated there were statistically significant differences in the proportions of students of color identified in the current sample as compared with the values provided by the participating institutions' institutional research offices, $X^2(3, n = 730) = 18.69, p < 0.001$. I obtained proportionally more students of color in survey data collection than were present in the

overall population. Due to their already relatively small n values in the survey, I chose to continue analysis without weighting cases, which would have simulated a reduction in the number of students of color in the analysis overall. There was a statistically significant difference reported in the proportion of international students identified in the current sample (4%) as compared with the value of 6% obtained from the participating schools, $X^2(1, n = 756) = 4.8, p < 0.03$. Because my review of the literature indicated that international students in higher education had been disproportionally affected by the pandemic, and fewer international citizens than expected chose to participate in my survey, I weighted cases to simulate the population percentage for analyses where this demographic variable was used. Because students' Pell eligibility can change every year, Mid-Atlantic College did not provide me with a population Pell eligibility percentage for use in this analysis; Southern College provided a percentage estimate based on fall 2020 enrollment. Lacking the total population Pell percentage, I did not test this demographic's proportion against the sample percentage for goodness of fit. Table 3 provides additional demographic comparison data for both schools by population and sample.

Approximately 60% of respondents attended Mid-Atlantic College, while the remaining 40% attended Southern College. Given that Mid-Atlantic has approximately 3,000 students, compared to Southern's approximately 1,200 students, the sample representation of the overall study population from each school is nearly proportional. The total sample also includes nearly equal representation among second years (37%), third years (33.2%), and seniors or students otherwise in their final year (29.9%). Most participants (45.8%) in the sample were enrolled for completely online courses during the Fall 2020 semester; importantly, and as noted previously, Southern College was entirely remote during fall 2020, and participants from Southern represent nearly 40% of the total sample (Table 4). Approximately 43% of participants took courses in a

hybrid fashion during fall 2020, meaning that some of their classes were in person, and some were online. Eleven percent of the sample only took classes in person in fall 2020. Nearly 56% of the sample ($n = 433$) lived in on-campus housing during the fall 2020 semester, while 28.5% of participants lived at their permanent address; approximately 14% of participants lived off campus, but close to campus, in fall 2020. Only 27 students (3.5%) in the sample had ever taken an online course prior to the fall 2020 semester, while the remainder reported having no experience with online course delivery (96.5%). This statistic is especially worth noting when considering that Southern College was entirely online in fall 2020—only five Southern students (1.6%) had experienced online learning prior to the fall 2020 semester.

Table 4

Learning Modes in Fall Semester 2020

Course delivery mode	<i>f</i>	%
All classes in person	89	11.5
Hybrid classes (in person and online)	331	42.7
All classes online	355	45.8

Testing Reliability of the Liberal Arts College Elements

The participants in the current study attended one of two identified liberal arts colleges in the Southern United States. As detailed previously and for the purposes of this study, I define a liberal arts college as a small higher education institution enrolling primarily undergraduates, anchored by a core liberal arts curriculum and an emphasis on close student-faculty interaction in a residential campus environment. Following a review of the LAC literature, I identified seven key elements common across LACs: (a) a broad liberal arts curriculum all undergraduates experience; (b) a focus on on-campus residential life; (c) low student-to-faculty ratio in academic classes; (d) close mentoring relationships between students and faculty; (e) the availability of

extracurricular and social opportunities for students; (f), the availability of high-quality, high-impact educational practices (e.g., undergraduate research); and (g) an appealing residential campus environment (e.g., architectural features, quality facilities, and emphasis campus beauty). As the current study was designed in part to understand the degree to which current LAC students value key elements of the LAC experience, the seven liberal arts college elements (LACE) were grouped into a scale associated with four time periods— at the time of admission, during the fall 2019 semester (pre-pandemic), during the fall 2020 semester (during pandemic), and during an imagined post-pandemic semester—to assess students’ perceptions of value for each element. Data were collected for last point in time only from students with at least one semester of academic eligibility remaining. A summary of the LACE items can be found in Table 5.

Table 5*Liberal Arts College Elements (LACE): Survey Items and Purpose*

Codebook Name	Item Wording	Purpose
		To assess students' perceptions of value regarding:
LACourse	Ability to take academic courses from across a broad liberal arts curriculum	Access to liberal arts curriculum
ResLife	Living in a residential campus community	Residential campus life
Ratio	Low student-to-faculty ratio in my classes	Small class sizes
Faculty	The ability to develop close mentoring relationships with faculty	Faculty relationships
Cocurricular	Access to co-curricular opportunities, such as internships, undergraduate research, and study abroad experiences	Cocurricular activities/their availability as part of experience
CampusLife	Access to social and campus life opportunities, such as student organizations, clubs, community service, and intramural sports	Social and campus life activities/their availability as part of experience
CampusAppeal	The appeal of the campus environment (e.g., architecture, quality facilities, campus beauty)	Campus built environment

A preliminary analysis of LACE item reliability was warranted in order to determine its internal consistency. Pallant (2010) recommended the use of the Cronbach alpha coefficient, a commonly used indicator of scale reliability. SPSS was used to run a reliability analysis for the seven LACE items at each time interval. Results of these reliability analyses are summarized in Table 6. Each reliability analysis conducted demonstrated that the seven LACE items had good internal consistency, with Cronbach's alpha values greater than .7 for all four time intervals.

Because the LACE items demonstrated good internal consistency and reliability, I determined it was appropriate and efficacious to create composite LACE variables for each time period in advance of the analyses that followed. Doing so reduced the likelihood of committing a Type 1 or Type 2 error by deploying single, composite variables to run analyses with independent variables, rather than testing all seven individual variables in the scale as stand-alone elements. The variable names, means, and standard deviations for the LACE are available in Table 7.

Table 6

Liberal Arts College Elements (LACE) Reliability Results

Time Interval	Cronbach's Alpha
At admission	0.774
Fall 2019 semester (pre-pandemic)	0.78
Fall 2020 semester (during pandemic)	0.819
Post-pandemic (predicted)	0.788

Table 7

Liberal Arts College Elements (LACE) Composite Variable Summary

Variable name	Description	<i>N</i>	<i>M</i>	<i>SD</i>
AdmitLACE	Composite scores for LACE at point of admission to college	772	3.90	0.67
Fall2019LACE	Composite scores for LACE during fall 2019 semester	759	3.94	0.68
Fall2020LACE	Composite scores for LACE during fall 2020 pandemic semester	752	3.41	0.96
PredictedLACE	Composite scores for LACE predicted by sophomores and juniors post-pandemic	531	4.01	0.75

Research Question One

Upon concluding preliminary analyses, I proceeded to analyses associated with answering research question one: To what degree do current students value key elements of their liberal arts college experience during the COVID-19 pandemic? In order to analyze data for this question, I used the LACE composite variables for each time period in a repeated measures ANOVA to determine whether the degree of importance study participants placed on the LAC experience changed over three points in time: at the time of their admission (Point 1), during the fall 2019 semester (Point 2; pre-pandemic) and during the fall 2020 semester (Point 3; during the pandemic). The repeated measures ANOVA was then used to consider a fourth point of time—predicted importance of each LACE item post-pandemic (Point 4)—among students eligible to return for at least one additional semester at their current institutions.

In the repeated measures ANOVA conducted for the full sample of participants ($n = 740$), there was a statistically significant effect ($p < .05$) for time (Wilks' Lambda = 0.72, sig. = 0.00). The partial eta squared value of 0.28 suggests time period had a very large effect on how participants rated their LAC experiences. Pairwise comparisons were used to locate the statistically significant differences indicated among the time periods. Statistically significant differences in mean scores on the LACE composite variables were present between participants' admission to their institution and their fall 2020 pandemic semester and between their fall 2019 and fall 2020 semester. No statistically significant difference in mean scores were noted between participants' admission year and their fall 2019 semester. Review of the mean LACE composite scores indicated the degree of importance participants placed on the elements of their college experience rose between admission ($M = 3.90$) and the fall 2019 semester ($M = 3.93$), then fell during the fall 2020 pandemic semester ($M = 3.40$).

A second repeated measures ANOVA was used to identify any statistically significant differences in mean LACE composite scores for returning students ($n=514$), who were asked to predict how important they believed the LACE items would be to them in a post-pandemic future semester. Results indicated a statistically significant effect for time (Wilks' Lambda = 0.68, $p < .05$, multivariate partial eta squared = 0.32) among this subset of returning student participants. Follow-up pairwise comparisons indicated statistically significant differences between every time period, with the exception of fall 2019 and post-pandemic prediction. As with the full sample in the previous repeated measures ANOVA, returning students' mean scores on the LACE composite variables increased between admission ($M= 3.90$) and fall 2019 ($M= 3.95$), then dropped during the fall 2020 pandemic semester ($M=3.44$). The highest mean score occurred in their post-pandemic predicted LACE value (4.00), suggesting returning students believed the elements of their LAC experience would be more important to them after the pandemic than at any other time period in the survey. Interpretations of the findings from these repeated measures ANOVAs will be discussed in Chapter 5.

Research Question 1a

Research Question 1a was designed to determine differences among participants' evaluation of the liberal arts college elements during the pandemic using designated independent variables, stating: Do student perspectives about their liberal arts college experiences during the pandemic differ significantly based on (a) their fall 2020 educational circumstances (e.g., school operating status, living situation); (b) the demographic groups to which they belong; or (c) the level of personal disruption they report the pandemic has caused? In order to answer research question 1A, I used a series of ANOVAs to compare how independent groups of participants evaluated LACE items during the fall 2020 pandemic semester and as predicted in a future post-

pandemic semester. The independent variables selected for these ANOVAs represented important groupings of participants as demonstrated by extant research, including course delivery experience (e.g., in person, hybrid, online), living arrangements (on campus, near campus, or at one's permanent address) demographic groups (race, gender, Pell eligibility, citizenship), and degree of personal disruption caused by the pandemic.

Testing Assumptions for ANOVAs

To effectively use ANOVAs, several assumptions were tested. First, ANOVAs require that continuous interval or ratio data; the dependent variables that will be used in this series are continuous on a scale of 1 (not at all important) to 5 (extremely important), affirming this assumption. Though parametric statistics assume scores are obtained via a random sample, Pallant (2010) noted “this is often not the case in real-life research” (p. 205). My research survey was administered to all undergraduate students in their second, third, fourth or otherwise final year of college at two LACs, resulting in more than 700 usable responses. I assume independence of observations recorded in the survey data, as more than 2,000 students received the instrument independently via email. It is therefore unlikely that any data were collected in group settings with multiple participants or in other scenarios where participants could influence one another in its completion. ANOVAs also assume normal distribution across the sample, although in many education and social science research projects, dependent variables are not normally distributed (Pallant, 2010), and with a large sample size as in this study, the risks associated with violating this assumption are lowered. Homogeneity of variance is also assumed in ANOVA, and Levene's Test for equality of variances results will be reported to address potential violations and needed adjustments to alpha levels in describing ANOVA results.

Testing LACE Scores and Course Delivery Modes

The first series of ANOVAs for Research Question 1a assessed whether participants' course delivery experience during fall 2020 (e.g., fully in person, hybrid, fully online) explained any statistically significant variance in how they evaluated the importance of their LAC experience. The independent variable for fall 2020 course delivery was used as a fixed factor in two ANOVAs. The first ANOVA used the fall 2020 LACE composite score as the dependent variable, and the second used the predicted LACE composite variable. In the first ANOVA, all Levene's test for homogeneity of variances sig. values were less than .05, indicating violation of the homogeneity of variance assumption. Follow-up robust tests of equality of means were also statistically significant at the $p < 0.05$ level. To account for this assumption violation, I set a more conservative alpha level of .025 for interpretation of ANOVA results. Results of the ANOVA indicated a statistically significant difference at the $p < 0.025$ level in mean LACE composite scores for fall 2020 among the three course delivery mode groups: $F(2, 749) = 6.40, p = .002$. Despite this result, the actual differences among groups by course delivery mode on the mean LACE fall 2020 composite score were quite small, with a calculated effect size of 0.02. Multiple comparisons indicated statistically significant differences between the mean LACE composite scores of students whose classes were in person versus those who were online, and between hybrid and online students, during the fall 2020 semester. Scores did not differ in a statistically significant way between in-person students and hybrid students (see Table 8).

Table 8*Fall 2020 LACE Scores by Course Delivery Mode*

Course Delivery Mode	<i>N</i>	<i>M</i>	<i>SD</i>
In Person	86	3.58	0.75
Hybrid	319	3.50	0.85
Online	347	3.28	1.08

The next ANOVA focused specifically on second- and third-year students who had at least one semester of additional time on their current campuses ($n= 531$). These students were asked to imagine how important the LACE items would be to them post-pandemic. In the ANOVA, course delivery mode was used as the independent variable, with the post-pandemic LACE composite as the dependent variable. Tests of homogeneity of variance did not indicate a violation of assumption, so I proceeded with an alpha level of $p < 0.05$ to determine statistical significance of the results. The results of the ANOVA indicated no statistically significant differences among the mean scores for returning students based on their course delivery mode in fall 2020: $F(2, 528) = 2.57, p = 0.08$. Whether they were in-person ($M=4.00$), in hybrid classes ($M= 3.93$) or fully online ($M= 4.10$) in fall 2020, returning students imagined they would strongly value the LAC experience post-pandemic. Mean scores and standard deviations for sample participants by course delivery mode, including at admission and in fall 2019 for comparison, are available in Table 9.

Table 9*LACE Scores by Course Delivery Mode in Fall 2020*

Variable	Delivery Mode					
	In Person (<i>n</i> = 89)		Hybrid (<i>n</i> = 331)		Online (<i>n</i> = 355)	
	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>
AdmitLACE (<i>N</i> = 772)	3.92	0.64	3.94	0.67	3.86	0.67
Fall2019LACE (<i>N</i> = 759)	3.94	0.60	3.93	0.68	3.94	0.70
Fall2020LACE (<i>N</i> = 752)	3.58	0.75	3.50	0.85	3.41	0.96
PredictedLACE (<i>N</i> = 531)	3.99	0.71	3.93	0.76	4.10	0.74

Note. Scale used for scoring was 1= *not at all important* to 5= *extremely important*.

LACE Items and Fall 2020 Living Arrangements

Some LAC students found themselves in a variety of unconventional living situations in the fall 2020 semester, owing to campus closures, limitations on residential life offerings, and other pandemic-related challenges (American Campus Communities, 2020). One of the schools included in the current study was fully remote during the fall 2020 semester, with only five students having ever taken an online class before the pandemic. As such, Research Question 1a also focused on whether differences in how students valued their LAC experiences during the pandemic occurred when grouped by their different living arrangements. To answer this question, the ANOVA procedures described in the course delivery modes section were repeated using fall 2020 living arrangements (on campus, off campus but close by, or permanent address) as the independent variable and the LACE fall 2020 composite and post-pandemic predicted composite variables as dependent variables.

In the ANOVA results for the fall 2020 LACE composite score ($N = 737$), Levene's Test for homogeneity of variance indicated a violation of this assumption; to compensate, a more conservative alpha level of 0.025 was set to determine statistical significance of ANOVA results. The between groups ANOVA result was statistically significant at the $p < 0.025$ level, indicating differences between groups on 2020 LACE composite scores based on the participants' reported living arrangements, $F(3, 748) = 6.17, p = 0.001$, but with a very small effect size of 0.02. In reviewing multiple comparisons results, statistically significant differences were present between students living on campus and those living at their permanent addresses, with on-campus students reporting higher scores on average ($M = 3.54$) than students living at home ($M = 3.22$). A second ANOVA sought to determine whether statistically significant differences occurred on the post-pandemic LACE composite variable based on returning students' living arrangements. The results did not indicate statistical significance based on students' living arrangements, though students who lived at home during the fall 2020 semester reported the highest mean scores ($M = 4.06$). Means and standard deviations grouped by fall 2020 living arrangement and including composite scores at admission and in fall 2019 are presented in Table 10.

Table 10

Liberal Arts College Elements (LACE) Scores by Fall 2020 Living Arrangements

Variable name	Living Arrangement					
	On campus ($n = 433$)		Off campus, but close by ($n = 106$)		Permanent address ($n = 221$)	
	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>
AdmitLACE ($N = 757$)	3.93	0.65	3.94	0.67	3.85	0.70
Fall2019LACE ($N = 744$)	3.96	0.65	3.90	0.68	3.92	0.73

Variable name	Living Arrangement					
	On campus (<i>n</i> = 433)		Off campus, but close by (<i>n</i> = 106)		Permanent address (<i>n</i> = 221)	
	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>
Fall2020LACE (<i>N</i> =737)	3.54	0.84	3.27	1.03	3.22	1.08
PredictedLACE (<i>N</i> =518)	4.01	0.75	3.94	0.74	4.06	0.73

Note: Scale used for scoring was 1= *not at all important* to 5= *extremely important*.

LACE Composite Scores and Student Demographics

Reporting and research on the COVID-19 pandemic has indicated that not all college student demographic groups have experienced it the same way; indeed, students of color, low-income students, and international students often reported more significant challenges in remaining enrolled during a semester where financial uncertainties and racial unrest nationwide compounded the effects of this once-in-a-lifetime public health crisis (Baer & Martel, 2020; Lundquist et al., 2020; Millet et al., 2020). Acknowledging disparities reported among different demographic groups, I included a demographic question section in my survey instrument to generate independent variables for use in statistical analyses. To date, no reports or studies have demonstrated if or whether the disparities in experience college students have faced across groups are mirrored in the experiences of LAC students specifically. In this section, analyses focused on ascertaining whether participants in the survey differed in the ways they valued their LAC experience using the LACE composite variable during the pandemic, as well as whether they differed in their predicted values of those elements post-pandemic.

Before proceeding to statistical analyses using racial identity as a variable, I made a few decisions regarding the dataset. As indicated in my survey instrument (Appendix A), I provided

students with a range of options for reporting their racial identities, adopting the demographic question used in the Higher Education Research Institute (2021) Diverse Learning Environments survey. For the purposes of this analysis, I excluded groups with fewer than 50 responses to ensure more robust statistical results and lessen the potential of reaching an inaccurate conclusion in the form of a Type 1 or Type 2 error. The full dataset's racial breakdown is available in Table 11. Similar to the analyses of course delivery mode and living arrangement differences, I used ANOVAs to test for potential racial group differences on the LACE fall 2020 composite variable. For federal Pell Grant eligibility and citizenship status variables, the categories for which included only two groups, independent samples t-tests were used to test for statistically significant differences between groups along the fall 2020 LACE composite variable. Among the four racial groups included in the independent variable (Asian, Black, Multiracial, White), the ANOVA result did not indicate statistically significant differences among groups in how students rated elements of their LAC experience during the fall 2020 semester. Returning students' scores on the predicted LACE composite also did not differ at a statistically significant level by racial identity group. Independent T-test results for students eligible and not eligible for federal Pell grants, a proxy variable for socioeconomic status, similarly did not reveal statistically significant results for either the full sample's mean scores on the fall 2020 LACE composite, nor the predicted post-pandemic LACE scores.

Table 11*Participant Responses to Racial Identity Survey Item*

Racial Identity	<i>N</i>	%
American Indian or Alaska Native	3	0.4
Asian	67	8.6
Black	53	6.8
Multiracial	50	6.5
Native Hawaiian or Pacific Islander	0	0
White	560	72.3
Other (option to fill in)	13	1.7
Selected more than one option	12	1.5

Before running independent samples *t*-tests to identify potential statistically significant differences between U.S. citizens and international students in the sample, I used the weight cases function in SPSS to simulate the proportion of international citizens in the population (5.8%) from which the sample was drawn. Given the seismic disruptions to the academic experiences of international students due to country-wide lockdowns, travel bans, and other restrictions, I determined it was important to weight cases to simulate what results would look like if the sample had fully represented eligible students in the population. With weighted cases established, an independent samples *t*-test indicated a violation of the assumption of equality of variances via the Levene's test; I proceeded noting the equality of variances was not assumed. The independent samples *t*-test indicated a statistically significant difference between the mean scores on the LACE fall 2020 composite variable of U.S. citizen students ($M = 3.40$, $SD = 0.96$) and international students ($M = 3.70$, $SD = 0.70$), $t(48.6) = 2.54$, $p = 0.014$, with a large effect size (0.31). This result indicates that approximately 31% of the variance in mean LACE fall 2020 scores was explained by whether students were U.S. or international citizens. A second independent samples *T*-test was run to determine whether returning students differed in their

predicted post-pandemic LACE scores based on their citizenship status, and no statistically significant difference was found.

Results of the ANOVA and independent samples t-tests detailed in this section demonstrated few statistically significant differences among groups in valuing elements of the LAC experience. Consistently, however, mean scores on the LACE composite variables increased as participants imagined a post-pandemic return to campus, suggesting the pandemic academic year experience may account for a degree of increased importance on key features of LACs.

Testing the LACE Items With Student Pandemic Disruption

The final element of Research Question 1a focused on the level of individual disruption survey participants reported, and whether that disruption when used as an independent variable would account for any differences among mean scores on the LACE composite variables. In other words, I sought to identify whether relationships existed between the degree of life disruption (academic, financial, mental health, physical health) caused by pandemic and how students then rated the importance of elements of their LAC experiences. To consider this question, I first returned to the disruption variable collected via a survey item that asked students to “rate how disruptive the COVID-19 pandemic has been to you personally on a scale of 1 (*not at all disruptive*) to 10 (*extremely disruptive*). Think about your daily routines regarding school, work, and personal life, and relationships with family and friends.” In the preliminary analysis phase, I noted that the mean score on this disruption scale for all participants was 7.53 out of 10; score clustering to the right of the distribution indicated a non-normal distribution (see Figure 2), with a negative skew (-0.706). An interpretation of this result will be discussed further in Chapter 5. In order to account for this non-normal distribution and to prepare for further

analyses, the sample was divided into equal groups using visual binning, the results of which can be viewed in Table 12.

Figure 2

Frequency Distribution of COVID-19 Disruption Scale

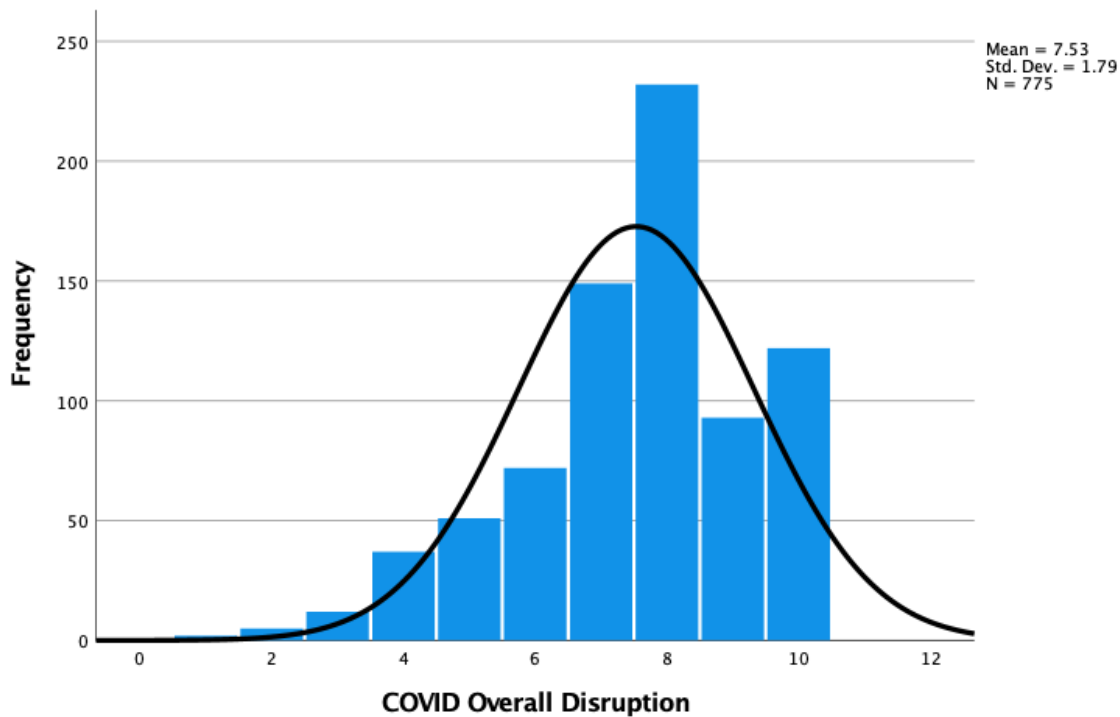


Table 12

COVID-19 Disruption Scale: Visual Binning Results

Degree of Disruption	N	%
<= 7	328	42.3%
8	232	29.9%
9 and 10	215	27.7%

Note. This table resulted from the COVID-19 disruption scale variable, in which students were asked to rate the level of overall disruption (1 = *not at all disruptive* to 10 = *extremely disruptive*) caused by the COVID-19 pandemic on their lives.

ANOVAs were then used to determine whether statistically significant differences existed in how participants rated the importance of LACE items based on the degree of disruption they reported the COVID-19 pandemic had caused in their lives. First, the LACE

composite variable for the fall 2020 pandemic semester was used as the dependent variable, with the binned disruption scores used as the independent variable. Results indicated a violation of the assumption of homogeneity of variances, so I selected a more conservative alpha of $p < 0.025$ for use in determining the ANOVA's statistical significance. Results of the ANOVA indicated statistically significant differences between groups based on students' reported pandemic disruption at the $p < 0.025$ level— $F(2, 749) = 4.99, p = 0.01$ —but with a very small effect size of 0.01; although the means between disruption level groups differed, the difference was very small (Table 13). Multiple comparisons indicated statistically significant differences between students who rated pandemic disruption at a 7 out of 10 or lower (about 42% of the sample, $M = 3.29$) and those who selected 9 or 10 (about 28% of sample, $M = 3.55$) in their scoring of the LACE composite variable for fall 2020.

Table 13

Fall 2020 LACE Score Means by Reported Pandemic Disruption

Pandemic Disruption Group ($n = 752$)	N	Fall2020LACE Composite M	SD
≤ 7	317	3.29	0.88
8	226	3.45	0.94
9 or 10	206	3.55	1.08

Note. This table resulted from the COVID-19 disruption scale variable, in which students were asked to rate the level of overall disruption (1 = *not at all disruptive* to 10 = *extremely disruptive*) caused by the COVID-19 pandemic on their lives.

The second ANOVA used the predicted post-pandemic LACE composite as the grouping variable ($N = 531$) and the binned COVID-19 disruption scores as the dependent variable to consider whether pandemic disruption accounted for any differences in how important students felt the LAC experience would be to them after the pandemic. The ANOVA result indicated statistically significant differences among mean post-pandemic LACE scores at the $p < 0.05$

level— $F(2, 528) = 13.30, p = 0.001$ — with a moderate effect size of 0.05. An estimated 5% of total variance in mean scores on the predicted post-pandemic LACE composite can be attributed to the degree of pandemic disruption reported by returning students with remaining semesters at their current institutions. Multiple comparisons indicated there were statistically significant differences among all three binned score groups (Table 14).

Table 14

Predicted Post-Pandemic LACE Score Means by Reported Pandemic Disruption

Pandemic Disruption Group ($n = 531$)	Predicted LACE Score Post-Pandemic		
	N	M	SD
≤ 7	218	3.84	0.75
8	152	4.03	0.73
9 or 10	161	4.23	0.71

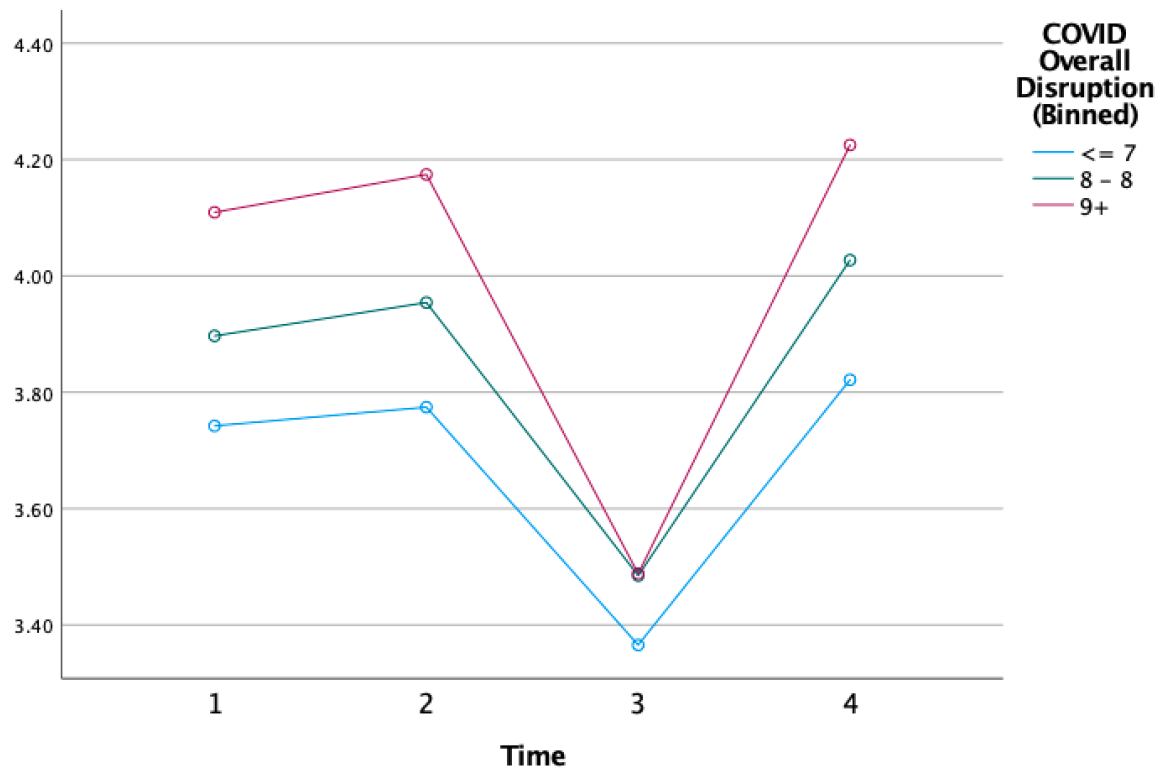
Note. This table resulted from the COVID-19 disruption scale variable, in which students were asked to rate the level of overall disruption (1 = *not at all disruptive* to 10 = *extremely disruptive*) caused by the COVID-19 pandemic on their lives.

To explore this result further, I used a repeated measures ANOVA using only returning students to see potential changes in mean scores over the four time periods on the LACE composite variables. Results from the repeated measures ANOVA produced a Wilks' Lambda value of 0.98, which was not statistically significant at the $p < 0.05$ level, indicating there were not statistically significant differences in mean LACE scores over the four time periods for returning students in the sample. Students who reported the highest levels of disruption generated by the COVID-19 pandemic indicated the LACE items would be more important to them post-pandemic than they were prior to the pandemic. While statistically significant differences in mean LACE composite scores were not indicated among binned disruption groups, the trend

lines for returning students are displayed in Figure 3 to illustrate their change over the four time periods.

Figure 3

Mean LACE Composite Scores Over Time: Returning Students



Note. “Time” denotes the four time periods for which LACE items were assessed: at admission to college (1); during fall 2019 (2, pre-pandemic); during fall 2020 (3, pandemic semester); and predicted post-pandemic (4).

Summary of Research Question 1 Findings

Research Question 1 sought to explore potential relationships among various pandemic conditions (e.g., course delivery, living arrangements) and demographic factors and how students rated the importance of elements of their LAC experiences before, during, and potentially after the COVID-19 pandemic. Time was identified as a statistically significant factor in how students scored their LACE items; all students ascribed a lower degree of importance to the LACE items

during the fall 2020 semester and returning students' scores as predicted for a post-pandemic semester revealed statistically significant differences when compared to their scores before the pandemic. ANOVAs revealed statistically significant, though unlikely practically significant, differences among mean LACE scores for students learning online, hybrid, or in person during fall 2020, with online students reporting the lowest mean LACE scores during the fall 2020 semester. Online students' LACE scores rebounded the most in imagining a post-pandemic return, as compared to those studying in hybrid or in-person classes. Similar to course delivery mode, statistically significant differences in LACE mean scores with a very small effect size were found among fall 2020 living arrangement groups, with students living at home reporting higher average LACE scores than those near or on campus. No statistically significant differences were found among racial groups or between Pell and non-Pell eligible students on mean LACE scores in fall 2020 or their post-pandemic prediction. Differences between international students' and U.S. students' LACE fall 2020 and post-pandemic prediction scores were statistically significant, with international students rating LACE items as more important than their U.S. citizen peers in both time periods.

On average, students in this study reported a personal pandemic disruption score of 7.53 out of 10, with 70% of all participants reporting disruption scores between 7-10. Returning students reporting the greatest personal disruption due to the pandemic also reported the highest mean LACE scores when imagining a post-pandemic experience on their campuses.

Research Question 2

The second research question focused on students' reported sense of belonging during the COVID-19 pandemic, asking, "To what degree do LAC students report a sense of belonging and intention to remain at their current institutions during the COVID-19 pandemic?" Two additional

sub-questions were offered to determine whether students' reported sense of belonging and their reported intention to graduate from their current college differed based on their fall educational circumstances or their demographic characteristics. To answer the research questions, independent variables generated in the fall 2020 circumstances and demographic characteristics sections of the survey instrument were used with dependent variables from the sense of belonging section in a series of ANOVAs and MANOVAs to explore their relationships and possible statistically significant differences.

Fall 2020 Circumstances, Sense of Belonging, and Intent to Graduate

The fall 2020 pandemic semester caused a great deal of disconnection for college students, particularly those who were not able to return to their campuses to live and learn due to institutional pandemic operating plans. Because living in a residential community and learning in classrooms with relatively low student-to-faculty ratios are hallmarks of the LAC experience, research question 2 was designed to determine whether the circumstances in which students found themselves during an unprecedented year explained any variance in their mean scores for their sense of belonging in their campus community or intent to graduate from their current school items. To conduct this analysis, I deployed MANOVAs, first using students' fall 2020 course delivery mode as the independent grouping variable and the sense of belonging and intent to graduate items as dependent variables. This analysis was then repeated using fall 2020 living arrangements as the independent variable.

Fall 2020 Course Delivery Modes

In a MANOVA using students' fall course delivery mode as the independent grouping variable, the Box's Test of equality of covariance matrices indicated a violation of assumptions, as did the Levene's Test of equality of error variances, so I selected the Pillai's Trace statistic

and set an alpha level of $p < 0.025$ to determine statistical significance. The Pillai's Trace value was 0.067, with a $p \leq 0.00$, indicating statistically significant differences among groups on the sense of belonging and intent to graduate variables. Participants' reported sense of belonging to the campus community and seeing themselves as part of the campus community were statistically significant at the $p < 0.025$ level with moderate effect sizes, while the intent to graduate from current institution variable result was not statistically significant. Results from this analysis are summarized in Table 15. Pairwise comparisons tests indicated statistically significant differences between the mean sense of belonging scores for students who took all their fall 2020 courses online and their peers whose classes were in person and peers who were in a hybrid learning mode with some classes online and some in person. Statistically significant differences between online students' mean sense of belonging scores and those of their hybrid and in-person peers for the "seeing self as part of the campus community" item. Students' whose courses were fully in person or hybrid did not differ significantly in mean scores on these two items. An examination of estimated marginal means revealed that students whose classes were online in fall 2020 reported a greater sense of belonging and sense of themselves as part of the campus community than both their peers in hybrid learning and in-person course modes.

Table 15

MANOVA Results: Sense of Belonging and Fall 2020 Course Delivery Modes

Survey Item	sig. value	Effect size	Interpretation
Sense of Belonging	0.00	0.066	Participant course delivery mode explained about 7% of variance in mean score for reported sense of belonging to the campus community
Seeing Self as Part of Campus Community	0.00	0.049	Participant course delivery mode explained about 5% of variance in mean score for seeing self as part of the campus community

Though the MANOVA results did not reveal statistically significant differences among course delivery mode groups, the mean scores reported by students on the intention to graduate from current institution item warrant attention. For all three groups—in person, hybrid, and online—the mean intent to return scores were extremely high, ranging from 4.82 to 4.91 out of 5 on a scale of *strongly disagree* (1) to *strongly agree* (5). Students whose courses were fully online in fall 2020 had the highest mean score among the three groups on intent to return (4.91). Mean scores for each course delivery mode group in the full sample for the sense of belonging and intent to graduate variables are summarized in Table 16.

Because Southern College was completely online with no residential operations in the fall 2020 semester and only five survey participants had ever taken an online course before, I filtered the dataset to only include Southern’s students ($n=308$) and examined the mean scores on intent to graduate in order to see whether the means changed when Mid-Atlantic College students were excluded. The mean score among Southern College students on the intent to return variable was 4.92, with no reported individual score lower than a 3 (*neither agree nor disagree*).

Approximately 93% of all Southern College respondents reported they strongly agreed they would graduate from their current institution.

Table 16

Sense of Belonging and Intent to Graduate by Fall 2020 Course Delivery Mode

Survey Item	Course Delivery Mode Mean Scores		
	In Person ($n = 89$)	Hybrid ($n = 327$)	Online ($n = 353$)
Sense of Belonging	3.36	3.27	3.92
Seeing Self as Part of Campus Community	3.64	3.53	4.07
Intent to Graduate from Current School	4.82	4.86	4.92

Note. $n = 769$. Scale for these three items was 1 = *strongly disagree* to 5 = *strongly agree*.

Fall 2020 Living Arrangements

Students in my study sample experienced a variety of living arrangements during the fall 2020 pandemic semester; 56% lived in on-campus housing, 14% lived off campus but close by, and 29% lived at their permanent address. Approximately 2% of participants selected “other” as their living arrangement and were not easily categorizable, thus they were filtered out of the dataset for this analysis. Both the Box’s and Levene’s Tests returned statistically significant results, so the Pillai’s Trace statistic was used, and a more conservative alpha level for determining statistically significant MANOVA results was set. For the fall 2020 living arrangements variable, the Pillai’s Trace value was statistically significant at $p < 0.025$, partial eta squared = 0.019. Tests of between-subjects effects indicated statistically significant differences based on living arrangement type for the sense of belonging and sense of self as part of campus community variables, with small to moderate effect sizes (Table 17). Differences among groups on the intent to graduate variable were not statistically significant. Post hoc pairwise comparison tests indicated students living on campus differed significantly in their mean sense of belonging score and seeing self as part of campus community score from those living at their permanent residence, but not from those living close by. Mean scores for all three groups, including intent to graduate scores, are summarized in Table 18. Similar to results among online students, those who lived at their permanent residence during the fall 2020 semester reported a greater sense of belonging and sense of self as part of the campus community than both their peers living on campus, and those living off-campus close by.

Table 17*MANOVA Results: Sense of Belonging and Fall 2020 living Arrangements*

Survey Item	sig. value	Effect size	Interpretation
Sense of Belonging	0.00	0.038	Participant living arrangements explained about 4% of variance in mean score for reported sense of belonging to the campus community
Seeing Self as Part of Campus Community	0.00	0.026	Participant living arrangements explained about 3% of variance in mean score for seeing self as part of the campus community

*Note. n = 754, p < 0.025***Table 18***Belonging and Intent to Graduate Scores by Fall 2020 Living Arrangements*

Survey Item	Living Arrangement (<i>M</i>)		
	On campus (<i>n</i> = 430)	Off-campus, close by (<i>n</i> = 105)	Permanent residence (<i>n</i> = 219)
Sense of Belonging	3.41	3.51	3.95
Seeing Self as Part of Campus Community	3.54	3.78	4.08
Intent to Graduate from Current School	4.87	4.88	4.90

*Note. n = 754. Scale for these three items was 1 = strongly disagree to 5 = strongly agree.****Sense of Belonging, Intent to Graduate, and Demographic Characteristics***

The final element of research question two sought to determine whether statistically significant differences existed among demographic groups in terms of reported sense of belonging and intention to graduate, given the disruption of the COVID-19 pandemic to the academic experiences of participants. In order to answer this question, I used MANOVA and ANOVAs to explore potentially significant differences among racial groups (MANOVA) and Pell eligibility and citizenship status (ANOVAs) as independent variables for analysis, and the sense of belonging and intent to graduate items as dependent variables.

In the racial groups MANOVA assumptions of equality of error variances and covariance matrices were violated, resulting in an adjusted alpha level of $p < 0.025$ for interpretation of multivariate results. The Pillai's Trace value ($p \leq 0.00$) was statistically significant, with a partial eta squared value of .014, indicating a very small overall effect for racial identity and students' sense of belonging and intent to graduate scores during the pandemic year. Tests of between-subjects effects indicated statistically significant mean differences at the $p < 0.025$ level among racial groups on the two sense of belonging variables with small effect sizes. Statistically significant differences among racial groups on the intent to graduate variable were not found. Statistically significant differences were identified only between White and Black students on the sense of belonging variable; White students also differed significantly from Black and Multiracial on the sense of self as part of the campus community variable. White students' mean scores were higher than these comparison groups during the pandemic. For a summary of mean scores, see Table 19; for effect sizes, see Table 20.

Table 19

Belonging and Intent to Graduate Scores by Racial Identity

Survey Item	Racial Identity Group			
	Asian (<i>n</i> = 67)	Black (<i>n</i> = 53)	Multiracial (<i>n</i> = 50)	White (<i>n</i> = 560)
Sense of Belonging	3.42	3.00	3.16	3.70
Seeing Self as Part of Campus Community	3.63	3.19	3.38	3.92
Intent to Graduate from Current School	4.88	4.83	4.90	4.89

Note. *n* = 730. Scale for these three items was 1 = *strongly disagree* to 5= *strongly agree*.

Table 20*MANOVA Results: Sense of Belonging and Racial Identity*

Survey Item	sig. value	Effect size	Interpretation
Sense of Belonging	0.00	0.031	Participant racial identity group explained about 3% of variance in mean score for reported sense of belonging to the campus community
Seeing Self as Part of Campus Community	0.00	0.038	Participant racial identity group explained about 4% of variance in mean score for seeing self as part of the campus community

Note. $n = 730$, $p < 0.025$

An ANOVA was then used to test for statistically significant differences between Pell-eligible students and their non-Pell eligible peers on the sense of belonging and intent to graduate variables as reported during the pandemic. The alpha level was adjusted to 0.025 to account for statistically significant Levene's test results tied to each of the three dependent variables used. No statistically significant differences were found between Pell- and non-Pell eligible students on the belonging and intent to graduate variables, though the mean scores for Pell-eligible students for belonging were slightly lower than their non-Pell eligible peers. Pell- and non-Pell students reported nearly identical mean scores for intent to graduate. A final ANOVA considered whether international students differed significantly from their U.S. citizen peers in reported sense of belonging and intent to graduate when surveyed during the pandemic academic year. No statistically significant differences in mean scores on the belonging or intent to graduate variables in the completed ANOVA.

Summary of Research Question 2 Findings

Research Question 2 sought to determine whether students' reported sense of belonging or intent to graduate from their current institutions varied in statistically significant ways by grouping variables my literature review indicated could be important for LAC students: course delivery mode, fall 2020 living

arrangements, and demographic characteristics. Students who were online during the fall 2020 semester reported higher mean scores on the two sense of belonging variables than students who were either hybrid or learning in person during fall 2020, with statistically significant differences in the means. Somewhat similarly, students who lived at their permanent address during fall 2020 had higher mean sense of belonging scores than their peers living on or close to campus during that semester. White students' mean sense of belonging scores were higher and statistically significant differences occurred between them and their Black and multiracial student peers, albeit with a very small effect size. No statistically significant differences on sense of belonging items were reported for Pell- and non-Pell eligible students or international students and U.S. citizens, respectively. Nearly all students in this sample reported they planned to graduate from their current institutions, and no statistically significant differences among groups were identified on intent to graduate.

Statistical Results Summary

In total, 22 statistical tests were conducted to fully examine the stated research questions in this dissertation. A summary table of the statistically significant results, and those that were not significant, can be found in Table 21, along with references to effect sizes and their interpretations for this research.

Table 21*Statistical Results Summary*

Statistical Method	Independent Variable	Dependent Variable(s)	Partial Eta Squared	Magnitude of Difference
Statistically Significant Results				
Repeated Measures ANOVA	All students/Time	LACE mean scores by year	0.28	Very large
Repeated Measures ANOVA	Returning students/Time	LACE mean scores by year	0.32	Very large
ANOVA	Course delivery mode	Fall2020LACE mean scores	0.02	Small
ANOVA	Fall 2020 living arrangements	Fall2020LACE mean scores	0.02	Small
Independent Samples T-Test	Citizenship status	Fall2020LACE mean scores	0.31	Very large
ANOVA	All students' Binned COVID-19 disruption score groups	Fall2020LACE mean scores	0.01	Small
ANOVA	Returning students' binned COVID-19 disruption score groups	Fall2020LACE mean scores	0.05	Medium
MANOVA	Course delivery mode	Sense of Belonging Items (2)	0.06, 0.05	Medium
MANOVA	Fall 2020 living arrangements	Sense of Belonging Items (2)	0.04, 0.03	Small
MANOVA	Racial identity	Sense of Belonging Items (2)	0.014	Very small
Results Not Statistically Significant				
ANOVA	Returning students' course delivery mode	Predicted LACE mean scores		
ANOVA	Returning students' fall 2020 living arrangements	Predicted LACE mean scores		
ANOVA	Racial identity	Fall2020LACE mean scores		
ANOVA	Returning students' racial identity	Predicted LACE mean scores		
Independent Samples T-Test	Pell eligibility	Fall2020LACE mean scores		
Independent Samples T-Test	Returning students' Pell eligibility	Predicted LACE mean scores		
Independent Samples T-Test	Returning students' citizenship status	Predicted LACE mean scores		
Repeated Measures ANOVA	Returning students' binned COVID-19 disruption score groups/Time	LACE mean scores by year		
MANOVA	Course delivery mode	Intent to graduate		
MANOVA	Fall 2020 living arrangements	Intent to graduate		
MANOVA	Pell eligibility	Sense of belonging (2) or intent to graduate		
MANOVA	Citizenship status	Sense of belonging (2) or intent to graduate		

CHAPTER 5

DISCUSSION

The purpose of this study was to understand students' perspectives on their liberal arts colleges (LACs) during the COVID-19 pandemic, as well as evaluate their reported sense of belonging to and intention to remain at their current schools, to forecast potential short- and long-term implications of the pandemic for institutions. This chapter summarizes the results and explains the findings that emerged during data analysis, in alignment with the established research questions. The first research question focused on to what degree students valued their LAC experiences at different points in time, including during the pandemic and in an envisioned post-pandemic semester. In answering RQ1 and RQ1A, a variety of student characteristics hypothesized to be significant were included in the analyses to determine potential significant differences among them, including fall 2020 course delivery modes, living arrangements, level of reported personal disruption caused by the pandemic, and demographic characteristics. Research Question 2 was designed to explore if and to what degree the pandemic experience has influenced students' sense of belonging to their campus communities as well as their intention to return to graduate from their institutions. Three dependent variables focused on belonging and graduation were used in the analyses as proxies to forecast potential attrition from LACs that might relate to their college experiences during the pandemic. In this chapter, I will comment on the study sample and data collection, and provide a summary of the study's main findings, along with interpretations and implications for practice. Recommendations for future research are also offered.

Study Sample, Data Collection, and Researcher Positionality

Spring and fall semester 2020 were undoubtedly the most chaotic and challenging semesters in recent history for higher education institutions, with ever-shifting CDC, federal, state, and local policies causing whiplash among college and university faculty and administrators working to deliver on their educational missions. The frantic work that took place in summer 2020—which for many liberal arts colleges included determining whether these highly residential communities could welcome students back to their campuses in the fall and the generation of entirely new online course delivery policies, procedures, technology, and training—came with no guarantees. The COVID-19 pandemic surged through the fall 2020 semester and a dark winter, resulting in campus closures, pivots to and back from fully online course delivery, the need to send students home or keep them in isolation and quarantine for long periods, and a new era of viral testing and monitoring that may change college health center practices forever.

If this summary sounds dramatic, chaotic, and even traumatic, it is meant to be. The 2020-21 academic year for anyone working in higher education was all of these things. And it is important for future readers of this dissertation to have a visceral sense of the chaos and that was the backdrop for this study to understand its findings fully, but also to consider these data not just as numbers on the page, but as nearly 800 individual students who alongside the faculty, staff, and administrators were learning, living, and coping in new ways and facing many adverse conditions. The work of this dissertation, in part, was to capture data about the student experience during the pandemic in real time for posterity. I felt it was critical to have data collected from students during the 2020-21 academic year because higher education, I hope, will not experience chaos and disruption on such a massive scale again in my career, and maybe even

in my lifetime. The central premise undergirding my research questions and study design was if and how the COVID-19 pandemic was influencing the experiences and perceptions of the LAC undergraduates.

Data were collected in March and early April 2021, as vaccine distribution under federal emergency use authorization got underway. Colleges and universities were progressing toward graduation ceremonies and end-of-year rituals that had been largely cancelled or postponed due to the pandemic in the previous year; masking and social distancing requirements were slowly being loosened. These temporal factors are worth noting because it is possible that had these data been collected in January or February 2021, some of the deadliest months of the pandemic in the U.S., results may have looked different. And as results are discussed in this chapter, the context in which these data were collected provides an important lens for their interpretation.

Part of my research approach also included purposefully identifying and including an LAC that was fully online during part of the academic year. I felt it was important to include LAC students in the study who had to navigate the new terrain of online education, which in general is not a common experience at small liberal arts institutions. And indeed, 97% of students surveyed had no experience with online courses prior to the fall 2020 semester. Much research has been conducted about the efficacy of online courses in higher education, but I did not locate any studies that focused on students' experiences learning online during emergency circumstances, especially in environments where online learning was previously rare or non-existent.

Despite the difficult circumstances in which data were collected, I was able to obtain a robust sample that was representative of the student populations from which data were drawn. And while I was concerned at the outset about recruiting Pell-eligible students and students of

color to participate in the study, given the financial challenges and ongoing racial and social justice movements unfolding in the U.S. and on campuses around the country during the pandemic, both populations were well represented in the sample when compared to those eligible within the institution populations. International students were, however, underrepresented in the study, so cases were weighted in several relevant analyses to mitigate this challenge in the data. Though the sample in most important ways mirrors the two schools' populations from which they were drawn, it is important to consider the number of students in each group within the sample when interpreting these findings.

My position as a researcher in this study is also an important interpretive lens for consumers of this research. For the past 10 years, I have worked full-time in administrative positions within LACs, in addition to being an LAC graduate. During the pandemic, I was working full-time in a leadership position on an LAC campus and was involved directly in the public health and policymaking decisions that enabled the institution to remain in operation. As such, in drawing observations and recommendations from the findings of this dissertation, I worked to manage my subjectivities, while also relying on my dissertation committee to check my assertions and assumptions for bias that could be associated with my researcher positionality.

Discussion of Results

In this section, I discussed the six primary findings interpreted from my statistical results, organized as follows: the liberal arts college elements (LACE) construct, fall 2020 situational factors, student demographics, quantifying COVID-19 disruption, belonging in a time of disconnection, and commitment to graduation. The findings in aggregate will then be discussed in the context of Cameron's (1984) organization adaptation framework, including Cameron and

Miles' (1982) strategic choice approach for decision-making during adaptation and change. The chapter will conclude with summary implications and recommendations for future research.

Elements of the Liberal Arts College Experience

The first significant contribution of this research is its identification of both a definition for and key elements of liberal arts colleges. I identified LACs as the institutions of focus for this study because they represent a very small niche of higher education institutions in the United States. I hypothesized that the unique nature and characteristics of these institutions warranted focused research attention, as pandemic conditions reduced or eliminated temporarily some of the core features that make LACs attractive to prospective and current students. When I completed my review of the literature on LACs, however, I was unable to locate any definitions or constructs for LACs and what matters about them to the students who choose them.

LACs are highly residential, highly interactive learning environments where undergraduate students receive very close attention from faculty and staff in an interactive academic and co-curricular environment. From a review of the literature on LACs, I posed a definition for them for the purposes of this study: small higher education institution enrolling primarily undergraduates, anchored by a core liberal arts curriculum and an emphasis on close student-faculty interaction in a residential campus environment. My literature review, as well as my experience living and working on these campuses, informed my further definition of seven hallmark elements of the LAC experience: (a) a broad liberal arts curriculum all undergraduates experience; (b) a focus on on-campus residential life; (c) low student-to-faculty ratio in academic classes; (d) close mentoring relationships between students and faculty; (e) the availability of extracurricular and social opportunities for students; (f), the availability of high-quality, high-impact educational practices (e.g., undergraduate research); and (g) an appealing residential

campus environment (e.g., architectural features, quality facilities, and emphasis campus beauty). These elements were employed in the design of my survey and became a pivotal component of my approach to the analyses used to answer my research questions. Establishing the definition and the elements helped me to design a survey instrument to help students think about their LAC experience holistically and the ways in which the pandemic has impacted those experiences.

The results of reliability testing for the seven LACE are an important finding from this study. Reliability testing indicated that the seven items have good internal consistency, which supported my hypothesis that LAC students both seek out and care about these elements and consistently rate them as important. The internal consistency found among the seven items also informed my decision to create a composite variable representing the LAC experience and incorporating all seven elements. Being able to consider the LACE items together as a composite rather than individually also increased the efficacy of my data analysis and reduced the chance of ascribing an observed statistical difference to any single LACE rather than to students' collective sense of the elements' importance. Researchers and practitioners interested in LACs as a distinct institutional niche in higher education and its hallmark elements and features may find utility in the seven-item survey section focused on the LACE and the corresponding results of my data analysis using the LACE composite variable. However, more research is necessary to determine if the reliability results obtained from my sample are replicable among other LAC populations, and further whether they would be so in non-emergency conditions.

Fall 2020 Situational Factors

My review of the literature and experience working on an LAC experience informed my decision to test whether situational factors, such as how students engaged in their courses or where they lived during the fall 2020 semester, were related to their evaluation of the LAC

experience overall. These factors were only unique because of the pandemic and the conditions it created. Liberal arts colleges are highly residential and prize the in-person classroom experiences that put students and faculty in close contact with one another. During the fall 2020 semester, many LAC students as well as the faculty and staff who work at these institutions were learning in real time how to learn, teach, and provide effective support in virtual and hybrid environments; as well as how to do these things from new locations, including their homes. Ninety-seven percent of study participants had no experience taking an online class prior to the pivot these institutions made in spring 2020. Research Question 1a posited that these altered situational factors related to how students would evaluate the LAC experience and their imagined “return to normal” after the pandemic ended. In a second important finding from this study, statistical results demonstrated that both how students took courses (termed “course delivery mode” in Chapter 4) and where they lived (“living arrangements”) mattered during the fall 2020 semester, and in ways that aligned with the literature and my understanding of LAC environments.

The Impact of Course Delivery Mode

Students who studied online during fall 2020 reported the lowest mean scores on the LACE construct, and those studying in person reported the highest scores, with hybrid learning students in the middle. There is a significant body of research literature on the efficacy of online learning, and students who learn online can learn as if not more effectively than those who might be sitting in the classroom (Castro & Tumibay, 2021). Students on liberal arts college campuses, however, had neither the experience themselves of learning in fully online environments, nor did their faculty have pedagogical experience teaching in them. Mean differences in how students evaluated their LAC experience during the fall 2020 pandemic semester seemed to highlight this

gap, and the challenge that accompanied LAC campuses' first-time pivot to online education during the crisis.

It is also worth noting, however, that while statistically significant, the magnitude of the mean differences in LACE scores among online, versus hybrid, versus in-person students in fall 2020 was very small. I imagined that the potential effects of transitioning into a fully online learning mode in this crisis would have had a much greater effect on how LAC students evaluated their experiences during the pandemic. Although those gaps between did manifest, they were not as large one might expect given the communal lack of experience with online teaching and learning during the pandemic. I would assert this result was good news for LACs; despite the turbulence caused by the pandemic, students' evaluation of the LAC experience was relatively steady and consistent, with online students reporting only slightly lower outcomes. And, when returning students were asked to imagine a post-pandemic return to normal on their campuses, their LACE scores were consistently higher with no significant differences between those who had learned online, hybrid, or in person. In fact, LAC students who were online in fall 2020 had the lowest mean decline in LACE scores from fall 2019 to fall 2020, but also the highest rebound in their predicted LACE score for post-pandemic campus life. This result could be explained, in part, by the power of a crisis to bring people together with empathy for shared struggle. While one might have expected LAC students who suddenly had to take their courses online to report significantly lower LACE scores, these students may also have been more understanding and empathetic toward their faculty and institutions, given the gravity of the pandemic's toll on campuses and society at large. The pandemic, in some ways has been a great equalizer—with online education opening windows between students and faculty onto lived

experiences and realities neither group would necessarily be privy to outside of pandemic conditions.

Liberal Arts Experience at Home

The pandemic forced many LAC students in this study into new living arrangements during the fall 2020 semester. Forty-three percent of the sample lived at their permanent address in fall 2020. Both participating LAC institutions have a residency requirement, where students are required to live on campus unless they apply for and receive an exemption to move off campus. In a normal year, more than 90% of all students at both participating institutions live in campus residential facilities, making the pandemic pivot to learning from an off-campus location or one's home particularly unusual for these campuses. I identified statistically significant differences in mean LACE scores among students living at home, off campus but close by, and on campus during the fall 2020 semester, with students living on campus reporting the highest mean scores, and those at home reporting the lowest. Like course delivery mode, these results were in step with conventional wisdom—LAC students value a highly residential experience, and thus moving off campus or home for part of it affected their evaluation of the experience overall during fall 2020. But, as with the course delivery mode results, the magnitude of the difference between scores was very small and all students rebounded upward when imagining a post-pandemic future on campus. Indeed, when looking to a future, post-pandemic semester, students who lived at their permanent residence in fall 2020 reported the highest mean LACE scores of any living arrangement group.

With the gift of hindsight, it is easy to cast the fears associated with sending students home to learn in spring and summer 2020 as overblown. At the time of this writing in November 2021, many institutions, including LACs, have returned to a state of near-normalcy with

COVID-19 safety protocols established and in place; and with students residing on campus and learning in person, including on both campuses from which study participants were drawn. In summer 2020, there was deep concern that disruption to students' experiences, particularly having to return to their homes while still paying full or near-full tuition, would result in students taking gap years (potentially a crisis for tuition-driven institutions that needed even more revenue to operate during COVID), or dropping out altogether. These fears did not manifest for students attending the institutions in this study. Post-pandemic LACE scores seem to indicate the opposite outcome—that those who lived at home in fall 2020 returned to campus even more committed to the LAC experience, rather than ready to depart or consider other institutional options.

Student Demographics

In designing the research questions for this study in step with the academic literature and press coverage of the pandemic as it unfolded, I anticipated that student demographic factors—most notably, race, socioeconomic status, and citizenship status—would help to explain how students in my study evaluated their LAC experience overall. Ample evidence has demonstrated that the pandemic has had disproportionate, negative effects on low-income students and students of color and international citizens pursuing higher education (Baer & Martel, 2020; Gallup & Lumina Foundation, 2020; Lundquist et al., 2020; Millet et al., 2020; NSCRC, 2020; USC-Dornsife, 2020). Embedded in Research Question 1a were a number of literature- and practice-based hypotheses about factors that might matter in terms of how students would rate elements of their LAC experience during the pandemic. The massive economic impact of COVID-19 was predicted to hit low-income students hardest (Gallup & Lumina Foundation, 2020); international students faced lockdowns, travel bans, and internet connectivity issues in

their home countries (Baer & Martel, 2020); and the U.S. reckoning with racism following the murders of George Floyd, Breonna Taylor, and other people of color during the summer of 2020 were reported to be adding even greater stress and challenges to the lives of students of color (Horsford et al., 2021).

The overall lack of statistically significant results when comparing LAC students grouped by these demographic variables was one of the most important findings of this study. In general, demographic factors seemed to matter less than extant research suggested regarding how students in the current study evaluated their LAC experiences during the pandemic. I did not find, for example, differences between low-income, Pell eligible students and their non-Pell eligible peers, or among students of different racial identities, in their evaluation either of the fall 2020 experience or their predicted post-pandemic return to their campuses. Only testing for differences between international students and U.S. citizens returned a statistically significant result, with international students reporting higher mean LACE scores during fall 2020 and in their predicted post-pandemic return than their U.S. citizen peers.

There are several reasons why I believe results were rarely statistically significant when comparing groups using demographic factors in this study. First, and perhaps most important, the students in this study all sought a liberal arts college education specifically, which as referenced, is a rather niche experience in a diverse higher education landscape. Regardless of the various demographic identities held, these students are likely to consistently value the elements of the LAC experience highlighted and tested in this study. These small, student-focused institutions may vary across the U.S. in terms of resources, but in general they are both tuition-driven and undergraduate-focused. As such, institutions were likely paying close attention to students at these schools, irrespective of their demographic characteristics and perhaps more so than at other

types of colleges and universities. This interest and individual attention paid to students is both identity-driven for LACs but also a practical matter; the loss of just a few LAC students in a class can affect both the institution's bottom line in tuition dollars as well as their retention rates—two factors that are key for both operational success and institutional rankings. In considering the results of my analysis with this lens, the lack of statistically significant results when comparing mean LAC experience scores is less surprising, and with only rather minor differences reported among demographic groups.

Second, both institutions in this study are well-resourced, suggesting they were able to provide quality, albeit adapted, experiences despite crisis circumstances created by the pandemic. This ability to continue to operate and delivery on their educational missions may have contributed to students' consistent, primarily positive evaluation of their LAC experiences. Third, a portion of my literature review focused on crises including natural disasters in and outside of higher education, and how they seemed to affect individuals. Crises can bring people experiencing them together, especially in residential living environments, creating connections forged by shared experiences (Doyle et al., 2017; Krane et al., 2007). The students who participated in this study have shared experiences with one another as well as with faculty and staff at their institutions; the scale and gravity of COVID-19 have touched millions of people in a variety of ways. It therefore seems possible that these shared experiences may have lessened students' critiques of their LACE experiences during the fall 2020 semester, and perhaps explained some of the rebound in their scores as they imagined a return to normal. Fourth, institutional resources may have also offset some of the potential adverse effects of the pandemic on low-income students. Mid-Atlantic College is known for being need-blind, which means students' full demonstrated financial need is met without loans, a practice that continued during

the pandemic. Although low-income students in this study may have been experiencing significant financial hardship at home, consistent institutional support for their educational pursuit may have minimized differences in their LAC experiences when compared to their wealthier peers.

Finally, although statistically significant differences were not identified in my analyses among racial groups on LACE mean scores in fall 2020, there are situational factors to consider about these groups that these results might otherwise obscure. Protests for racial justice were occurring in cities across the country and on college campuses throughout the 2020-21 academic year. One of the two campuses in the current study experienced significant activism and disruptions to campus life and the student experience as students, faculty, and staff protested for change on campus to improve the lived experiences of Black students. While these protests were not experienced at all LACs across the country, it is important for LAC leaders, faculty, and staff to consider if and how the movement for racial justice overlays with the ways their students of color have experienced the COVID-19 pandemic on campus. The psychological stressors that developed among students, but particularly among students of color, could result in colleges and universities interpreting student outcomes as related to the pandemic, rather than the wider cultural and social movements in which the pandemic college experience is situated.

Quantifying Pandemic Disruption

A fourth contribution of the current study to the literature was its quantification of COVID-19 pandemic disruption, or the degree to which students in the study reported the pandemic had disrupted their lives. I adapted a scale from Skinner and Lansford's (2020) unpublished measure on experiences related to COVID-19 to assess LAC students' level of disruption using the following question in my survey:

Please rate how disruptive the COVID-19 pandemic has been to you personally on a scale of 1 (*not at all disruptive*) to 10 (*extremely disruptive*). Think about your daily routines regarding school, work, and personal life, and relationships with family and friends.

Students in this study reported a mean disruption score of 7.53 out of 10; the median score for all participants was 8 out of 10. Nearly 30% of the total sample selected either a 9 or 10 out of 10 for their disruption score. Among the total sample, 70% of participants reported disruption scores between 7 and 10. Irrespective of students' backgrounds, academic progress, engagement in campus life or other factors that may have been markers for understanding the pandemic experience in 2020-21, students reported significant personal disruption in their lives due to COVID-19.

When grouped by binned pandemic disruption scores, statistically significant differences in mean LACE scores emerged, but with a very small effect size. In general, students who reported greater pandemic disruption had higher mean LACE scores than those who reported somewhat less disruption. This finding was more acute among returning students; those who reported the greatest overall pandemic disruption also indicated the LACE items would be more important to them upon return than at any previous time period in their experience with their institutions.

Over the first months and year of the COVID-19 pandemic, higher education faculty, staff, and leadership likely heard many stories from individual students about how the pandemic was affecting their lives and their educational progress. The results of this study provide researchers and higher ed practitioners, faculty, and decision-makers with quantitative data about pandemic disruption to undergird those anecdotes. Given the ubiquity of the pandemic's impacts on society at large and higher education institutions, it is likely that both students and institutions

will be grappling with the short- and long-term effects for years to come. The COVID-19 disruption score data in this study provide a snapshot in time for future researchers who will study the pandemic's longer-term impacts, including on the outcomes such as retention and graduation rates of students who experienced it while in college.

Belonging in a Time of Disconnection

The COVID-19 pandemic not only caused sickness and death, but also loneliness, isolation, and disconnection as stay-at-home orders, closures, masking, and other behavioral restrictions changed the way most people in the U.S. navigated daily life. Colleges and universities were not immune to these changes. Many institutions, including the two that participated in this study, transformed their operations to remain open during the pandemic, including for one institution, closing the campus and operating virtually for the entire fall 2020 semester. In this dissertation, I attempted to measure the potential effects of these major changes for students, including by asking survey questions about their reported sense of belonging to their campus communities during this crisis. Researchers have used sense of belonging items as a proxy for measuring likelihood of retention, as feelings of disconnection or lack of belonging for students can be an indicator of attrition (Hausmann et al., 2007; Hausmann et al., 2009; Hoffman et al., 2002; Hurtado & Carter, 1997). Because LACs are small and tend to be enrollment- and tuition-driven places, just a few departures among the student body can cause negative financial outcomes, and attrition at higher rates can be detrimental to 4-, 5-, and 6-year graduation rates, which are tied to institutional rankings. Therefore, it was especially important to consider whether the COVID-19 pandemic experience might relate to students' reported sense of connection or belonging to their institutions.

Fall 2020 Situational Factors and Sense of Belonging

Nearly 70% of students in the current study reported they felt a sense of belonging to their campus communities, with a similar percentage (72%) reporting that they saw themselves as part of their campus communities. In examining whether students' course delivery mode was related to their sense of belonging, analyses showed that those students whose classes were fully online reported a greater sense of belonging and sense of themselves as part of the campus community than those who learned via hybrid or in person classes in fall 2020. This finding seemed counterintuitive, given that online students at LACs had perhaps the most divergent experience from the norm for LACs during the pandemic. Another interpretation, however, could be the combination of novelty of online courses for LAC students and faculty, tied with strong foci on undergraduate student teaching at these kinds of institutions led to serious efforts to create quality learning experiences. And as referenced in relation to the outcomes of research question one, the connections between students and faculty going through the pandemic together in real time may have created a sense of camaraderie and mutual understanding that may not have resulted in a typical online learning environment. Liberal arts colleges were also forced to make substantial changes to their in-class learning environments to teach students on campus during the pandemic, including incorporating physical distancing, masking protocols, and sanitation procedures into everyday class experiences. Professors' attention to in-person students may have been reduced due to the juggling that occurs in hybrid class settings between the students in the room and the students learning virtually; a juggle that likely challenges even experienced online and hybrid teachers, compared to those faculty teaching in a hybrid mode for the first time. These factors could be responsible for the in-person and hybrid students reporting statistically different and lower sense of belonging scores than their online peers. These findings

suggest that the significant efforts many LAC institutions made in a very short time to pivot to fully virtual learning did not seem to negatively impact the degree of connection or sense of belonging students reported during the 2020-21 school year.

Similarly, my analyses also revealed statistically significant differences in reported sense of belonging for students based on where they lived during the fall semester with small to moderate effect sizes. On average, students who lived at home had higher mean sense of belonging scores than students who lived on campus. This finding could be due to the potential added comfort, flexibility, or environmental control that students living at home might have felt as compared to students living on or near campuses that altered their operations in many ways during the pandemic. Students at home may not have registered the differences in experience on their campuses as those living close enough or within the residential communities themselves during the pandemic, which could help to explain their higher mean sense of belonging scores.

Student Demographics and Sense of Belonging

Based on my analyses, some student demographic characteristics appear related to students' reported sense of belonging to their campus communities during the 2020-21 pandemic school year. Sense of belonging scores differed significantly, albeit with a small effect size, among students of different racial groups; statistically significant differences were identified when comparing Black and multiracial students' mean scores to their White counterparts in the sample, with Black and multiracial students reporting lower scores than their White peers. It would be difficult to attribute this difference among racial groups as causally related to the pandemic, however tempting to do so. In the current sample, students of color on both campuses are underrepresented before the pandemic began. Black and multiracial students in this sample also did not appear to have proportionally different experiences in terms of their fall 2020

educational circumstances, living arrangements, or reported personal disruption scores when compared to their White peers. As such, this finding does not seem to be connected to students of color having a categorically different pandemic experience than White students. Due to their underrepresentation on these campuses, Black and multiracial students' sense of belonging scores may have differed or been lower than those of White students before the pandemic, an interpretation supported by a significant body of research on belonging for Students of Color attending predominantly White institutions (e.g., Johnson et al., 2007; Strayhorn, 2018; Vaccaro & Newman, 2016).

Pell- and non-Pell eligible students did not differ significantly in terms of their sense of belonging scores, but a greater proportion of Pell students were fully online and living at home during fall 2020 than their non-Pell eligible peers. This difference may be related to financial realities associated with attending college during the pandemic. Students with fewer financial resources may have been less likely than wealthier peers to pay their normal tuition for a very different, or even sub-optimal experience at their LACs during the pandemic, and thus chose to live and study at home to save money. Review of the descriptive statistics associated with the survey item about financial disruption caused by the pandemic confirmed that Pell students reported slightly more financial distress, but the difference was not statistically significant from their non-Pell eligible peers.

International students also reported similar sense of belonging scores to those of their peers who are U.S. citizens. As previously referenced, international students in this sample are underrepresented as compared to the populations from which they were drawn, and most international students who participated in the current study lived on their campuses during the fall 2020 semester. It would not be appropriate to generalize this finding to international students

at LACs because the number of total participants was so small (31). Given the widely reported challenges international students have faced on American college campuses during the pandemic (Baer & Martel, 2020; Fischer, 2020), a focus on international students' experiences in LAC environments during the pandemic is worthy of additional research and consideration to better understand their navigation of this challenging time.

Commitment to Graduation

In the current study, I also included a survey item focused on students' intention to remain at their current institutions until graduation, as an additional measure of retention or potential attrition among participants navigating the COVID-19 pandemic. Nearly all participants reported they intended to graduate from their current institution, eclipsing their reported sense of belonging scores in this study; 92% of participants strongly agreed they would graduate from their current institutions. Only 6 students in the sample strongly disagreed, and 12 were undecided, out of 775 total participants. This finding, while not generalizable to all LAC institutions, seems to indicate that attrition and transfer were not a serious threat at these participating institutions despite the pandemic's disruption to their campus operations and to the lives of students. In this dissertation, I have characterized the abrupt transformation of LACs during the pandemic as a disorienting dilemma (Mezirow, 1978), which I hypothesized would result in differences in students' reported intent to graduate based on their educational circumstances and demographic characteristics. To a great extent, this hypothesis did not hold; nearly all of the students in this study, across course delivery modes, place of residence, and demographic characteristics, reported their intention to remain and graduate from their current institution. In considering the findings that have been discussed at length in this section, one might conclude that the results of this study indicate that the pandemic has not shaken LAC

students' connections to their campuses, nor has it spurred contemplation of transfer or institutional departure, a potentially important finding for faculty, staff, and leaders of these types of institutions. It is worth noting, however, that this result and the lack of statistically significant differences among groups on the intent to graduate score could be due to the fact that LAC students in general tend to graduate at higher rates than other types of institutions (Chopp et al., 2013), and that 6-year graduation rates at the two institutions participating in this study were already quite high (71% at Southern College, 88% at Mid-Atlantic College). The once-in-a-lifetime nature of the COVID-19 pandemic and its impact on higher education, however, certainly had the potential to disrupt long established trendlines on retention and graduation, given its ubiquitous impacts on students and institutions. It is therefore important to acknowledge that LAC participants in this study remained steadily committed to their colleges amidst unprecedented turbulence and uncertainty, and future research should examine whether this level of commitment holds when examining graduation rates for LACs in 5 to 10 years.

COVID-19 and Organizational Adaptation

My decision to undertake a dissertation research project during the COVID-19 pandemic was driven by two parallel impulses: (a) to collect data about the lived experiences of LAC students during the pandemic in order to better understand it from their perspectives, and (b) to offer recommendations at the institution and higher education sector levels to make LACs stronger and more resilient when the pandemic ends. Given the number of existential threats to the educational and business models on which these institutions rely, the pandemic posed an even greater risk to the long-term success and viability of LACs, especially those unable or incapable of responding numbly and effectively to the crisis. Organizational adaptations are the modifications and alterations organizations make to adjust to external change in order to restore

institutional equilibrium (Cameron, 1984). Organizational adaptation also accounts for the defensive or anticipatory moves organizations make to prepare for future challenges. In my conceptual framework, I outlined a case for LAC institutions to pursue a strategic choice approach to organizational adaptation during and after the pandemic and set out to gather evidence via my research questions that would provide grounding for both defensive and offensive institutional moves to make LACs stronger in the future. Higher education institutions in general are often slow to change and incrementalistic in approach when change occurs; the pandemic changed nearly everything for U.S. colleges and universities overnight, especially for high-touch, relationship-oriented liberal arts colleges. In this section, I will apply my findings through the lens of Cameron's (1984) strategic choice framework for organizational adaptation, offering potential *domain defense*, *domain offense*, and *domain creation* (Cameron, 1984) actions LACs might consider taking at the institution level as they continue to respond and adapt to the ongoing pandemic.

Domain Defense

According to Miles and Cameron (1982), a domain defense entails organizational attempts to enhance their own legitimacy to protect the organization from a hostile external environment. Given the rapid onset of the pandemic, there was likely no way for LACs to mount a true domain defensive strategy to prepare, however, it is possible even during the pandemic for institutions to engage in the work of strengthening their market position and seeking to protect against further damage from the pandemic. The findings of this study suggest that LACs may have been quite successful in keeping their students engaged, aiding them in making educational progress under difficult circumstances, and preventing most students from contemplating institutional departure. To the degree that this finding holds at other institutions, a proactive

communication strategy regarding sharing stories of student success, resilience, and academic progress during the pandemic may prove a proactive, defensive strategy moving into year two of pandemic operations.

The pandemic has not stopped prospective students from considering their options, and the enrollment- and tuition-driven nature of LACs suggest that effective communication of institutional successes and progress toward a return to more normal conditions will not only aid in retaining current students but help attract new students. Liberal arts college students in this study reported strong sense of belonging to their institutions, despite nearly half of all participants in the current study studying online in the fall 2020 semester; a well-crafted public narrative about preventing students from disengaging or falling through the cracks during the pandemic would be reassuring to parents and students alike and may help LACs who do it well compete and stand out in the marketplace of options.

Domain Offense

Amidst the ongoing pandemic, this research supports a number of potential domain offense actions to expand LACs' areas of strength. First, the pandemic forced an unprecedented shift for these institutions toward technology in teaching. Liberal arts colleges, in general, are not known for dynamic online teaching options, instead prizing in-person classroom experiences with small class sizes and engaged faculty. The current study, however, points to positive outcomes for students who were fully online, including their strong commitment to the core elements of a liberal arts college experience, despite the abrupt transition to online learning. Liberal arts college leaders should consider this finding before aggressively pursuing a return to "normal," and consider how the best of what has emerged in faculty pedagogies during the pandemic can be applied and integrated into teaching and learning in these environments. Online

office hours, recorded lectures, opportunities for students who are ill to participate in classes virtually, and small group virtual discussion options via Zoom are just a few examples of practices that faculty could retain in a post-pandemic future. These moves toward a more technologically integrated future on LAC campuses seems in keeping with the technophile generation currently applying for and attending four-year colleges. Further, given current students have now experienced some of these positive aspects of online education that may not have been previously available, their absence may also be noted unfavorably as institutions return to post-pandemic norms and pedagogies.

Results of this study also indicated that nearly all participants experienced major personal disruption due to the pandemic, suggesting they may return to their LAC institutions bearing the weight of cumulative pandemic disruption and fatigue with them. Ensuring robust, well-staffed and effectively resourced student health services, counseling services, residential life, and other departments key to supporting the physical, mental, academic, and social well-being of students may also position LACs competitively among their peer institutions. Those LACs that managed to come through the first year of pandemic operations in relatively strong financial health are likely best positioned to enact this domain offense action focused on student wellbeing. Liberal arts colleges are already well-known and regarded for their focus on undergraduate students and their experiences, so capitalizing on this hallmark strength to support pandemic-weary students—and communicating effectively about their efforts to do so—may aid LACs in attracting new prospective and transfer students to their institutions.

Domain Creation

Among the three strategic choice actions for organizational adaptation, domain creation is perhaps the most unusual for LACs to consider. In domain creation, organizations seek to

minimize risks and threats by diversifying their offerings into less turbulent areas of the market where they have expertise or development potential. While other types of higher education institutions, such as research-intensive universities, community colleges, and public colleges and universities, have by nature of their market position *had* to engage in domain creation to respond to external factors such as changes in state funding, foci of granting organizations, and shifts in the labor market, LACs as a sector have been somewhat buffered from having to do so. The pandemic, however, likely revealed, or reinforced institutional areas of strength that might present LACs with new opportunities. For example, newfound abilities to teach online at scale could present significant revenue opportunities for LACs. Online courses offered strategically (e.g., over summers, during semester breaks) to new markets could introduce new tuition revenue that support institutional operations at large. The reimagining of campus facilities to provide in-person and hybrid learning environments and enable faculty and staff to do their work remotely, might present new ways LACs could more effectively use campus space and feed insights for strategic campus space planning efforts. These types of domain creation actions will rely greatly on individual institutional characteristics, but the upheaval caused by the pandemic likely has created new windows of opportunity for LACs to develop and expand upon their strengths in order to sustain their core missions.

The results of this study indicate that the selected LAC institutions were successful in enabling students to learn and live in new ways, departing from some of the key LACE for which these colleges are known. That departure from the norm, however short-term, opens up opportunities for institutions to adapt, and to engage in defensive, offensive, and creative strategies to strengthen their ability to deliver on their educational missions. Though only a few examples are noted here, many more organizational adaptations likely exist that are unique to

LACs based on their pre-pandemic and current circumstances. This research suggests that students remain committed to LACs and their core elements; it may therefore behoove institutions to consider practical, sustainable changes that might improve LACs further as a result of knowledge gained during the COVID-19 pandemic.

Implications for Future Research and Practice

The findings discussed in this chapter suggest implications for future research and practice, particularly for those studying and working within LAC environments. This section will discuss several recommendations for future researchers, as well as opportunities for practitioners to use these findings as higher education continues to navigate through and out of the COVID-19 pandemic.

Implications for Future Research

Several recommendations for future research are offered considering the current study's findings. In developing this study, I designed a survey instrument that articulated key elements of the liberal arts college experience in a way that resonated with LAC students. This effort was due in part to my frustration in the process of designing the study that I did not identify extant, research-tested instruments or survey tools that focused specifically on liberal arts colleges and their institutional hallmarks, rather than a broader focus on liberal arts *education* and *outcomes*. The absence of such instruments struck me as a research gap, as LACs comprise a distinctive niche of higher education worthy of quantitative study. I invite future researchers to use the liberal arts college definition provided in this study, and the seven-item liberal arts college elements portion of my survey instrument for future studies that incorporate the hallmarks of an LAC experience into key research questions about students who choose to attend these

institutions, to see if the reliability results acquired in this study are replicable with other LAC populations.

To quantify meaningfully the personal disruption college students in my study experienced during the pandemic, I created the COVID-19 disruption scale using an adaptation of several survey items from Skinner and Lansford's (2020) COVID-19 experience survey. I believe my findings in this study will add to a growing body of literature emerging from the pandemic about college students, but also that this adapted scale might prove useful to researchers who continue to study the pandemic's effects even after the global public health crisis has abated. One of the simultaneous benefits and shortcomings of my study was that participants were experiencing the pandemic in real time, allowing little room for deep reflection on the effects of the experience overall. Participants had to engage in retroactive remembering to complete my survey, looking back on the fall 2020 semester from the vantage point of spring 2021 to answer the LAC experience items. It would be interesting and worthwhile to re-survey the sample, or one drawn from the same or a similar population on an incremental, longitudinal basis. As current students and future graduates have time to reflect upon their COVID-19 experiences at their LACs, their disruption scores and mean LACE values may look different than they did as reported amidst the pandemic academic year.

Though the sample size achieved for the purposes of a dissertation study was adequate and appropriate for my chosen analyses, as noted throughout this discussion the total number of participants who were international students, Students of Color, and low SES-students were relatively small, making it difficult to generalize findings related to these groups. Future studies that could draw larger samples of LAC students from a wider range of institutions using the

current study's survey instrument or an adaptation thereof would generate additional evidence to support or refute some of the initial, exploratory findings of this two-institution study.

The strong commitment participants demonstrated to remaining at their current institutions to graduate presents another opportunity for future research. As referenced in the discussion of findings, the participating institutions in this study have strong 6-year graduation rates already, but those percentages (71% and 88% of students graduate in six years at Southern and Mid-Atlantic, respectively) are lower still than the nearly 93% of participants who indicated they planned to graduate from their colleges. A follow-up study of LAC students at these or other institutions five or more years from now would help researchers to understand the potentially long tail of COVID-19 effects in terms of graduation rate differences. It will take at least five years to understand from institutional data whether LACs or other institutional types saw major data changes or anomalies among their pandemic classes along their journey to graduation.

Last, the minimal statistically significant differences among demographic groups identified for inclusion in this study suggests another potential area for future research. I suspect, based on reporting emerging from other sectors of higher education that these results would not hold in a diverse pool of higher education institutional types. A report by the U.S. Department of Education (2021), for example, reported that:

COVID-19 has raised new barriers for many postsecondary students, with heightened impacts emerging for students of color...both for entry into higher education and for continuing and completing their studies. Many institutions of higher education that disproportionately serve students of color and students from low-income backgrounds have seen declines in enrollment since the pandemic began. (p. iv)

While these types of disparities did not emerge in my research, I believe this may be due to the focus on LAC students. Comparative research on student pandemic experiences and outcomes, disaggregated by demographic characteristics, that involve students attending less well-resourced LACs (if remaining within this sector) or other types of higher education institutions such as minority-serving institutions or historically black colleges and universities, or community colleges would help to offer a fuller picture of diverse student experiences during the fall 2020 pandemic semester.

Implications for Practice

In interpreting the results of this study, several implications for practitioners in higher education and at LACs specifically emerged and are worthy of discussion. I organized these implications into three themes: minding the expectations gap (the distance between students' pandemic experiences and their desired return to "normal"); leveraging lessons learned from COVID-19, particularly with regard to the pandemic pivot to online course delivery; and evaluating mental health resources and support services for students.

Minding the Expectations Gap

One of the more compelling findings in my study can be seen perhaps most clearly in Figure 3 in Chapter 4, which illustrated the "pandemic dip" in liberal arts college elements mean scores, and their rapid rebound as students imagined a post-pandemic future. In all the analyses I conducted—regardless of students' fall 2020 situational factors, identity groups, or reported level of COVID-19 disruption—when asked to rate how important they believed the LACE items would be to them post-pandemic, the mean scores uniformly rose. On the one hand, this can be interpreted as great news for LACs; despite pandemic circumstances, these students remained committed to the unique elements that make these types of campuses special. On the other hand,

I would offer there is a potential shadow side to these results. Faculty and staff should keep in mind that all LAC students are likely returning to their campuses during the 2021-22 academic year with heightened expectations for a more normal LAC experience where the elements LACs are known for are more fully available and accessible.

This implication may be especially salient for students whose LAC experiences diverged the most from a “normal” year during the fall 2020 semester. My statistical results suggest that students whose situations changed most drastically from a normal year—those who lived at home rather than on their LAC campus, and those who took their classes completely online—placed the greatest importance, on average, on the LACE items when thinking about future semesters. The pandemic experience for students who lived at home (nearly all of whom were also taking classes online) seemed to reinforce what was important to them about LACs at the time they were admitted; for this group, mean LACE scores increased from admission (3.85 out of 5) to post-pandemic prediction (4.06). Students who lived at home and/or learned online during the fall 2020 semester may return to campus with a renewed sense of urgency to engage in the life of an LAC campus. It may benefit LAC campuses to identify the demographic and academic/co-curricular characteristics of these students who were at home or learning online in 2020 on their campuses. Outreach to them may assist institutions in assessing their needs and how best to meet them as they transition back to campus.

Similarly, campuses might also experience increased demand among students to live in residence than in previous years, due to a sense of “missing out” during the 2020-21 academic year. For some LAC campuses that may still need to use portions of residential housing stock for isolation and quarantine housing, this potential demand from returning students may outstrip institutional supply. Liberal arts college leaders, particularly those in student affairs and

residential life, may benefit from giving these potential campus housing supply and demand issues advance consideration, and considering how to best ensure students living on campus in 2021-22 have a safe and positive experience even as the pandemic continues.

The COVID-19 pandemic continues to present significant challenges for safely and effectively operating high-touch, highly residential campuses such as LACs, with the potential for not only an expectations gap to emerge and at minimum, be discouraging and disappointing to students (as well as some faculty and staff). If not considered or attended to, at worst such a gap may result in students deciding to take a gap year or to transfer. This potential gap could also be exacerbated further by a potent combination of faculty and staff exhaustion in the wake of the pandemic year and resource challenges institutions face in rebounding from the unforeseen expenses of operating during a global pandemic. The relatively small size of LACs may be an advantage here, in that these institutions may be able to adjust and pivot operations more nimbly in response to pandemic conditions while to a great extent preserving some of the hallmarks of the college experiences they provide. In any case, LACs may benefit from setting up institutionally appropriate ways of monitoring and evaluating the student experience during the second year of the pandemic and beyond, in order to identify students who may be struggling or failing to connect in the pandemic-modified campus environment all are likely encountering once again in 2021-22.

Leveraging COVID Lessons Learned

The pandemic has also opened opportunities for institutional learning and innovation of operations on liberal arts college campuses, which historically are known for adherence to tradition and long-established practices (Chopp et al., 2013). Despite the disruption and challenges to normal operations of LACs during the pandemic, my research indicated students

still reported valuing what these institutions offer, to a high degree, even when those offerings looked very different than they had in pre-pandemic times. Almost overnight, nearly every LAC faculty member began teaching in fully online and/or hybrid learning environments, a change that seems unlikely to have ever occurred absent an urgent crisis of the pandemic's magnitude. Indeed, the COVID-19 pandemic forced the greatest mass migration to online education higher education will perhaps ever experience, an especially monumental change for LACs that prize small, in-person classes. It is therefore of practical interest that (a) online students did not report significant drops in LACE composite scores during fall 2020 and that (b) their mean LACE score for post-pandemic campus life was highest among course delivery modes.

These results may be viewed with relief by faculty, staff, and administrators; that the pivot to online education for LAC students did not seem to diminish in any significant way students' value placed on the LAC experience overall, and that scores did not vary significantly among course delivery modes. This result could be explained, in part, by the power of a crisis to bring people together with empathy for shared struggle. While one might have expected LAC students who suddenly had to take their courses online to report significantly lower LACE scores, these students may also have been more understanding and empathetic toward their faculty and institutions, given the gravity of the pandemic's toll on campuses and society at large.

The pandemic, in some ways has been a great equalizer—with online education opening windows between students and faculty onto lived experiences and realities neither group would necessarily be privy to outside of pandemic conditions. Faculty and students have learned alongside one another during the pandemic about how to learn and work together virtually. It seems possible that the newness of these virtual endeavors many have increased the effort faculty

put into staying connected with students who were learning virtually helped keep those students engaged with their institutions. The online pivot of 2020 likely also resulted in many LAC faculty giving more individual attention to their teaching pedagogies and their engagement one-on-one with students to shepherd them through courses during the pandemic. Students returning to classrooms on campus may expect this level of attention and course innovation to continue face-to-face.

Students may also anticipate that some of the teaching and mentoring approaches that emerged on LAC campuses during the pandemic remain in place, such as online office hours, recorded lectures, and the opportunity to attend a class virtually when feeling ill. Many professors may have felt that these online strategies were for educational continuity through the pandemic only and may be eager to return to how they taught and engaged with students in normal times, too. Given that the current generation of traditionally aged college students grew up with technology integrated into their lives, it stands to reason that even if a full return to in-person classes is possible, they will expect the best of what emerged in terms of classroom technologies to remain in a post-pandemic world. The financial and technological costs of the pivot online for LACs may have been viewed by these institutions as temporary, but it seems likely that the adaptations made by both faculty and students to using online tools and resources during the pandemic will result in sustained needs, such as Zoom platform access and in-classroom video and sound equipment.

Though the 2021-22 academic year, and future years, may be punctuated by continuing operational adjustments due to the pandemic, LAC leaders, faculty, and staff would benefit from taking stock of the best practices and innovations that emerged in the online pivot of 2020 that may optimize and improve teaching and learning in the future. It seems unlikely that in the

absence of disruption on a massive scale as the pandemic has caused, many faculty at small, teaching-intensive institutions would have been compelled to reinvent their pedagogies and incorporate technological tools to do so. The continually rising costs of the teacher-scholar model and immersive residential environments emblematic of LACs necessitate a thorough review of lessons learned from the online pivot to incorporate best practices into established pedagogies for these institutions. Failing to do so and heeding the call to return to “the way things were” would be an extraordinary missed opportunity to build toward better, more resource-efficient, and technologically nimble liberal arts colleges.

Heeding Warning Signs Around Mental Health

The COVID-19 pandemic, to varying degrees, disrupted the lives of students, as well as faculty, staff, and leaders at liberal arts institutions. Findings from this study may be useful indicators of the universality of personal impacts experienced by college students during the 2020-21 academic year. It is possible that this personal disruption was invisible to the faculty, staff, and peers of students experiencing it, and thus it might be easy to dismiss the pandemic’s individual effects as campuses trend toward a more normal experience in the coming years. Many students returning to LACs, however, will likely bring distress, trauma, and anxiety borne of the pandemic experience back to their campuses with them, and campuses will likely need to provide additional support students as they re-enter college life. This need for additional support is only compounded by the already extremely challenging environment for recruiting and retaining counseling center staff and leaders (Kafka, 2021).

Student health centers and counseling centers on college campuses have experienced significant increased demand for services during the pandemic (Abelson et al., 2020; Kafka, 2021; Weissman, 2021), and it may take months or years to regain a sense of normalcy in these

critical campus spaces of support. Leaders should take stock of these units in particular, as well as among front-line student support staff such as residence life, whose work was critical to LAC campuses' ability to operate during the pandemic. These professional staff may be experiencing a greater level of fatigue and exhaustion following the 2020-21 academic year than some other parts of campus, to say nothing of the individual pandemic disruption they themselves experienced. And yet, the degree of personal disruption students reported in this study suggests that student will continue to need these supportive offices and spaces as they return to campuses. While institution leaders should be considering how to properly compensate and support all faculty and staff at all times, as campuses navigate through—and hopefully out of—the pandemic, special attention should be paid to rewarding and taking care of those who have been on the front lines of providing students support through an extraordinarily disruptive and challenging time.

Conclusion

During the last 18 months, Mezirow's (1978) term, *disorienting dilemma*, has resonated deeply and personally with me as a researcher, and also took root in my design and execution of this dissertation study. The COVID-19 pandemic has wrought untold personal disruption for people around the world, as well as for undergraduate students trying to navigate their college educational experiences. Going to college in “normal” times is challenging, and decades of higher education research has documented the many challenges and issues students face in the journey from admission to a degree. Beginning in March 2020, the pandemic instigated a wave of changes to higher education institutions that impacted the experiences of students, including pivots to online-only or hybrid education; masking mandates and social distancing requirements; regimented prevalence testing, and periods of isolation and quarantine for students exposed to or

having contracted COVID-19; and the alteration or elimination of classroom and experiential learning opportunities during the 2020-21 academic year. In this dissertation, I hypothesized that college students were experiencing disorienting dilemmas in the wake of these changes, and that at liberal arts colleges in particular, feelings of disorientation might be more acute due to the nature and identity of LAC institutions.

Students enroll in LACs for myriad reasons, but this dissertation demonstrated that they value the seven key elements that are hallmarks of LACs—ability to take courses in a liberal arts curriculum, on-campus residential life, low student-to-faculty ratio, mentoring relationships with faculty, access to co-curricular opportunities, engagement in social and campus life activities, and the general appeal of the built campus environment—and are eager for a return to normalcy with regard to these parts of the college experience. The “pandemic dip” and resulting rebound in the reported value LAC students in this study placed in these experiential elements of their campuses demonstrated that while experiencing substantial personal disruptions, their commitment to the LAC educational model remained strong. And while there is great solace to be taken for pandemic-fatigued faculty, staff, and administrators of LACs in this result, the current moment also offers institutions an opportunity to capitalize on the best of what was learned over the past year to build stronger, more resilient colleges for the future.

In so doing, LAC faculty, staff, and administrators should also do what they do best—putting students at the center of their work especially in the immediate months ahead. Students in this study reported high levels of personal disruption due to the pandemic and will likely be dealing with the aftereffects of it throughout their remaining LAC experience. The faculty, staff, and administrators who work at these institutions are undoubtedly experiencing the effects of pandemic disruption as well, and how it is or is not crossing over into their work on campuses.

The next year, and likely beyond, will require more empathy and understanding of what students and employees have been through, and opportunities collectively to heal and move forward together. It is my hope that the findings and interpretations of data collected for this dissertation contributed in some way to that healing and progress.

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APPENDIX A

Survey Instrument

Attending College During COVID-19- Survey

Screening Questions

Q1. PURPOSE OF THE STUDY The purpose of this project is to understand the degree to which the COVID-19 pandemic has affected the experiences of students currently enrolled in liberal arts colleges. In order to achieve this goal, the experiences and perspectives of students are the primary focus. The data gathered will be analyzed as part of a dissertation study with the goal of helping higher education faculty and administrators strengthen pandemic response efforts and learn from students' experiences to be better prepared for future crises and disruptions.

PROCEDURES To participate in this study, please complete this survey and submit it via the Internet. Most respondents complete this questionnaire in about 7 minutes, although individual progress will vary by how quickly you move through the questions.

You may decide not to complete the survey for any reason at any time without consequence of any kind. Your participation and submission of the questionnaire indicate your consent to participate in the study. You will be asked for a contact email address at the conclusion of the study if you wish to be entered into a raffle for a Visa gift card. You are not required to submit your email address. If you do so, the email address will not be attached to your responses to the survey. No other personal identifying information is required for participation.

POTENTIAL BENEFITS TO PARTICIPANTS AND/OR SOCIETY You may have the opportunity to reflect on your prior academic experiences and your expectations for college as you complete the survey, which may enhance self-understanding. Your responses to the survey also will be directly beneficial to college or university faculty and leaders seeking to learn from the pandemic experience and may benefit future generations of college students as well.

POTENTIAL RISKS AND DISCOMFORTS There could be survey items that you are uncomfortable answering or to which you would simply prefer not to respond. Your participation in this study is strictly voluntary, and you will be under no obligation whatsoever to answer any questions that you are not inclined to answer. You may choose not to answer any specific questions you do not want to answer and remain in the study.

CONFIDENTIALITY Please note that your responses will be used for research purposes only and will be strictly confidential. Any information that is obtained in connection with this study will remain confidential.

IDENTIFICATION OF INVESTIGATOR If you have any questions or concerns about the research, please contact Ashleigh Brock, PhD candidate in the School of Education at William and Mary: 804-929-5075 or amheck@email.wm.edu, or Dr. James P. Barber,

RIGHTS OF RESEARCH SUBJECTS If you have additional questions or concerns regarding your rights as a study participant, or are dissatisfied at any time with any aspect of this study, you may contact, anonymously if you prefer, Dr. Jim Barber at 757-221-6208 (dissertation chair, jpbarber@wm.edu), or Dr. Tom Ward at 757-221-2358 (tjward@wm.edu) and Dr. Jennifer Stevens at 757-221-3862 (jastev@wm.edu), chairs of the two William and Mary committees that supervise the treatment of research study participants.

By proceeding into the questionnaire, you are indicating your voluntary participation in this study and confirming you are at least 18 years of age.

Q2. What is your current class standing?

- ☐ First year / freshman
- ☐ Second year / sophomore
- ☐ Third year / junior
- ☐ Fourth year / senior
- ☐ Fifth year / senior
- ☐ Graduate / Professional student

Skip Logic: If first year / freshman or Graduate / Professional student are selected, skip to “End of Survey” message.

Q3. Were you enrolled at your current school during the fall 2019 semester (before the COVID-19 pandemic)?

- ☐ Yes
- ☐ No

Skip Logic: If No selected, skip to “End of Survey” message

Fall 2020 Educational Circumstances

Q4. Please select your current school from the drop-down list.

Choices will be edited to include institutions participating in the study. This question is required.

Q5. Where did you live during the fall 2020 semester?

- ☐ I lived in on-campus housing.
- ☐ I lived in off-campus housing, but close to my campus.
- ☐ I lived at home (my permanent address).
- ☐ Other (Please describe your living situation)

Q6. Prior to the COVID-19 pandemic, had you ever taken an online course at your college before?

- ☐ Yes
- ☐ No

Personal Disruption Due to COVID-19

Q7. Please rate how disruptive the COVID-19 pandemic has been to you personally on a scale of 1 (not at all disruptive) to 10 (extremely disruptive). Think about your daily routines regarding school, work, and personal life, and relationships with family and friends.

1 2 3 4 5 6 7 8 9 10

Liberal Arts Experiences Before, During, and After COVID-19

The following questions ask that you rate the importance of certain elements of your college experience at three different moments: (1) when you chose your college, (2) before the pandemic began / fall semester 2019, and (3) during the pandemic in fall semester 2020. Then, you will be asked to rate how important you expect those elements to be to you when the pandemic ends.

Q8. Please rate how important the following characteristics were to you when you first made the decision to attend your school.

	Not at all important	Slightly important	Moderately important	Very important	Extremely Important
Ability to take academic courses from across a broad liberal arts curriculum	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Living in a residential campus community	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Low student-to-faculty ratio in my classes	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Ability to develop close mentoring relationships with faculty	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Access to co-curricular opportunities, such as internships, undergraduate research, and study abroad experiences	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Access to social and campus life opportunities, such as student organizations, clubs, community service, and intramural sports	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
The appeal of the campus environment (e.g., architecture, quality facilities, and campus beauty)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Q9. Please describe how important the following elements of your college experience were to you in fall 2019, before the pandemic began.

	Not at all important	Slightly important	Moderately important	Very important	Extremely Important
Ability to take academic courses from across a broad liberal arts curriculum	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Living in a residential campus community	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Low student-to-faculty ratio in my classes	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Ability to develop close mentoring relationships with faculty	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Access to co-curricular opportunities, such as internships, undergraduate research, and study abroad experiences	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Access to social and campus life opportunities, such as student organizations, clubs, community service, and intramural sports	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
The appeal of the campus environment (e.g., architecture, quality facilities, and campus beauty)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Q10. Please describe how important the following elements of your college experience were to you in fall 2020, during the pandemic.

	Not at all important	Slightly important	Moderately important	Very important	Extremely Important
Ability to take academic courses from across a broad liberal arts curriculum	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Living in a residential campus community	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Low student-to-faculty ratio in my classes	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Ability to develop close mentoring relationships with faculty	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Access to co-curricular opportunities, such as internships, undergraduate research, and study abroad experiences	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Access to social and campus life opportunities, such as student organizations, clubs, community service, and intramural sports	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
The appeal of the campus environment (e.g., architecture, quality facilities, and campus beauty)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Q11. Please describe how important you anticipate the following elements of your college experience will be to you when the pandemic ends.

	Not at all important	Slightly important	Moderately important	Very important	Extremely Important
Ability to take academic courses from across a broad liberal arts curriculum	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Living in a residential campus community	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Low student-to-faculty ratio in my classes	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Ability to develop close mentoring relationships with faculty	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Access to co-curricular opportunities, such as internships, undergraduate research, and study abroad experiences	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Access to social and campus life opportunities, such as student organizations, clubs, community service, and intramural sports	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
The appeal of the campus environment (e.g., architecture, quality facilities, and campus beauty)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Sense of Belonging

Q12. I feel a sense of belonging to the <insert institution name> community.

- ☐ Strongly disagree
- ☐ Somewhat disagree
- ☐ Neither agree nor disagree
- ☐ Somewhat agree
- ☐ Strongly agree

Q13. I see myself as a part of the <insert institution name> community.

- ☐ Strongly disagree
- ☐ Somewhat disagree
- ☐ Neither agree nor disagree
- ☐ Somewhat agree
- ☐ Strongly agree

Q14. I intend to complete my degree at <insert institution name>.

- ☐ Strongly disagree
- ☐ Somewhat disagree
- ☐ Neither agree nor disagree
- ☐ Somewhat agree
- ☐ Strongly agree

Display logic: Display this question if class standing Second year / sophomore or Third year / junior are selected.

Participant Information

Q15. Are you (select all that apply):

- ☐ American Indian or Alaska Native
- ☐ Asian
- ☐ Black or African American
- ☐ Multiracial
- ☐ Native Hawaiian or Pacific Islander
- ☐ White
- ☐ Other (optional fill in)

Q16. Are you Spanish, Hispanic, or Latinx, or none of these?

- ☐ Yes
- ☐ None of these

Q17. What is your current gender identity?

- ☐ Woman
- ☐ Man
- ☐ Non-Binary
- ☐ Genderqueer / Gender non-conforming
- ☐ Identity not listed above (optional fill in)

Q18. Do you identify as transgender?

- ☐ Yes
- ☐ No

Display logic: Display this question if Non-Binary, Genderqueer / Gender non-conforming, or Identity not listed above are selected.

Q19. Do you have health insurance?

- ☐ Yes
- ☐ No

Q20. Which of these best describes your citizenship status?

- ☐ International student
- ☐ Permanent resident
- ☐ U.S. citizen
- ☐ I prefer not to say

Q21. Are you a recipient of federal Pell Grants to help you pay for college?

- ☐ Yes
- ☐ No

Q22. Did either of your parents/guardians complete a 4-year college or university degree?

- ☐ Yes
- ☐ No

Q23. Thank you for taking this survey! If you would like to be entered into a raffle to receive a xxx, please add your email address. This information will not be tied to your responses in this survey.

Appendix B

Sample Invitation and Reminder Email Drafts

Sample Invitation

Subject: Survey about your experiences during COVID-19

Dear [Name],

Southern College is participating in a research study about liberal arts college students across the southern United States and their experiences during the COVID-19 pandemic. Your perspectives are critical to help researchers understand what it has been like to attend college during this unprecedented crisis.

The survey is brief and should take less than 10 minutes to complete. Please click this link or copy and paste it into your internet browser to go to the survey website: [link]

If you complete this survey by **April 23**, you will be invited to submit an email address to enter a raffle for **1 of 5 \$50 Visa gift cards**. No personally identifiable information will be associated with your responses in any reports on these data. The William and Mary Institutional Review Board has approved this survey. Should you have any comments or question, you can contact the researcher, Ashleigh Brock.

Thank you very much for completing this survey.

Sincerely,

Reminder Email

From: Ashleigh Brock
Subject: The COVID-19 college experience

Dear <first name> ,

Last week, you were invited to share your perspectives on attending college during the COVID-19 pandemic. This survey is part of multi-institutional research study examining students' college experiences during the pandemic across the U.S. south.

Follow this link to the Survey:

Take the Survey [link]

Or copy and paste the URL below into your internet browser:

[link]

The deadline to participate in this survey is April 18. If you complete it, you will be invited to submit an email address to **enter a raffle for 1 of 5 \$50 Visa gift cards.**

Your perspectives are critical to help researchers understand what it has been like to attend college during this unprecedented crisis. The survey is brief and should take less than 10 minutes to complete.

The Mid-Atlantic College Institutional Review Board has approved this survey. Should you have any comments or questions, please contact me.

Thank you very much for completing this survey.

Sincerely,

Ashleigh Brock



Vita

Ashleigh Marie Brock

Birthdate: November 14, 1983

Birthplace: Baltimore, Maryland

Education: 2016-2021 **College of William and Mary**
Williamsburg, Virginia
Doctor of Philosophy
Education Policy, Planning, and Leadership
Concentration: Higher Education Administration

2008-2010 **Michigan State University**
East Lansing, Michigan
Master of Arts
Student Affairs Administration

2001-2005 **University of Richmond**
Richmond, Virginia
Bachelor of Arts
Majors: Rhetoric and Communication Studies
Journalism