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ENROLLMENT MANAGEMENT STRATEGIES AS A RESULT OF COVID-19

AT RURAL COMMUNITY COLLEGES

by

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B.S. December 2008, Strayer University
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A Dissertation Submitted to the Faculty of
Old Dominion University in Partial Fulfillment of the
Requirements for the Degree of

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COMMUNITY COLLEGE LEADERSHIP

OLD DOMINION UNIVERSITY

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Approved by:

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ABSTRACT

ENROLLMENT MANAGEMENT STRATEGIES AS A RESULT OF COVID-19 AT RURAL COMMUNITY COLLEGES

Robin Christine Daniel
Old Dominion University, 2022
Director: Dr. Mitchell R. Williams

Higher education institutions world-wide were impacted by the unprecedented novel coronavirus (COVID-19) beginning in early 2020. COVID-19 caused a disruption in services to students and resulted in pivots of teaching, learning, and student support. Community colleges differ from four-year counterparts through varying student demographics, funding sources, mission and foci, and student intentions. Community college enrollment is affected by economic, employment, and social trends. Enrollment management practices changes as campus operations for student support changed to remote support. COVID-19 forced administrators at colleges to make quick decisions. This study examined the perceptions of academic administrators at rural community colleges regarding how COVID-19 impacted enrollment management practices.

This study aimed to determine the perceptions of changes occurring to enrollment management practices and the subsequent financial challenges resulting from COVID-19 within rural Virginia community colleges. Each rural community college in Virginia is included within the Rural Virginia Horseshoe, totaling 14 colleges. This study was a sequential explanatory study that was conducted in two phases. Phase One was a quantitative inquiry using a non-experimental survey to gather mid to senior-level administrators' perceptions of how COVID-19 was impacting enrollment management practices at their college. A total of 45 respondents completed the survey. The distribution included 102 mid to senior-level administrators. For the

qualitative inquiry, the multiple case study research tradition was utilized. A total of 10 interviews were conducted with mid to senior-level administrators.

Five themes emerged from the findings: (a) COVID-19 led to crisis management and operations in phases, (b) managing student onboarding during COVID-19, (c) COVID-19 created unique challenges for community college students, (d) COVID-19 affected decision-making procedures, and (e) COVID-19 resulted in work/life balance issues and COVID fatigue. Major implications in the current study suggest that colleges should be ready to pivot to remote instruction or back from it, review the onboarding processes and supports to ensure that they are adequately serving students, and advocate to reduce the digital divide.

Keywords: COVID-19, enrollment management, rural community college, crisis management, decision-making processes

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This thesis is dedicated to Katherine, TJ and my parents who supported and encouraged me to pursue my dreams.

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time of COVID-19 to support the students, faculty, and staff at your colleges. All of you are heroes of your college and community.

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CHAPTER I

INTRODUCTION

A world-wide extraordinary response was required by the unprecedented novel coronavirus (COVID-19) that occurred in early 2020. States of emergency were declared across the United States and states began implementing stay-at-home orders (Oliver, 2020).

Administrators were forced to make quick decisions regarding the continuation of classes during COVID-19 and controlling access to college facilities. At the time of this writing, many leaders had to make difficult decisions regarding the return of students to campuses around the country (Illanes et al., 2020). Before COVID-19, many leaders at higher education institutions were concerned over declining enrollment that institutions have been facing.

In 2020, the declines in enrollment due to COVID-19 led, inevitably, to financial concerns. If there are no students, the higher education institution is unable to fulfill the mission and has no purpose (Ayers, 2017). People in rural areas face additional financial challenges as these areas already have higher unemployment, lower educational achievement, fewer higher education options, and a lower per capita income than urban or suburban populations (Eddy, 2009; Torres et al., 2013). Administrators at rural community colleges had significant and unique concerns regarding enrollment. In-person classes were forced to have smaller enrollments due to the six-foot/social distance restrictions, and college leaders were required to move more classes to a virtual environment. Lack of access to adequate technology and broadband internet access was an overwhelming concern for many administrators as it would affect the number of the students that their institution could serve.

Enrollment management involves enrolling and retaining students (Dolence, 1996). Enrollment is tied to funding through full-time equivalents (FTEs) and performance-based

funding (Jones et al., 2008). In today's environment, students have choices for attending college, and college leaders must focus on recruiting and retaining students to sustain community college budgets.

Background of the Study

Community colleges are linked to the communities they service by providing opportunities to students through the establishment of affordable, open access to education (Vaughan, 2006; Williams et al., 2007). Affordable college access was made available to far more Americans with the passing of the *Higher Education Act of 1965* (Kanter & Armstrong, 2019; 20 U.S.C. § 1001). The *Higher Education Act* established low-interest loans and funding for low-income students through federal aid grants. Community colleges play a unique role in addressing access to higher education and opportunities for upward mobility of low-income Americans. One component of the mission of community colleges is to have open access and equity for all students (Vaughan, 2006; Williams et al., 2007). According to Boggs (2011), higher education contributes to a better quality of life, higher socioeconomic status, and higher income.

Community college enrollment is heavily affected by economic, employment, and social trends at the national, state, and local levels. These factors make enrollment management especially challenging at community colleges. Even with many advances, an opportunity gap exists in rural areas of the United States, where students are more likely to have low socioeconomic status or are first-generation college students (McKinney & Novak, 2013). The need exists to focus on enrollment management to recruit and retain students, and for students to obtain a degree or certificate.

Administrators at community colleges face challenges with competition from distance education programs as well as other institutions. Distance education programs provide education to students who can access the program regardless of their physical distance from the campus (Cohen et al., 2013). Additionally, the decisions regarding human resources and services offered to students, when funding is limited, are hard on administration, students, employees, and the community. At most rural community colleges, limited resources impact the ability of leaders to successfully manage enrollment to the greatest benefit of the college and its students.

Enrollment Management

Jack Maguire (1976), a Boston College faculty member, devised the term *enrollment management* in Boston College's *Bridge* magazine. Maguire (1976) provided that "enrollment management is a process that brings together often disparate functions having to do with recruiting, funding, tracking, retaining and replacing students as they move toward, within and away from the University" (p.16). Hossler and Bean (1990) defined enrollment management as a systematic set of activities to exert more influence over student enrollments and to organize those activities. "Optimally, an institution's enrollment is comprehensively developed and is based on a strategic, integrative plan that includes the identification, attraction, selection, encouragement, registration, retention, and graduation of targeted student segments" (Huddleston, 2000, p. 65). Jones et al. (2008) provided the functional areas involved in enrollment management, "recruiting, admissions, financial aid, student records, advising, retention, student outcomes, graduation, and placement" (p. 168).

Kerlin (2008) defined the factors that led community colleges to enrollment management as "unusual enrollment trends, funding limitations, revised institutional strategic plans, a competitive marketplace, shifting demographics, economic trends, multiple missions" (p. 11).

During the Great Recession of 2007 to 2009, community college enrollment increased. Since 2010 and the end of the recession, community colleges have been experiencing declining enrollment (Schmidt, 2018). With the onset of the COVID-19 pandemic in early 2020, community colleges have generally seen further declines in enrollment (Collins, 2021; Floyd, 2021). The declines in enrollment reinforce the need for college administrators to review enrollment trends and focus on managing enrollments at their institutions.

Crisis Management

Crisis management is a key component of an institution's planning process. Institutions must be prepared with a plan of action when a crisis or catastrophe hits. These crises are typically in the form of man-made or natural disasters and can occur at unfortunate frequency (L'Orange, 2010). Between 1966 to 2010, there were 42 shootings with fatalities at U.S. schools and colleges (L'Orange, 2010). Many natural disasters have halted educational operations such as Hurricanes Katrina (2005), Irma (2017), and Dorian (2019). As found in the post-Katrina environment, the most identified enrollment management practices were targeted marketing strategies, offering of online courses to keep the students enrolled during the time, and retaining students through technology (Jones et al., 2008).

COVID-19 is a crisis of historical proportions that will affect higher education for many years. In the United States, tens of thousands have died, and thousands of additional families have been affected by illness, separation from loved ones, loss of businesses, and unemployment (Centers for Disease Control [CDC], 2020a). One in four people were unemployed at a rate of 14.7% in April 2020 (U.S. Bureau of Labor Statistics, 2020). Prior to the pandemic, issues were rising due to mental health, inequity, and food crises. COVID-19 exacerbated mental health issues among adults 18 years of age or older (CDC, 2020b; Jarboe, 2021; Son et al., 2020).

Housing and food insecurities increased in the United States (The Hope Center, 2021). Equity gaps rose with fewer Hispanic and African American students attending college during COVID-19 (NSC, 2021). Seventy-five percent of businesses have been negatively affected. COVID-19 has affected colleges and universities worldwide (Illanes et al., 2020).

Decision-Making

Community college presidents often follow the mantra of “do the right things, for the right reasons” (Smith & Fox, 2019, p. 84). Decision-making by college administrators is a normal routine, but other factors such as an immediate crisis or a prolonged period of financial or enrollment decline adds more difficulty for community college leaders. “Leaders should evaluate situations and alternative choices from several ethical viewpoints, weighting costs and benefits of alternatives before making a decision and taking action” (Smith & Fox, 2019, p. 76). Leaders are responsible for protecting their students’ lives and livelihoods (Comfort et al., 2021).

Purpose of the Study

The purpose of this sequential explanatory study was to examine the perceptions of academic administrators at rural community colleges regarding how a crisis impacts enrollment management practices. Participants discussed their lived experiences and perceptions of changes that occurred in enrollment management practices and the subsequent financial challenges resulting from the COVID-19 pandemic within rural Virginia community colleges. Additionally, I examined the procedures used to make enrollment management operational decisions during COVID-19.

Research Questions

The following research questions guided this study:

1. How do academic administrators at rural community colleges describe the changes occurring to enrollment management practices as a result of COVID-19 and the financial impact of the pandemic?
2. How are rural community college academic administrators at rural community colleges making enrollment management process decisions as a result of COVID-19?
 - a. How are the financial implications of COVID-19 affecting rural community college academic administrators' decision-making processes?

Significance of the Study

Academic leaders, researchers, and advocates could all benefit from the study.

Enrollment management is a vital component of higher education institutions' operations (Hossler & Bean, 1990). Advocates may use the research findings to request additional funding for rural community colleges. Leaders, board members, and researchers interested in rural community colleges will have a high interest in this study, as many such areas were struggling prior to the COVID-19 crisis, and the pandemic and related financial crisis likely heightened the problems affecting rural places. Rural community colleges face many additional challenges, endure additional financial hardships, and have fewer resources than counterparts (Cejda, 2012; Scott et al., 2015). Academic leaders and researchers will benefit from the research by reviewing the challenges and opportunities experienced by administrators at rural community colleges.

Conceptual Framework

The two dominant theories that I used to explain enrollment management activities were *resource dependency* and *systems theory* (Hossler & Hoezee, 2001). The authors indicated that

all higher education institutions are dependent on resources to maintain operations and deliver the mission. According to Pfeffer and Salancik (1978), resources are required by organizations “because organizations are not self-contained or self-sufficient, the environment must be relied upon to provide support” (p. 43). Organizations are loosely coupled to their environment, allowing the organization to prioritize those events. Enrollment management staff can use the resources dependency theory to determine the scarce resources in conjunction with student enrollment (Hossler & Hoeszee, 2001). The number of students enrolled can be linked to tuition revenue. Enrollment is the main revenue stream as funding for the college is dependent on full-time equivalents (FTEs) and performance-based funding (Jones et al., 2008).

Bronfenbrenner’s (1989) ecological systems theory uses a microsystem, mesosystem, exosystem, macrosystem, and chronosystem approach to fulfill the role of exploring the phenomenon. The theory provides factors that influenced process changes at the college during COVID-19. “In order to effectively influence student enrollments, enrollment managers and the units that comprise an enrollment management program have to share information, goals, and strategies frequently” (Hossler & Hoeszee, 2001, p. 7). Analysis of the enrollment practices helped to determine how contributions from other departments can maintain or increase enrollment.

Overview of the Methodology

To learn about community college administrators’ knowledge and perceptions of the enrollment management changes that occurred as a result of COVID-19, I used both quantitative and qualitative methods in two phases using a sequential explanatory design. Descriptive statistics were used in this mixed-methods study to detail the college administrators’ knowledge and perceptions of enrollment management changes and subsequent financial challenges due to

COVID-19. I employed a multiple case study analysis to provide an in-depth examination to help develop a deeper understanding of the relationship between the community college administrators and the phenomenon of enrollment management.

Data Collection and Analysis

Prior to beginning the data collection, approval was requested from the Old Dominion University Human Subjects Committee (see Appendix G). Data collection began upon approval and consisted of two phases. Data collection in both phases consisted of a Likert-type survey, semi-structured interviews, and document analysis. Participants in Phase One were employed at the 14 community colleges in Virginia that make up the *Rural Horseshoe* (The Virginia Foundation, 2020). The survey was sent to all mid- to senior-level academic administrators to obtain a broader view of this issue and provide information regarding how rural leaders perceive the COVID-19 pandemic and how it is affecting enrollment management. The mid- to senior-level academic administrators included participants serving in roles with a title of director, dean, vice-president, and president. The survey asked participants to rate levels of knowledge and perceptions of enrollment management practices on a Likert-type scale. Descriptive and inferential statistical results along with effect sizes were calculated to help inform the interview protocol, and participant and college selection for Phase Two.

In Phase Two of the study, I selected three rural colleges from the group of 14 to draw participants with whom to conduct semi-structured interviews. Data obtained helped form the interview questions and allowed me to conduct more in-depth interviews on the issues identified within the survey. The interviews were conducted with a minimum of three mid to senior-level administrators from each of the selected three community colleges, resulting in a minimum of nine participants.

In the data analysis, commonalities and conflicts were identified within institutions and across institutions. A document analysis was conducted from data collected from webpages and social media. During Phase One, I identified common themes and statistical data from the initial survey. This helped determine an interview protocol, which is included in Appendix A. An important component of the data analysis is that data must be prepared, organized, coded, themed, and represented visually or in writing (Creswell & Creswell, 2018). A data dashboard was compiled to display results from Phase One. I employed the analytical techniques of pattern matching and explanation building to analyze data (Yin, 2018). After the completion of the interviews, the recordings were transcribed. Participants then reviewed their transcripts, and I completed field note comparison. Pattern matching was used as an iterative process to cluster ideas (Yin, 2018). I will thematize the data within-case and across-case by coding chunks of data, categorizing into clusters, and reviewing for interrelationships of the categories. I discuss the data analysis and the conclusions that resulted from the analysis in Chapters Four and Five.

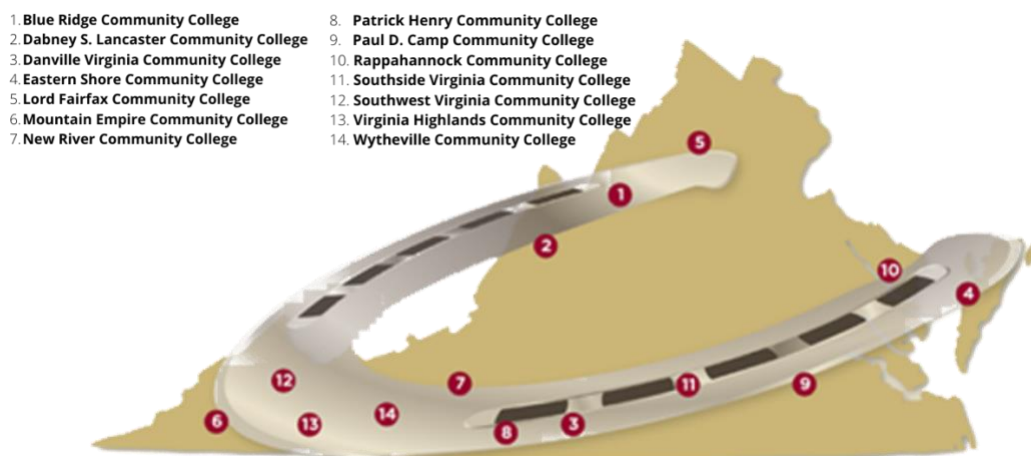
Delimitations

Creswell (2013) defined elements that confine and limit the scope of a study as delimitations. This study will focus on the perceptions of community college mid and senior academic leaders regarding enrollment management practices due to COVID-19. For the initial survey, a minimum of three employees received the questionnaire at each of the Rural Virginia Horseshoe institutions within the Virginia Community College System (see Figure 1). The sample was comprehensive in that the initial survey included representatives from Rural Virginia Horseshoe institutions. Comprehensive sampling is the method where an entire group will be selected based on the set criteria (Hays & Singh, 2012). The academic administrators selected for this study

cannot be assumed to represent the entire population of academic administrators in the United States.

Figure 1

Virginia's Rural Horseshoe



Note. A visual representation of the Virginia's rural horseshoe. From "How VLDS Will Transform the Way We Look at Rural Virginia," by K. Coates, 2016, Virginia Longitudinal Data System (VLDS) (<http://vlds.virginia.gov/archive/how-vlds-will-transform-the-way-we-look-at-rural-virginia/>).

Purposive sampling was used to select the sample of mid and senior-level administrators at the Virginia community colleges to interview. The sample is convenient because as an employee, I have convenient access to the population of mid and senior-level administrators at the 23 Virginia community colleges. Convenience sampling offers time, energy, and money savings benefits, however, limits the transferability of the finding of this study (Hays & Singh, 2012).

Definitions of Terms

The following terms are defined for the purpose of this study:

- *Community college*: Two-year public institution of higher education awarding associate degrees, certificates, and workforce training. Each college is classified as urban-serving, suburban-serving, and rural-serving (Carnegie Classification, n.d.). All community colleges in the Virginia Community College system are nonresidential and none offer a bachelor's degree.
- *COVID-19*: COVID-19 is an acronym for the novel Coronavirus disease 2019. The virus had not been identified prior to 2019 and spreads from person to person as a respiratory illness (Coronavirus, n.d.).
- *Crisis management*: Crisis management is determined by the process of where administration acts on an unexpected and disruptive event that could harm the organization's stakeholders.
- *Enrollment management*: "Enrollment management is a process that brings together often disparate functions having to do with recruiting, funding, tracking, retaining and replacing students as they move toward, within and away from the University" (McGuire, 1976, p. 16).
- *Financial implications*: For the purposes of this study, any kind of action taken having a positive or negative ramification on the institution's financial standpoint.
- *Large rural college*: For the purposes of this study, a college with more than 1,500 full time equivalents (FTE) for the Fall 2020 semester.
- *Medium or mid-size rural college*: For the purposes of this study, a college with 1,000 to 1,499 full time equivalents (FTE) for the Fall 2020 semester.

- *Mid-level administrator*: For the purposes of this study, mid-level administrators will be defined as administrative faculty in roles of dean and director including any at the assistant or associate level.
- *Rural areas*: Rural areas are counties with a population less than 20,000 people.
- *Rural community college*: For the purposes of this study, rural community colleges are two-year public institutions awarding associate degrees as the highest level within the service region with a population of less than 20,000 by county.
- *Senior-level administrator*: For the purposes of this study, senior-level administrators will be defined as administrative faculty in roles of vice-president and president including any at the assistant or associate level.
- *Small rural college*: For the purposes of this study, a college with less than 999 full time equivalents (FTE) for the Fall 2020 semester.
- *Virginia Community College System (VCCS)*: The Virginia Community College System serves the Commonwealth of Virginia with 23 community colleges. A State Board for Community Colleges governs the VCCS with the Governor appointing the 15-member board. The executive officer of the VCCS is the Chancellor. The Chancellor appoints each individual community college president (VCCS, 2020).

Chapter Summary

COVID-19 has impacted the world and changed society. In late 2020, the length of time required to maintain these changes was unknown. Higher education had made plans to start the fall semester with varying strategies from completely online, offering some or all in-person classes, offering synchronous classes where students can participate virtually, and hi-flex models. COVID-19 requires higher education institutions to be fluid and have the ability to pivot

as environmental changes influence society. I seek to find out how COVID-19 has influenced enrollment management practices at rural community colleges.

The introductory chapter consists of an overview of the current study, including background, conceptual framework, purpose statement, research questions, professional signature, overview of the methodology, delimitations, and definitions of key terms. Chapter Two reviews the current literature related to enrollment management. Chapter Three outlines the research methodology used in the study. Chapter Four provides a report of the study's findings. Chapter Five includes a discussion of this study's findings, implications, and recommendations for future research.

CHAPTER II

LITERATURE REVIEW

The purpose of this sequential explanatory study was to examine the perceptions of academic administrators at rural community colleges regarding how a crisis impacts enrollment management practices. Participants discussed their lived experiences and perceptions of changes occurring to enrollment management practices and the subsequent financial challenges resulting from the COVID-19 pandemic within rural Virginia community colleges. Additionally, I examined the procedures used to make decisions. I sought to expand the body of research regarding enrollment management practices and to create a more thorough understanding of how a crisis impacts enrollment at rural community colleges.

This chapter includes relevant literature in the field of this study. I describe the method of the literature review and the conceptual framework of the study. Next, I discuss the details of Chapter Two to include a graphical representation displaying the areas of focus: (a) enrollment management, (b) crisis management, (c) rural community colleges, (d) decision-making, and (e) impacts of a crisis on enrollment management practices and decisions. There is insufficient research that addresses rural community college leadership in crisis situations and enrollment management. This lack of research regarding rural community college senior-level academic leaders and the phenomenon of a crisis on enrollment management practices underline the relevance of this study.

Method of the Literature Review

The use of the Monarch OneSearch tool on the Old Dominion University Libraries webpage enabled the search of multiple databases concurrently and returned results from peer-reviewed articles, books, dissertations, and other text documents. To search the literature,

keywords were used in various combinations. The keyword terms included enrollment management, crisis management, COVID-19, coronavirus, decision-making, enrollment, crisis, natural disasters, pandemic, and rural community colleges. The search for literature was limited to peer-reviewed journal articles, government-sponsored research briefs, policy documents, and books. Most literature was published within the last two decades, though some older sources are included for historical perspective or for special relevance to rural community colleges.

Conceptual Framework of the Study

Hossler and Hozee (2001) used the theories of resource dependency and systems theory to explain enrollment management activities. Administrators at higher education institutions are dependent on resources and systems to maintain operations and deliver the mission.

Resource Dependency Theory

According to Pfeffer and Salancik (1978), resources are required by organizations and support would have to be provided by the environment. Pfeffer and Salancik (2003) further defined the relevance of resource dependency to higher education and provided suggestions to expand beyond the traditional-aged students to meet resource demands. Resource dependency theory helps to understand why administrators vary decisions in response to resource providers. Decisions regarding operations of colleges have been affected by the source of funding that the institution receives. Askin (2007) determined that “institutions model themselves to fit the expectations of entities upon which they depend for funding and/or other resources” (p. 979).

Pfeffer and Salancik (1978) discussed three critical factors in determining an organization’s dependency. The factors are (a) requirement for operations and survival; (b) involvement of source regarding use and allocation; and (c) lack of alternatives. Public colleges and universities are dependent on those that provide resources to the institution. Community

colleges typically rely on support from state allocations, local funding, and revenue from tuition and fees (Cohen et al., 2013). Additionally, performance-based funding impacts resource dependency theory as D'Amico et al. (2014) linked resource dependency theory to performance-based funding. Bakhit (2014) assessed community college presidents' reactions to funding decreases through the resource dependency theory lens. Askin (2005) studied financing and the relationship to operations of the community college through resource dependency theory to find that similar institutions or organizations "become increasingly alike" (p. 20).

Systems Theory

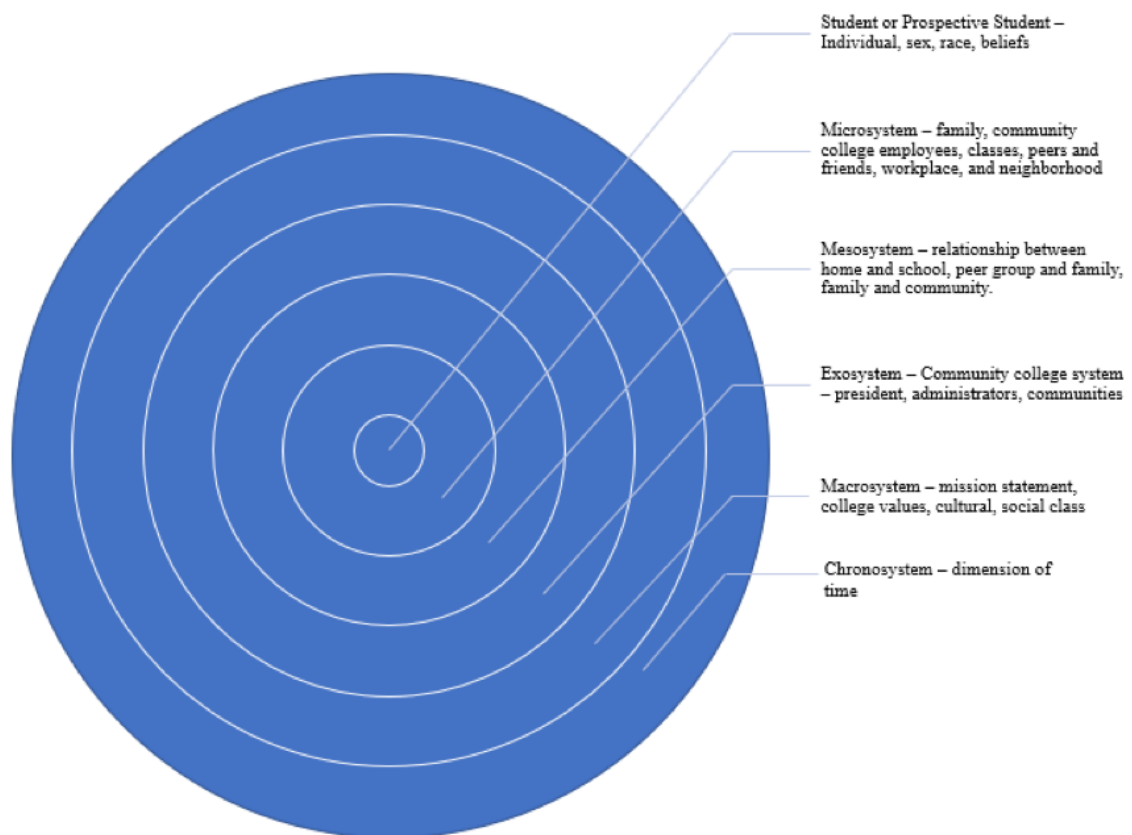
Bronfenbrenner's (1989) ecological systems theory uses microsystem, mesosystem, exosystem, macrosystem, and chronosystem levels to fulfill the role of exploring the phenomenon. Various parts of the system impact other parts in some way. Hossler and Hoezee (2001) indicated, "In order to function effectively in a collegiate setting, enrollment managers need to have an understanding of systems theory and how it can help guide their organizational strategies" (p. 61). Strategic enrollment management has been built on systems theory. Higher education institutions are dependent on student enrollment to financially sustain the institution.

Bronfenbrenner's (1989) ecological systems theory identified five system levels. The students or prospective students are in the middle of Figure 2. The microsystem is the next level which is the student's immediate environment. The next level is the mesosystem which are the student's connections. The exosystem is the student's indirect environment. The macrosystem is the student's social and cultural values. The chronosystem is the student's changes over time. At each of these levels, the student's experience at a higher education institution influences or sways the student's life. Specifically, with enrollment management in higher education, family influences and assistance fall into the microsystem level. The connections that are being built

with recruiters, advisors, or counselors at the college are located in the mesosystem level. Interactions between higher education employees at events or interaction with them in the student's community will impact the exosystem level. College orientations and student engagement will impact the macrosystem level. All combined will lead to changes in the chronosystem level.

Figure 2

Bronfenbrenner's (1989) Ecological Systems Model



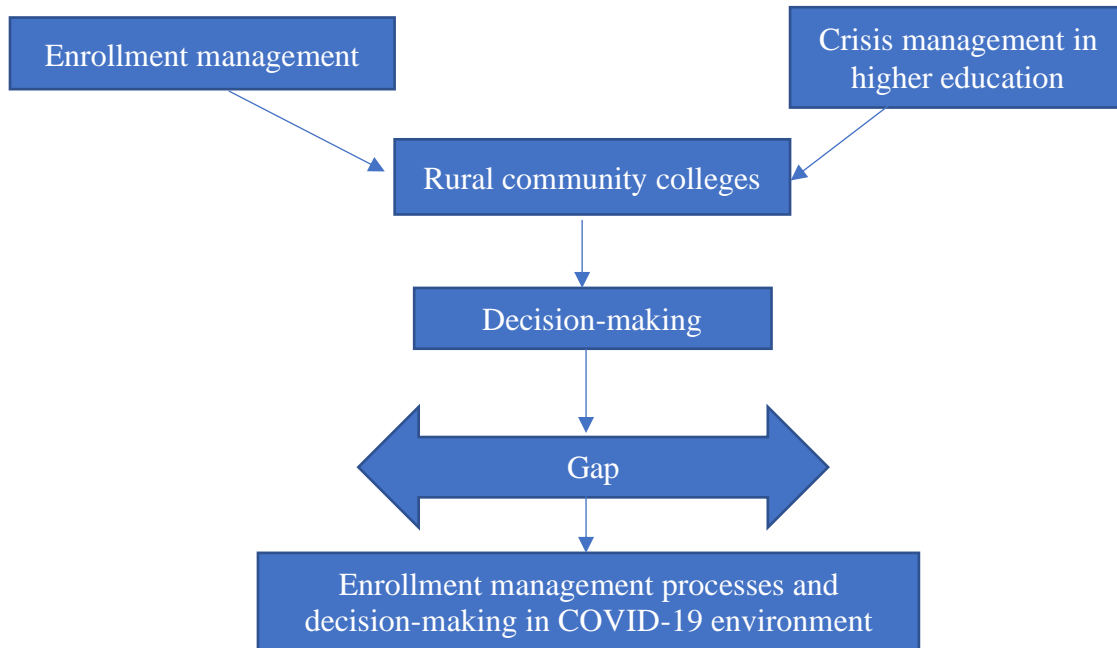
In an alternative study provided by Pavlov and Katsamakas (2020), ecological systems theory “draws on systems theory to conceptualize a *college as a complex service system* and to develop a system dynamics computational model that captures core casual interrelations and feedback effects between faculty, facilities, tuition revenue, financials, reputation, and outcomes” (p. 19).

Graphical Representation of Chapter Two

This chapter begins with a description and core components of enrollment management and crisis management. I describe enrollment management in detail to include the definition of enrollment management, the history of enrollment management in higher education, evolution of enrollment management in community colleges, funding implications, and department functions. In the next section, I describe crisis management to include a definition of crisis management, influential crisis events, and the coronavirus pandemic. Next, I describe rural community college and administrative challenges. I then discuss decision-making processes. Finally, I review the literature to disclose information found on how a crisis affects enrollment management practices in higher education. Figure 3 provides a graphical representation of Chapter Two.

Enrollment Management

Managing enrollment at community colleges has shown to impact funding and resources. In this section, enrollment management is defined, the history of enrollment management is discussed, and the framework for the evolution of enrollment management is defined. Additionally, this section contains a discussion of funding implications, and the across-department teamwork that is necessary to support enrollment management. Beginning with the

Figure 3*Graphical Representation of Chapter Two*

20th century, community colleges started to explore strategic enrollment management concepts to begin addressing enrollment fluctuations. Enrollment management originally was initiated as a concept at four-year college and universities (Bontrager & Pollock, 2009). Enrollment management in a community college setting addresses the financial dependence on student enrollment, increased competition from other postsecondary institutions, changing demographics of students, and increased accountability related to graduation, retention, transfer, and job placement (Dougherty, 2002; Ritze, 2006; Rosenfeld, 1999).

Enrollment Management Defined

Enrollment management has been defined using many variations. Maguire (1976) provided that “enrollment management is a process that brings together often disparate functions

having to do with recruiting, funding, tracking, retaining and replacing students as they move toward, within and away from the University” (p.16). Hossler and Bean (1990) defined enrollment management as a systematic set of activities to exert more influence over student enrollments and to organize those activities. Dolence (1993) described enrollment management as the theory and science of sustaining the institutional size along with recruiting new students. “Optimally, an institution's enrollment is comprehensively developed and is based on a strategic, integrative plan that includes the identification, attraction, selection, encouragement, registration, retention, and graduation of targeted student segments” (Huddleston, 2000, p. 65). Jones et al. (2008) provided the functional areas involved in enrollment management, “recruiting, admissions, financial aid, student records, advising, retention, student outcomes, graduation, and placement” (p. 168). Kerlin (2008) provided a definition for community college as, enrollment management is a comprehensive and coordinated process that enables a college to identify enrollment goals that are allied with its multiple missions, its strategic plan, its environment, and its resources, and to reach those goals through effective integration of administrative processes, student services, curriculum planning and market analysis. (p. 11)

History of Enrollment Management

In the United States, enrollment management began as a concept for higher education institutions to address the expected enrollment crisis after the diminishing Baby Boom population in the 1970s (Bontrager, 2004). Maguire (1976) created and defined the term of enrollment management as a way to attract and retain students. Kreutner and Godfrey (1981) published an article in the 1981 *College Board Review* regarding managing enrollments using a matrix approach at California State University. At Bradley University, Tom Huddleston created a

functional enrollment management department which included market research and marketing (Henderson, 2001). Two other institutions, Northwestern University and Carnegie-Mellon University, are known for contributions to enrollment management practices (Henderson, 2001; Kraft, 2007).

Additional books, professional meetings, and monographs began to appear regarding enrollment management due to Maguire's coining of the term (Hossler, 2015). Kemerer et al. (2015) published *Strategies for Effective Enrollment Management* to further define the concept of enrollment management and need for campus-wide involvement. Hossler authored or co-authored three books *Enrollment Management: An Integrated Approach* (1984), *Creating Effective Enrollment Management Systems* (1986), and *Managing College Enrollments* (1986). In 1991, the first annual national Strategic Enrollment Management Conference was held by the American Association of College Registrars and Admissions Officer (AACRAO) (Hossler, 2015).

Evolution of Enrollment Management

The evolution of enrollment management began with the focus on managing applicants that enrolled in the institution. Bontrager (2004) wrote:

Enrollment management as we know it today was born in the anticipation and impact of a demographic downturn. From the 1950s through the 1970s, colleges and universities enjoyed a steady stream of students fueled by a succession of societal and demographic changes. From the G.I. Bill in the 1950s, to the Civil Rights movement in the 1960s, to the last vestiges of the baby boom generation in the 1970s, higher education saw an expansion of interest, access, and sheer numbers that provided a steady stream of students. (p. 11)

Kerlin (2008) defined the factors that lead community college officials to employ enrollment management as “unusual enrollment trends, funding limitations, revised institutional strategic plans, a competitive marketplace, shifting demographics, economic trends, multiple missions” (p. 11). Community college enrollment has shifted throughout time. In the 20th century, enrollment increased during the great recession of 2007 to 2009. Since that time community colleges have been experiencing declining enrollment (Schmidt, 2018).

Funding Implications of Enrollment Management

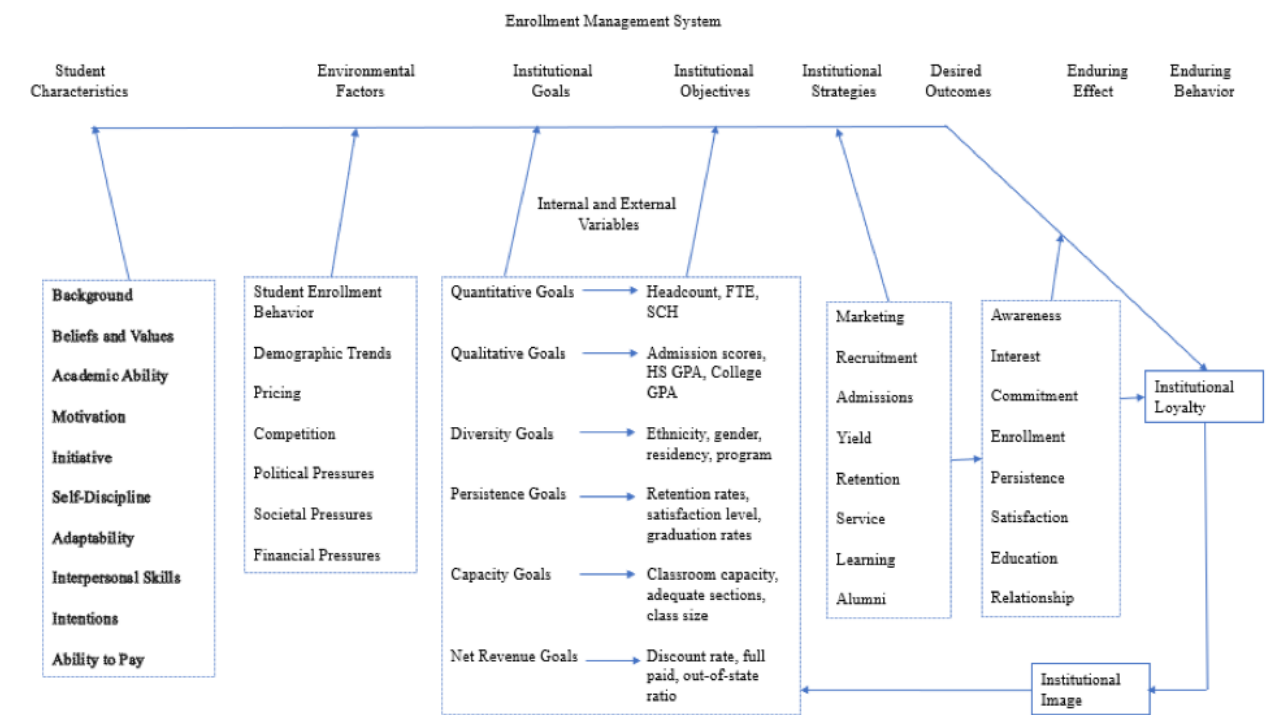
Traditionally, community colleges were funded based on enrollment and the concentration was on new students. Performance funding and accountability has changed funding models of many community colleges. The focus of administration has changed to student success, retention, and attracting new students (Harrell, 2015). Funding for operating community colleges comes from state appropriations, local revenue, and tuition and fees collected from students. The Virginia Community College System funds the 23 community colleges in the system with formulas using a combination of 20% performance-based funding and 80% division of state allocation (VCCS, n.d.).

Department Functions

The *Enrollment Management System* provided a system thinking archetype where higher education institutions can view interrelationships and consider processes across departments (Black, 2008). Figure 4 demonstrates the interrelationships across areas. Cross college involvement in Enrollment Management is supported through the offices of academic affairs, admissions and records, business office, financial aid, information technology, institutional research, marketing, the president, recruitment, and student services (Cesarini, 2011).

Figure 4

Enrollment Management System in Higher Education (Black, 2008)



The chief academic officer's and academic affairs' role in enrollment management is through academic program planning and staffing (Noel-Levitz, 2009). The business office supports enrollment management by collecting tuition and fees from students as well as managing finances and budgeting within the college (Hossler et al., 2015). With completion included in many college and universities funding models, the business or finance office has a greater role as the operational funding of the college or university depends on enrollment and retention to completion. Students rely on financial aid from federal, state, local, institutional, and private sources to pay for tuition, fees, and books at community colleges. The aid is managed by

the financial aid office which impacts tuition revenue, the demographics of the student body, class sizes, and retention (Gross, 2015).

Kilgore (2013) associated technology with enrollment management through data being supported by the information technology department. The information technology department provides the infrastructure and technology to support the secure collection of data. The institutional research department's role in enrollment management is to supply and disaggregate the data into understandable terms. Accurate and trustworthy data are particularly important in enrollment management decision-making for administrators at colleges or universities (Huddleston, 2000) as data-informed processes can help to implement and identify initiatives, procedures, policies, and programs for determining the right-size of the college (Harrell, 2015).

Marketing involves communicating out what programs are offered, when the courses are available, affordability and worth of degree obtainment, and reasons the student should select the college or university. Enrollment marketing should include "brand marketing, one-to-one relationship marketing, social media marketing, and word of-mouth marketing, institutional visibility, recognition, brand identity, and competitive market position play an increasingly prevalent role in enrollment success" (Hossler et al., 2015, p. 37). The president's role in enrollment management is to provide the amount of focus desired by the institution to support the processes (Mager, 2012).

Recruitment is where the one-on-one discussions and information about enrollment with potential new students occurs. One objective of most recruiters is to sell them on the college or university (Hossler et al., 2015). Admissions at community college often involves the completion of the application to the college and obtaining needed records from the students. Most community colleges have an open access admissions policy which allows any student completing

all required paperwork entrance into the college. Student services is an area that incorporates counseling through academic advising or career services, orientation, and retention. Students need support from initial contact to graduation (Hossler, 1984).

Crisis Management in Higher Education

Crisis management is a key component of an institution's planning process. Institutions must be prepared with a plan of action when a crisis or catastrophe hits. These crises are typically in the form of man-made or natural disasters and can occur at an unfortunate frequency (L'Orange, 2010). Many colleges and universities are faced with reduced budgets and personnel, which has direct implications on crisis management. Additionally, violence or crises that draw media attention impact prospective students' decisions to attend (Kelsay, 2007). Sharing information through social media and the internet was elevated during the crisis response to the terror attacks of September 11, 2001 (Asselin, 2012).

On university campuses across the nation there have been incidents that led to investigations by the Department of Education, resulting in significant fines and publicity related to *Clery Act* (20 U.S.C. § 1092(f)) violations. Systemic failures were found at Pennsylvania State University (Britt & Timmerman, 2013) and Michigan State University (Sulfaro & Gill, 2019), which led to changes in leadership, public outcry, and multi-million-dollar fines (Murray & Kishur, 2008). After these incidents, colleges and universities have had to engage in marketing strategies to regain the public trust.

Definition of Crisis

Crisis has many definitions. "It is not possible to give a precise definition of a crisis because it is not possible to predict with certainty how a crisis will occur, when and why" (Mitroff, 2005, p. 63). In higher education, Zdziarski et al. (2007) explained crisis as "an event,

often sudden or unexpected, that disrupts the normal operations of the institution or its educational mission and threatens the well-being of personnel, property, financial resources, and/or reputation of the institution” (p. 16).

Influential Crisis Events

In the period from 1966 to 2010, there were 42 shootings with fatalities at U.S. schools and colleges (L’Orange, 2010). Mitroff (2004) noted that the time between the crises has decreased, while the scope and size of a crisis has increased. During the period from 2001 to 2016, there were 190 shootings at 142 colleges, with 437 wounded and 167 killed (Rock, 2019). Notable crises started with student murders from sniper shootings at University of Texas in 1966, student murders at the University of Florida in 1992, the hate crime murder of Matthew Shepard by fellow University of Wyoming students in 1998, and the student deaths from a bonfire log collapse at Texas A&M bonfire in 1999 (Akers, 2007). Mass shootings with numerous lives lost at Virginia Tech in 2007 (Catullo, 2008) and Northern Illinois University in 2008 (Gray & DeKalb, 2008). Additional shootings have occurred at higher education institutions including a faculty shooting at the University of Alabama in 2012 (Associated Press, 2012), and three Muslim students killed at University of North Carolina-Chapel Hill in 2015 (Al-Jazeera, 2015). Additionally, accidents have resulted in student loss with incidences such as the Southern Airways plane crash in 1970 that killed 37 members of the Marshall University football team (Akers, 2007) and the collapse of a bridge next to the University of Minnesota during fall orientation in 2007 (Louwagie, 2012).

Natural disasters have caused disruptions to education at higher education institutions. The major natural disasters include hurricanes, earthquakes, floods, tornadoes, and severe weather. With the significant disruptions to campus operations, some colleges offered courses

through alternative delivery methods to keep students enrolled. Efforts were made by colleges and universities to assist students affected by natural disasters to keep them enrolled and to recruit students for the following years. Devastation has occurred in higher education institutions from Hurricanes Katrina and Rita in 2005 (Beggan, 2010; Gardner et al., 2007; McCullar, 2011; Nelson, 2006), flooding at the University of Iowa in 2008 (Hounsell, 2014), Hurricanes Harvey and Irma in 2017, Hurricane Florence in 2018, and Hurricane Dorian in 2019. Hurricane Floyd in 1999 affected Camp Community College in Franklin where the town of Franklin experienced over 12 feet of water (Reese, 2001). An earthquake disrupted instruction at Germanna Community College in 2011 (Lukasik, 2021).

Sexual incidents have increased at higher education institutions including the Duke lacrosse rape incident in 2006 (Wolverton, 2006), the child abuse scandal at Penn State University in 2011 (Ganim, 2011), and the rape of an unconscious student at Stanford University (Fantz, 2016). Additional incidents at higher education institutions involve the student suicide at Rutgers University in 2008 resulting from online bullying (Foderaro, 2010), University of California-Davis student protestors sprayed with pepper spray by university police in 2011 (Kinkade, 2013), a rope found around the neck of a statue of the first Black student to attend the University of Mississippi in 2015 (Newswire, 2015), and the viral video of an Oklahoma University fraternity member singing a racially offensive song in 2015 (Svrluga, 2015).

Multiple high-profile police officer involved shootings across the country led to civil unrest and disruption of operations on college and university campuses (Dancy et al., 2018). Higher education institutions can no longer ignore events that have affected students of color (Carter, 2007; Campbell & Valera, 2020; Green, 2016). In May 2020, the death of George Floyd led to widespread protests across the nation, with many college and university leaders joining the

call for increased equity and social justice (The Economist, 2020). Campbell and Valera (2020) called for institutions to invest in “diversity and inclusion practices that build capacity for equity and fairness” (p. 664).

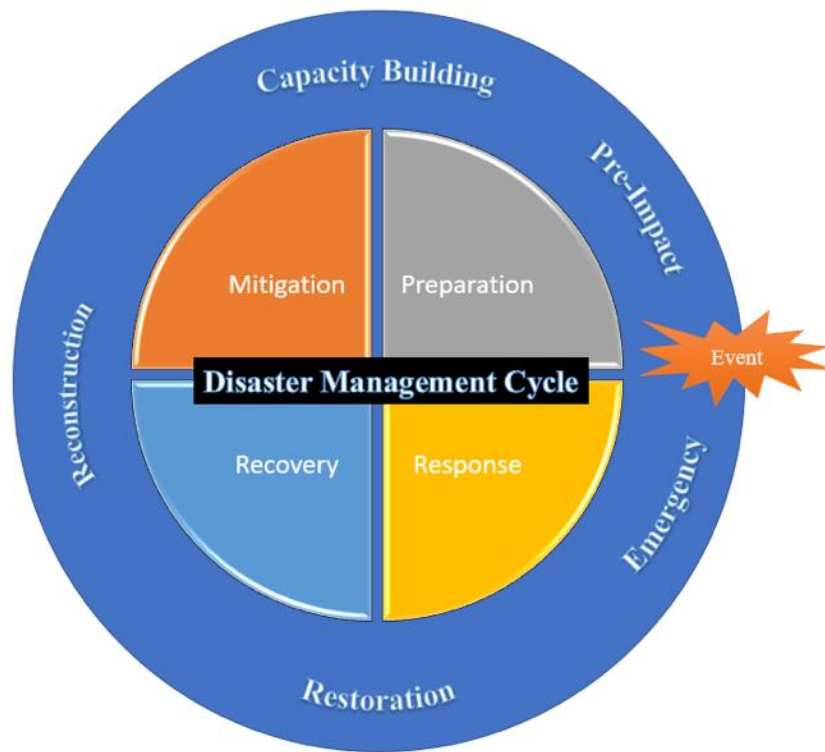
Stages and Cycle

In a crisis, there are three distinct phases noted as pre-crisis (before), crisis (during), and post-crisis (after) (Agnes, 2018; Bernstein, 2013; Coombs, 2007; Moerschell & Novak, 2020). Most universities and colleges have a written plan labeled as a crisis management plan in place to safeguard people from harm and a continuity plan to restore business operations back to a pre-crisis state (Moerschell & Novak, 2020). In higher education institutions, the communication, location of the communication, and the timing of communications is a critical component of the plan (Moerschell & Novak, 2020).

Overall management of a crisis requires the implementation of a disaster management plan (see Figure 5). In the disaster management plan, there are four phases, preparation, response, recovery, and mitigation (Alexander, 2002). Preparation includes actions to reduce the impact of the disaster such as evacuation or implementation of additional security measures. Response refers to any emergency actions during or immediately after the disaster. Day-to-day, an event or situation continually causes an organization to remain in a response phase. The recovery phase includes repairing damages and restoring services after the disaster. The mitigation phase includes preparing for the next future disaster after the conclusion of the current one.

Figure 5

Disaster Management Cycle (Alexander, 2002; Collins et al., 2016)



Coronavirus Pandemic

Unlike most disasters, the coronavirus pandemic falls outside of the normal disaster management planning characteristics. Furthermore, there has been limited research published on pandemics (Meyer & Wilson, 2011). The onset of the COVID-19 pandemic in late 2019 created significant challenges for colleges and universities worldwide (Illanes et al., 2020; Kirlin, 2020; Kumar, 2020; Tesar, 2020). The outbreak began in Wuhan, China and was declared a pandemic on March 11, 2020, by the World Health Organization (WHO). In the United States, the University of Washington was the first major university to cancel in-person exams and classes on

March 6, 2020. Stay-at-home orders were issued by many states in the U.S. to help slow the spread of COVID-19.

COVID-19 is a disruption that “significantly altered nearly every aspect of college life” (Smalley, 2020, para. 1). Due the length of time that COVID-19 affected colleges and universities, administrators used crisis management on a daily basis and evaluated the impact of COVID-19 on a semester-by-semester basis. Lango (2021) conducted a study regarding crisis management in phases. The long-term impacts of COVID-19 is expected to be observed and studied over next several years.

Rural Community Colleges

Community colleges have a comprehensive mission that includes (a) a comprehensive curriculum; (b) open-access admissions; (c) a student focused learning environment; (d) serving the economic development of the area; and (e) offering programming to fit the needs of the community (Williams et al., 2007). In many mission statements, one of the primary goals of a community college is to provide a comprehensive curriculum that offers the appropriate mix of transfer and technical courses to provide students the opportunity to attain meaningful degrees.

Students at community colleges are dependent on financial aid to fund their education (Eichelberger et al., 2017). Large segments of underserved student populations are provided postsecondary education by community colleges (Hicks & Jones, 2011; Williams et al., 2007). The National Center for Education Statistics reported that in 2015-16, 74.7% of first-time, full-time students received financial aid at a 2-year public college. Hardy and Katsinas (2007) established that a rural community college serves 35% of community college students.

Challenges for Administrators at Rural Community Colleges

Administration at rural community colleges face unique challenges. Enrollment at all community colleges has been declining, and the National Student Clearinghouse (2021) determined that enrollment has declined 14.8 percent since 2019. With the Virginia Community College System, there has been a four percent loss in enrollment for all 23 colleges (VCCS, 2022).

Generally, the overall challenges involve politics, finances, geographic location, and economics (Pennington et al., 2006; Williams et al., 2007). An additional prevailing issue rural community colleges have experienced is declining populations and reduced state funding (Hicks & Jones, 2011). In a qualitative study conducted by Hicks and Jones (2011), three college presidents summarized specific issues as “effective utilization of resources, decreased state funding and depressed tax bases, slim margin for error, meeting the needs of diverse student populations, and the recruitment and retention of quality employees” (p. 31). A specific review of the impact of the mission of the college, human resources, financial concerns, political impacts, and technological concerns follows.

Mission. Ayers (2017) asserted that the community college mission statement should function as a public relations document, as a guide for strategic planning and budgeting, and offer a constructive sense. Community colleges have a comprehensive mission including a comprehensive curriculum; open access admissions; learning environment focused on students; commitment to serve the economic development of the area; and offering programming to fit the needs of the community (Williams et al., 2007). One struggle of the mission is providing a comprehensive curriculum to a small student population in a vast geographic region which prevents the use of economies of scale (Hicks & Jones, 2011; Pennington et al., 2006; Williams

et al., 2007). A comprehensive curriculum works toward finding the appropriate mix of transfer and technical courses to provide students the opportunity to attain meaningful degrees. Also, providing community education supports the mission by offering personal interest, skill level, and youth or senior-citizen programming (Miller & Deggs, 2012).

Rural community colleges have a lack of complacency and continue to focus on grabbing the next opportunity (Hicks & Jones, 2011). Rural community colleges lead community growth and change and influence community expectations (Miller & Deggs, 2012). “The community college represents an ideal catalyst for addressing many problems of rural life whose solutions may lie in education and development of people” (Vineyard, 1979, p. 34). One key advantage of a rural community college is the flexibility and the ability to be responsive to local organizations (Hicks & Jones, 2011).

Rural community colleges are expected to play a more significant role in the communities’ economic development than urban community colleges (Pennington et al., 2006). The support integrates the culture and environment of the rural community college to the community (Hicks & Jones, 2011). Therefore, community college missions have evolved to cover all areas of economic development. Leaders are working “collaboratively with community-based organizations to address many of the economic challenges facing rural communities and to make these areas more economically competitive” (Pennington et al., 2006, p. 652). Expectations of the rural community college continue to evolve and grow.

Rural community college leaders “must consider activities far beyond traditional classes” and “embracing the college’s role in developing the identity of the individual” (Miller & Deggs, 2012, p. 338). Characteristics of successful small rural-serving community colleges are: “(a) a climate of transparency, (b) effective and succinct communication, (c) fulfilling the mission of

serving students, (d) lack of complacency coupled with a sense of urgency, and (e) the ability and willingness to change” (Hicks & Jones, 2011, p. 44). The support of the community by the college is, however, an ever-lasting and vital part of continued success for sustaining college operations and student completion.

Human Capital. Challenges for leaders at community colleges are more adverse than at other higher education institutions. This challenge is often visible in rural community leaders relative to appropriate leadership skills (Williams et al., 2007). Lack of human resources to accomplish the mission of the college, maintain daily operations, and to participate in initiatives is a constant struggle for rural community college managers. The mission of the rural community college is multifaceted requiring equipped instructional and administrative leadership (Williams et al., 2007). Often, the administrative leadership team must make decisions quickly. The margin for error is slim, and mistakes could be detrimental to the college (Hicks & Jones, 2011). Data-driven decision-making and strategic planning are vital to the daily activities of the colleges (Hicks & Jones, 2011). The administrative leadership team needs the correct data and awareness of policy to make immediate decisions since an incorrect decision could be costly.

There are fewer employees at rural community colleges, but they are expected to do more with less, which causes strain when trying to meet the institution’s objectives (Hicks & Jones, 2011). Due to the smaller communities, always, college employees represent the institution (Hicks & Jones, 2011). Another area of concern is the retention and recruitment of faculty members due to geographic isolation (Vineyard, 1979; Williams et al., 2007). In general, it is difficult to find qualified personnel to work at a rural community college (Pennington et al., 2006). The location of the college and surrounding communities tend to be a significant deciding factor for new employees.

Instructors at rural community colleges must understand how to teach effectively to diverse students. Diversity includes age differences, prior educational experiences, and professional backgrounds of rural community college students (Williams et al., 2007). Faculty are required to become more innovative which requires the use of additional technology. The use of technology in the classroom, however, can be challenging for some instructors, and some rural community colleges cannot adequately train the instructors on the use of the technology (Williams et al., 2007).

Financial Concerns. Funding is a significant challenge for rural community colleges (Hicks & Jones, 2011). Fixed costs to operate institutions are comparable at both the rural and urban community colleges, but rural community colleges have fewer resources (Eddy, 2013). Urban community colleges are often financially supported by a broader tax base. Rural community colleges “have a smaller, less diversified tax base to financially support the college and its mission” (Williams et al., 2007, p. 26). Not all states allow community colleges to receive funding from a tax base. Of those receiving tax-based funding, rural community colleges still lack sufficient resources (Hicks & Jones, 2011). In some areas, the largest employer is the rural community college. Thus, the residents of the community rely on the college to earn a living. The community college thereby impacts the economic viability of the region (Miller & Deggs, 2012).

Community college funding varies by state. In most states, partial funding links to the number of students or the equivalency of full-time enrollments. Full-time student enrollment is the correlation between enrollment and state funding (Hicks & Jones, 2011). If funded based on the student count process, rural community colleges receive lower funding than larger colleges which does not leave “them equal footing in funding matters” (Pennington et al., 2006, p. 650).

Some states have implemented performance-based funding. Performance-based funding ties appropriations to credentialing students (Li & Kennedy, 2018). “Performance-based funding models place a portion of the yearly allocations (resources) at risk by awarding these only if performance goals are met” (Thornton & Friedel, 2016). Performance-based funding affects rural community college operations through decision-making, public perceptions, and programs offered (Thornton & Friedel, 2016).

Another challenge is the lack of or inability to hire a trained and experienced grant writer. Without a grant writer to provide consistent voice and knowledge of federal, state, and founder guidelines, rural community colleges lose the ability to compete and attain grants to help the college offer social services and cultural activities (Pennington et al., 2006).

Political Impacts. Leaders at rural community colleges struggle with attaining the needed political clout (Williams et al., 2007). The lack of exposure and visibility in the media impacts the college’s ability to gain additional resources from the legislatures (Vineyard, 1979). Policymakers overlook the location of colleges as dimensions of opportunity which is a deciding factor for a student’s decision on attending college (Hillman, 2016).

Virginia Rural Horseshoe

The Virginia Rural Horseshoe (see Figure 1) shows an arc through Virginia, illustrating that 75% of the geography of the commonwealth is rural (Finnegan, 2019). Fourteen of the community colleges within the VCCS are branded as the Rural Virginia Horseshoe (RVH). Finnegan (2019) asserted “19% of adults fail to graduate from high school; only 27% of adults have a college degree; as a region, it would rank 50th in the nation for educational attainment” (p. 63).

Decision-Making at Community Colleges

Community college presidents often follow the mantra of “do the right things, for the right reasons” (Smith & Fox, 2019, p. 84). Decision-making by college administrators is a normal routine, but with additional factors such as a crisis or a prolonged event adds more complexity. “Leaders should evaluate situations and alternative choices from several ethical viewpoints, weighting costs and benefits of alternatives before making a decision and taking action” (Smith & Fox, 2019, p. 76). Comfort (2007) provided four components of decision-making (1) cognition, (2) communication, (3) coordination, and (4) control. A shared governance model is the decision-making process used by community colleges (Fernandez & Shaw, 2020). During COVID-19, quick decisions needed to be made by administrators, forcing some of the decision-making process into a more authoritative approach instead of standard shared governance model (Freeman et al., 2021; Garcia, 2006; Gigliotti, 2020; Higginbotham & Dahlberg, 2021; Kezar, 2020; Lango, 2021).

Disruptions to Enrollment Management Practices

Crises lead to disruptions in enrollment management practices. Enrollment management practices in the post-Katrina environment included targeted marketing strategies, offering of online courses to keep the students enrolled during the time, and retaining students through technology (Jones et al., 2008). In the past, community college enrollments have increased with economic downturns, such as the downturn with the recession in 2008 (Smith, 2016). The economic downturn during COVID-19 did not have the same impact to community college enrollment as the 2008 recession (NSC, 2021).

Floyd (2021) stated “these realities remind us of the fragile and inextricably interwoven mesh existing between the microcosm and macrocosm” (p. 2). This concept integrates with

systems theory where everyone is vulnerable. Along with institutions dealing with COVID-19, administrators at institutions are dealing with the social and racial unrest, political divisiveness, and all economies are under stress.

COVID-19

The National Student Clearinghouse Research Center announced the Fall 2020 preliminary data on September 24, 2020. Overall undergraduate student enrollment declined 2.5% with community colleges experiencing the greatest loss of 8% (Sedmak, 2020). The initial review of the data added concerns for the vulnerability of community college students during disruptions such as recessions, disasters, or pandemics. The data indicated that enrollment for the age group of 18-20 decreased by 9.5 % and the group of 21–24-year-olds decreased by 8.7% compared to Fall 2019 (Sedmak, 2020). In the Household pulse survey (U.S. Census Bureau, 2021), students planning to attend community colleges changed their plans due to COVID-19 by 41 percent.

Remote Learning. Due to campus closures, instructors were asked to shift their face-to-face instruction to remote learning. Adedoyin and Soykan (2020) conducted a study on the online shift to emergency remote learning, which occurred within days or a week of the onset of the pandemic (Bird et al., 2020). Online learning was not a new concept for studies, however, there was a shift in attitude towards online learning due to the forced nature of its implementation due to COVID-19 (Adedoyin & Soykan, 2020; Oliveira et al., 2021; Ribeiro, 2020).

Support Students and Managing Enrollment. Colleges were forced to change practices from face-to-face services to remote services. Staff at colleges reverted to remote operations such as email, phone calls, text messages, Zoom meetings, and social media to reach students for

enrollment and to build relationships (Berezhna & Prokopenko, 2020; Garcia, 2021; O'Donoghue et al., 2020; Roache & Muschette, 2020). Existing studies address the gaps in online services (Barr, 2014; Beaudoin, 2013; Bouchey et al., 2021; Brown, 2017; Forrester & Parkinson, 2006; Hicks, 2016; Jones & O'Shea, 2004; Luedtke, 1999; Mitchell, 2009; Ozoglu, 2009). Moreover, online onboarding processes such as completing an application for admissions or financial aid can be confusing or a barrier for students (Ardoin, 2013; Ardoin, 2018; Johnston, 2019; Means et al., 2016; Nelson, 2016; Supiano, 2014).

Academic challenges for students. In many instances, students were forced to shift from in-person courses to online courses in a matter of days (Bird et al., 2020). Aucejo et al. (2020) surveyed students in April of 2020 to find that 13% of students were delaying graduation, 11% withdrew from classes, and 50% of students reported a decrease in study hours. The shift to online education within the Virginia Community College System has resulted in a course completion decrease of 6.7 percentage points (Bird et al., 2020).

Non-academic challenges for students. Students experienced non-academic challenges related to COVID-19 such as job loss or family members losing employment. During the initial onset of COVID-19, the unemployment rate hit 14.7, one in four people were unemployed (U.S. Bureau of Labor Statistics, 2020). Businesses, colleges, and universities have been affected (Illanes et al., 2020). Additional challenges for students included lack of childcare (The Hope Center, 2021), increased responsibilities at home with children (Jarboe, 2022; Korkmaz et al., 2022), siblings in K-12 moving to online education, and broadband or internet access issues (Bird et al., 2020). Access to adequate technology impacted students' abilities to complete coursework online (Flaherty, 2020; Lederman, 2020). There is a gap in access to broadband services between urban (98.3%) and rural areas (77.7%) of approximately 20% (FCC, 2020)

which exacerbated the digital divide further (Bacher-Hicks et al., 2021; Beard et al., 2017; Jones & Reinecke, 2017). Some colleges and universities were able to support students by providing free laptops or loaner laptops (Decker, 2021).

Mental health, inequity, and food insecurity are on-going issues that have been worsened by the COVID-19 pandemic. With the transition to remote learning, feelings of isolation and lack of engagement resurfaced as a concern (Hart et al., 2021; Huguet et al., 2001; Moore, 1989; Nissenbaum & Walker, 1998; Pfefferbaum & North, 2020). More support is needed due to hardships especially for students with a lower socioeconomic status and students of color (Anderson, 2020; Aziz, 2015; Belfield & Bailey, 2011).

Faculty and administrative challenges. Just like students, faculty were forced to shift from in-person instruction to online instruction within days (Bird et al., 2020) and may have lacked adequate technological resources to complete their job duties (D’Amico et al., 2022; Hu, 2020; Zhang et al., 2020). During the summer of 2020, community colleges grappled with challenges related to enrollment, advisement, and student retention (Wicks, 2020). The shift to online teaching and remote work (DeMartino & Weiser, 2021) brought additional stress (Adedoyin & Soykan, 2020; Tugend, 2020) and an increase in faculty workloads (Johnson et al., 2020; Krukowski et al., 2020; Sparkman-Key et al., 2021).

COVID-19 in the United States brought about “the inherent shock of moving to the online space, the heightened sense of unequal and undemocratic practices, the unfairness of the online system and the way the white, the male, the middle class are again privileged in the space of Covid-19” (Tesar, 2020, p. 557). No longer was it time to debate the movement to online learning and teaching as the future; COVID-19 forced it into reality. The study by Blankenberger

and Williams (2020) found that budgets and expenditures of colleges were harmed by the disruptions caused by COVID-19.

Chapter Summary

An overview of enrollment and crisis management is found in Chapter Two. Individually, both qualitative and quantitative research exists for each topic. The literature review determined that there is a gap in the literature regarding the convergence of enrollment management and crisis management. Limited studies exist regarding enrollment management practices during a crisis.

CHAPTER III

METHODOLOGY

This chapter will explain and provide a justification for the methodological decision made to conduct this study. In this chapter, the study's purpose and the research questions are provided. I explain the research design and the reason for using a sequential explanatory research design. I provide a description of the setting and the reasons for the selection of the setting along with a description of the participants. An explanation for the instrumentation, data collection procedures, and data analysis is also provided. Lastly, trustworthiness, limitations, and a conclusion complete this chapter.

The purpose of this sequential explanatory study was to examine the perceptions of academic administrators at rural community colleges regarding how a crisis impacts enrollment management practices. Participants discussed their lived experiences and perceptions of changes occurring to enrollment management practices and the subsequent financial challenges resulting from the COVID-19 pandemic within rural Virginia community colleges. Additionally, I examined the procedures used to make decisions.

Research Questions

The following research questions that guided this study:

1. How do academic administrators at rural community colleges describe the changes occurring to enrollment management practices as a result of COVID-19 and the financial impact of the pandemic?
2. How are rural community college academic administrators at rural community colleges making enrollment management process decisions as a result of COVID-19?

- a. How are the financial implications of COVID-19 affecting rural community college academic administrators' decision-making processes?

Research Design

This study presents a mixed methods design, utilizing a two-phase, sequential, explanatory research method with a case study approach through the lens of resource dependency and systems theory. According to Creswell and Creswell (2018), a mixed methods design is one in which I collected, analyzed, and used both quantitative and qualitative data in one study. The explanatory sequential design is “a two-phase data collection project in which the researcher collects quantitative data in the first phase, analyzes the results, and then uses the results to plan (or build on to) the second, qualitative phase” (Creswell & Creswell, 2018, p. 278). In this study, a mixed methods design is expected to yield insight beyond what could be captured in either a quantitative or qualitative study alone (Creswell & Clark, 2014; Creswell & Creswell, 2018).

In Phase One of the study, quantitative methods were used. “Quantitative research is an approach for testing objective theories by examining the relationship among variables” (Creswell & Creswell, 2018, p. 26). Quantitative research helps to understand responses to a few variables gathered from numerous people (Creswell & Clark, 2014). An online survey was used to collect quantitative data. Descriptive statistics were used in this mixed-methods study to detail the college administrators' knowledge and perceptions of enrollment management changes and subsequent financial challenges due to COVID-19.

In Phase Two of the study, qualitative data were collected to build on Phase One. A qualitative study is designed to learn about a few people by acquiring detailed enriched information to focus on the participants' experiences (Creswell, 2012). In order to better

understand the administrators' perceptions, the rural academic administrators provided insight into the effectiveness of transitioning enrollment management practices and the challenges that they endured during COVID-19. Qualitative research was used to tell the story regarding the phenomenon. Thus, obtaining individual accounts from the administrators provided valuable insight into their unique experiences. According to Merriam (2009), "[q]ualitative researchers are interested in understanding how people interpret their experiences, how they construct their worlds, and what meaning they attribute to their experiences" (p. 5). The qualitative study provided a more in-depth perspective of real-life issues (Creswell, 2012). The mixed methods study phases provided integrated conclusions to help explain qualitative results and extend quantitative results (Creswell & Clark, 2014).

Ontology and Epistemology

Ontology is the nature of reality (Creswell & Creswell, 2018). I used two ontological stances within this study. As recommended by Creswell and Clark (2014), during Phase One of this study a postpositivist approach was used in the selection of instruments, measuring variables, and assessment of statistical results. In Phase Two of the study, social constructivism was used as it is a belief that a *universal truth* does not exist (Hays & Singh, 2012).

Epistemology probes into the nature of truth and knowledge. An epistemological standpoint is *how do we know what we know?* (Patton, 2002). The participants and I co-constructed the knowledge. I sought "to construct knowledge through social interactions as well as to understand how individuals construct knowledge" (Hays & Singh, 2012, p. 41).

Research Tradition

The mixed methods research tradition is not as well-known as qualitative and quantitative research traditions. "Mixed methods research has evolved to the point where it is a separate

methodological orientation with its own worldview, vocabulary, and techniques” (Tashakkori & Teddlie, 2003, p. x). Mixed methods evolved in the late 1980s because some research problems require more than numbers or words (Creswell & Clark, 2014). Creswell (2013) noted:

In practice, the individual using this worldview will use multiple methods of data collection to best answer the research question[s], will employ multiple sources of data collection, will focus on the practical implications of the research, and will emphasize the importance of conducting research that best addresses the research program. (pp. 28-29)

I used the mixed methods tradition to “search out the opportunity for a greater assortment of divergent views” (Subedi, 2016, p. 571).

The study employed a two-phase, sequential explanatory research approach to address the study through a mixed methods design. The explanatory sequential design employed a two-phase data collection project. The design was beneficial as it allowed me to use the first quantitative data collection to build on the second qualitative data (Creswell & Creswell, 2018). A mixed methods study allowed for both broad data collection from officials at 14 rural community colleges as well as in-depth and rich data from interviews of enrollment management officials at three of the colleges.

Role of the Researcher, Positionality, and Potential Biases

I am considered an instrument in the qualitative phase of this study (Patton, 2002). I am a woman who has worked in higher education for over 20 years at a single institution. I currently hold a mid-level leadership position at a rural community college in the southeastern United States. I am familiar with other rural community colleges that will be selected for this study, and I am familiar with some of the participants selected for inclusion in the study. Although my

experiences may impact the study's data analysis, it may provide additional insight to interpret and delineate the significance of the data (Corbin & Strauss, 2008).

Research Setting and Context

The study took place in Virginia and focused on the 14 rural community colleges in the state that are part of the Virginia Community College System (VCCS). The VCCS includes 23 community colleges within the Commonwealth of Virginia governed by a State Board (VCCS, 2020). The State Board consists of 15 Governor-appointed members. Presidents of each college report to the Chancellor. Each community college has a designated administration and is responsible for its own accreditation (VCCS, 2020).

In Phase One, the study consisted of participants from the 14 community colleges in Virginia that make up the *Rural Horseshoe* (The Virginia Foundation, 2020). "Draw a line from Virginia's Eastern Shore, westward across Southside to Southwest Virginia, and then up the Shenandoah Valley, and you would trace an arc that represents 75% of the Commonwealth's geography" (The Virginia Foundation, 2020, para. 2). Figure 1 contains a map and list of the colleges in the Virginia Rural Horseshoe.

In Phase Two of the study, three rural community colleges were selected based on the results from Phase One. Purposeful sampling was used to intentionally select the three rural community colleges. Colleges were selected based on enrollment category sizes of fall full-time enrollments and location within the state.

Participants

The focus of this study was rural community college mid to senior-level academic administrators involved in enrollment management practices. In Phase One, I collected data via a Likert-type scale survey. The survey is attached in Appendix B. Participants included those

currently employed prior to the COVID-19 pandemic and those who were serving in a position that directly impacts enrollment management. The survey was sent to all mid to senior-level academic administrators who are concerned with enrollment management at 14 rural institutions to obtain a broader view of enrollment management issues and gather information regarding how rural leaders perceive the COVID-19 pandemic and the effect of the resulting financial crisis on enrollment management. All mid to senior-level academic administrators were at the level of coordinator or higher. Job responsibilities vary by size and available resources at community colleges, a summary of all job titles is included in Appendix C.

In Phase Two, interviews were sought from mid to senior-level administrators in the following positions: vice president of academic affairs, vice president or dean of student affairs, enrollment management or student services, and vice president of finance and administration. The structure of each community college is different based on available resources; participants' titles may be different. Individuals were identified through contacts at the colleges or research on their website. The college selection process incorporated convenience sampling due to the college's expected willingness to participate in the study (Hays & Singh, 2012). At each site, a minimum of three administrators were identified to participate in semi-structured interviews. To strive for homogeneity of the sample, the three selected individuals held similar positions at each of the selected sites.

Instrumentation

In Phase One of this study, a 28-item survey was emailed to all mid to senior-level academic administrators at each of the 14 rural Virginia community colleges who are involved in enrollment management practices. The COVID-19 Enrollment Management Survey (CEMS), an adapted instrument, was used based on the Strategic Enrollment Management Health Assessment

Survey developed by Dr. Jim Black (2003). Permission was received to use 12 questions and to create an adapted model. Dr. Black completed a case-study on the instrument to obtain his dissertation at University of North Carolina at Greensboro. During the study, Dr. Black (2003) beta-tested the survey by analyzing and evaluating enrollment management operations at one institution. Dr. Black (2003) found the inter-rater reliability based on the Landis and Koch scale (1977) as substantial, 0.73490 Kendall coefficient. Validity was achieved through pattern matching and rival explanations (Black, 2003). The adapted survey, which I used in this study, provided a basis for a proven survey that has been reviewed to ensure reliability and validity as described in the study. Dr. Black is the CEO and President of SEM Works, a consultant firm specializing in enrollment management.

The survey assessed administrators' knowledge and perceptions regarding the institution's enrollment management practices in the areas of enrollment management operations, marketing and communications, COVID-19 and impacts, and decision-making practices regarding enrollment management operations. The adapted survey was evaluated by a pilot college using a small group of mid to senior-level academic administrators. The survey used a five-point Likert-type scale with the following responses 5 (strongly disagree), 4 (disagree), 3 (neither agree or disagree), 2 (agree), or 1 (strongly agree). The survey is included in Appendix B.

In Phase Two of this study, I used one-on-one, in-depth interviews to understand further the perceptions of a minimum of nine mid to senior-level academic community college administrators. I used four open-ended interview questions, which can be found in Appendix A. The semi-structured interview protocol allowed for focus on discussion and opportunities to

express unique experiences. The open-ended questions allowed me the option to ask additional probing questions during the interviews.

Pilot Study

A small pilot study was conducted at one rural community college to review the survey instrument and interview protocol to determine if the wording of the items was clear and unambiguous, the instructions were easy to understand, and to determine the approximate time required to complete the survey and interview. A 28-question survey was administered to four pilot study participants via email including a description of the study. The participants in the pilot consisted of community college leaders serving in the roles of a vice president of academics and workforce, a vice president of enrollment management and student success, a vice president finance and administration, and an academic dean of instruction. Participants were given one week to respond to the study. Participants were asked to detail any items that were confusing and unclear. The survey captured the average time that the participants took to complete the survey

All four pilot participants completed the survey and two responded with feedback that warranted changes to the survey. I determined some solutions based on discussions of these items with the dissertation committee. One change was to categorize the Likert-type items with a heading and group them together. No questions were changed. The following headings were added 1) enrollment management operations, 2) marketing and communications to recruit new students and retain current students, 3) COVID-19 and impacts, and 4) decision-making practices regarding enrollment management operations. One additional recommendation was to give an optional space for respondents to provide any additional comments. The finalized survey instrument was titled COVID-19 Enrollment Management Survey (CEMS) (see Appendix D).

Document Analysis

Document analysis is a secondary method of data collection. According to Merriam (2009), documents defined as “public records, personal papers, popular culture documents, visual documents, and physical material and artifacts” (p. 162) are essential to the collection of data. I gathered additional data from the institution’s website, online news articles, and social media regarding the transition to online learning during the COVID-19 pandemic.

Documentation collected was used to validate data collected through the interview process (Yin, 2018).

Data Collection

Before beginning the data collection, approval was obtained from the Old Dominion University College of Education Human Subjects Committee. Approval from several college’s Institutional Review Boards were obtained. Data collection began upon approval. I collected data in two phases. Additionally, I used a document analysis where I obtained data as a secondary method of data collection. I reviewed and collected data from each college’s social media pages and webpages while collecting data in the two phases.

Phase One

The CEMS was deployed as a web-based survey. I contacted each administrator by e-mail to provide them with an introduction to the study and detailed the purpose of the study. The same day, the survey was sent to each of the participants through an electronic survey. The informed consent was built into the survey as the first step in the process. The survey remained open for two months. Any participant that had not completed the survey received a reminder on Day 7, Day 13, Day 40, and Day 55. At the end of the collection period, the responses were downloaded into a spreadsheet. Descriptive statistics were calculated, and a summary of results

were presented in a dashboard format (see Appendix E). The results were used to review the interview protocol used in Phase Two (see Appendix A).

Phase Two

Data were collected through semi-structured interviews at three rural community colleges. Each community college served as one case using a multiple case study design. Three mid- to senior-level academic administrators were chosen from the small and mid-size college and four mid- to senior-level academic administrators were chosen from the large enrollment-sized college. Each administrator served in the role of vice president of academic affairs, vice president or dean of student affairs, enrollment management or student services, and vice president of finance and administration. As potential participants were identified, I contacted each administrator by e-mail detailing the purpose of the study, my plans to include individual semi-structured interviews, and asked if they were willing to participate in the study. I made phone calls to reiterate similar information in the email and ensured that the proposed participants met the inclusion criteria. Interviews were scheduled in subsequent e-mails or phone calls. I emailed an overview of the interview process, protocols, and provided the informed consent form (see Appendix F). The informed consent form contained the study procedures, risks associated with the study, and participants' rights. Participants were provided with an opportunity to ask any questions. The informed consent was available for electronic signature or authorization via email.

A crucial component of qualitative research is interviewing (Creswell, 2014; Merriam, 2009; Patton, 2014). The sample interview questions were reviewed and determined to be the final interview questions (see Appendix A). Participants provided descriptions of their experiences of the phenomenon of a crisis on enrollment management practices in their own

words, which allowed me to gain a deeper understanding of the phenomenon. Individual participants provided experiences, attitudes, and beliefs through interviews (Hays & Singh, 2012). The questions for semi-structured interviews were open-ended, which allowed me to obtain as many details as the participant was willing to share. Follow-up questions were asked to obtain additional information or encourage further discussion. Interviews were conducted using Zoom, an online video conferencing platform. The interviews were conducted between June 2021 and August 2021 with an expected duration of 30 minutes. During the interviews, field notes were taken, and the audio was recorded. I maintained a reflexive journal to reflect on views and any influences on the current research. Reflexive journaling assisted with the initial analysis of data to ensure that accurate and timely data were collected (Miles & Huberman, 2014).

Data Analysis

Data analysis occurred twice in this study, at the conclusion of data collection with the quantitative instrument and the qualitative instrument. For effective data analysis, data must be prepared, organized, coded, themed, and represented visually or in writing (Creswell & Creswell, 2018). Creswell and Clark (2014) provided a four-step approach to implementing an explanatory sequential design. The data analysis portion of each step is outlined below. In both phases of the study, I reviewed and mined data to find commonalities and conflicts between the colleges and within the college. Identities of each of the 14 rural community colleges and all participants are protected by the pseudonyms which I assigned to each college.

Step One

The CEMS results were collected and I downloaded the raw data into an Excel document. The data were visually inspected. Data were loaded into software package called SPSS. The qualitative data were analyzed to determine descriptive (mean, median, and standard deviation)

and inferential statistics of the rural mid and senior-level academic college administrators' perceptions of enrollment management decision-making. Common themes were identified with the data collection process. The document analysis was conducted to include collecting, assessing, and synthesizing informational data collected from COVID-19 webpages or social media posts regarding COVID-19 by each college (Creswell & Clark, 2014). These results helped me refine the interview protocol and selection of the three rural community colleges for Phase Two.

Step Two

Results were explained as significant results, nonsignificant results, outliers, and group differences (Creswell & Clark, 2014). Results were compiled and displayed in a dashboard format by college (see Appendix E). The results helped to further refine the interview instrument. Open-ended questions were developed to determine the lived experiences and perceptions of the participants regarding enrollment management. Prior to the interviews, the dashboards, statistics, and interview protocols were shared with all interview participants.

Step Three

After the interviews were completed, the recordings were transcribed verbatim into a document. The participants were provided a chance to review their transcript for accuracy. The document was compared to field notes and the document analysis. Additional items related to tone, non-verbal cues, and speech patterns were noted in document. The qualitative method used was a multiple case study approach.

In Phase Two, I employed the analytical techniques of pattern matching and explanation building to analyze data (Yin, 2018). I used pattern matching as an iterative process to cluster ideas (Yin, 2018). A codebook was created and maintained to ensure consistency. The codebook

contained each code, direct quotes or references, examples of the data, and definitions of each code (Hays & Singh, 2012). This document was loaded into NVivo, a software package to assist with the organization of the data coding. I thematized the data by coding chunks of data, categorizing into clusters, and reviewing for interrelationships of the categories. I provided a general explanation to find important meanings through the reoccurrence of the data (Stake, 1995). I began with the horizontalization of the data by ensuring that all data were examined equally and had equal value (Merriam, 2009). The horizontalization process included reviewing the transcribed data to identify any non-overlapping, non-repetitive statements (Hays & Singh, 2012).

The theme development occurred within-case and cross-cases. The analysis included reviewing for commonalities and conflicts within each case and across all cases. I used the patterns in the data to formulate a cross-thematic analysis (Creswell & Creswell, 2018). I thematized the data by coding chunks of data, categorizing into clusters, and reviewing for interrelationships of the categories.

Step Four

In this step, the primary purpose was to interpret the connected results. Interpretations were completed for the summaries of both the quantitative and qualitative results. I integrated the two sets of connected results. This allowed for an explanation of the qualitative results and an extension of the quantitative results which resulted in integrated conclusions (Creswell & Clark, 2014). Using both instruments, I searched for the overall commonalities and conflicts. The results provided a strategy of successes and failures of enrollment management practices during COVID-19. Results are presented and discussed in Chapters four and five.

Trustworthiness

The quality of the data is vital to ensure credibility and trustworthiness. According to Hays and Singh (2012), clear strategies must be developed to establish transferability, confirmability, dependability, and credibility. This study addressed data quality through member checking, audit trail, triangulation, and thick description. Member checking involves having the participant review the transcript for accuracy and offer an opportunity for each participant to expand on the notes (Hays & Singh, 2012). I requested that the participants review the notes and asked for any updates. Audit trails “provide a collection of evidence regarding the research process” (Hays & Singh, 2012, p. 214). I kept an audit trail throughout the entire process. Also, the reflexive journal was used to ensure research was conducted in the intended manner. I used the journal to record my thoughts and impacts of the process on me. I used the journal to remove as much bias as possible from this study. I started the journal when my data collection was completed and maintained the journal until chapters four and five were completed.

Triangulation was used to check validity. Triangulation occurs when multiple forms of evidence are used to describe findings (Hays & Singh, 2012). I triangulated the data sources by surveying all rural mid to senior-level academic administrators involved in enrollment management practices at the 14 rural Virginia community colleges, conducting interviews with nine administrators, and conducting document analysis of enrollment related items from varying sources. The descriptive and statistical survey results, transcribed interviews, and the analysis of the collected documents as well as the thematic analysis were used to ensure triangulation by comparing responses to collected documentation.

Limitations

This study had limitations that are factors outside of my control (Creswell, 2012). In Phase One, I was unable to control who completed the electronic survey and made assumptions that the participants had the appropriate level of knowledge to adequately answer questions, provide truthful answers and did not exhibit *social desirability bias*. In Phase Two, qualitative research does not “generalize findings to individuals, sites, or places outside the study” (Hays & Singh, 2012, p. 278). Another potential limitation was the instrumentation used to collect the data. Measures were taken to increase the instrument's validity, but participants could interpret the questions differently than I had intended.

Summary

Chapter Three detailed the two-phased, sequential explanatory research design. This study used a quantitative method to measure enrollment management practices of rural community college mid to senior-level academic administrators and the impact of COVID-19 on operations. The study then used a qualitative method to explain if rural community college academic administrators believe that COVID-19 impacted enrollment management operations. The participants of this study are rural community college academic administrators within the 14 rural colleges of the Virginia Community College System. I selected a sample of ten administrators at three rural community colleges for in-depth interviews. This chapter provided information on the phases of the study, along with each data collection method and analyses.

CHAPTER IV

FINDINGS

The purpose of this sequential explanatory study was to examine the perceptions of academic administrators at rural community colleges regarding how a crisis impacts enrollment management practices. The crisis associated with the data collection for this study was the COVID-19 pandemic. This chapter is organized by the two phases of the sequential explanatory study that I conducted. I will present the quantitative inquiry findings, followed by the qualitative inquiry findings. The quantitative portion of the study utilized an electronic survey to gather mid to senior-level academic administrators' perceptions of how COVID-19 impacted enrollment management practices at their institution. After the data were collected and analyzed, the qualitative portion of the study began. The qualitative multiple case study involved the collection and analysis of interview data from three colleges, one from each enrollment category (small, medium, and large) based on fall semester FTE ranges. Additionally, a document analysis was conducted on each colleges' website to understand the public-facing COVID-19 protocols.

The following research questions guided this study:

1. How do academic administrators at rural community colleges describe the changes occurring to enrollment management practices as a result of COVID-19 and the financial impact of the pandemic?
2. How are rural community college academic administrators at rural community colleges making enrollment management process decisions as a result of COVID-19?
 - a. How are the financial implications of COVID-19 affecting rural community college academic administrators' decision-making processes?

Phase One

In Phase One, participants completed the COVID-19 Enrollment Management Survey (CEMS). The survey was divided into four sections beyond the demographics to gather perceptions regarding (1) enrollment management operations; (2) marketing and communications to recruit new students and retain students; (3) COVID-19 and impacts; and (4) decision-making practices regarding enrollment management operations. The Likert-type scale ranged from strongly agree (5) to strongly disagree (1), with (3) representing neutral.

Demographic Profile of Participants

Participants were solicited from mid- to senior-level administrators from the 14 community colleges within in the rural Virginia Horseshoe. As part of Phase One of this study, Questions 1-4 of the questionnaire asked mid- to senior-level administrators about personal and institutional characteristics. Table 1 displays the respondents by college. A total of 47 participants completed the survey. Approximately 17% ($n = 8$) were administrators from small community colleges, approximately 34% ($n = 16$) were from medium sized community colleges, and the remaining 50% ($n = 23$) were from large size community colleges. A majority, 60%, of the participants had been in the position for four or more years. Approximately 30% had been in the position for one to three years and 10% had been in the position for less than a year.

Table 1*Respondent Demographics by College from CEMS Responses*

#	College Pseudonym	College Size	Participants	In Position Less than 1 Year	In Position 1 to 3 Years	In Position 4+ Years
1.	Buttercup	Large	10	2	2	6
2.	Chrysanthemum	Large	4	0	3	1
3.	Daffodil	Medium	4	0	1	3
4.	Dahlia	Medium	1	0	1	3
5.	Daisy	Medium	3	2	1	0
6.	Iris	Medium	1	0	0	1
7.	Lavender	Medium	2	0	0	2
8.	Marigold	Medium	4	0	2	2
9.	Periwinkle	Medium	2	0	1	1
10.	Petunia	Medium	4	1	1	2
11.	Rose	Large	5	0	1	4
12.	Sunflower	Small	1	0	0	1
13.	Violet	Small	2	0	2	0
14.	Zinnia	Small	5	0	0	5

Enrollment Management Operations

As indicated in Table 2, items 5 through 10 were designed to capture perceptions regarding overall enrollment management operations. Respondents felt positively that enrollment management strategies were embedded in the strategic planning process ($M = 4.23$) and aligned

with the internal environment ($M = 4.16$). The largest variation ($SD = 0.996$) was the campus-wide awareness of enrollment management efforts.

Table 2

Items 5-10 Enrollment Management Operations Section CEMS Responses

	Minimum	Maximum	Mean	Std. Deviation
5. An integrated, institutional approach to enrollment management is in place (e.g., marketing, recruitment, retention, student services, financial aid)	2	5	4.02	0.897
6. Enrollment management is embedded in the strategic planning process	2	5	4.23	0.812
7. Strategies are aligned with the internal environment (e.g., mission, institutional strengths, resource constraints, technology capability, campus culture)	2	5	4.16	0.754
8. Strategies are aligned with the external environment (e.g., mission, institutional strengths, resource constraints, technology capability, campus culture)	2	5	4.02	0.841
9. The enrollment operation has positively influenced student services (e.g., improvements in student satisfaction, student complaints, turnaround time, student runaround, accuracy of information, access to information)	2	5	4.00	0.816
10. There is campus-wide awareness by faculty and staff of the college's enrollment management efforts	1	5	3.91	0.996
Mean 4.06, Std. Deviation 0.64				

Marketing And Communications to Recruit New Students and Retain Students

A large part of the enrollment management process is marketing, recruitment, and communication. Items 11 through 17 focused on marketing, communications, course offerings,

and recruitment. In Table 3, the respondents positively agreed ($M = 4.00$) that recruitment communications to students are clear. The largest variance ($SD = 1.083$) was found in branding where there is a consistent look and feel to the marketing message. A notable item of reference is the calculation ($M = 3.95$, $SD = 0.749$) regarding the response to Item 13. COVID-19 impacted course scheduling offerings to more virtual format with hands-on instruction for the required academic courses with labs.

Table 3

Items 11-17 Marketing and Communication Section CEMS Responses

	Minimum	Maximum	Mean	Std. Deviation
11. The marketing message is reflected in day-to-day behavior on campus	1	5	3.60	0.979
12. The marketing message influences institutional decision-making	1	5	3.44	1.076
13. Courses are offered at times and places that are convenient to students.	2	5	3.95	0.749
14. There is a consistent and distinctive marketing message and look.	1	5	3.83	1.083
15. Recruitment communications are frequent enough to build awareness or influence student choice	2	5	3.79	0.940
16. Recruitment communications are delivered promptly	2	5	3.95	0.785
17. Recruitment communications to students are clear	2	5	4.00	0.690
Mean 3.78, Std. Deviation 0.67				

COVID-19 and Impacts

COVID-19 first impacted the Virginia Community College System in March of 2020. VCCS Chancellor Glenn DuBois cancelled all commencement ceremonies (Tyree, 2020). On March 30, 2020, Governor Ralph Northam issued a statewide Stay-at-Home order to mitigate the spread of COVID-19 (VDEM, 2020). Administrators at the system office made certain overarching decisions but administration at the individual colleges had ambiguity to make operational decisions regarding course delivery and campus operations. As indicated in Table 4, the CEMS collected respondent perceptions regarding the impacts of COVID-19 regarding enrollment management. Respondents positively ($M = 4.70$, $SD = 0.465$) perceived that COVID-19 changed recruitment and onboarding practices at their colleges. The largest deviation and lowest mean ($SD = 1.238$, $M = 2.12$) were associated with Item 22, where the question addressed whether the impact of COVID-19 led to an increase of full-time equivalents (FTEs). Most institutions in the state lost FTEs due to the impact of COVID-19. Respondents agreed that COVID-19 impacted retention and persistence, marketing, and student support services. The perception of reducing the barriers that impact applicants and enrollment were in a mid-way average ($M = 3.23$) due to COVID-19.

Decision-Making Practices Regarding Enrollment Management Operations

Decision-making practices vary by administrative leadership at each college. Sustainable operations of community colleges are impacted by financial implications. As shown in Table 5, this section of the CEMS gathered the perceptions regarding decision-making practices. The respondents perceived that these decision-making practices have changed during COVID-19 ($M = 4.00$). The highest deviation ($SD = 1.028$) in answers by the respondents in this section was regarding the influence of financial implications on decision-making processes.

Table 4*Items 18-24 The Impact of COVID-19*

	Minimum	Maximum	Mean	Std. Deviation
18. COVID-19 changed recruitment/on-boarding practices	4	5	4.70	0.465
19. COVID-19 changed retention practices	2	5	4.30	0.708
20. COVID-19 negatively influenced student retention and persistence	2	5	4.08	0.917
21. COVID-19 changed services to support students	2	5	4.53	0.631
22. COVID-19 positively impacted enrollment by increasing full-time equivalents (FTEs)	1	5	2.12	1.238
23. Barriers to applying and enrolling at the college have been reduced due to COVID-19	1	5	3.23	1.130
24. Marketing messages were impacted by COVID-19	2	5	4.14	0.843
Mean 3.87, Std. Deviation 0.38				

Table 5*Items 25-27 The Impact of COVID-19 on Decision-making Practices*

	Minimum	Maximum	Mean	Std. Deviation
25. Decision-making practices have changed during COVID-19	2	5	4.00	0.873
26. Decision-making practices have been influenced by financial implications.	2	5	3.88	1.028
27. Decision-making practices are quicker in COVID-19 environment.	1	5	3.16	0.998
Mean 3.68, Std. Deviation 0.65				

Summary of Phase One

In summary, mid- to senior-level administrators perceived that enrollment management operations are part of their internal environment and planning processes. There was lack of knowledge regarding enrollment managements process by all staff and faculty at the institutions. Marketing messaging and branding feel into a mid-range mean. Administrators felts that recruitment communications were clear and delivered promptly, nonetheless may not be frequent enough to influence the student's choice decision. Respondents agreed that COVID-19 impacted recruitment, onboarding, retention, persistence, student support services, enrollment, marketing, and decision-making practices. Barriers to applying and enrollment were not positively or negatively impacted by COVID-19.

Phase Two

Phase Two consisted of a qualitative inquiry to gather information from mid- to senior-level academic administrators' regarding their perceptions of how COVID-19 (crisis) impacted enrollment management practices. I selected a multiple case study as the best research tradition to understand the administrators' perceptions. I selected three community colleges within the Virginia Rural Horseshoe region to conduct the qualitative inquiry. Each college was in the determined size range of small, medium, and large. As shown in Table 6, 10 participants were interviewed, four from the large colleges and three each from the medium and small institutions. I collected information using semi-structured interview questions to collect thick, descriptive data. The interviews were conducted from May to August 2021. Prior to the interview, each individual was provided with a copy of the responses collected by each college using the COVID-19 Enrollment Management Survey (CEMS).

Table 6*Interview Participant Demographic Information*

#	Participant Pseudonym	Level	College Size	Case
1.	Amanda	Mid	Large	One
2.	Clint	Senior	Large	One
3.	Fran	Mid	Large	One
4.	Kim	Mid	Large	One
5.	Jodie	Mid	Medium	Two
6.	Roger	Mid	Medium	Two
7.	Victor	Senior	Medium	Two
8.	Ken	Senior	Small	Three
9.	Bert	Senior	Small	Three
10.	Glenn	Mid	Small	Three

Interview Questions

Prior to the interviews, I developed a protocol for the semi-structured interview questions (Appendix A). Each interview question corresponded to each of the research questions. Table 7 shows the alignment of the interview questions to the research questions. Five themes emerged from the analysis. The five themes are: 1) COVID-19 Led to Crisis Management and Operations in Phases, 2) Managing Student Onboarding during COVID-19, 3) COVID-19 Created Unique Challenges for Community College Students, 4) COVID-19 Affected Decision-making Procedures, and 5) COVID-19 Resulted in Work/life Balance Issues and COVID Fatigue.

Table 7*Interview Question by Research Question*

Interview Question	Research Question
Question 2 - Explain your experience with changes to onboarding new students and retaining existing students, if any, regarding enrollment management practices as a result of COVID-19. [Probing questions]	1
Question 3 – Tell me about your experiences with the decision-making processes during COVID-19?	2, 2a
Question 4 - How are the financial implications of COVID-19 affecting the decision-making processes?	2a

Theme 1: COVID-19 Led to Crisis Management and Operations in Phases

The respondents discussed the phases of the COVID-19 pandemic and the impact upon college operations during each phase. The administrators at the colleges took each semester and made decisions based on the situation that was best for their college at that time. Clint commented that “we were changing everything and in the midst, and crisis management was happening every single day.” Victor shared “I think everyone realized that we really didn’t have a choice.” Guidance from the system office or health officials were provided to the colleges. Clint provided, “we were getting new rules and trying to conform to those as we went along.” Additionally, Victor stated that the system office supported the colleges by sharing that “I think that their support has really been beneficial and being able to hear what other colleges are doing and how they’re handling things has been very helpful.”

The Transition Semester: Spring 2020. In March 2020, the colleges transitioned from in-person instruction and services to remote instruction and services. Administrators at the colleges within the system had the authority to decide how to deliver instruction and services remotely. Kim explained, “March 14 was the big day of 2020, when everything just had to shut

down”. Rose college transitioned in-person to virtual synchronous where instruction occurred on the scheduled day and time. Administrators explained how instructional designers helped faculty transition classes as some instructors had not taught online previously. Fran stated:

I think I had one faculty member who ironically is very close to retirement and always taught in person. And once he went through and we were encouraging faculty to write scripts. Write your script down, then record it because you'll be more consistent and you'll get out everything that you want. So, it took time. And, but once he did that and he said, I have been resisting, this online platform, my whole career. And he said, because I knew the time that it would take to do it well. And he said, now that I have it all set up, he said, I love it. I love the online, and his students are still very successful. And again, he admits it was a lot of hard work, but he said, it's ironic that I am going to retire in the next year, all my courses have now been converted online. So, I think it also forced faculty to think outside the box.

Classes with labs transitioned to simulation, take-home labs, or used software to complete virtual dissections. Ken explained:

I got to drive over to our regional center with a bucket full of sheep hearts so that students could pick them up to do dissections from their home conveniently. So, students would pick up these plastic bags with the sheep heart and go home and cut them apart, take photos and send them to their teacher.

The administrators described working with students on how to complete their courses or whether they were to award incomplete grades. Kim explained that students enrolled in “hands-on courses...really struggled and we saw a lot of incompletes”. Hands-on courses were pushed

back until students could get the hands-on training or for the college to obtain approvals to use simulations instead of hands-on required trainings such as clinicals.

Administrators described how they reached out to students to understand their situations during the transition from face-to-face instruction to virtual instruction. Call campaigns were created at some colleges to reach out to students. Others used an early alert functionality in a software application called EAB Navigate. Additionally, texting campaigns were used at some colleges. Amanda stated:

And then on the backside, for retention, immediately we created a group of faculty and staff, and we wrote a phone script and we reached out to every student on the campus, just to check in with them to see how they're doing, what's working, and to see if there's anything that we could do to support them. The calls took about two weeks to make, but by and large, there wasn't a lot of things that we could... We couldn't solve every problem. We did certainly what we could. A lot of people just said, "I'm really overwhelmed with going online, but the call made me feel like you cared." We felt like that was really important. We also did a COVID alert through Navigate to figure out how students were doing in their classes right after students transitioned with faculty members, because we knew that students could not answer our call or could tell us whatever they wanted to, but where the rubber meets the road is in the classroom.

Roger stated:

It [COVID-19] turned us on our head. You know, some of our advising staff was out with Spring Break, taking a vacation during Spring Break, only to learn now their office had been shut down, they had no access to their paper catalog, their paper policies and stuff.

The Holding Semester: Summer 2020. The primary delivery for credit classes was online course delivery and some workforce courses were held in-person. Colleges offered student services remotely or with a small number of staff on-campus. Victor explained:

[W]e still had students coming to campus. So, what we ended up doing is doing a rotation with student service. ...[O]nce we saw students were still coming to campus, we had one person from admissions, one person from financial aid and an advisor here at all times. And that helped that really because students, my background is student services, but I haven't advised in that capacity. And so long, it was frustrating for me and the student, I couldn't help them.

Continuing to Fall 2020 and Beyond. As the colleges were transitioning and preparing for Fall 2020, administrators were still working in crisis mode but with better knowledge of how to operate and manage the COVID events. The concept of HyFlex emerged as a model to provide instruction to students in the COVID environment. The goal of the instructor was to provide the student with an effective and equitable HyFlex experience (Wigal, 2021). In the HyFlex model, students can decide if they will participate in face-to-face instruction, online, or a combination of the two (Beatty, 2019). Ken explained:

It means that students can move between an on-ground and an online mode anytime they want in a semester. I like that idea. It's definitely going to take work and rethinking how the class is set up in terms of what more research is on the support component. There are some students who need a better structure. They need the structure that an on-ground class provides.

Student engagement was a major concern and making the best use of the instructor and student's time. Ken explained, "I also like to see us do a lot more of using the class time in a smart way, so

that if you're just using your class time to provide lecture to students, and there's no real engagement or interaction, then use online delivery for that.”

College staff had to collaborate on the best way to code classes in the Student Information System for registration and communicate the class delivery options to students verbally and on marketing materials. Fran explained, “So there was collaboration between student services and the academic affairs side of the house, trying to find easy language or very transparent language that would help students”.

Once colleges reopened, colleges were required to develop re-opening plans with layered approaches to ensure the safety of students and employees. The CDC recommended six feet social distancing in all areas of the colleges. Administrators had to implement methods to provide the hands-on laboratories required for science and trades classes. Ken explained

[W]e reduced the amount of time students came to campus. Instead of coming three hours every week, it was more like an hour every other week. So, we divided the lecture for the lab component into four sections, and that model will work for chemistry, physics, our electronics classes. And then other areas, welding, and we did put the lecture component online. So, it meant that students just have more time to actually work in the lab. The welders were, they benefited a little bit from having the welding lab, by nature, socially distanced, because there are things that separate them.

Student completion is a focus of most administrators at community colleges as it affects outcomes of students in courses as well as performance-based funding and supporting the college’s mission. Student success in online courses was a concern. As Amanda said:

I think students learn very quickly whether they appreciated online learning or not, and they made enrollment decisions based on that. Some students learned that they really

thrive in this environment and they'll continue to want online courses, and some students thought, no, I cannot do this...

Theme 2: Managing Student Onboarding During COVID-19

Student onboarding in a pre-COVID-19 environment was primarily in-person.

Administrators discussed their practices prior to COVID-19 and explained the differences in the COVID-19 environment. Administrators continued many of their normal practices of pushing campaigns through texting, emails, and snail mail. They also continued to make use of the website and social media to advertise or promote events.

High School - Class of 2020 in Region. Prior to COVID-19 a group of staff members from the college would host advising sessions at the local high schools to complete applications, register students in classes, and complete the placement processes. The COVID-19 shutdown in March of 2020, impacted the registration efforts at the local high schools for the incoming class of 2020 as most college visits were during April. Amanda described the impact of COVID-19 on their college's onboarding activities:

Pre COVID, all of our high school students, they would attend a group advising and registration day in their high school. The career coach who had helped prepare us, we would send out a team, we'd give them information, help them get registered, which would lead from there. It would take us three or four hours per high school in order to complete the enrollment.

Administrators adapted processes to work in a remote environment. Amanda continued to explain:

[W]e assigned advisors to high school[s] and had them on the backside do all this registration. They would make sure the program was right, look at the holds, work with

the career coach on the holds, and then based on that information, they would recommend courses. Then the advisor would send an email to the student with the onboarding information and the recommended courses, and then they would copy the career coach on it. Then we'd also put a copy of it in Navigate. If the student lost the email or came back in three months, we'd have record of it and didn't have to do it over again. That's how we worked with our high school students.

Zoom meetings became a way for colleges to get information out to larger group of students.

Victor discussed “we did a parent night for dual enrollment students, just like normally we would go to each high school”. Also, Roger explained:

[W]e would have massive Zoom meetings to where we would bring the high school students along with their parents, into the Zoom, and initially have our president and some other folks speak up front and then go into breakout rooms to do some of our scheduling and stuff. But also, over the past year, and I don't want to skip questions because I do believe this is coming up, but our online social media presence has significantly increased through Facebook Lives and what I call massive Zoom events, where we would have 200 people in a Zoom room that was not a specific group of individuals that would be meeting. It would just be a massive enrollment event in a Zoom room.

Administrators lost momentum with some of high school students. Some students didn't come to college. Clint stated, “it was easy to just say, okay, you know, it's not my year to do it. So, I think we lost a lot of new students coming.” Jodie talked about exhausting all recruitment efforts through remote operations; the impact on enrollment was not the same. She stated, “it just had to do with not being able to get into the high schools and not being able to talk to people”.

Adult Students/Outside of Region Students. Administrators discussed the management of onboarding adult students and students living outside of their region. Once students completed an application for admissions, student received a survey that launched them into the Direct Enrollment Survey to assist with placement processes for recommended math and English classes. Amanda stated:

We also have new student sessions set up, so they can opt into a new student session and if they want to do it all on their own, they can. If they do nothing, our outreach office follows up with them. They call them and say, "Hey, you were interested. You're this far, let me help you." We really have dramatically changed in COVID.

Administrators transitioned their support services to Zoom. However, they realized that they were missing some foot traffic and that their websites were not as user friendly. To provide assistance to students, some colleges created a virtual reception desk. Amanda discussed:

I worked with our IT department to create a virtual reception desk that is linked right from our homepage, like, "Got questions, need help, click here." And we assigned, initially, through last summer, we trained up faculty, anybody on campus that was willing to work the virtual reception desk, we assigned them there.

Clint stated, "we lost the older students because they had all of the family issues and things that they were dealing with". Victor stated, "The folks in student services have been very creative in their marketing, in creating events primarily using Zoom to recruit and help students with financial aid or their application." Jodie provided, "I feel like we made every effort that we could to maintain and retain our existing students."

Theme 3: COVID-19 Created Unique Challenges for Community College Students

Administrators provided comments regarding the challenges that students endured during the phases of COVID-19 at their colleges. Students struggled with their kids being home from K-12 schools, plus having to support them through virtual learning. Some students' technology and internet access were also a challenge. Fran shared:

I think we were very gracious with students in terms that we gave more incompletes that semester and more time for people because of internet issues or if they said that my kids are home. Additionally, some told us that I don't have time to do any of this anymore. Or, I've had to pick up another job because my spouse lost their job.

Kim explained “our community college students are constantly being thrown challenges, such as, single mom, kids get sick, parents get sick, death in the family, tragedy, homelessness. To them I would say the pandemic is just one more challenge.” Additionally, administrators discussed the difficulties that some students experienced with the college jargon.

Technology Challenges. The digital divide issues were exasperated during the onset of COVID-19. Many rural areas lack the broadband infrastructure to support remote learning and work (FCC, 2020). Some students did not have access to a laptop or a computer to complete assignments. College administrators attempted to help students during the onset of COVID-19.

Roger explained:

Five percent to seven percent of our population did not have the means to get adequate internet at their home to do their classes. Most of our students lived in an area where they could get some service for a hotspot or a lot of students were able to continue working on their smart phones, using just data instead of wifi.

Amanda explained her experience in trying to onboard a student at her college:

I talked to a brand new student and the conversation, if she would've walked in my office, we'd probably would've been done in 25 minutes. It took us an hour, because she Zoomed in with her phone and she couldn't get audio and she had to go out and come back in and couldn't figure it out. She was a student that had some learning challenges and it just, finally, at 5:30, I said, "Why don't I just call you?" But she's going to have to learn the technology, because she wants to take an online SDV [Student Development course] this summer. I'm trying to teach her, without being able to see her, walk her through anything, so we have found that delivering our services is just taking twice as long to do anything.

Some colleges used *CARES Act* funding, money provided by the federal government during COVID-19, to support higher education institutions in providing hotspots and laptops. Fran explained “ Let's use the *CARES Act* money for you to buy a laptop. But there are still people that, regardless of whether you give them the hotspot, they live in such a rural area that it would not work.” Ken provided “many students were able to use the funds that went directly to them for purchasing laptops or use their financial aid dollars for purchasing laptops”. Zinnia College provided a laptop loaner program where students could check out the laptop and bring it back in at the end of the semester.

Administrators made wifi accessible outside of their buildings to provide access to students and employees that needed it at their locations. Fran explained:

You saw people sitting in their cars because they were parked in parking lots where wifi was accessible or the closest place to their home. And in this situation, the teacher was in her car in the parking lot. And during class realized that one of her students was in the car next to her, and we all realized it together. And we're like people are doing what they have to do.

Jodie explained that many students signed up for virtual classes in the Spring 2020 and relied on the college by using the computer labs to complete their assignments. Jodie provided:

One of the most shocking things to me of the whole experience was in Spring of '20. We had students in January who signed up to take a virtual class in January. No idea any of this [COVID-19] was going to happen. They were registered for one or more virtual classes. They had no personal computer and they had no reliable internet access. They were completely relying on the college. They would come to the college and work in the library. I mean, that floored me.

Additionally, students used their cell phones to complete assignments in Canvas, a course management system. Bert explained “I know students who have submitted term papers, they are typing on their cellphone. It's straight into Canvas.” Bert was concerned about underrepresented and low-income students. Bert stated, “I think we're going to see that effect in those populations because of that lack of independence.”

Understanding the language. For new students to the process, the terminology can be confusing and there can be a need for additional support. Fran explained:

My experiences with enrollment practices that finding that students need more support and in a perfect world, I would think 24-7 support, even on the weekends.

What's an EIN, why is it asking me to put in an employer identification number? So, because he had participated as a child in learning can be fun activities. He already had an input. Of course I could get access to that, but I wanted to try to go through it as if I had no experience at all. And so we, the enrollment services folks, were extremely helpful and followed up but found that, the services are only available Monday through Friday

from 8:00 to 5:00 or whatever. So, I think with the population of students that we're working with, we need around the clock.

Theme 4: COVID-19 Affected Decision-making Procedures

Decision-making at the colleges was handled differently. Some colleges handled the decision-making process through the executive leadership. Clint provided:

Most of the decision-making was from the president, myself, and the other vice president, with HR and facilities, as appropriate. We ran the decisions through the president's staff meeting, which includes all of my direct reports and all of the other vice-president's direct reports. It changed so rapidly sometimes.

At another college, the entire executive leadership was involved. Bert shared, "I think we had to pull experience, we had to make decisions quickly." In order to make decisions, all employees were encouraged to be part of the conversations to make decisions. Jodie shared: "the leadership team used the CDC and the VCCS guidelines and the Virginia Department of Health. They just really relied heavily on those guidelines to make decisions."

Communication. Some college presidents held college assemblies or town halls to communicate with employees about updates and to allow employees to share concerns.

Administrators still practiced shared governance. Fran shared "it just really eased people's minds there as well, just to know what was going on behind the scenes and just for transparency".

Amanda shared "I spent my time carrying out a lot and communicating the decisions that had been made." Jodie shared "our philosophy was we will extend grace to our students because this is just unprecedented." In departmental decisions, Roger shared about his decision-making processes:

But I learned to be a lot more lenient in decision-making, and it was difficult because you have all of these ideas and you quickly learn that a lot of things you want to implement, especially quickly during a pandemic, is hard to do with the State being involved.

Financial Implications. A majority of the colleges decreased in full-time equivalents (FTEs) during COVID-19 (NSC, 2021). A decrease in FTEs affected the state funding that the college received. Clint shared:

I think there's two parts to that. One is certainly it's a decrease in revenue because of the enrollment, but it's an amazing amount of money that we're getting from the federal government. Because of that we've been able to do some things that we weren't able to do. Previously, as far as professional development and things like that. It all has to be COVID related, but we've been able to do a lot of professional development. But the money that we're getting is going to cover the tuition issues that we have. So, we're feeling very comfortable this year, financially.

During the onset of COVID-19, there was uncertainty about the future. Administrators at the colleges scrutinized spending. Amanda stated, "We really didn't do a lot of spending, and that was because our enrollment was so down. We were down 10%, so we had to really look at where we could cut that from the budget." Roger provided:

We have all these positions that we're ready to hire to, wait we can't hire right now, going into a hiring freeze. Coming out of that realizing that maybe that funding is no longer there or because the way we'd rearranged things, we no longer need that, but we had this funding set aside.

Administrators found out what where they could do without funding or positions. Roger stated, "it's a balancing act, especially when it comes to the funding of where are funds best utilized."

Administrators were hopeful that students would choose to attend community colleges versus attending a four-year college or university. The expectation was that students would attend a community college to save money. Fran shared: “Our hope was that maybe it [enrollment] would increase because if people couldn't go into the four-year colleges and have that on campus experience, why not just pay less and, attend community college? Well, that did not happen.”

Based on class schedule changes due to social distancing and decrease of the enrollment limits, administrators had to hire more adjunct faculty to help support the classroom instruction. Roger shared:

We have a daytime welding program and an evening welding program, and we have one professor for those programs. Well, both of those programs filled up within three weeks time. So now we're looking that one of the financial implications we're having is that we're going to need to hire an adjunct and do a mid-evening, mid-afternoon, section. ... So, one of the financial implications that we have going on is the fact that we're going to have to hire more adjuncts than we did ...

One college took the funding provided through COVID-19 into a grant to assist students in need with tuition funding. Students were eligible if they did not qualify for federal financial aid or scholarships. At the time of the interview, administrators were seeing an increase in enrollment compared to the previous year. Jodie stated, “I think that that's one of the really happy financial implications of COVID is that the money that's come from the federal government is being funneled directly to students for tuition dollars.” Additionally, there was no tuition and fee increase. This helped some colleges stabilize enrollment.

Strong Leadership. Rose college reported that strong leadership was helpful during the phases of COVID-19. The president, vice-presidents, and academic deans have been in their roles for five or more years. At that college, everyone was aware of the strengths and weaknesses of each other. Clint stated, “We knew who was going to take care of things and just being able to, to make those decisions.” Administrators were constantly dealing with decisions daily regarding how to handle operations. Clint provided:

I think that's the thing that I'll look back on and say, that's one of the main reasons that we, we feel comfortable that we've gone through this and done the best we could is because we've had really good people that have stuck with us and done the things that were necessary.

Theme 5: COVID-19 Resulted in Work/life Balance Issues and COVID Fatigue

Mental health and fatigue for employees was a concern for administrators. Administrators shared the concerns over the well-being of their employees as the shift to remote work brought challenges not only to students but to employees. Administrators within this study discussed burnout, issues regarding maintaining the work/life balance with the stay-at-home orders or campus closures, Zoom fatigue, and COVID fatigue.

Most employees were converted to telework with little or no guidance beforehand. Kim stated: “So do more with less, seems to be the theme. And it has been, it's been hard.” Employees were trying to provide customer service to students. Amanda shared her daily routine at her remote home office. She would:

try to be in the office [remote office/on computer] by 7:15 or 7:30 a.m. And then try to cut it off to just sit with my family. But COVID has been very hard. I think that has also really blurred life and work for everybody, not just me, but for people outside of our

division such as faculty. Because you finish dinner with your family and you're like, "Oh, just one more email." You go right back to it. And I think it became very hard for administration. That transition home, it was such a heavy lift. Everybody was working 12, 14, 15 hours a day.

Administrators mentioned COVID-19 fatigue for themselves and their employees. They shared the concern that people were exhausted and tired. Some employees were feeling isolated by working from home and not having the same type of office interactions. Amanda stated:

I think there has been this COVID fatigue that has been created, because of the really blurred lines between, I'm working from home, I live from home, and it all just kind of blends. I'm very lucky I haven't lost people, just from being just so exhausted.

Kim stated:

We are all burned out. We are all and that seems to be consistent. Even if I talk to faculty or administration or students, we're all burnt-out, life is exhausting right now. Because you're constantly waiting for the next big change. So, it's exhausting.

Due to working virtually, employees relied more on electronic communication by email or chat. Amanda stated, "I find there are so many more emails and there are so many more... And just from students that... You'll get nine from one student in a day."

Additionally, employees were dealing with sickness or loss within their own family or friends. Kim shared:

It affected all of us in some way, but I know some that they lost their spouse and now they're single parents, that's a huge change. Some of them, they didn't even know anybody that got sick or some they got sick, but they were fine after a week. So it was, and I would say for those that they were sick for a week, those aren't as big of a challenge

as what they else they might be dealing with, which could be sickness, it could be loss of a parent, loss of a child. There [are] so many challenges going on, it's not just, COVID-19, that's just one.

Administrators shared about faculty experiences. Faculty had to transition to online teaching in a matter of weeks. The transition to online forced some full-time faculty to retire. There were some adjuncts that decided not to teach until the college was back in person or sit out a couple of years. Jodie shared “I think whatever the rest of us dealt with faculty had it far, far worse. It's more stress, more investment of hours.” Fran shared:

I think a small handful that after that semester said, I think I'm ready to retire. And some adjunct faculty that said, I need to take a break I'm not as comfortable with the technology, and I would prefer to wait and teach for you all again when you're back on campus.

One administrator shared what one of their faculty endured during COVID-19. Fran shared:

I also had a conversation with a faculty member that had never really experienced tragedy in her life. Had never been like in a place where it was anxiety ridden, like COVID. When students used to come to her and say, oh my gosh, I'm having an anxiety attack. I just need to... and she's like I never understood that before. She's like, because I'd never experienced it before until going through this. And so, I think us all going through this tragedy, this pandemic together, it has just made people more understanding of each other.

Summary

In Chapter Four, I presented my research findings that guided my efforts to seek to answer my research questions. I provided the analysis in two phases by using the survey and the voices of my participants. The five themes that emerged were:

1. COVID-19 Led to Crisis Management and Operations in Phases
2. Managing Student Onboarding during COVID-19
3. COVID-19 Created Unique Challenges for Community College Students
4. COVID-19 Affected Decision-making Procedures
5. COVID-19 Resulted in Work/life Balance Issues and COVID Fatigue

In Chapter Five, I will summarize the study and the findings, compare my findings to those in the literature, discuss implications for action from my research, and make recommendations for future research.

CHAPTER V

DISCUSSION

Enrollment at community colleges has declined 14.8% since 2019 (NSC, 2021). Forty-one percent of students cancelled their plans to attend a community college during the fall semester of 2021 (U.S. Census Bureau, 2021). The mission statements of many community colleges include providing open-access admissions and curriculum to meet the needs of the students and the community (Ayers, 2017; Williams et al., 2007). The decrease in enrollment at community colleges is widening the gap of citizens in the community between those with a post-secondary education or credential and those without.

The purpose of this sequential explanatory study was to examine enrollment management practices during a crisis, COVID-19, through the viewpoint of mid- to senior-level academic administrators. From the onset of COVID-19 pandemic, mid- to senior-level administrators have been in uncharted territory and doing the best with what they have.

Purpose Statement and Research Questions

The purpose of this sequential explanatory study is to examine the perceptions of academic administrators at rural community colleges regarding how a crisis impacts enrollment management practices. Participants discussed their lived experiences and perceptions of changes occurring to enrollment management practices and the subsequent financial challenges resulting from the COVID-19 pandemic within rural Virginia community colleges. Additionally, I examined the procedures used to make decisions.

The following research questions guided this study:

1. How do academic administrators at rural community colleges describe the changes occurring to enrollment management practices as a result of COVID-19 and the financial impact of the pandemic?
2. How are rural community college academic administrators at rural community colleges making enrollment management process decisions as a result of COVID-19?
 - a. How are the financial implications of COVID-19 affecting rural community college academic administrators' decision-making processes?

Summary of Methodology

During this sequential explanatory study, I conducted the research in two phases. I implemented the COVID-19 Enrollment Management survey (CEMS) with mid- to senior-level administrators at the Virginia rural horseshoe community colleges in Phase One. I identified 106 mid- to senior-level administrators. In Phase Two, I conducted 10 interviews with mid- to senior-level administrators at three community colleges. The study started in April 2021 and concluded in August 2021. The problem that I addressed was how mid to senior-level administrators handled enrollment management practices and decision-making processes during COVID-19.

I obtained approval from Old Dominion University College of Education and Professional Studies Human Subjects Review Committee as well as from the Institutional Review Board of several of the community colleges participating in the study (see Appendices G and H). I used a Creswell and Clark (2014) four-step approach:

1. Design and implement the quantitative strand
2. Use strategies to connect the quantitative results to the qualitative strand
3. Design and implement the qualitative strand

4. Interpret the connected results

The data analysis for each phase was used to find commonalities and conflicts between the colleges and within the college (Creswell & Clark, 2014).

Pseudonyms were used to protect the identify of each participant and their represented institution. Any information that could be used to identify the college or the participant was removed before the research began. All information gathered will remain confidential. All of the data are stored in a locked private office on a password protected computer; I am the only person with access to this computer. All data collected will be destroyed in five years. The results of this study will be used in reports, presentations, and publications with no identifying information of the participants.

Document Analysis

I collected data from each college's webpage and social media pages regarding published COVID-19 information as a secondary method of data collection (Merriam, 2009; Yin, 2018). Colleges had a page or link to information posted on the main page of the website. I established a protocol of the document analysis (Appendix I). I used the data collected to verify information collected through the semi-structured interviews in Phase Two and to clarify any data received by asking additional probing questions.

Phase One

The quantitative inquiry was a non-experimental survey designed to gather perceptions of mid- to senior-level administrators regarding enrollment management operations during COVID-19. I created the COVID-19 Enrollment Management Survey (CEMS) instrument to collect data in the quantitative inquiry. After obtaining the required approvals, I emailed the 28-item survey instrument (see Appendix D) and the informed consent form (see Appendix B) to mid to senior-

level administrators at the 14 rural community colleges in the “rural horseshoe” area of Virginia. The administrators’ titles varied by each college with a summary of titles provided in Appendix C. I emailed the administrators with an electronic survey to complete (see Appendix B). The survey collection was open from mid-April to mid-June. I sent follow-up emails as a reminder to complete the survey with the final deadline of mid-June. I was able to obtain responses from at least one representative from all 14 Virginia Rural Horseshoe colleges.

At the conclusion of the collection, I received 45 responses to the CEMS. The responses were downloaded and placed in Excel document for review. The document was loaded into SPSS to calculate the statistical analysis. I utilized descriptive analysis and inferential statistics to describe the distribution. Themes were developed from the statistical analysis. Dashboards were created for each college selected to participate in Phase Two. The results of the data analysis helped to ensure that the pre-defined semi-structured interview questions were appropriate for Phase Two.

Phase Two

I selected three community colleges from the 14 Virginia Rural Horseshoe colleges. One college was selected from each of the enrollment category sizes (small, medium, large) based on fall full-time enrollments. Additionally, I reviewed the number of responses received from the surveys in Phase One and in conjunction used purposeful sampling to determine the final selections. I revisited the developed research questions and probing questions prior to the start of Phase Two with the survey data collected in Phase One. No changes were made to the developed questions (see Appendix A). I emailed 12 participants to request their participation in the semi-structured interview. Ten participants agreed and completed the interview. The participants had varying titles, from coordinator to vice-president, and all had some involvement in enrollment

practices at their college. I had three participants at each small and medium size college, and four participants from the large size college. Prior to the scheduled interview meeting, a follow-up email was provided to each participant with information about the study, the informed consent, the four primary questions, a summary of the survey results from the Phase One collection (see Appendix E). Each participant digitally signed ODU's Informed Consent Document (see Appendix F) before each interview began.

Interviews were conducted using online virtual meeting using Zoom software. At the start of each Zoom meeting, I explained the statement of confidentiality and anonymity, voluntary participation, and potential risks and benefits of the study. I asked for permission to record and obtained consent from all participants. I recorded verbal discussion only. I was able to ask additional probing questions to gain further insight that might not have been addressed in the primary question. The interviews lasted no more than 45 minutes with most taking approximately 30 minutes. I maintained field notes of each interview. After each interview, I transcribed the data verbatim in a document and provided the opportunity for each participant to review their transcript for accuracy.

I used pattern matching to cluster ideas and explanation building in the analysis of the data (Yin, 2018). I established a codebook to ensure consistency in the data analysis process (Hays & Singh, 2012) and loaded the data into NVivo where I used the software to thematize the data through coding the chunks of data. I used within-case and cross-cases for the theme development and established content validity by reviewing the major themes against my field notes, and document analysis. As a final step, I integrated the results and drew conclusions regarding how the qualitative results in Phase Two extended and explained the quantitative results captured in Phase One (Creswell & Clark, 2014).

Summary of Major Findings

After the analysis of the data, five major themes emerged: (1) COVID-19 Led to Crisis Management and Operations in Phases, (2) Managing Student Onboarding during COVID-19, (3) COVID-19 Created Unique Challenges for Community College Students, (4) COVID-19 Affected Decision-making Procedures, and (5) COVID-19 Resulted in Work/life Balance Issues and COVID Fatigue.

Regarding the first theme - COVID-19 Led to Crisis Management and Operations in Phases - I discovered that mid to senior-level administrators were handling crisis management on a daily basis for the first year and that the administrators handled crisis management for COVID-19 in phases that coincided with the semester. For most administrators, their experience in crisis management centered on weather-related events where there is an initial impact and rebuilding afterwards. COVID-19 was different than a weather-related crisis. None of the administrators imagined that the COVID-19 pandemic would affect the college operations for an extended amount of time. At the onset, administrators were learning how to handle crisis management in a pandemic environment that constantly had rules and regulations changing as everyone was learning the impacts of COVID-19 at the same time. The different variants of COVID-19 added additional complications. Administrators were taking one semester at a time to find the best solution for offering classes and enrolling students. The spring 2020 semester was the initial semester of impact when the stay-at-home orders were issued and all courses were shifted to online learning. Mid to senior-level administrators had to determine how to manage college operations in a remote environment along with attempting to move the college forward with enrollments for future semesters.

Theme two comprises the perceptions that college administrators shared as they discussed determining the process for managing student onboarding during COVID-19. At the onset of COVID-19 and the stay-at-home orders, college operations were transitioned to remote operations. Most college campuses were closed to the students and only open for essential employees during that period. College support staff had to shift to working from their homes which led to some technology issues. Administrators explained that they had to get creative with ways to deliver services whether by phone, text messaging, or using virtual meetings (Zoom, WebEx, Google Meet, or Microsoft Teams).

Most colleges were in the middle of the major recruiting season with the high school class of 2020. Normally the colleges would take teams of representatives into the local high schools to help prospective students complete applications, complete placement testing, discuss their desired plans for determining the program of study, complete enrollment in the upcoming fall semester, and assisting with FAFSA completion. Administrators shared that the staff was unable able to go into the high schools and had to figure out ways to reach students remotely. The shift in operations to a more electronic route included hosting information sessions through Zoom, specific sessions for high school seniors, using text messages as a campaign through technology tools, or phone calls. Additionally, many colleges expanded posts on the college's webpage and made use of social media outlets to reach students.

The third theme was COVID-19 Created Unique Challenges for Community College Students. Mid- to senior-level administrators shared their interactions with students during COVID-19. Some students were unable to stay enrolled in classes due to family members being sick or death of family members, their children in K-12 schools having to learn remotely, loss of employment or family members loss of employment, and not having adequate internet services.

Administrators shared that the adult students decided not to re-enroll in semesters based on the uncertainty of COVID-19 and remote learning.

The fourth theme was COVID-19 Affected Decision-making Procedures. At some colleges, administrators discussed that COVID-19 decisions were handled through executive leadership and pushed down to mid-level administrators. Many decisions had to be made quickly. Zinnia college discussed their process was still through shared governance. In order to disseminate information quickly, several college presidents held college assemblies to communicate with employees about the decisions being made at the local and state level. Due to COVID-19, college administrators monitored finances and limited spending. During the reopening and social distancing requirements, administrators discussed the financial requirements related to the need to hire more adjunct faculty to support in-person classroom instruction.

The final theme that emerged was COVID-19 Resulted in Work/life Balance Issues and COVID Fatigue. Administrators discussed how the lines for work and home life were blurred due to remote operations with their employees and themselves. They would start working early as they did not have to commute and would often work past their scheduled time off. Some employees felt the need to be accessible on their emails at all times, as the number of emails increased due to remote work, and they wanted to provide the best customer service to the students. At the onset of COVID, many college employees worked 12- to 15-hour days to assist with the transition to remote operations. COVID fatigue was described as burnout from doing more with less, working additional hours, isolation from fewer office interactions, and just waiting for the next thing to occur. Additionally, two administrators explained that the remote instruction forced some full-time faculty to retire and some adjuncts to temporarily stop teaching.

Findings Related to the Literature

This study supported the recent literature about crisis management, decision-making, and the shift to remote operations including but not limited to: Adedoyin and Soykan (2020), Berezhna and Prokopenko (2020), Freeman et al. (2021), Lango (2021), O'Donoghue et al. (2020), Oliveira et al. (2021). This study supports the existing qualitative or quantitative studies but with an added dimension of sequential, explanatory study. The following section presents the study's findings and describes their relationship to the existing literature. The five themes found in Chapter Four are organized in this section.

Theme 1: COVID-19 Led to Crisis Management and Operations in Phases

A significant amount of literature exists regarding crisis management in higher education settings where the physical infrastructure is affected. Natural disasters are the primary focus of the literature surrounding physical infrastructure, such as Hurricanes Katrina and Rita (Beggan, 2010; Gardner et al., 2007; McCullar, 2011; Nelson, 2006), flooding (Reese, 2001) and earthquakes (Lukasik, 2021). Manmade crises affect the campus less by physical structure and more by the physical and emotional impacts to students and staff. Examples include the mass shooting at Virginia Tech (Catullo, 2008), loss of the Marshall University football team (Akers, 2007) due a plane crash, sexual violence incidents dealing with rape (Ganim, 2011; Wolverton, 2006), bullying (Foderaro, 2010), and the recent protests regarding the death of George Floyd (The Economist, 2020). There has been limited research around the H1N1 pandemic (Meyer & Wilson, 2011) and COVID-19 pandemic (Oliveira et al., 2021). COVID-19 disrupted traditional teaching, learning, and in-person support services whereby forcing higher education institutions to pivot to online instruction, learning, and support services.

Crisis Management and Leadership. Unlike a natural disaster where the event occurs and recovery can begin, the participants explained that COVID-19 was a constant evolution of new issues that required continual crisis management. Each semester, starting in March of the Spring 2020 semester through Spring 2022 semester, administrators included in this study introduced a new factor of COVID-19 that they were required to implement and handle under crisis management. As supported by Lango (2021), the study broke the phases of COVID-19 into semesters with each resulting in related decisions for that specific semester. The three distinct phases of crisis management are pre-crisis (before), crisis (during), and post-crisis (after) (Agnes, 2018; Bernstein, 2013; Coombs, 2007; Moerschell & Novak, 2020). Administrators began discussing COVID-19 for the pre-crisis phase in late February or early March 2020. As required by the Department of Education Clery Act, each institution has a Continuity of Operations Plan (COOP) to assist with maintaining operations during a crisis or disaster.

Some institutions included in this study affirmed the approach where administrators had to circumvent the decentralized structure of shared governance to make expedited authoritative decisions (Gigliotti, 2020). The participants discussed the administrative leaders of the college hosting college assemblies or town halls to communicate decisions and share updated information about COVID-19 to their college communities; supporting the study by Moerschell and Novak (2020) to acknowledge relationships and align communications. Additionally, administrators used a multitude of ways to distribute messages to faculty, staff, and students once decisions were made by administration at colleges.

Pivot to Remote Learning. The Meyer and Wilson (2011) study regarding the H1N1 pandemic found that higher education institutions lacked preparedness for online learning. Bert stated that he could only relate this type of crisis to the measles outbreak while he was a

residence director at a four-year university. Colleges were not fully prepared to pivot from face-to-face learning to online learning as Clint shared his college was able to convert classes over within days. This study supports the current study of Adedoyin and Soykan (2020) where the online learning shift was an emergency and the shift to online learning occurred within days or a week without adequate planning and designs of instruction.

Due to the shutdowns and need for administrators to maintain college operations, administrators had to switch face-to-face courses to online courses. This study supported the unavoidable change of attitudes toward online learning (Adedoyin and Soykan ,2020; Oliveira et al., 2021; Ribeiro, 2020) where four colleges transitioned to HyFlex modality and all of the remaining colleges offered asynchronous, synchronous, or both.

Student engagement was a concern of several administrators within this study. As supported in several studies a challenge with online courses is missing relational and nonverbal cues from students who may have feelings of isolation and depressed engagement (Hart et al., 2021; Huguet et al., 2001; Moore, 1989; Nissenbaum & Walker, 1998). During the initial pivot, faculty were more flexible with students and vice-versa as it was a learning process for all. Bert shared that it was more difficult to reach the students that were not engaged being a remote environment.

Theme 2: Managing Student Onboarding During COVID-19

All administrators included in this study had concerns about enrollment at their colleges. Overall, in the Virginia Community College system, there has been a continual decline in credit headcounts since the 2011-2012 academic year. The prior academic year difference for all 23 community colleges in the system was a loss of four percent (VCCS, 2022). The VCCS system implemented a new Strategic Plan entitled *Opportunity 2027* in May 2021 (VCCS, 2021). The

strategic plan has specific objectives regarding review and development of the student onboarding process through an equity lens.

This study concentrated on the onboarding process during the COVID-19 pandemic at the Rural Horseshoe colleges. Jones et al. (2008) defined the functional areas in enrollment management to include recruiting, admissions, placement, advising, financial aid, student records, student outcomes, and graduation. Each college included in this study had a different variation of some of the offices included in the enrollment management definition. Additionally, some of the higher-level leaders shared a role as vice president over both academic affairs and student affairs.

This study extended the conclusions of Berezhna and Prokopenko (2020) and O'Donoghue et al. (2020) where colleges used email, phone calls, text messages, and social media to sustain education and to build informal relationships outside of traditional face-to-face advising. This study supported the determination by Roache and Muschette (2020) that student support services should be offered in the same manner although the physical campus was closed. In support with Garcia (2021), administrators shared that their college used outreach events to build relationships and provide necessary information sharing.

Some of the administrators discussed the perceived expectation of higher enrollments at the colleges during the 2020-2021 academic year due to the transition to remote learning. For most of the colleges included in this study, that did not happen. Community college enrollment is typically triggered by the economy. If there is a downturn in the economy, community college enrollment increases as seen in the peak in community college in 2010 following the recession from the economic downturn in 2008 (Smith, 2016).

Theme 3: COVID-19 Created Unique Challenges for Community College Students

As found in this study, the shift from face-to-face teaching to online learning synchronously or asynchronously required instructors, administration, and students to become flexible in order to finish the spring 2020 semester. Administrators discussed their perceptions of student challenges related to technology and internet access, being a student-parent in lockdown, and enrollment management processes and terminology.

Technology and Internet. During the lockdowns and campus closures, students were unable to use wifi and computer labs inside the facilities at the colleges. The studies by Flaherty (2020) and Lederman (2020) found that the lack of adequate technology impacted the students' ability to complete coursework online, which impacted their success at the college. Within this study, administrators at colleges discussed helping students acquire laptops to help complete their coursework and attend online classes. Colleges within this study received *CARES* (Coronavirus Aid, Relief and Economic Security) *Act* funding and some colleges helped students purchase laptops with this funding and others provided laptops for check-out. This study supports the findings in the study by Decker (2021) where the university adapted protocols to support students during the pandemic by providing laptops purchased through *CARES* funding for check-out from the library and free-of-charge hotspots to students with the most need.

Administrators discussed providing access to students and faculty in their parking lots and working with their communities to find access to wifi. A study by Bacher-Hicks et al. (2021) found evidence of the digital divide during COVID-19. Administrators in this study discussed that some students were completing their assignments on their cellphones. The Federal Communications Commission [FCC] (2020) found that 77.7% of rural areas in the U.S. had access to broadband services, compared to 98.3% in urban areas. Some college administrators in

this study helped students acquire hotspots. Nonetheless, due to the remote areas where students lived, the hotspots would not work. This study supported the findings in Illanes et al. (2020) and Zhang et al. (2020) where students lacked the internet service to support online learning.

Student-Parents. Several administrators in this study discussed student-parents and their ability to finish classes and enroll in future classes. This study supports the study by Jarboe (2022) that found that student-parents had increased responsibilities during COVID-19. Student-parents were now caring for children who could not go to childcare due to the lockdowns, helping their children through online learning, and managing employment loss or changes. The current study supports the findings of The Hope Center (2021) and Jarboe (2022) which found the lack of childcare caused student-parents to miss both class sessions and important assignments.

Processes and terminology. The current study supports the findings of Ardoin (2013) which found rural students and first-generation students often had difficulty immediately understanding university/higher education jargon. One administrator, Fran, discussed her experience with a parent during the enrollment process, specifically with the terminology used regarding the student id number being referred to as an employer identification number. Johnston (2019) and Supiano (2014) highlighted that language used by academia can be jargon or specific lingo which causes a barrier to students understanding the enrollment management processes. Ardoin (2018) expanded on the Ardoin (2013) findings which indicated language is a barrier for rural students seeking higher education. Means et al. (2016) discussed limited knowledge of available financial aid by rural African American students. In another study, Nelson (2016) found that students with a collaborative application process were more successful than those solely in a student-driven application process.

Additionally, administrators discussed the shift to virtual student support services instead of face-to-face support for students for all enrollment management operations as well as all student support services. Previous studies highlighted the gaps in services for online students (Barr, 2014; Beaudoin, 2013; Bouchey et al., 2021; Brown, 2017; Forrester & Parkinson, 2006; Hicks, 2016; Jones & O'Shea, 2004; Luedtke, 1999; Mitchell, 2009; Ozoglu, 2009). For some students, this was an added challenge as they may have issues with technology, the internet, or lacked the digital competency to meet with an enrollment management team member by Zoom or other video conferencing platforms.

Theme 4: COVID-19 Affected Decision-making Procedures

This study supports the findings of Garcia (2006) that a rapid response was required from leadership during the onset of COVID-19 to transition to online delivery of instruction. The quick decisions informed the stakeholders that leadership understood the significance of COVID-19. Additionally, the findings in this study supported the study by Fernandez and Shaw (2020) which countered the perception that decisions by academia are slow.

As supported by literature, the authority changed as the urgency of COVID-19 decision-making shifted to foster responsiveness (Freeman et al., 2021). None of the participants in this study discussed any fears regarding the decision-making processes at their college as described by Lango's (2021) study. An administrator at Zinnia College in Phase Two discussed the processes still being upheld for shared academic governance while the other administrators at the other two colleges discussed crisis leadership at the executive level. The findings by Higginbotham and Dahlberg (2021) found that decision-making processes reverted to quick unilateral decisions which deviated from the academic governance model. None of the

administrators in this study mentioned any disgruntled faculty members regarding the decisions-making processes regarding COVID-19 at their institutions as found by Kezar (2020).

Administrators within this current study shared their initial concern over budgets at their institutions. Administrators at Rose College required all purchases to be approved by a Vice President of the college. The current study concurred with the conclusions of Blankenberger and Williams (2020) that college budgets and expenditures were harmed by the financial and economic disruptions created by the COVID-19 pandemic. In reality, however, the implementation of *CARES Act* and *Higher Education Emergency Relief Funds* (HERRF) funding saved college leaders from having to face many of the challenges which would have been created by the financial hardships from COVID-19.

Theme 5: COVID-19 Resulted in Work/Life Balance Issues and COVID Fatigue

Administrators in this study discussed the issues regarding work and life balance while working remotely, as well as fatigue or mental exhaustion from the issues caused by COVID-19. Administrators shared concerns about the amount emails and communications that they would receive in a day. The added communications caused some employees to increase their working hours or feel the need to address those communications that they received even after working hours had ended. This study supports the study by Adedoyin and Soykan (2020) which indicated that the additional emails added stress to faculty.

This study also supports the findings of Sparkman-Key et al. (2021) which noted that faculty did not have all the needed technology to teach their courses from home. Fran shared a supporting story from one of the faculty members that was in the parking lot teaching their course and a student was in the car next to her. This study supports the extant literature that indicated faculty workloads increased during the onset of COVID-19 with the transition to

remote work (Johnson et al., 2020; Krukowski et al., 2020; Sparkman-Key et al., 2021). Fran shared that there were full-time faculty that decided to retire and part-time faculty that could not transition to online courses. Tugend (2020) found that by the end of Fall of 2020, 69 percent of faculty members felt very or extremely stressed compared to 32 percent at the end of 2019. This study supports the data collected in the nationwide survey conducted by The Chronicle of Higher Education (Tugend, 2020).

This study also supported the study by DeMartino and Weiser (2021) which asserted that higher education administrators were able to complete their work remotely. During the interviews several of the administrators discussed primarily working from home. Some administrators shared that some of their faculty and staff lacked access to broadband just like some of their students. Where possible, the administrators provided faculty and staff with hotspots so that they could transition to remote work. This present study supported the findings by Adedoyin and Soykan (2020) regarding students and instructors with bad or no internet connections who were often denied access to online teaching and learning opportunities.

Conclusion of Findings

Administrators at rural community colleges had been operating under the motto of “doing more with less” in a pre-COVID environment. COVID-19 exasperated that concept and stretched college employees even further. Crisis management and operational practices related to COVID-19 started in March 2020 with the onset of the lockdowns and campus closures designed to curtail the spread of COVID-19 and flatten the curve. The study aligns with the literature that the shift from face-to-face learning happened quickly within a week. Along with teaching and learning, administrators had to shift face-to-face operations to remote operations and provide ways to support students. Enrollment management operations were shifted, and colleges had to

find a way to reach students. This study supported the existing recent literature regarding how enrollment management offices shifted to using alternate methods of communication and online meetings to replace face-to-face meetings.

Discussion

The purpose of this study was to understand the perceptions of how a crisis, COVID-19, impacted enrollment management practices by mid to senior-level academic administrators at rural community colleges. Some of the biggest challenges for administrators in this study at the start of COVID-19 was the uncertainty, not knowing what changes the next day would bring, and managing the constant changes. Unlike the typical crisis events such as weather-related or man-made, COVID-19 has been a prolonged crisis that forced the administrators that participated in this study to use crisis management daily at the onset while simultaneously trying to forecast future semesters based upon current trends.

Another challenge that administrators faced was the shift to fully online learning and online support services. Administrators shared how their staff tried varying ways to reach students since they no longer had the option of face-to-face contact. Students responded using various methods of communication (text, phone, email, videoconference) and one-size did fit all. Staff members had to learn how to handle multiple text messages that may span hours to days where they could previously meet with a student for a face-to-face conversation for 15 to 30 minutes. One commonality obtained from administrators is that not everything will return as it had prior to COVID-19 (Sparkman-Key et al., 2021).

The onboarding process to college can be confusing for some students but the closure of campuses and shift to only online support added complications. The onboarding process to college includes (a) completing the admissions applicant; (b) reviewing placement into English

and math courses by high school data, test scores, or placement tests; (c) discussing the program of interest and future career plans; (d) registering for first semester courses; and (e) payment of the courses to complete the enrollment process, including completing the FAFSA, scholarship or other financial aid forms. Administrators at these colleges recognized the need to provide additional support to onboarding students and the need to reduce barriers to enrolling in classes.

Administrators discussed setting up additional resources with one of their tools called Navigate to provide clear and consistent communications to students. One challenge that administrators discussed was that during the Spring 2020 through Spring 2021, colleges lost the ability to recruit and help seniors at their local high schools complete enrollment applications, FAFSA for financial aid, and scholarship applications. High schools were closed and shifted to remote learning or if in-person, they had restrictions on visitors to the schools. Administrators discussed that staff promoted online webinars or meetings to explain processes, provide assistance, and answer questions.

Administrators discussed in this study that students and even some faculty and staff members had to use the wifi access established in parking lots to complete courses, teach courses, or complete job duties (D'Amico et al., 2022; Hu, 2020). To solve issues of inequality and disparities from the digital divide, high-performance broadband is needed for everyone in the United States (Zhang et al., 2020). Many federal initiatives and executive orders have been implemented; however, rural areas still lack availability or options for adequate broadband. The digital divide has widened the equity gaps.

Administrators shared that students' faced challenges of childcare, access to technology resources, loss of family members, and financial issues. With the stay-at-home orders, many students lost jobs or had family members in their household lose jobs. Some students had to pick

up multiple jobs to support their family while others struggled to find jobs. Each student is different and may need a different level of support than others. Jarboe's (2021) study recommended providing support to student-parents as they had to assist with helping their children complete assignments through remote learning and share technology resources with their children. Moreover, the mental health of students became an overwhelming concern during COVID-19 for students where students could be impacted by insecurity, feelings of isolation, emotional distress, increased substance abuse or use, fear, and insomnia (Pfefferbaum & North, 2020).

Implications for Practice

The current study provides information about how COVID-19 impacted enrollment management practices at rural community college through the perceptions of mid- to senior-level administrators. Data were collected approximately one year after the onset of the COVID-19 and stay-at-home orders were issued to the flatten the curve. Implications for practice by community college leaders and legislators follow.

Ready to Pivot

COVID-19 has been unique in terms of the time that it has impacted higher education operations. Through the varying phases of COVID-19, administrator responses required (a) a quick transition to remote teaching, learning, and operations; (b) plans to re-opening that mandated colleges to implement social distancing, protective shields, masks, and contact tracing; (c) having vaccines available and the requirements around them for faculty and staff of community colleges; (d) a plan to shift back to fully remote operations and learning for shorter periods of time due to additional variants of COVID-19; and (e) plans to fully reopen without any protective measures while still monitoring for any on-campus outbreaks and local trends.

Each of these phases, required leaders to look at college operations to determine if the college was meeting the mission and ensuring student success.

College leaders need to have plans to be ready to pivot by transitioning to instruction and student support to online learning in the event of another major outbreak or future crisis.

Strategic and crisis planning need to include ways to be prepared and ready to pivot to online instruction and support. Strategic planning could help college leaders reduce fears by effectively planning and including measures to be ready for a crisis when it occurs by having the necessary infrastructure in place (Sparkman-Key et al., 2021).

COVID-19 has highlighted the need for more education regarding crisis management including determining how leaders will address the variations of crises such as weather-related, gun violence, biological, race related riots, and health pandemics. It is likely impossible to cover exactly how to each crisis individually but expansion of crisis training beyond weather-related crises is needed. Many organizations and associations have crisis trainings. There is a need for the trainings to be expanded and cover additional variations of crises. Higher education doctoral programs, system office trainings, and American Association of Community Colleges (AACC) should review training and curriculum provided on crises and develop additional training to help leaders be prepared for future crises.

Review Onboarding Processes and Supports

Community college leaders should review the onboarding processes for prospective students entering in the enrollment management funnel from being a prospect to enrolling in classes at their college. A successful onboarding process will help students reach student success by completing the class or the credential they needed. The review should include a reflection on the data to determine if and where students are being lost in the enrollment management funnel.

There are many points in the funnel where the student could get lost such as issues with completing the application, understanding the college jargon or language, understanding pre-requisites for courses, applying for financial aid, or payment processes. College leaders should determine where barriers exist and attempt to provide a standardized solution or remove barriers where possible.

College leaders will need to learn the best methods to communicate with and provide services to different generations. Many Generation Z students prefer to text or chat versus talking over the phone and want to obtain information quickly. Generation Z is the first generation to be a digital native whereby having access to a smartphone and not knowing any different. The mission and values of the college should be reflected in the communications and the communications should be dynamic in nature. Now with remote operations, students are willing to meet with student services staff by video conference, if they have the technology to support it.

Community college leaders should review existing technology and implement technology to help provide automated support to students. Technology that could help support automated support could include Customer Relationship Management (CRM) and AI Chatbots. The CRM could help staff and managers easily identify prospective and applied students to the college, provide ways to monitor ongoing communications with the student, and track where the student is within the pipeline. The AI Chatbot could help staff and students by answering general questions simulating a human-like conversation. Providing additional support through technology can help leaders to provide services when the students need them and help the students be successful with starting at the college.

College leaders should review the communications being sent from the college to determine if the communications contain jargon or language that would be difficult to understand

by diverse student populations. The communications should be reviewed for length, how the communications are sent, and the frequency of the communications. College leaders should concentrate on identifying ways in their communications to let the students know what barriers they may face, the steps that they need to complete, and how the college can help them achieve student success.

Rural community colleges have limited staff resources and often have staff “wearing multiple hats” which leaves them stretched and limited in their ability to get all of the necessary tasks completed. To be able to assist students through the enrollment funnel pipeline, college leaders should advocate for more funding for advisors to assist students with onboarding and additional wrap-around services. Added advisors could assist with getting students through the onboarding processes and ensure the students have a full understanding of the degree that they have enrolled in, as well as the support needed to finish their credential. These advisors could work varying shifts with 24/7 support to be available when students are reaching out. Legislators should provide additional advising support to help students through the process so that they could earn credentials and fill needed jobs within the community.

Part of the enrollment funnel includes selecting classes from the course offerings. College leaders should evaluate how classes can and will be taught to students. The shift to remote learning added additional modalities that colleges had not been using, such as synchronous, asynchronous, HyFlex, and hybrid models. College leaders should review their class schedule processes for flexibility to determine if classes are available when students want to take them, the duration of the classes (8-week, 12-week or standard 15- or 16-week sessions), and availability so that students can complete their programs in a timely manner to be successful.

Digital Divide

The digital divide is not a new concept for rural community college leaders, as they have been providing open computer labs and resources for students that take distance learning classes. COVID-19 made this topic become a top priority. Many low-income students attend community college and have limited access to quality internet. Studies indicated that the digital divide still exists. As stated in Chapter four, Fran shared that a faculty member and student were in the college's parking lot on the college's wifi during the lockdown. One was teaching the class and one was taking the class both side-by-side in their cars. Students and instructors had to find ways to continue instruction and learning by finding adequate internet access.

As highlighted by this study, administrators need to continue to advocate for their communities to have access to quality and affordable broadband in their students' homes so that they may complete their education and have equal access to resources. COVID-19 has reinforced the concept that quality internet access is a necessity, not a luxury (Jones & Reinecke, 2017). Some scholars have declared that quality internet should be classified as a basic, fundamental utility, as is electrical and telephone service (Beard et al., 2017; Jones & Reinecke, 2017). State policy makers should additional policies around providing quality and affordable broadband access to rural citizens. Adequate and quality broadband access is a necessity just as is electricity to ensure that students are successful.

Many students attending rural community colleges are considered low-income and underserved. Low-income students are living in poverty. Helping a student earn a degree or credential is one way to help remove the student from the cycle of generational poverty (Williams & Nourie-Manuele, 2018). A student who has reached their academic goals is more likely to be active in the community. Research has shown that if a student is on welfare,

obtaining a degree improves the likelihood that students will not return to public assistance (Aziz, 2015; Belfield & Bailey, 2011). The community college's mission is to provide education to its residents, thus assisting educated residents to obtain jobs to support the community economically. More educated citizens will also help attract new businesses to the community.

Work/Life Balance

COVID-19 exasperated the need for higher education employees to be available more and in different ways to students. During the emergency remote operations, employee fatigue was discussed by participants in this study as well as the difficulty of maintaining the balance of the lines between work and personal lives. College leaders should look at policies to address work/life balance for employees. A typical work schedule of 8 a.m. to 5 p.m. may not be the best solution to support college operations as college's review operations in a post-pandemic environment. College leaders should evaluate the timing of when student concerns arise, review the best operational hours of employees to address the student needs, and determine available options of technology to assist with supporting students. Leaders should define expected working hours of employees and define the acceptable time period of when student concerns need to be answered. The expectations for faculty response should be indicated in the course syllabus.

College leaders could plan to support employees by providing workshops or scheduled meetings to help reduce stress such as coffee hours, mediations sessions, writing workshops, and supporting wellness activities (Sparkman-Key et al., 2021). Additionally, college leaders should focus on wellness programs which may have a correlation to positive impacts on productivity (Sparkman-Key et al., 2021). These trainings and programs could help employees better serve students and help with overall student success. College leaders should review mental health services for their employees. Employees may have experienced mental health related issues from

the pandemic and may still be dealing with ways to cope. College leaders should review training opportunities that will help employees deal with trauma or mental health related issues in their classroom, on-campus, or while providing services to students.

Theoretical Considerations

The findings of this study could supplement existing literature regarding resource dependency theory. Resource dependency theory suggests that colleges are dependent upon external resources (Hossler & Hoezee, 2001). At the onset of COVID-19, the administrators were uncertain about future enrollment at the colleges and froze spending unless specific approvals were received. At the system-level, a hiring freeze was implemented until the *CARES/HEERF* funds were allocated.

The findings of this study supplement Bronfenbrenner's (1989) ecological systems theory using two factors. The first factor was the units of the enrollment management offices working together to share information, goals, and strategies (Hossler & Hoezee, 2001). COVID-19 forced administrators to change business processes at their institutions which caused additional communications between offices to determine how to deliver services and information to students. The second factor was from a student perspective and building the relationships with advisors or staff to work through the enrollment management process easier.

Recommendations for Further Research

COVID-19 impacted all colleges and universities around the world. The lasting impacts of COVID-19 to education will be felt for years to come. The first recommendation is replicate this study in another state. This study focused on one state system and there could be strategies implemented in another state that would work to address a crisis better in the future.

Additional research on how the digital divide impacts rural community college enrollment would be beneficial. In this regard, rural college leaders would want to know if the digital divide has increased equity gaps in their service regions. Another recommendation for future research would be to replicate the current study using urban colleges instead of rural, and additional future studies could examine this issue from a different viewpoint such as the perspectives of faculty members. An additional recommendation is to conduct a study to determine student perceptions regarding the marketing and communications section of the CEMS (items 11-17) to see if it is consistent with administrator perceptions in this study. Finally, a future exploration of this topic could follow a longitudinal design to examine enrollment management practices during a crisis and in the subsequent enrollment years.

Conclusion

COVID-19 challenged rural community college leaders in their role to support the local community and the college. Being a rural community college leader often involves making hard decisions on whether to support the best interest of the college or the community. The shift to remote learning and operations added complexity to the decision-making processes of senior leadership at community colleges whose responsibility is to ensure that the mission is fulfilled (Ayers, 2017) and provide open-access admissions to the students (Vaughan, 1997).

Many additional challenges are ahead for mid- to senior-level administrators including addressing continued enrollment declines. As administrators need to be ready to pivot based on data trends, they also need to be mindful of decreasing the digital divide. This could provide low-income Americans with the tools necessary to increase economic and social mobility while serving to fulfill social justice by providing equal opportunities. COVID-19 has taken an emotional toll on college leadership as well faculty and staff. College leaders and legislators can

still do more to help improve the lives of students, reduce equity gaps, and improve social mobility of students within the communities.

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Appendix A

Interview Protocol

Organization of investigation: College Alias

Interviewee (Title and Name): _____

Interviewer: Robin C. Daniel

Institution: Old Dominion University

RESEARCH QUESTIONS:

1. How do academic administrators at rural community colleges describe the changes occurring to enrollment management practices as a result of COVID-19 and the financial impact of the pandemic?
2. How are rural community college academic administrators at rural community colleges making enrollment management process decisions as a result of COVID-19?
 - a. How are the financial implications of COVID-19 affecting rural community college academic administrators' decision-making processes?

Interview Protocol (about 10 Minutes)

Part I: Introductory Session Objectives (10 minutes). Build rapport, describe the study, provide additional context, and answer any questions (informed consent form would be reviewed and signed prior to interview).

Introductory Process

Thank you for your time today. This study is entitled Enrollment Management Strategies as a Result of COVID-19 at Rural Community Colleges. The uncertainty of enrollments due to the COVID-19 pandemic have created concerns regarding enrollment management practices and the related financial implications. Minimal research has been found regarding the intersection of enrollment management practices and crisis management. The purpose of this sequential explanatory study is to research rural community college mid to senior-level academic administrators' perceptions of how a crisis impacts enrollment management practices. Participants will discuss their experiences, knowledge, and perceptions of changes occurring to enrollment management practices and the subsequent financial challenges resulting from the coronavirus pandemic within rural Virginia community colleges. Additionally, the study will examine the procedures being used to decide changes. This study is to expand the body of research regarding enrollment management practices and to create a more thorough understanding of how a crisis impacts enrollment at rural community colleges.

Because your responses are important, and I want to make sure to capture everything you say, I would like to record our conversation today. Do I have your permission to record this interview? [1] if yes, thank the participant, let them know you may ask the question again as you start recording, and then turn on the recording equipment; (2) if no, proceed with next section].

I will also be taking written notes. I can assure you that all responses will be confidential, and a pseudonym will be used when quoting from the transcripts. I will be the only one privy to the

recordings which will be eventually deleted after they are transcribed. To meet our human subjects requirements at the university, you must sign the form to provide authorization. If I unable to obtain an electronic signature from you, an agreement statement collected through email will be used.

Essentially, this document states that: (1) all information will be held confidential, (2) your participation is voluntary and you may stop at any time if you feel uncomfortable, and (3) we do not intend to inflict any harm. Do you have any questions about the interview process or how your data will be used?

This interview should last less than an hour. During this time, I have several questions that I would like to cover. If time begins to run short, it may be necessary to interject in order to push ahead and complete this line of questioning. Do you have any questions at this time?

Part II: Interviewee Background (**about 50 minutes**). Objective: To establish rapport and obtain the story of the participants in general with the research topic.

1. How are you today?
2. Explain your experience with changes to onboarding new students and retaining existing students, if any, regarding enrollment management practices as a result of COVID-19.
 - *[Probing question if needed based on participant's oversight (recruiting, admissions, advising, financial aid, class registration, class offerings, instructional management, marketing, and communications):*
 - *If changes, How have the changes modified your department's practices as a result of COVID-19?*
 - *If no changes, Tell me how you feel that there were no changes to your department as a result of COVID-19?]*
3. Tell me about your experiences with the decision-making processes during COVID-19?
4. How are the financial implications of COVID-19 affecting the decision-making processes?
5. Is there anything else that you would like to add that would be beneficial to the discussion?

Appendix B

Research Participant Information and Consent Form: Survey

Email Invitation

Greetings,

My name is Robin Daniel, and I am currently a doctoral candidate in the Community College Leadership, Ph.D. program at Old Dominion University in Norfolk, Virginia. My research is regarding enrollment management practices used by rural community colleges in Virginia during the Fall 2020 term as a result of COVID-19. I am interested in understanding the mid to senior-level academic administration perceptions of the decision-making process and financial changes resulting from COVID-19.

Based on your directory information on your college's website, you fit the qualifications for my study. I would like to invite you to complete a survey (provide link). I can send you more information on the study, including the informed consent form detailing your voluntary participation. The names, titles, and departments of the participants will not be identified in my study.

I understand that you are very busy in your position, but I would appreciate the opportunity to obtain information from you via this survey (provide link). I appreciate your consideration.

All the best,
Robin Daniel

Informed Consent

This informed consent will be the first page of the survey once the participant clicks the link.

Dear Participant:

The purposes of this form are to give you information that may affect your decision whether to say YES or NO to participate in this research, and to record the consent of those who say YES. You are being asked to participate in a research project. Researchers are required to provide a consent form to inform you about the study, to convey that participation is voluntary, to explain risks and benefits of participation, and to empower you to make an informed decision. You should feel free to ask the researchers any questions you may have.

Study Title: Enrollment Management Strategies as a Result of COVID-19 at Rural Community Colleges

1. RESEARCHERS:

Mitchell R. Williams, Ph.D., Responsible Project Investigator, Associate Professor, College of Education, Department of Educational Foundations and Leadership, Old Dominion University

Robin C. Daniel, M.S., Investigator, Doctoral Candidate, Higher Education Program, College of Education, Department of Educational Foundations and Leadership, Old Dominion University

2. PURPOSE OF RESEARCH:

As a mid to senior-level academic administrator, you are being asked to participate in a research study exploring the perceptions of how a crisis impacts enrollment management practices. Your participation will contribute to the knowledge surrounding how a crisis influences enrollment at rural community colleges. This study, entitled “Enrollment Management Strategies as a Result of COVID-19 at Rural Community Colleges” is conducted by Dr. Mitchell R. Williams and Robin C. Daniel. Please note that if you are under 18 years old, you are not able to take part in this study.

3. WHAT YOU WILL DO:

You will be asked to complete an electronic survey of approximately 15 minutes in length.

4. RISKS AND BENEFITS:

This study poses little to no risk to participants because information will be kept confidential. As with any research, there is some possibility that you may be subject to risks that have not yet been identified. Participants will benefit from engaging in the process of self-reflection and developing a voice for their experiences while contributing to the literature that explores enrollment management and mid to senior academic administrators’ perspectives.

Materials, while confidential, may be subject to federal subpoena but every effort will be made to protect the confidentiality of the participants. There are no direct benefits for participation in the study. The researchers may choose to retain those benefits described as potential or indirect.

5. PRIVACY AND CONFIDENTIALITY:

Your confidentiality will be protected to the maximum extent allowable by law. Any direct identification information, including your name, will be removed from data when responses are analyzed. All data will be secured in locked file cabinets and electronic data will be password protected. The data will be accessible only to the researchers associated with this study and the

Institutional Review Board. During dissemination, findings will be reported by theme (aggregating the data). The results of this study may be published or presented at professional meetings, but the identities of all research participants will remain confidential. Special care will be taken to ensure contextual details do not give away your identity. Although every attempt will be made to keep your identification private, some distinguishing responses that you share and other comments may reflect your identity. All data will be stored for at least five years after the project closes. Five years after the conclusion of the study, the data (digital audio files, transcripts, my notes, documents related to your teaching online) will be destroyed.

6. YOUR RIGHTS TO PARTICIPATE, SAY NO, OR WITHDRAW:

Your participation is completely voluntary. It is OK for you to say NO. Even if you say YES now, you are free to say NO later, and walk away or withdraw from the study. You may choose not to participate at all, or to answer some questions and not others. You may also change your mind at any time and withdraw as a participant from this study with no negative consequences. Your decision will not affect your relationship with Old Dominion University, or otherwise cause a loss of benefits to which you might otherwise be entitled

7. COSTS AND COMPENSATION FOR BEING IN THE STUDY:

You will receive no compensation for participating in this study.

8. CONTACT INFORMATION FOR QUESTIONS AND CONCERNS:

If you have any questions later on, then the researchers should be able to answer them; please contact the researchers Dr. Mitchell R. Williams, 2322 Education Building, Old Dominion University, Norfolk, VA, mrwillia@odu.edu, 757-683-4344, or Robin C. Daniel, rdani002@odu.edu, 109 Campus Drive, Alberta, VA, 23938, 434-637-3712. If you have questions or concerns about your role and rights as a research participant, would like to obtain information or offer input, or would like to register a complaint about this study, you may contact, anonymously if you wish, Dr. Laura Chezian, Chair of the Darden College of Education Human Subjects Review Committee at (757) 683-7055 or the Old Dominion University Office of Research, at 757-683-3460.

9. VOLUNTARY CONSENT:

By typing your name below and clicking yes, you are indicating your voluntary participation in this study and acknowledge that you may: 1) choose not to participate in the study; 2) refuse to answer certain questions; and 3) discontinue your participation at any time without any penalty or loss of benefits to which you are otherwise entitled. You are saying that you have read this form or have had it read to you, that you are satisfied that you understand this form, the research study, and its risks and benefits. The researchers should have answered any questions you may have had about the research. The researcher will give you a copy of this form for your records. And importantly, by signing below, you are telling the researcher YES, that you agree to participate in this study. The researcher should give you a copy of this form for your records.

Your typed name serves as a signature below to indicate your voluntary agreement to participate in this study.

Name (Printed)_____

In addition, your signature below means that you voluntarily agree to allow your responses to be digitally recorded.

Question to proceed

Yes, I agree to participate in the study

No, I do not agree to participate in the study

Appendix C

Participants Titles

Titles will vary by institution. Participants will be selected with the following titles:

- President
- Vice President of Academic Affairs
- Vice President of Academics and Student Services
- Vice-President of Student Affairs
- Vice-President of Enrollment Management and Student Success
- Vice-President of Finance and Administration
- Vice-President/Dean of Enrollment Management
- Vice-President/Dean of Student Success
- Director of Financial Aid
- Director of Marketing
- Director of Institutional Effectiveness or Research
- Dean of Instruction
- Coordinator of Admissions and Records

Appendix D

Survey Instrument

Introduction: The uncertainty of enrollments due to the COVID-19 pandemic have created concerns regarding enrollment management practices and the related financial implications. As a mid to senior-level administrator, you are being asked to participate in a research study exploring the perceptions of how a crisis impacts enrollment management practices

Purpose: The purpose of this sequential explanatory study is to research rural community college mid to senior-level academic administrators' perceptions of how a crisis impacts enrollment management practices. Participants will discuss their experiences, knowledge, and perceptions of changes occurring to enrollment management practices and the subsequent financial challenges resulting from the coronavirus pandemic within rural Virginia community colleges. Additionally, the study will examine the procedures being used to decide changes. This aim of this study is to expand the body of research regarding enrollment management practices and to create a more thorough understanding of how a crisis impacts enrollment at rural community colleges.

Procedure: This survey is designed to be completed electronically and should take approximately 15 minutes.

Participation and Consent: Your participation in this survey is voluntary. You may choose not to participate. Survey results are confidential and will be kept on a password protected computer in a password protected file. Before proceeding with the survey, you will be provided a consent form which you must read and agree before proceeding with the survey. If you have any questions about this survey or about this research project please contact Robin C. Daniel, rdani002@odu.edu or Dr. Laura Chezan, Chair of the Human Subjects Review Committee for the Darden College of Education and Professional Studies, lchezan@odu.edu or 757-683-7055.

You may skip a question you do not wish to answer.

1. College size in full time equivalent (FTE) for Fall 2020
☐ less than 999 ☐ 1,000 to 1,499 ☐ 1,500 to 3,999

2. Areas of responsibility (Select all that apply)
☐ Admissions ☐ Marketing ☐ Student Services
☐ Advising ☐ Recruiting
☐ Financial Aid ☐ Student Activities

3. For Fall 2020, how are classes delivered (Select all that apply):
☐ In-Person, on-campus or centers, for all most classes
☐ In-Person, on-campus or centers, for technical or lab classes
☐ Asynchronous (fully online, no scheduled meeting time)

- _____ Synchronous (scheduled meeting time)
4. How long have you been in your current position:
- _____ less than 1 year
- _____ 1 to 5 years
- _____ 6 to 10 years
- _____ 11 to 15 years
- _____ 15 or more years

Respond to the following statements using this scale:

1-Strongly agree

2-Agree

3-Neither agree nor disagree

4-Disagree

5-Strongly disagree

Enrollment Management Operations:						
		1	2	3	4	5
5.	An integrated, institutional approach to enrollment management is in place (e.g., marketing, recruitment, retention, student services, financial aid)					
6.	Enrollment management is embedded in the strategic planning process					
7.	Strategies are aligned with the internal environment (e.g., mission, institutional strengths, resource constraints, technology capability, campus culture)					
8.	Strategies are aligned with the external environment (e.g., mission, institutional strengths, resource constraints, technology capability, campus culture)					
9.	The enrollment operation has positively influenced student services (e.g., improvements in student satisfaction, student complaints, turnaround time, student runaround, accuracy of information, access to information)					
10.	There is campus-wide awareness by faculty and staff of the college's enrollment management effort					
Marketing & Communications to recruit new students and retain current students:						
11.	The marketing message is reflected in day-to-day behavior on campus					
12.	The marketing message influences institutional decision-making					
13.	Courses are offered at times and places that are convenient to students.					
14.	There is a consistent and distinctive marketing message and look.					
15.	Recruitment communications are frequent enough to build awareness or influence student choice					
16.	Recruitment communications are delivered promptly					
17.	Recruitment communication to students are clear					
COVID-19 & Impacts:						
18.	COVID-19 changed recruitment/on-boarding practices					
19.	COVID-19 changed retention practices					

20.	COVID-19 negatively influenced student retention and persistence					
21.	COVID-19 changed services to support students					
22.	COVID-19 is expected to positively impact enrollment by increasing full-time equivalents (FTEs)					
23.	Barriers to applying and enrolling at the college have been reduced due to COVID-19					
24.	Marketing messages were impacted by COVID-19					
Decision-making practices regarding enrollment management operations:						
25.	Decision-making practices have changed during COVID-19					
26.	Decision-making practices have been influenced by financial implications.					
27.	Decision-making practices are quicker in COVID-19 environment.					

Adapted from Enrollment Management Instrument (Black, 2004).

28. Do you have any additional comments that you would like to share about enrollment management operations at your institution that was not shared above?

Appendix E

CEMS Dashboards

Figure 6

CEMS Summary Results for Petunia Community College



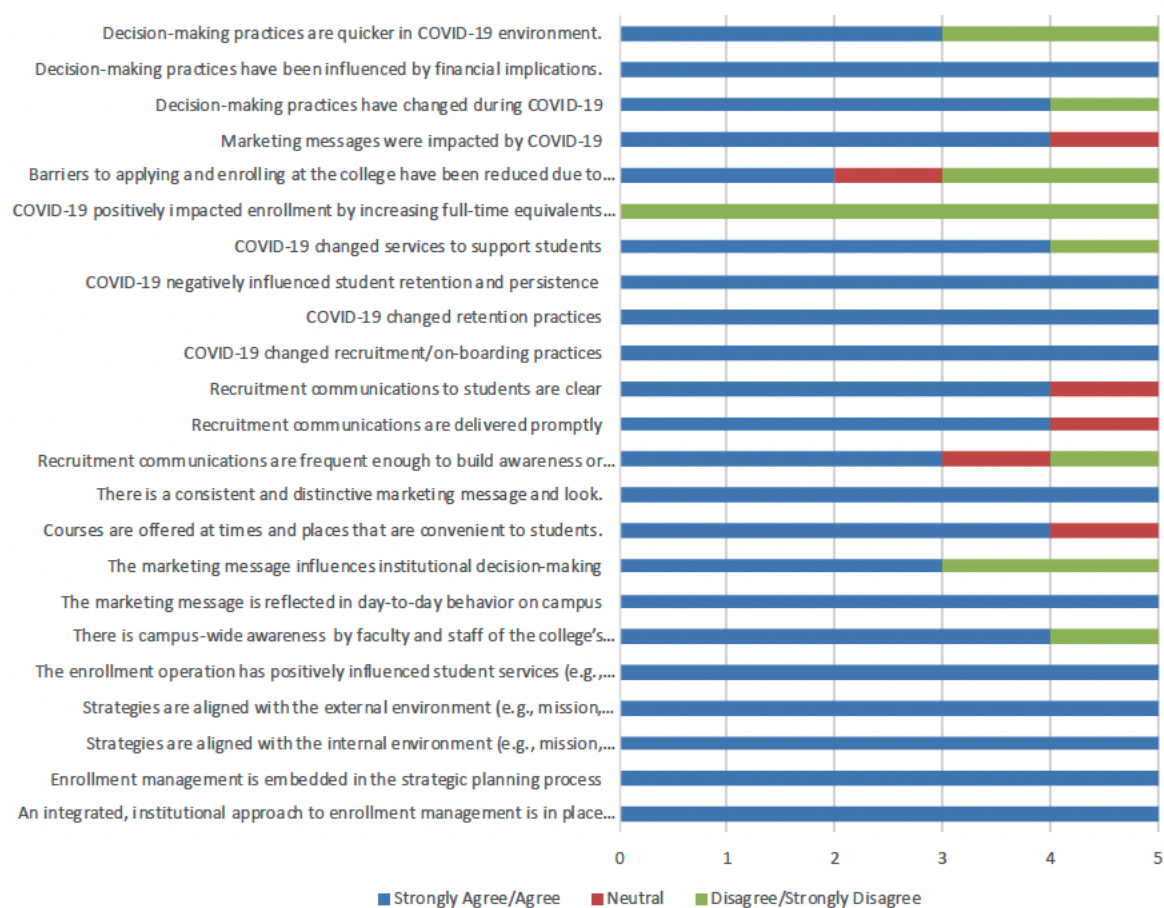
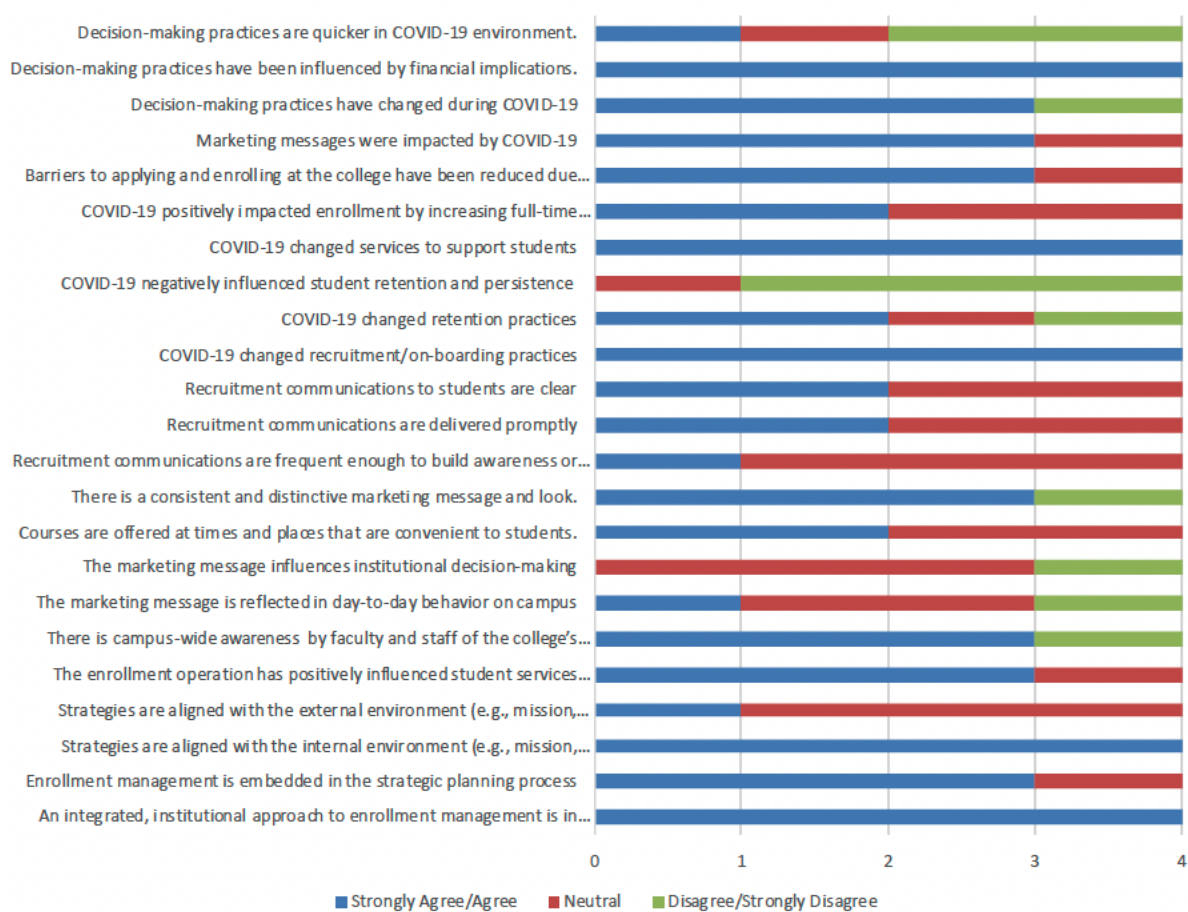
Figure 7*CEMS Summary Results for Rose Community College*

Figure 8*CEMS Summary Results for Zinnia Community College*

Appendix F

Research Participant Information and Consent Form: Interview

E-mail Subject: Invitation to participate in research

Good afternoon,

My name is Robin Daniel and I am conducting research on enrollment management strategies at rural community colleges following the COVID-19 Pandemic. For this study, I will be interviewing senior academic administrators at rural community colleges regarding perceptions of how a crisis impacts enrollment management practices. Participants will discuss their experiences, knowledge, and perceptions of changes occurring to enrollment management practices and the subsequent financial challenges resulting from the COVID-19 pandemic within rural Virginia community colleges. Additionally, the study will examine the procedures being used to make changes in enrollment management.

I am writing to invite you to be interviewed for this study. If you are interested, please email me at rdani002@odu.edu. I will send you a consent form which must be signed and returned prior to the interview. The interview should take no more than 60 minutes, and it will be conducted using Zoom. Participation in all aspects of this study is voluntary, and you can withdraw from the study at any time.

The findings of this study will be deidentified, and your anonymity protected I would be pleased to share the results of this study with you. Your contribution to this work is important. I look forward to talking with you. Please let me know if you have questions.

Best wishes,

Robin Daniel
Ph.D. Candidate, Community College Leadership
Old Dominion University
rdani002@odu.edu

Informed Consent

Dear Participant:

The purposes of this form are to give you information that may affect your decision whether to say YES or NO to participate in this research, and to record the consent of those who say YES. You are being asked to participate in a research project. Researchers are required to provide a consent form to inform you about the study, to convey that participation is voluntary, to explain risks and benefits of participation, and to empower you to make an informed decision. You should feel free to ask the researchers any questions you may have.

Study Title: Enrollment Management Strategies as a Result of COVID-19 at Rural Community Colleges

Dear Participant:

The purposes of this form are to give you information that may affect your decision whether to say YES or NO to participate in this research, and to record the consent of those who say YES. You are being asked to participate in a research project. Researchers are required to provide a consent form to inform you about the study, to convey that participation is voluntary, to explain risks and benefits of participation, and to empower you to make an informed decision. You should feel free to ask the researchers any questions you may have.

Study Title: Enrollment Management Strategies as a Result of COVID-19 at Rural Community Colleges

1. RESEARCHERS:

Mitchell R. Williams, Ph.D., Responsible Project Investigator, Associate Professor, College of Education, Department of Educational Foundations and Leadership, Old Dominion University

Robin C. Daniel, M.S., Investigator, Doctoral Candidate, Higher Education Program, College of Education, Department of Educational Foundations and Leadership, Old Dominion University

2. PURPOSE OF RESEARCH:

As a mid to senior-level academic administrator, you are being asked to participate in a research study exploring the perceptions of how a crisis impacts enrollment management practices. Your participation will contribute to the knowledge surrounding how a crisis influences enrollment at rural community colleges. This study, entitled “Enrollment Management Strategies as a Result of COVID-19 at Rural Community Colleges” is conducted by Dr. Mitchell R. Williams and Robin C. Daniel. Please note that if you are under 18 years old, you are not able to take part in this study.

3. WHAT YOU WILL DO:

You will be asked to complete a semi-structured interview of approximately 60 minutes in length.

4. RISKS AND BENEFITS:

This study poses little to no risk to participants because information will be kept confidential. As with any research, there is some possibility that you may be subject to risks that have not yet been identified. Participants will benefit from engaging in the process of self-reflection and developing a voice for their experiences while contributing to the literature that explores enrollment management and academic administrators’ perspectives.

Materials, while confidential, may be subject to federal subpoena but every effort will be made to protect the confidentiality of the participants. There are no direct benefits for participation in the study. The researchers may choose to retain those benefits described as potential or indirect.

5. PRIVACY AND CONFIDENTIALITY:

Your confidentiality will be protected to the maximum extent allowable by law. Any direct identification information, including your name, will be removed from data when responses are analyzed. All data will be secured in locked file cabinets and electronic data will be password protected. The data will be accessible only to the researchers associated with this study and the Institutional Review Board. During dissemination, findings will be reported by theme (aggregating the data). The results of this study may be published or presented at professional meetings, but the identities of all research participants will remain confidential. Special care will be taken to ensure contextual details do not give away your identity. Although every attempt will be made to keep your identification private, some distinguishing responses that you share and other comments may reflect your identity. All data will be stored for at least five years after the project closes. Five years after the conclusion of the study, the data (digital audio files, transcripts, my notes, documents related to your teaching online) will be destroyed.

6. YOUR RIGHTS TO PARTICIPATE, SAY NO, OR WITHDRAW:

Your participation is completely voluntary. It is OK for you to say NO. Even if you say YES now, you are free to say NO later, and walk away or withdraw from the study. You may choose not to participate at all, or to answer some questions and not others. You may also change your mind at any time and withdraw as a participant from this study with no negative consequences. Your decision will not affect your relationship with Old Dominion University, or otherwise cause a loss of benefits to which you might otherwise be entitled

7. COSTS AND COMPENSATION FOR BEING IN THE STUDY:

You will receive no compensation for participating in this study.

8. CONTACT INFORMATION FOR QUESTIONS AND CONCERNS:

If you have any questions later on, then the researchers should be able to answer them; please contact the researchers Dr. Mitchell R. Williams, 2322 Education Building, Old Dominion University, Norfolk, VA, mrwillia@odu.edu, 757-683-4344, or Robin C. Daniel, rdani002@odu.edu, 109 Campus Drive, Alberta, VA, 23938, 434-637-3712. If you have questions or concerns about your role and rights as a research participant, would like to obtain information or offer input, or would like to register a complaint about this study, you may contact, anonymously if you wish, Dr. Laura Chezán, Chair of the Darden College of Education Human Subjects Review Committee at (757) 683-7055, or the Old Dominion University Office of Research, at 757-683-3460.

9. VOLUNTARY CONSENT:

Option 1: Electronic Signature obtained through software (DocuSign or Adobe):

By electronically signing below, you are indicating your voluntary participation in this study and acknowledge that you may: 1) choose not to participate in the study; 2) refuse to answer certain questions; and 3) discontinue your participation at any time without any penalty or loss of benefits to which you are otherwise entitled. You are saying that you have read this form or have had it read to you, that you are satisfied that you understand this form, the research study, and its risks and benefits. The researchers should have answered any questions you may have had about the research. The researcher will give you a copy of this form for your records. And importantly, by signing below, you are telling the researcher YES, that you agree to participate in this study. The researcher should give you a copy of this form for your records.

Your signature below indicates your voluntary agreement to participate in this study.

Electronic Signature _____ Date _____
Name (Typed) _____

In addition, your signature below means that you voluntarily agree to allow your responses to be digitally recorded.

Electronic Signature _____
Date _____

Option 2: Returned Email Statement

I agree that I am indicating my voluntary participation in this study and acknowledge that I may: 1) choose not to participate in the study; 2) refuse to answer certain questions; and 3) discontinue my participation at any time without any penalty or loss of benefits to which I am otherwise entitled. I am saying that I have read this form, that I am satisfied that I understand this form, the research study, and its risks and benefits. The researchers have answered any questions I may have had about the research. The researcher has given me a copy of this form for my records. And importantly, by typing this statement with my name below, I am telling the researcher YES, that I agree to participate in this study.

Participants Name _____

10. INVESTIGATOR'S STATEMENT:

I certify that I have explained to this subject the nature and purpose of this research, including benefits, risks, costs, and any experimental procedures. I have described the rights and protections afforded to human subjects and have done nothing to pressure, coerce, or falsely entice this subject into participating. I am aware of my obligations under state and federal laws and promise compliance. I have answered the subject's questions and have encouraged him/her to ask additional questions at any time during the course of this study. I have obtained the above electronic signature(s) or agreement regarding this consent form.

Signature _____
Date _____
Name (Printed) _____

Appendix G

Old Dominion University Education Human Subjects Review Committee Exemption



OFFICE OF THE VICE PRESIDENT FOR RESEARCH

Physical Address

4111 Monarch Way, Suite 203
Norfolk, Virginia 23508

Mailing Address

Office of Research
1 Old Dominion University
Norfolk, Virginia 23529
Phone(757) 683-3460
Fax(757) 683-5902

DATE: February 9, 2021

TO: Mitchell Williams

FROM: Old Dominion University Education Human Subjects Review Committee

PROJECT TITLE: [1711767-1] Enrollment Management Strategies at Rural Community Colleges Resulting from the COVID-19 Pandemic

REFERENCE #:

SUBMISSION TYPE: New Project

ACTION: DETERMINATION OF EXEMPT STATUS

DECISION DATE: February 9, 2021

REVIEW CATEGORY: Exemption category # 2

Thank you for your submission of New Project materials for this project. The Old Dominion University Education Human Subjects Review Committee has determined this project is EXEMPT FROM IRB REVIEW according to federal regulations.

We will retain a copy of this correspondence within our records.

If you have any questions, please contact Laura Chezan at (757) 683-7055 or lchezan@odu.edu. Please include your project title and reference number in all correspondence with this committee.

This letter has been electronically signed in accordance with all applicable regulations, and a copy is retained within Old Dominion University Education Human Subjects Review Committee's records.

Protocol Number: 21-8 Daniels

----- Forwarded message -----

From: [REDACTED] **Glenda** [REDACTED]
Date: Mon, Apr 26, 2021 at 9:02 AM
Subject: Survey: Enrollment management practices in Virginia
To: ROBIN DANIEL <rdani002@odu.edu>
Cc: [REDACTED]

Good morning,

Your research was approved.

All the best.

Glenda

----- Forwarded message -----

From: **Kevin** [REDACTED]
Date: Tue, May 11, 2021 at 9:21 AM
Subject: RE: Research Study
To: Robin Daniel <rdani002@odu.edu>

Robin,

The President's staff approved your research, and I don't see anything that would cause any issues. While there would normally be an IRB approval, I don't feel that would be necessary in this case. Therefore, you may proceed as you wish. If you need anything from [REDACTED], let me know.

Have a nice day,

Kevin

Appendix I
Document Analysis Protocol

1. Location: Where does information reside regarding COVID-19 protocols?
2. Reopening Plan: Does the college have reopening plan published?
 - a. Is the college open to the public or for walk-in services?
 - b. What measures are being taken to ensure safety for in-person classes or walk-in services?
3. Communication: What type of communication is posted on the COVID-19 page?
 - a. Specific student communications
 - b. Specific faculty/staff communications
 - c. Specific community notifications
4. What are the types of student services offered? How are services offered?
5. What types of classes are offered?
6. What kinds of enrollment-related marketing or recruiting is occurring?
7. What financial assistance is being offered to the students?
 - a. Additional funding
 - b. Technology support (laptops, hotspots)

VITA

ROBIN C. DANIEL

Old Dominion University
Darden College of Education and Allied Professions, 2300 Education Building
Department of Education Foundations and Leadership
Norfolk, VA 23529

EDUCATION

Ph.D., 2022, Community College Leadership, Old Dominion University
M.S., 2010, Information Systems Technology, Strayer University
B.S., 2008, Database Technology, Strayer University

HIGHER EDUCATION EXPERIENCE

Southside Virginia Community College, Albemarle, Virginia

Director of Institutional Effectiveness, Research, & Planning	06/2018-Present
Interim Dean of Student Success	01/2020-08/2020
Adjunct Instructor ITE	01/2019-05/2019
Software Applications Support Administrator	05/2003-05/2018
Adjunct Instructor IST	08/2012-05/2014
Computer Operations Technician	03/2000-05/2003
Administrative Support	01/1998-02/2000

PRESENTATIONS

<i>Navigate Best Practices</i> , VCCS, Charlottesville, Virginia	2020
<i>Faculty Training and Incentive Plan to Promote Navigate Adoption</i> , VCCS, Glen Allen, Virginia	2019
<i>Fostering Global Learning and Engagement</i> , Anglia Ruskin University, Cambridge, United Kingdom.	2019

AWARDS & SERVICES

Onboarding Redesign Workgroup, Virginia Community College System	2021-Present
Virginia Network Senior Leadership Seminar, American Council of Education	2018-2020
President's Council, Southside Virginia Community College	2018-Present
Council of Deans and Directors, Virginia Community College System	2018-Present
VCCS Academic Management Seminar	2018
Administrative Council, Southside Virginia Community College	2017-Present
Chancellor's Leadership Academy, Virginia Community College System	2010
VCCA Showcase Winner, Virginia Community College System	2007