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“This Is Anonymous, Right?” A Qualitative Study of Why Higher Education Students Cheat

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“THIS IS ANONYMOUS, RIGHT?”
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ABSTRACT

Academic dishonesty occurs in higher education. Students who choose to cheat will find a way no matter the assessment type, learning environment modality, and deterrents. Academic integrity in online assessments has been prevalent even before the COVID-19 pandemic. However, due to the recent increase in online learning modalities, cheating is at the top of faculty concerns, and many instructors believe that online assessments open the door for cheating.

I conducted a root causal analysis using an improvement science framework to identify why students cheat in higher education. This study identified two major themes of reasons students participate in academic dishonesty. First, the pressure of grades and GPA influence students to cheat. Second, personal pressures such as family expectations, time management skills (or lack thereof), and education expenses can lead students to believe they have no other options but to cheat.

Recommendations to alleviate grade and student pressures include a steering committee to identify updates to current policies and procedures related to GPA, a required academic integrity course for all students, time management and study resources for students, and assessment training for faculty. Educational leadership can create and implement interventions to help address the student pressures and, therefore, decrease the amount of academic dishonesty at higher education institutions.

DEDICATION

I want to dedicate my dissertation work to the two most important people in my life, my husband, Albert Rogers, and my daughter, Laila Rogers, who encouraged me to start and finish this degree. I also dedicate this work to my loving parents, Randy and Stella Alexander, for always having encouraging words.

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TABLE OF CONTENTS

LIST OF TABLES

Table Page

LIST OF FIGURES

CHAPTER ONE

INTRODUCTION AND OVERVIEW

Academic dishonesty occurs in higher education (e.g., McCabe et al., 2017; Anderman & Murdock, 2007). Research suggests that over two-thirds of students have cheated at least once in their college experience (McCabe et al., 2017; McKibban & Burdsal, 2013). Students who choose to cheat will find a way no matter the assessment type, learning environment modality, and deterrents (McCabe et al., 2001).

Introduction to Problem of Practice

Academic integrity in online assessments has been a prevalent issue even before the COVID-19 pandemic (e.g., Cole & Swartz, 2013; McCabe & Trevino, 2002; McCabe et al., 2001; McNabb & Olmstead, 2009). However, due to the recent increase in online learning modalities, cheating is at the top of faculty concerns, and many instructors believe that online assessments open the door for cheating (McNabb & Olmstead, 2009). Even though most research before 2019 showed inconclusive results that dishonest practices increase with online testing versus in-person testing (Cole & Swartz, 2013; Ladyshewsky, 2015), researchers agree that cheating occurs in higher education no matter the modality at the institutions (e.g., McCabe, 2005; McCabe et al., 2001).

Academic Integrity Research is Important

Preventing cheating at higher education institutions such as Clemson University is essential because of the high student expectations and real-world value of diplomas. With increasing academic dishonesty cases and almost half of the charges related to quiz or test assessments (Clemson University Office of Academic Integrity, 2021) (Please see Figure 2.2), it is necessary to address the increasing issues of academic misconduct. The International Center

for Academic Integrity ([ICAI], 2021) considers academic integrity imperative so that research and work will not lose value.

Academic dishonesty devalues the educational process. “Integrity is the cornerstone of academia” (McCabe et al., 2017, p. 4). People may question the quality of education at institutions with higher academic misconduct. Not to mention, today’s college students are tomorrow’s leaders. “The university should be a place with people who have strong values and convictions even in stressful situations” (McCabe et al., 2017, p. 9). Students across the nation and at Clemson University can become societal leaders in education, healthcare, business, and politics. Students will not be exposed to lessons in honesty and integrity if institutions cannot encourage a culture of integrity to help students make good decisions (Anderman & Murdock, 2007; McCabe et al., 2017).

Additionally, cheating skews data and gives inaccurate student progress. “Students who cheat without getting caught receive credit for learning outcomes that they have not actually mastered” (Parks-Leduc et al., 2021, para. 1). The purpose of any assessment is to measure what students have learned. Student cheating diminishes the accuracy of the assessment results (Anderman & Murdock, 2007). “Cheating undermines the intent and process of assessment” (Anderman & Murdock, 2007, p. 35), resulting in teachers being unable to determine whether a student knows the material, can solve the assigned problem, or complete the given task.

Also, cheating reduces the ability of faculty to adequately support [failing] students (Anderman & Murdock, 2007). Students are hindered in their progress towards a degree and career when they perform poorly in required foundational courses. Therefore, it is essential to provide students assistance when appropriate (Young et al., 2021). If students cheat, their

assessment does not accurately reflect their learning. Instructors will not identify these students as needing support. These students cannot access remediation or interventions and will not get the help or material they need. These students will move on without the foundational information needed to be adequately prepared for success.

Lastly, unethical behavior in college could lead to unethical behavior in the workplace (Nonis & Swift, 2001). In their study, Nonis and Swift (2001) found a high correlation between cheating at college and cheating at work. “Once an individual forms the attitude that cheating is acceptable behavior, he or she is likely to use this behavior, not only in the educational arena but also in other areas” (p. 75). Therefore, it is vital to increase awareness and understanding of unethical behavior in the college setting before students participate in these behaviors in the workplace. For example, business schools are often blamed for “cultivating unethical behaviors” in their students, who, in turn, participate in unethical behaviors in the business world (Parks-Leduc et al., 2021, para. 4). Addressing unethical behavior in college begins with finding the impetus behind unethical behaviors such as cheating.

Academic Dishonesty in the News

Cheating in higher education is not uncommon. In 2014, the University of North Carolina Chapel Hill held an eight-month-long investigation into a two-decade-long cheating scandal using “fake classes” with automatic grades for student-athletes (Beard & Dalesio, 2014). Every week, articles in higher education blogs, online publications, and news sources discuss the increase of academic dishonesty cases in online exams.

Recently, the *Duke Chronicle* released a report about the almost threefold increase in academic misconduct at Duke University over the Fall 2020 semester (Sirdeshmukh, 2021). In

March, the *Wall Street Journal* reported on a North Carolina State University [N.C. State] instructor who caught over 200 students cheating on his final exam. N.C. State's academic dishonesty cases also doubled over the 2019-2020 Academic Year (Hobbs, 2021). West Point had its "worst academic scandal since 1976," when they charged more than 70 cadets with cheating on an online exam (Brook, 2020). Virginia Commonwealth University saw a threefold increase in academic misconduct cases during the 2020-2021 academic year. Cases doubled at the University of Georgia and increased by fifty percent at The Ohio State University (Dey, 2021).

COVID-19 Pandemic

An increase in academic dishonesty in online assessments has become an even more complex problem due to the recent rise in online learning because of the COVID-19 pandemic (Clark et al., 2020; Dicks et al., 2020; Nguyen et al., 2020). Higher education instructors quickly switched to an online modality. The move to online was so rapid that many instructors were unprepared for online learning, including administering online assessments (Verhoef & Coetser, 2021). As the associate director of learning technology, I spoke to several Clemson University faculty who expressed their fears of an increase in opportunities for students to cheat in online exams (e.g., D. Taylor, personal communication, September 10, 2020; D. Weinbrenner, personal communication, September 16, 2021). With the number of academic integrity cases increasing at Clemson University, these fears are not without validity. Higher education students choose to cheat no matter the modality or type of the assessment (Ladyshewsky, 2015).

Researchers are still attempting to answer why there are more academic integrity cases during the COVID-19 Pandemic institution closures than in previous semesters (Mutongoza,

2021; Verhoef & Coetser, 2021). Mutongoza (2021) conducted semi-structured interviews with students and found that many students discovered more cheating opportunities due to online learning. These opportunities included a lack of policies or consequences and vigilance for online tests (Mutongoza, 2021).

Remote Proctoring Systems

One rarely addressed concern in academic integrity is that anti-cheating tactics and systems are a large industry that is costly to higher education institutions and their students (Newton, 2020). Utilizing proctoring services reduces academic dishonesty but does not eliminate it (Farland & Childs-Kean, 2021). Companies like Respondus (Web.respondus.com, n.d.), ProctorU (Proctoru.com, n.d.), RPNow (Psionline.com, n.d.), and Honorlock (Honorlock.com, n.d.) charge for virtual proctoring services. These online proctoring systems are expensive, which for many institutions is cost-prohibitive to use on every assessment in every course for every student (Farland & Childs-Kean, 2021).

While Respondus (Web.respondus.com, n.d.) uses artificial intelligence to review video footage of students taking tests, other systems like ProctorU (Proctoru.com, n.d.) and RPNow (Psionline.com, n.d.) employ humans who check the video footage looking for evidence of dishonest practice. These human-employed services bring up additional issues such as student privacy (Evers & Hofer, 2020) and increased student fees. Therefore, it is essential to identify the motivations behind students' decisions to cheat in online assessments for university leaders to apply cost-effective and non-burdening strategies targeting these specific motivations.

Problem of Practice

The problem of practice guiding this study is a proportion of higher education students cheat (e.g., McCabe et al., 2017; Anderman & Murdock, 2007; Miller et al., 2007), and Clemson University has documented data that students cheat in online assessments (CU OAI, 2021). This study focuses on identifying the underlying themes of motivational factors of undergraduate students cheating in online examinations. University leaders and faculty can then devise a plan to lower the number of academic dishonesty cases in online exams based on targeting identified motivations. In the following sections, I will explain the underlying rationale and data for this study, the research questions, and the guiding theories of study.

Key Terms

Academic integrity: Intellectual honesty (Cole & Swartz, 2013). The "professional code serving academia, including students, instructors, researchers and the institution itself" (Cole & Swartz, 2013, p. 740). The International Center for Academic Integrity (ICAI) has five values that embody AI: honesty, trust, fairness, respect, and responsibility (ICAI, 2021).

The Clemson University Academic Integrity Statement is as follows: "As members of the Clemson University community, we have inherited Thomas Green Clemson's vision of this institution as a "high seminary of learning." Fundamental to this vision is a mutual commitment to truthfulness, honor and responsibility, without which we cannot earn the trust and respect of others. Furthermore, we recognize that academic dishonesty detracts from the value of a Clemson degree. Therefore, we shall not tolerate lying, cheating or stealing in any form" (Clemson University Division of Student Affairs, 2020).

Academic dishonesty: The Clemson University Academic Integrity policy defines academic dishonesty as, "Any breach of the principles outlined in the Academic Integrity Statement is considered an act of academic dishonesty" (Clemson University Division of Student Affairs, 2020).

Cheating: The Clemson University definition of cheating includes "Using aids or devices not expressly allowed by the instructor during an examination, test, quiz, or other assessment; copying another person's answer(s) on a test, exam, quiz, lab report, or other work to be evaluated; copying another person's answers; consulting with another person or with unauthorized materials during an assessment; improperly obtaining, access to examination paper(s) or set of questions, or other confidential information; collaborating on work to be evaluated where such collaboration is forbidden by the instructor" (Clemson University Office of Academic Integrity, 2021). For this study, I will be utilizing this definition of cheating.

Honor Code: A policy that includes elements such as a written pledge where students affirm their work, a judiciary that hears academic dishonesty violations, or a clause to place an obligation on students to report cheating incidents (McCabe et al., 1999).

Motivational Factors: In this study, the term motivational factors refers to any motivation attributed to students participating in dishonest academic practices. These factors can be contextual (e.g., institutional norms, honor codes, academic integrity policies, and faculty involvement*)* or individual (e.g., demographics, self-efficacy, moral development, personal values and ethics, and academic pressures such as scholarship requirements and course pre-requisites*)*; intrinsic *(*e.g., study habits, academic stressors, and academic competition*)* or extrinsic *(e.g.*, family expectations for a specific GPA), and a combination of the above

(Anderson & Murdock, 2007; McCabe et al., 2017). Factors can include personal, familial, grade-oriented, or course-related motivations. Most research on academic integrity in higher education focused on individual factors such as demographics and contextual factors such as school culture. However, this study seeks to find all types of motivation to cheat from the student's perspective.

Online Assessment: For this research study, the term online assessment includes traditional quizzes, tests, and exams administered electronically through an internet-based system such as a learning management system (LMS).

Research Question

The proportion of higher education students who cheat in online exams is increasing (e.g., Clark et al., 2020; CU OAI, 2021; Dicks et al., 2020; Frieburger et al., 2017; McCabe et al., 2017; Nguyen et al., 2020). Academic dishonesty leads to the devaluing of coursework and research, inaccurate student progress, a reduction in the ability of instructors and instructional leaders to identify and support [failing] students, and students not being adequately prepared for success. Additionally, academic dishonesty leads to students having a skewed view of unethical behavior that could follow them to the workplace (Anderman & Murdock, 2007 & Nonis & Swift, 2001).

However, researchers lack an understanding of why students cheat and the motivations behind the decision, especially in online assessments (Schraw et al., 2007; Simkin & McLeod, 2010). Despite the integrated interventions, students continue to find new and inventive ways to cheat. Many researchers focused on specific features of students that lead them to break the rules or classroom practices associated with cheating.

As a result, academic leaders and instructors cannot curb cheating in online assessments (e.g., Mutongoza, 2021; Verhoef & Coetser, 2021). The number of cases of academic dishonesty continues to rise (Clark et al., 2020; CU OAI, 2021; Dicks et al., 2020; Nguyen et al., 2020). While many interventions are utilized, including cheating deterrents in exams, students continue to find new and inventive ways to cheat (Farland & Childs-Kean, 2021).

I designed my study to address this problem of practice by asking the following research question: Why are students motivated to participate in dishonest academic practices in online assessments? Specifically, I sought to understand the underlying motivational factors influencing a student's decision to participate in academic dishonesty.

By researching why students cheat in online assessments, I identified specific motivational factors contributing to the increase in cheating at Clemson University. The findings from my dissertation in practice will provide higher education instructors and leaders with research-based intervention strategies to encourage academic integrity at Clemson University and other higher education institutions.

Rationale for Research

There is a general agreement in most academic integrity studies that the practice of cheating is common (McCabe et al., 2017; McCabe et al., 2001; Anderman & Murdock, 2007; Miller et al., 2007). The well-documented problem of student cheating comes from studies dating back to the early 1960s. These studies show that the number of U.S. students who cheat ranges from 50% to 90% and has increased continuously over the last 50 years (McCabe et al., 2001; McCabe & Trevino, 2002; Sherill et al., 1971). McCabe and Trevino's (1997) quantitative study

of students at nine state universities found that college students' most significant increases in cheating were on tests and exams. Summarizing the problem, Eisenberg (2004) stated:

> The pervasiveness of the phenomenon of cheating and the fact that the high figures on cheating…prevail in spite of punishments and vast educational efforts to eliminate academic cheating, suggests that academic cheating cannot be seen as a rare practice, performed merely by a minority of deviant actors. (p. 165)

The numerous studies and institutional documented increases in academic misconduct cases such as Clemson University show that cheating is a problem in higher education.

Academic Dishonesty Studies

Much research exists on academic integrity, including plagiarism (e.g., Anderman & Murdock, 2007; Freiburger et al., 2017; Klein, 2011; Park, 2004), contract cheating (Curtis et al., 2021), and other forms of academic dishonesty (e.g., Anderman & Murdock, 2007; Cole & Swartz, 2013; Freiburger et al., 2017; Hughes & McCabe, 2006). However, the area of cheating in online assessments is far less studied. Donald McCabe, considered the father of academic integrity research (Todd, 2014), and his collaborators conducted most of the cited research. The following sections will discuss various factors and motivations involved in a student's cheating decision, drawing mainly from McCabe's work.

Anderman and Murdock (2007) define cheating from the perspective of learning as "a strategy that serves as a cognitive shortcut (p. 2). Students may cheat because they do not know how to use effective learning strategies, or they do not want to or have the time to invest in learning these strategies (Anderman & Murdock, 2007). Additionally, Anderman and Murdock (2007) stated that student motivations to cheat are varied: these include being focused on grades,

maintaining a certain image, or lacking "requisite self-efficacy to engage in complex tasks" (p. 2). Anderman and Midgley's (2004) quantitative longitudinally study included data beginning with students self-reporting their cheating behavior in the 5th grade, twice during the last year of middle school (eighth grade), and again at the end of the first year of high school. The study found that cheating occurs less in children than in teenagers. Cheating occurred more in middle and high school grade levels than in elementary grade levels, most likely because the instructional practices at these levels are more focused on academic grades (Anderman & Midgley, 2004). They suggested that this upward trend continues through college.

While cheating is a problem, multiple motivational factors lead students to cheat, whether contextual, individual, or both (McCabe et al., 2017). Leming (1980) stated, "Cheating behavior is a complex psychological, social, and situational phenomenon" (p. 86). However, there is limited insight into these variables or factors on students in higher education (McCabe & Trevino, 1997). Knowing these factors is essential in developing effective strategies and interventions to reduce academic dishonesty among college students.

Contextual Factors. Contextual cheating factors include situational and institutional factors that may lead a student to cheat (McCabe & Trevion, 1997). Contextual factors include, but are not limited to, organizational norms, faculty involvement, institutional-level cheating deterrents, honor codes, and cultural values (McCabe et al., 2017).

Organizational Norms. Organizational norms such as peer influence strongly correlate with cheating (McCabe et al., 2017). In McCabe and Trevino's study (1997), peer disapproval was the strongest predictor of reduced cheating. Also, students are more likely to cheat if they see others cheating (Genereux & McLeod, 1995; Crown & Spiller, 1998) or find cheating

socially acceptable (Fain & Bates, 2002). Studies in Greek life showed that these social constructs could provide environments where cheating is accepted (Stannard & Bowers, 1970). Also, students with a friend who was not caught in academic misconduct or punished increased students' likelihood of cheating (Freiburger et al., 2017).

Faculty Involvement. One major contextual factor that impacts cheating in higher education is an institution's faculty and instructors and their classroom practices and procedures (e.g., McCabe et al., 2017; Simon et al., 2003; McNabb & Olmstead, 2009). Faculty with clear academic expectations which define and explain cheating throughout the semester have less academic misconduct (Hutton, 2006; McCabe et al., 1997; McNabb & Olmstead, 2009). McCabe et al. (2001) also found that the professor experience, syllabus policy, class size, and level of course difficulty also affect the levels of student cheating.

Honor Codes and Cultures of Integrity. Most higher education academic integrity scholarship focuses on strategies that increase or decrease cheating or organizational values and ethics related to academic misconduct (e.g., Gallant, 2007; McCabe & Trevino, 2002). McCabe and Trevino (2002) focused on honor codes and found that students cheat less at institutions with honor codes. "Students cheat. But they cheat less often at schools with an honor code and a peer culture that condemns dishonesty" (McCabe & Trevino, 2002, p. 37). Gallant's research focused on a liberal arts college's attempt at an integrity culture change. The results suggest analyzing institutional artifacts and values to "develop an understanding of the underlying assumptions that may be inhibiting or enabling integrity culture change" (p. 408).

A few academic integrity studies focus on the moral aspects of cheating, such as Eisenberg (2004). Eisenberg (2004) found that institutions creating or attempting to create an

environment where students feel academic dishonesty is socially unacceptable have fewer integrity cases. Cultural values significantly influence personal ethical behavior (McShane & Von Glinow, 2005).

Additionally, a coalition for academic integrity created a template for universities to study their misconduct policies. The International Center for Academic Integrity (ICAI) is a non-profit organization promoting academic integrity and student ethics. ICAI (2021) offers various resources, including the Fundamental Values, which the Clemson University Rutland Institute for Ethics was integral to creating. Hughes and McCabe (2006) insist that the fundamental values of "honesty, trust, fairness, respect, and responsibility" must be promoted and upheld for all academic work to promote academic integrity (p. 51). This coalition is a resource for institutions wanting to build a culture of academic integrity. However, none of these resources target individual factors that motivate students to cheat outside of moral influences.

Internal Factors. While the research field in academic dishonesty, in general, is broad, most scholarship on higher education identifies contextual issues and provides suggestions to address them at the institution-wide level (e.g., Hutton, 2006; Gallant, 2007; Roberts & Hai-Jew, 2009). Many colleges and universities handle academic integrity through academic expectations and honor codes. However, these strategies do not target individual factors such as pressure to succeed, access to digital resources, social norms, or self-efficacy (Miller et al., 2007). In the article reviewing a decade of research on cheating, McCabe et al. (2001) focused mainly on contextual factors of cheating, such as academic integrity policies and honor codes. They found individual factors to be "less important than contextual factors" (p, 227) even though individual factors are "significant correlates of cheating among college students" (p. 227). Schools should

address individual factors in addition to institutional contextual factors. Internal factors include, but are not limited to demographics, academic stressors and pressures, and more recently, the impact of emergency remote learning.

Demographics. Several research studies on individual factors of cheating focus on student demographics. Many of these studies found that certain demographic factors correlated with academic misconduct (Lambert & Hogan, 2004; Lanier, 2006; Whitley, 1998). The most common attributes of college students who cheat are undergraduate white males with a lower grade point average (GPA) (Miller et al., 2007). However, some studies contradict almost every attribute listed (e.g., Whitley, 1998; Lambert & Hogan, 2004; Lanier, 2006). For example, gender is not as much a factor as a pressure to succeed (Anderman & Murdock, (2007). "Who are these cheaters? They are students—male and female, intelligent and lazy, athletes and nerds—with a need to get ahead, a fear of failure, or pressure to succeed" (Miller et al., p. 26).

Academic Stressors and Pressures. Academic stressors affecting academic dishonesty levels include the difficulty of a course, course requirements, and course pre-requisites (Whitley, 1998). Additionally, life events can influence study habits by creating an increased sense of anxiety resulting in an incentive to cheat (Whitley, 1998). Other cheating incentives include high grades and passing challenging courses (Mutongoza, 2021). Academic pressures such as the influence of friends and peers, lack of confidence, work overloads, and perceived unfairness can also motivate students to cheat (Mutongoza, 2021).

Recent research studies include student reasons and internal factors for cheating (e.g., Ives, 2020; Verhoef & Coetser, 2021). Ives's (2020) quantitative study surveying students found that the number one reason for cheating among the participants was to keep a scholarship or

financial aid. Based on a review of eight studies, Ives's study asked students to rate 23 reasons for academic misconduct. Other top-rated factors included grades being more important than learning and students not liking the instructor (Ives, 2020).

Emergency Remote Learning. More recent research on cheating in higher education falls under the impact of the COVID-19 pandemic and the move to emergency remote learning. One such study by Verhoef & Coetser (2021) analyzed students' perceptions of cheating during emergency remote learning due to the COVID-19 pandemic using data collected from a student forum. Outcomes from the panel included student perceptions that cheating was due to the availability of content online and a lack of monitoring (Verhoef & Coetser, 2021). Additionally, several students commented that pandemic-related issues such as mental health and increased stress played a role in cheating (Verhoef & Coetser, 2021). More importantly, student comments included internal factors that motivated cheating, such as lack of time management, academic inexperience, and technology struggle (Verhoef & Coetser, 2021). While these findings provide insight into motivational factors to cheat, Verhoef and Coetser (2021) conducted their research at a University in South Africa. Without further investigation, we cannot assume these findings translate to institutions in the United States.

Motivational Factors. While cheating is a problem, multiple factors lead students to cheat, whether contextual, individual, or both (McCabe & Trevino, 1997). When students cheat, many variables are related to personal [individual] and situational [contextual] variables. These variables include "motivational, moral, and developmental factors" (Anderman & Murdock, 2007, p. 36). In this study, motivational factors include any reasons that impact a student's cheating decision. These motivations can include contextual or individual factors and anything

intrinsically or extrinsically motivated. This study will identify motivational factors contributing to student cheating in higher education. Examples of these motivational factors include but are not limited to student ability, the subject matter of the course, likability of the instructor, self-efficacy, and moral development (Anderman & Murdock, 2007; McCabe et al., 2017). "There is a great need for research that incorporates these characteristics of cheaters, especially academic and motivational characteristics…in order for us to more fully understand why students engage in cheating behaviors" (Anderman & Murdock, 2007, p. 28). This study aimed to identify motivational characteristics and why students cheat to add to the body of academic integrity scholarship.

In-Person vs. Online Testing. Lastly, many studies involving misconduct in online assessments are comparative case studies focused on whether cheating is more rampant in online tests versus in-person (e.g., Cole & Swartz, 2013; Ladyshewsky, 2015). Unfortunately, many of these studies prove inconclusive. Even though these studies are inconclusive, the number of online assessment academic integrity cases increased at Clemson University during the semesters of emergency remote learning due to the COVID-19 pandemic when courses moved to an online modality (CU OAI, 2021).

Needed Research. While research exists on the correlation between individual factors and cheating in higher education, more research is required (McCabe et al., 2017). McCabe's research agreed that researchers should study individual factors in addition to contextual factors. Research into motivational factors for cheating should include more than just demographics. Miller et al. (2007) state:

> Although demographic variables are popular and extensive in the research literature, they are, in most cases, fixed variables that lead only to shocking statistics and very general profiles of cheaters, drawing attention to the problem of academic dishonesty. They do not identify the processes underlying the decision to cheat (p. 15).

Recent research exists on student reasons and motivational factors for cheating. Ives's (2020) quantitative study surveying students found that the number one reason for cheating among the participants was to keep a scholarship or financial aid. I developed this study's survey instrument from a review of other studies where Ives identified a list of 23 different reasons for committing academic misconduct. Participants rated each reason. While this is a valid study, it did not comprehensively describe why students cheat. Also, the list used was pre-determined by the researcher. In utilizing a qualitative method of interviewing focus groups and individuals, I allowed the students to provide their reasons in their own words.

The Digital Divide

One of the motivational factors impacting student cheating could be related to the digital divide. Many refer to technology as the great equalizer in education because it helps level the playing field for access and equity (Broady, 2020). Individuals are known by Internet Protocol (I.P.) addresses in the virtual world instead of names, race, or social status (Linder, 2021). However, technology gaps exist through the devices and bandwidth used to access the virtual world (Rothberg et al., 2012; Gorski, 2018).

Rothberg et al. defined the Digital Divide as the gap between those who can benefit from digital technology and those who do not (2012). Gorski (2018) described this phenomenon as an opportunity gap in that not all students will have an equitable experience in the online world

depending on their technology access and resources. Many of our Clemson University undergraduate students may be falling through this opportunity gap without the adequate resources to succeed in online assessments. To push for equitable education, intuitions such as Clemson University try to solve the digital divide by providing students access to resources (Holland, 2021; Clemson Computing and Information Technology [CCIT], 2021).

Internet Access. Internet access is a significant obstacle for many higher education students participating in online assessments. Broadband access is not equitable across the state of South Carolina. Some counties have coverage as high as 98.7% (Richland) and others as low as 0.6% (Marlboro) (BroadBand Now, 2021). Broadband access in South Carolina is essential to the large percentage of undergraduate commuter students at Clemson University who must rely on internet access off-campus.

University campuses are usually much more reliable and equitable. Former Director of Network Services at Clemson University explained that all students on Clemson's campus have access to at least one gigabit (Gb) wired access and an average of 100 Mbps broadband wireless (and possibly higher). Wireless access and speed depend on a user's exact location and how many others use the same access point. He stated, "The major difference between [Clemson University] campus and other places is that we have the infrastructure to deploy and upgrade connectivity very easily. I can easily add bandwidth as needed. That is not the case in rural communities where network infrastructure has never been deployed" (D. Schmiedt, personal communication, September 2, 2020). The lack of infrastructure is a serious issue in South Carolina. Even though 116 internet providers operate within South Carolina, over 10% of the state's population only has access to one provider, thus limiting access (BroadBand Now, 2021).

Three counties surround Clemson University in the upstate of South Carolina, with decently high percentages of rural areas (IndexMundi, 2021). Depending on their location, students living off-campus may not have access to adequate bandwidth. During the COVID-19 pandemic campus shut-down, Clemson students could be found in their cars in campus parking lots to access a reliable internet network (CCIT, 2021).

Infrastructure. Infrastructure tends to be the biggest obstacle to broadband access in online education (Danielle McLean, 2021). Infrastructure includes the installation of towers, fiber optics, personnel, and much more. It is a serious investment that is hard to justify in certain areas "when the number of connected subscribers would be so low" (Gebb, 2020, para. 17). Schmiedt also said, "Our [Clemson University's] goal is to always be in a position to own and control what we call 'facilities-based infrastructure.' That means we own and control the physical infrastructure so that we can adapt it to the current needs of the University's network users. The network should never be a limiting factor" (D. Schmiedt, personal communication, September 2, 2020). Therefore, even though students living on-campus should have equitable access to internet connectivity, this does not include all students. Students living off-campus are not guaranteed adequate nor equitable access.

Clemson University has a high percentage of undergraduate students living off-campus. University Registrar estimates that about 65 percent of the undergraduate student population lives off-campus (D. Sparacino, personal communication, June 16, 2021). Clemson University is in Pickens County, with Anderson and Oconee counties surrounding it. These counties (especially Oconee) have rural communities with limited network access (U.S. Census Bureau, 2019). Additionally, there are no government regulations for broadband access to students living

off-campus. In fact, on March 3, 2020, when all students were living off-campus, there was a major internet outage during an online general education Math common exam. The outage affected several local apartment complexes housing Clemson students. The Executive Director of Customer Services at CCIT confirmed that these students could not participate during the assigned time due to the AT&T unplanned outage. These students and many others only have access to one internet provider whose service may or may not be reliable.

Due to location, inadequate access to a reliable network could result in a lack of understanding of class material (Holland, 2021). Clemson's faculty give students access to the course and supplemental materials via Canvas, our cloud-based learning management system (Clemson Online, 2021). Students with unreliable networks may have issues accessing materials and fail to understand the course's concepts. Students who feel unprepared for assessments may feel they have no recourse but to cheat.

Student Devices. Even if access to higher broadband internet such as gigabit access on-campus or paid internet off-campus is available, students must have a device to access the fast network and participate in virtual activities such as online assessments (CCIT, 2021). Most colleges and universities have minimum laptop requirements for all incoming undergraduate students. The premise is to ensure all students have access to the resources needed to succeed. For example, Clemson University has a mandate in the student handbook that states:

> Laptops are required for all undergraduate and MBA graduate students. While students may bring any laptop that meets the minimum specifications, recommended laptops are posted on the CCIT website. Clemson University works with vendors to offer recommended laptops with custom warranties at special prices. Students with

> recommended laptops receive priority support on campus for both software and hardware issues as a part of their purchase package. Repair technicians on campus can complete warranty repairs on these laptops. Students with recommended laptops kept in Hardware Repair for an extended period of time may be able to check out a loaner laptop if available. CCIT also services and repairs many other brands of computers for a fee, or under the manufacturer's warranty, if applicable. (Clemson University Division of Student Affairs, 2020)

All Clemson University students must have a personal laptop and are encouraged to purchase a new one from the University's computer store.

According to Clemson University's former CIO, students spend an average of $1,700 on an approved required device. A CCIT committee, including representatives from each college and student advisory groups, decides Clemson's laptop recommendations and minimum requirements. Clemson University is state-funded and must choose the actual devices offered at the Clemson Computer Store through a request for proposal through state vendors. On the current list, even though seventeen hundred is the average, the high-end MacBooks are closer to three thousand dollars (CCIT, 2021).

These required devices are not cheap, especially for students from economically disadvantaged homes. Students who choose to go an inexpensive route and not purchase a device from the recommended list may have issues. For example, many Clemson-supported softwares are not compatible with Chromebooks, including remote proctoring systems usually required for online assessments (Clemson Online, 2021). In this case, a student must borrow a computer from a friend or attempt to find an open spot at one of the limited computer labs on campus.

Equitable Education. Technology advancements have changed how students work on assignments (Scanlon & Neumann, 2002). Digital resources are a critical component of equitable education, but having access is not enough. Students need opportunities to develop skills to utilize the resources, including engaging with learning experiences (Holland, 2021). Economically disadvantaged students without adequate devices may have issues participating in online assessments or may not have sufficient access to resources or course materials (Anajwe et al., 2021). Students on-campus who have good internet access may not have a reliable device to access the network. An unreliable device could result in limited access to online course materials.

Theoretical Framework

In this study, I employed improvement science to "seek understanding of the world in which they live and work" (Creswell & Poth, 2018, p. 24). By seeking the 'why' behind student actions, I could "inductively develop a theory or pattern of meaning" (Creswell & Poth, 2018, p. 24). One important aspect of improvement science in education is that a researcher's laboratory is their classroom (Fullen & Quinn, 2015) or, in my case, an institution. My position at Clemson University puts my worldview on higher education online instruction. My department maintains and supports Clemson's online assessment systems, including the learning management system and remote proctoring tools. Higher education is the world in which I work, especially with online and virtual education and technologies, and is, therefore, my laboratory.

Foundational Theories

I used improvement sciences as the theoretical framework for my study. Improvement Science is a problem-based perspective to improve education. Improvement science involves

"developing, testing, implementing and spreading change informed by subject matter experts" (Lemire et al., 2017, p. 25). In essence, improvement science helps researchers and practitioners recognize or understand when an applied change is an improvement. A Plan, Do, Study, Act (PDSA) cycle for testing and learning allows practitioners to test currently available or create innovations "rather than waiting for a proven program" (Lewis, 2015, p. 59). As practitioners embedded in a system, including higher education institutions, we can carry out significant change through a scientific process.

Even though the PDSA cycle is at the heart of improvement science methods, the Plan section is the most critical aspect of the cycle. Planning for change includes a root causal analysis (RCA) to identify the problem (Spaulding & Hinnant-Crawford, 2019). Improvement Science uses the thoughtful application of interventions or "solution systems" to positively impact (Bryk et al., 2017). "A material weakness in any one driver can undermine the efficacy of the overall solution" (p. 80). However, these interventions must target the root cause and be institution-specific (Bryk et al., 2017). "Any proposed change…must be integrated into the existing organization…" (p. 80). Improvement science research "directly engages concerns about how local conditions shape the take-up and use a set of change ideas," which is key to reaching the ultimate improvement goal—"quality performance at scale" (p. 80). Strict attention to the root cause is the main difference between improvement science and experimental research designs (Crow, 2019).

Improvement science approaches should be cyclical and not a linear research design, with formative data guiding improvement exemplified in PDSA cycles. As Bryk et al. suggested, educational leaders can use improvement science to avoid being solution-driven and assuming

they know the fix before fully understanding what is producing the problem. Change agents should focus on addressing site-specific issues. Bryk et al. (2017) explain, “failing to appreciate fully the significance of context has often led good reform ideas to fail” (p. 81). By focusing on a causal analysis (Spaulding & Hinnant-Crawford, 2019) for this study, I identified root causes. I can now work with institutional leaders and faculty to create specific interventions and change ideas.

Malcolm Tight (2021), in a synthesis of educational research, suggests, “all higher education institutions and employees need to be much more aware of the likelihood that some of their students are cheating, how to identify this, and what they might be able to do about it” (p. 129). To solve a problem, we must determine the reason for the problem—the crux of the issue. “Effective problem-solving demands that a premium be placed not just on what needs to be fixed but also on knowing why systems currently work as they do and learning how they might be improved toward the goal of greater efficacy at scale” (Bryk et al., 2017, p. 33). As Tight (2021) suggested, I need to identify motivators for cheating at Clemson University. Once academic leadership, faculty, and students know what needs fixing, we can begin improving.

Systems improvement science encourages researchers to shift from short-term solutions and “think for the longer term and avoid impetuous, shortsighted decisions” (Bolman & Deal, 2017, p. 142). There is never a magic silver bullet to improvement. Because academic integrity is a long-standing issue, applying improvement science will allow administrators and practitioners to use their expertise to identify student motivations to cheat and create meaningful change at the heart of the problem.

The first principle of Bryk's improvement science paradigm involves being problem-specific and user-centered (University of Technology Sydney, 2015). For example, academic misconduct in online assessments is an identified problem at Clemson University, as revealed through the recent increases in academic integrity cases. Also, the end-users and clients of any educational institution's learning and educational outcomes are students. Faculty and academic leaders know the result they want—little to no cheating; however, Clemson University fails to reach the goal due to our increasing numbers of academic integrity violations. Improvement science is a method to define what interventions could lead to achieving the desired results.

The improvement science method is not a quick fix. Improvement research takes time to identify the root causes of the problem to be resolved (Bryk, 2020). Practitioners who want to improve outcomes attempt to understand the problem through the students they serve. Defining the root cause of an issue is the most critical and time-consuming part of the process that leads to change. A root causal analysis (RCA) is the foundation for any type of systems improvement (Bryk, 2020; Hinnant-Crawford, 2020; Spaulding & Hinnant-Crawford, 2019). Without an RCA, "those tasked with improvement often move forward solely from the perspective of subject matter knowledge or with unexamined assumptions about their system" (Bennett & Provost, 2015, p. 38). An RCA helps identify, organize, and categorize the causes of a problem or issue (Spaulding & Hinnant-Crawford, 2019).

Additionally, an RCA helps give specific information on the *what*, *how*, and, most significantly, the why of a problem or issue (Spaulding & Hinnant-Crawford, 2019). This research attempted to answer two questions Spaulding and Hinnant-Crawford (2019) encourage practitioners to ask: What is causing students to cheat at Clemson University, and what do we

blame? If these questions get answered, the focus shifts to decreasing the problem of academic integrity cases in online assessments.

Conclusion

Academic dishonesty in assessments is a known issue at Clemson University (CU OAI, 2021). Many faculty and institutional leaders believe the increase is due to the shift to online exams (MacLeod & Eaton, 2020). Students have access to more online resources that potentially allow cheating to be more accessible (Verhoef & Coetser, 2021). Some faculty and leaders at Clemson University have even suggested reverting assessments to a pen and paper method or lockdown tests utilizing expensive tools and systems that claim to prevent cheating.

Issues lie with both beliefs. Previous studies show no evidence of an assessment's modality affecting student misconduct. However, since the pandemic and the switch to more online modalities of learning and evaluation, our academic misconduct numbers at Clemson have doubled. Research into the cause of the increase was needed to identify interventions to decrease cheating at Clemson. Lastly, we know the tools and systems that claim to prevent cheating and deter cheating but cannot stop it. Once a student decides to cheat, there is little to stop the student. This research aimed to find the motivational factors of why students make that decision and recommend interventions to target the identified factors.

CHAPTER TWO

METHODS

This research was a qualitative phenomenology study focusing on commonalities of participants involving academic dishonesty in online assessments to answer the following research question: Why are students motivated to participate in dishonest academic practices in online assessments? Specifically, I sought to understand the underlying motivational factors influencing a student's decision to participate in academic dishonesty.

Phenomenology

Qualitative research methods allow researchers to observe and interpret subjects in natural settings (Denzin & Lincoln, 2011). In qualitative research, knowledge comes from observation and interpretation (Webb & Welsh, 2019). Phenomenology as a methodology assumes "individuals make choices, but they are circumscribed by the specific conditions of their everyday life" (Webb & Welsh, 2019, p. 170). Researchers who utilize phenomenology focus on the unique experiences of each participant within the same experience (van Manen, 1997).

The phenomenology approach was appropriate for this study. I collected data from participants with similar experiences to "develop a composite description of the essence of the experience for all individuals" (Creswell & Poth, 2018, p. 75). In this study, the "essence" was the factors motivating cheating practices. A qualitative study approach allowed me to get in-depth responses to the phenomenon of cheating at Clemson University (Creswell & Poth, 2018).

The qualitative phenomenology approach allowed for exploration into student perceptions and actions involving academic integrity infractions. Qualitative research "should contain an action item for reform that may change the lives of participants, the institutions in

which they live and work, or even the researchers' lives" (Creswell & Poth, 2018, p. 25). As such, this research study used an improvement science framework to identify specific cheating motivations so that academic leadership (including faculty and students) can design interventions to decrease the number of infractions of academic dishonesty in online assessments. Institutional policies on academic integrity "should be evidence-based, incorporating fruitful information on the pathways involved in the decision to cheat" (Freiburger et al., 2017, p. 223). Otherwise, institutions could promote a cheating culture instead of integrity (Park, 2004).

My study collected data from undergraduate student interviews and recent graduate interviews (Creswell & Poth, 2018). Students have first-hand, unique insights into the cheating phenomenon, and their experiences were valuable sources of information. First, I used convenience sampling (Maxwell, 2012) of three current Clemson University undergraduate students and collected data using semi-structured interviews. I also used convenience sampling (Maxwell, 2012) for ten recent Clemson University graduates (from 2018 to 2021). I collected data using semi-structured interviews. Utilizing convenience sampling (Maxwell, 2012) for these two groups allowed me to use the rapport I built with the students so that they felt more comfortable being open and honest about cheating (Maxwell, 2012). I analyzed the interview data to determine if common themes exist as to why students cheat.

Additionally, I purposefully selected (Maxwell, 2012) seven faculty including three from the general chemistry faculty in a semi-structured focus group interview to gauge faculty perceptions of student cheating in online assessments. I will use the results of this study to provide instructors and technology leadership with recommendations on encouraging academic integrity. Focusing on academic integrity at Clemson University allowed insight into internal

factors motivating students to participate in dishonest practices and helped leaders devise an action plan to address these factors directly.

Research Site

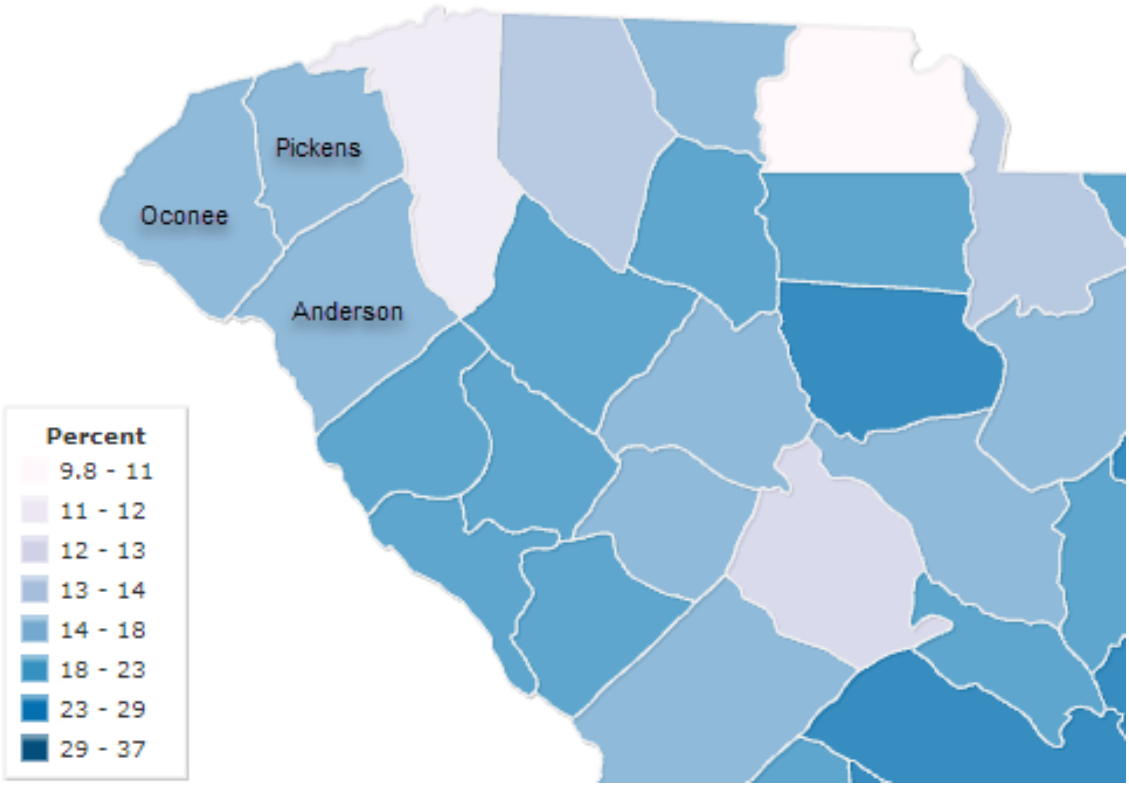
This study was conducted at Clemson University and focused on undergraduate students. I will give further information about the research site in the following section.

About Clemson University

Clemson University is a Research One (R1) doctoral university with a very high research level (The Carnegie Classification of Institutions of Higher Education, n.d.). Clemson is also a Land Grant institution designated by the state of South Carolina (Association of Public & Land-Grant Universities, n.d.). Located in the Upstate of South Carolina, the University is situated geographically in Pickens County but is surrounded by and expanded to Oconee and Anderson Counties. These three counties have a relatively high poverty rate. According to the U.S. Census Bureau (2019), Pickens County has 15.3 percent poverty, Oconee County has 13.1 percent, and Anderson County has 12.9 percent. The figure below (IndexMundi, 2021) shows the location of each county and the percentage of the population in poverty compared to surrounding counties.

Figure 2.1

South Carolina Upstate Region Poverty Rate by County



Considering that over half of our undergraduate students live off-campus and there are no online undergraduate programs, these commuters most likely live in one of these counties (CU Records and Registration, 2021).

Clemson University offers over 80 majors, 90 minors, and 130 graduate degree programs (Clemson University Records and Registration, 2021). With Clemson University being a prominent state school and a top-tier educational college, this is the ideal place to establish best practices related to assessment practices. As far as a real-world application of a study into academic integrity, Nonis and Swift (2001) found that many students see academic dishonesty behaviors as acceptable or even norms. Additionally, academic dishonesty will most likely carry over into dishonesty in the workplace (Nonis & Swift, 2001). Furthermore, integrity is part of the

school's mission. Clemson University's mission includes

> Educating undergraduate and graduate students to think deeply about and engage in the social, scientific, economic, and professional challenges of our times. The University also is committed to the personal growth of the individual and promotes an environment of good decision-making, healthy and ethical lifestyles, and tolerance and respect for others. (Clemson University Relations, 2021)

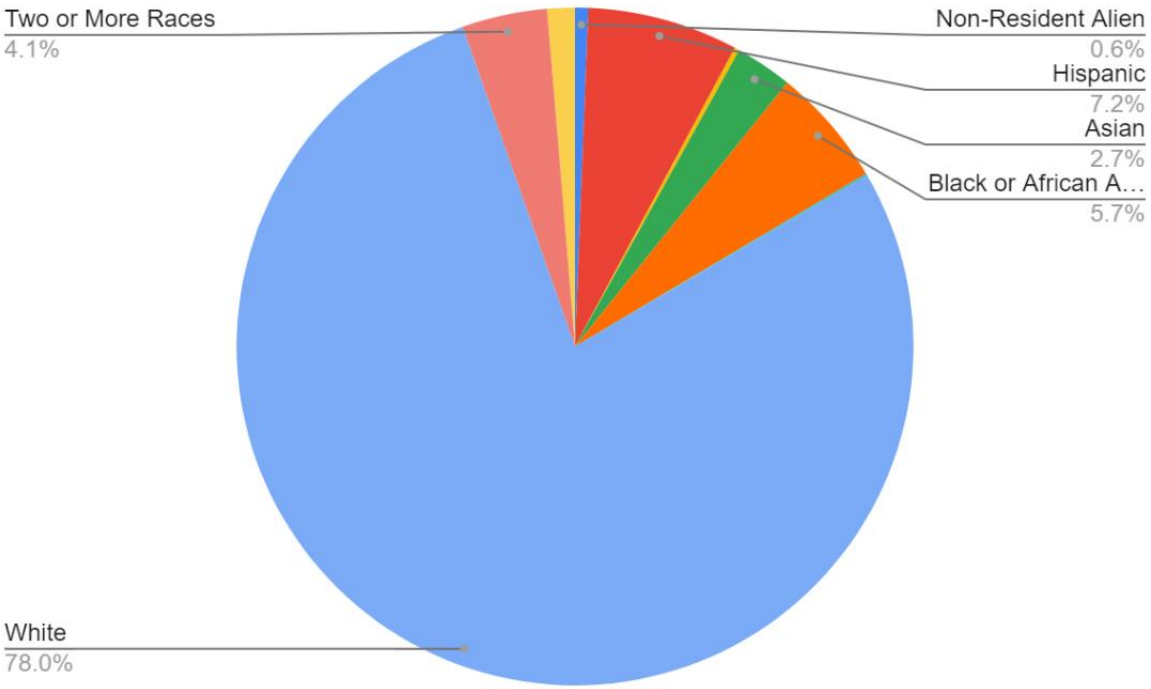
Clemson students directly impact South Carolina's workforce, future students, and future leaders. If Clemson University leadership wants to promote an "environment of good decision making," the instructional best practices, including creating and administering assessments, should reflect this mission.

Clemson University Undergraduate Students

My study included interviews with Clemson University undergraduate students and interviews with recent graduates. The current student population is 21,653 undergraduate students (Clemson University Office of Institutional Research, 2021). Figure 2.2 shows undergraduate students' race/ethnicity percentages (Clemson University Office of Institutional Research, 2021).

Figure 2.2

Clemson University Undergraduate Racial-Ethnicity Diversity Breakdown

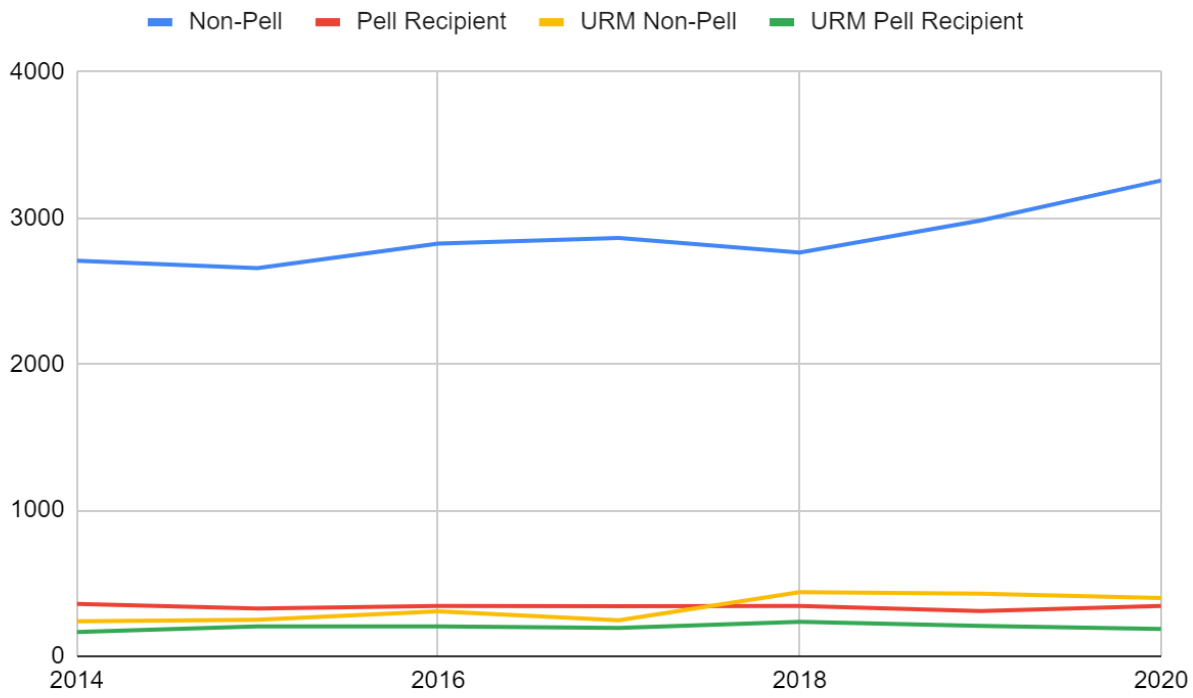


Because of the need for high-end computing products in online education (CCIT, 2021), it is essential to include students who may be experiencing disparities. Clemson University currently has about 18% of the undergraduate student population qualify for the Pell Grant (Clemson University Office of Institutional Research, 2021). Students awarded Federal Pell Grants must "display exceptional financial need" based on a student's expected family contribution, cost of attendance, and status as a full-time or part-time student (Federal Student Aid, 2021). During the 2020 academic year (August 2019 – May 2020), 12.7% of full-time first-year students qualified for the Pell Grant. Of these, 53.6% were underrepresented minority students (URM). The overall percentage is slightly higher for full-time transfer students. For the same academic year, 19.7% of full-time transfer students qualified for the Pell Grant, with 39.9%

of these students classified as underrepresented minorities. Figure 2.3 below (Clemson University Office of Institutional Research, 2021) shows the number of first-year students receiving Pell grants from 2014 through 2020.

Figure 2.3

Clemson University First-Year Freshman Pell Grant Recipients Academic Years 2014 - 2020



The graph in Figure 2.3 shows that the overall number of first-time, first-year students at Clemson University has been upward since 2018 (Clemson University Office of Institutional Research, 2021).

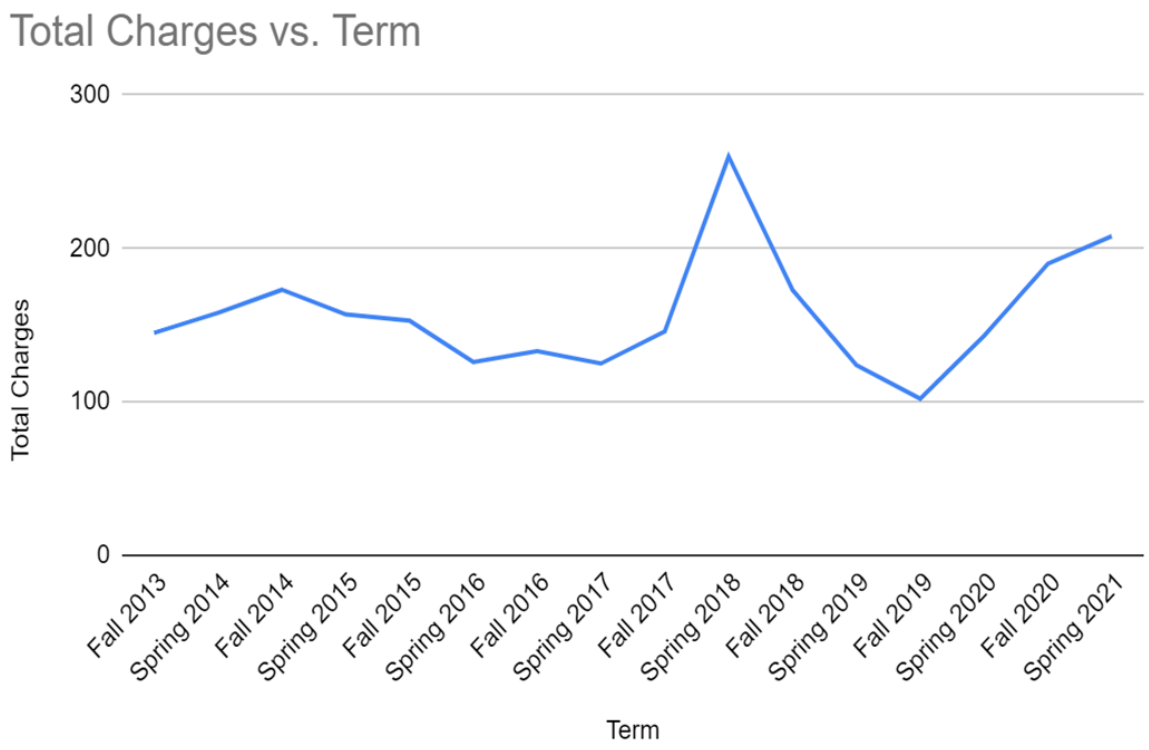
Academic Integrity Cases at Clemson University

Academic integrity cases are on the rise at Clemson University. The number of academic integrity cases doubled from the Fall 2020 semester to Spring 2021 (CU OAI, 2021). Figure 2.4

(CU OAI, 2021) shows the total number of charges at Clemson University from the Fall of 2013 through the Spring of 2021. At Clemson University, any breach of the principles outlined in the Academic Integrity Statement is considered an act of academic dishonesty and could result in an academic integrity charge (CU OAI, 2021). In the figure below, the total charges data includes resolved and dropped cases. Resolved cases include charges where the student admitted to the charge, was found in violation, or found not in violation of the charge. Dropped cases indicate charges dismissed against the student.

Figure 2.4

Total Academic Integrity Charges from Fall 2013 through Spring 2021 at Clemson University



Note: The spike in 2018 is due to an inordinate number of cases from one engineering course.

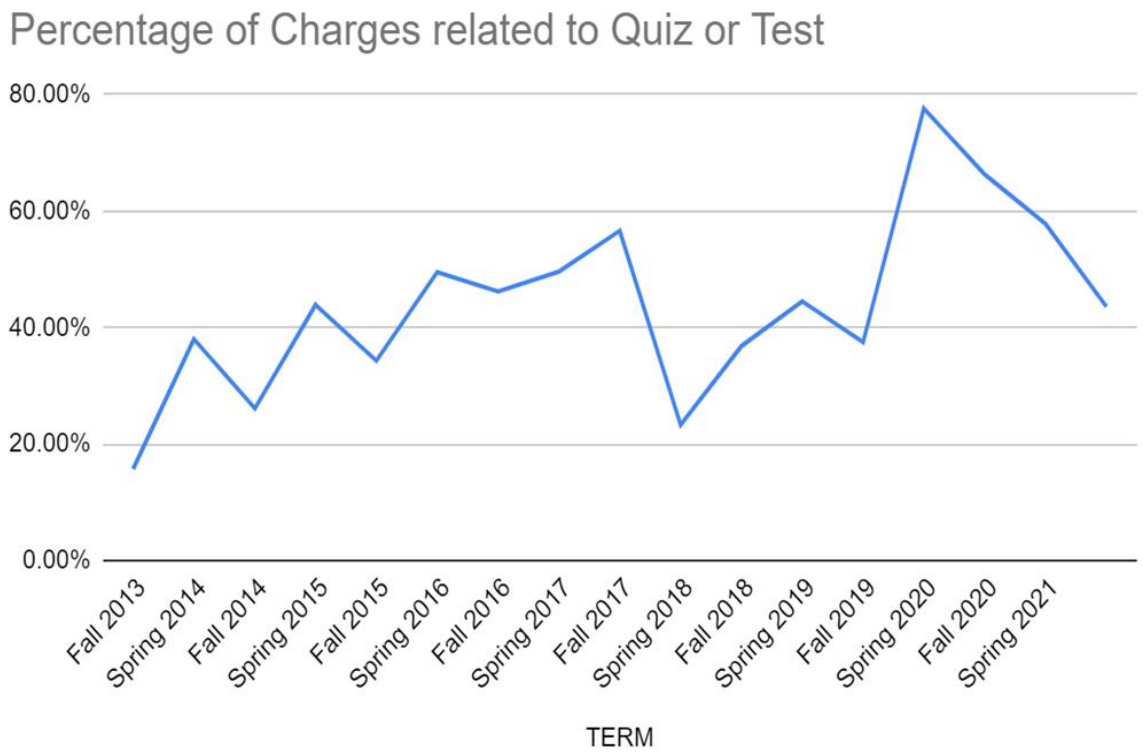
The COVID-19 pandemic forced higher education institutions and faculty into remote

and online learning. In most cases, including at Clemson University, the transition to online was abrupt, with less than a month to prepare (Clemson News, 2020). Clemson Online hosted several training opportunities, workshops, and drop-ins where faculty frantically prepared to convert face-to-face courses to online. Additionally, many instructors expressed concerns about having never taught online. Once the announcement came later in the Spring semester that exams would be online, tech support tickets flooded in with requests for help creating and administering online exams and how to confirm academic integrity (CCIT, 2020).

According to the Senior Associate Dean for the Office of Undergraduate Studies, academic integrity charges increased after switching to remote learning, including doubling the number of guilty academic dishonesty cases on quizzes or tests. In the Spring 2020 semester, the number of misconduct cases jumped to 111 from 49 the previous spring. The numbers continued to rise to 126 in the fall of 2020 (CU OAI, 2021). The figure below shows the percentage of the total resolved academic integrity cases related to testing (quiz or test). Most exams were online for Spring 2020, Fall 2020, and Spring 2021. As Figure 2.5 indicates, there was a significant spike in the Spring 2020 and Fall 2020 semesters when learning moved online.

Figure 2.5

Academic Integrity Resolved Cases Related to a quiz or test from Fall 2013 through Spring 2021 at Clemson University

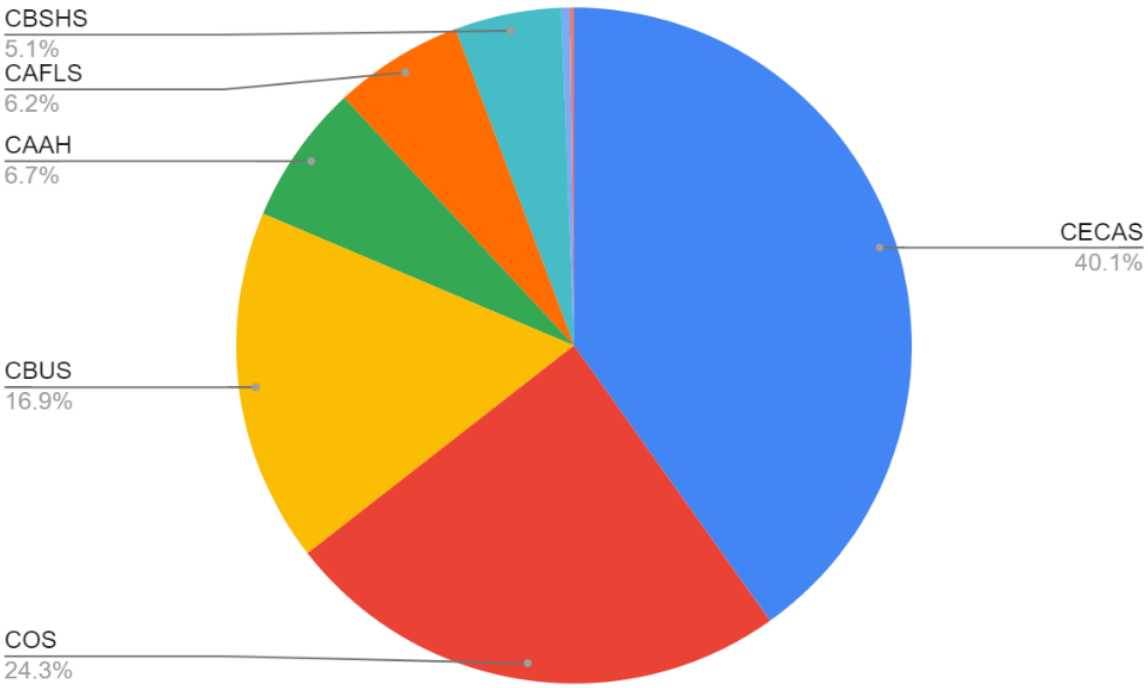


Note: The Spring 2021 semester still had pending cases and may not accurately reflect totals for that term at the time of this report.

While the College of Computer Engineering, Computing and Applied Sciences (CECAS) has the highest percentage of academic integrity cases, the College of Science (COS) (which houses General Chemistry) is in second place. Figure 2.6 below (CU OAI, 2021) shows each college's percentage of academic integrity cases from Fall 2013.

Figure 2.6

Clemson University Academic Integrity Charges by College from terms Fall 2013 – Spring 2021

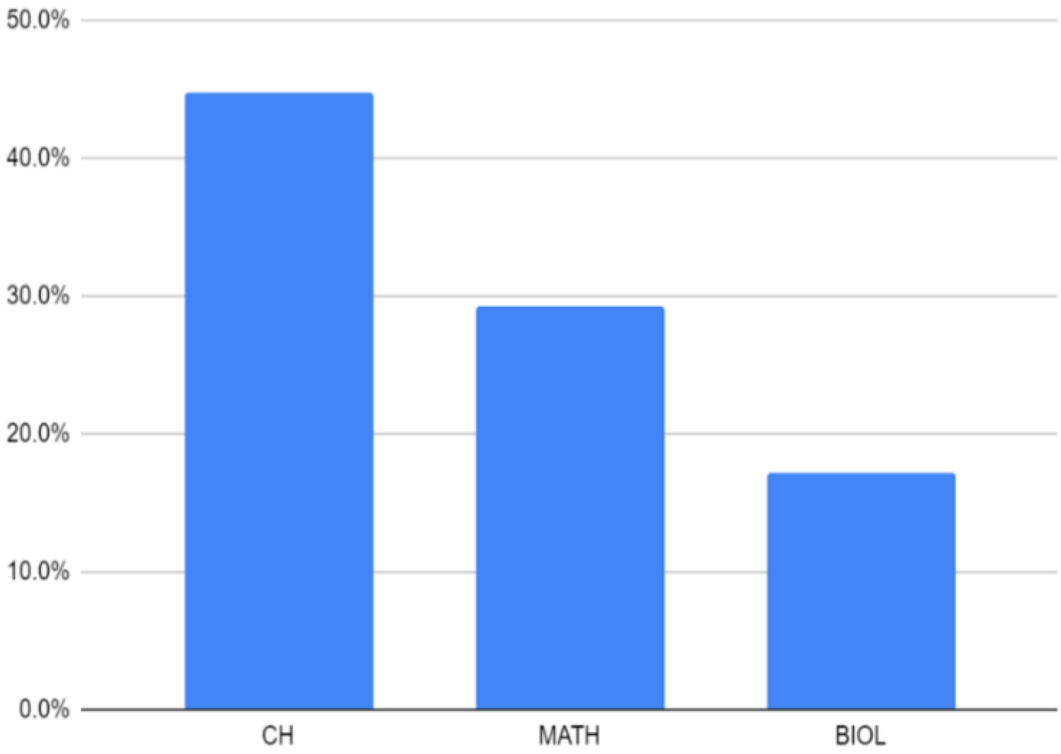


Note: CBSHS is the College of Behavioral, Social, and Health Sciences. CAFLS is the College of Agriculture, Forestry, and Life Sciences. CAAH is the College of Architecture, Arts, and Humanities. CBUS is The Wilbur O. and Ann Powers College of Business. COS is the College of Science. CECAS is the College of Engineering, Computing, and Applied Sciences. The College of Education (CED) is the pink sliver of 0.4%, and CU has 0.2%. Students designated as CU are undeclared, transient, exchange, and special students.

Chemistry (CH) courses are at the top of academic integrity cases in the College of Science. Figure 2.7 (CU OAI, 2021) shows that almost 45 percent of all academic integrity cases in the College of Science come from the Chemistry department.

Figure 2.7

Clemson University College of Science Academic Integrity Cases

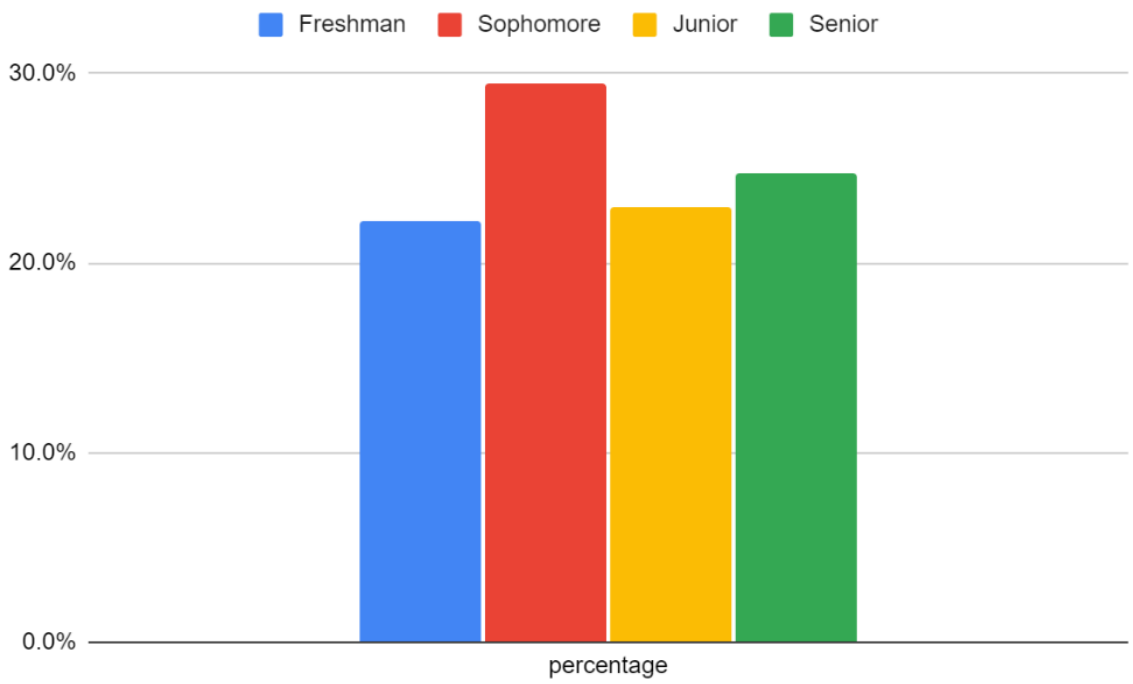


Clemson University Academic Integrity Cases Student Attributes

At Clemson University, male students are charged twice the rate of female students (Clemson University Office of Academic Integrity, 2021). Additionally, the majority of infractions come from the sophomore class. The figure below shows the percentage of academic integrity infractions by class. Freshmen have the lowest percentage, while seniors are the second-highest (Clemson University Office of Academic Integrity, 2021).

Figure 2.8

Clemson University Academic Integrity Cases by Class



Note: Freshman students may be underrepresented in this data because many first-year students come in with enough course credits to classify as sophomores.

Clemson University's Academic Integrity Tactics

Clemson University does have clear expectations of academic integrity. The Academic Integrity statement is as follows:

> The Clemson University Academic Integrity Statement is as follows: "As members of the Clemson University community, we have inherited Thomas Green Clemson's vision of this institution as a "high seminary of learning." Fundamental to this vision is a mutual commitment to truthfulness, honor and responsibility, without which we cannot earn the trust and respect of others. Furthermore, we recognize that academic dishonesty detracts from the value of a Clemson degree. Therefore, we shall not tolerate lying, cheating or

stealing in any form" (Clemson University Division of Student Affairs, 2020). Any breach of the principles outlined in the Academic Integrity statement is considered dishonest (Clemson University Division of Student Affairs, 2020).

Technology. Clemson University currently pays for Respondus Monitor (Web.respondus.com, n.d.), an artificial intelligence cloud-based online proctoring system to curb cheating practices. Technology support groups, CCIT & Clemson Online, also support Remote Proctor Now (psionline.com, n.d.), funded by student fees per test. CCIT and Clemson Online promote online assessment best practices such as password-protecting exams, utilizing a lock-down browser, and randomizing question orders (Clemson Online, 2021).

General Chemistry and Online Exams

My study also includes the general Chemistry faculty at Clemson University. This group comprises 12 to15 instructors and serves over 3,000 students each semester. These instructors give large common exams through Clemson's learning management system (LMS). During Spring 2020 through Spring 2021 semesters, these exams were virtual. For Fall of 2021, the exams were still online through the LMS, but students were on-campus and proctored by an instructor. Before Spring 2020, the exams utilized paper tests and scantrons. Only quizzes were online through the LMS.

During the 2019-2020 academic year, the general chemistry coordinator worked closely with the Clemson Online department to discuss the possibility of moving the group's common exams to an online format. Even though the faculty administered only one exam using the LMS before the COVID-19 pandemic, during the University shutdown where all classes were virtual, the overall online exam modality was successful with minimal issues. Because of the extensive

work of the coordinator and Clemson Online on these large online exams, general chemistry became the model for best practices for all online exams (Clemson Online, 2020). For example, one best practice is utilizing practice tests to ensure that all students' equipment runs appropriately for an online exam. Additionally, the coordinator communicates the dates and times of exams with CCIT's support center, so consultants are prepared to help students who run into issues before or during an exam.

Why General Chemistry?

As a staff member at Clemson University, my role allows me to interview faculty in general education departments. Additionally, my department assists with general education common exams administered online through the learning management system. I have insider knowledge about the creation and administration of these exams and the strategies used to deter cheating. The outcomes of these exams help my department determine online exam best practices and plan for other major exams. Because of my department's close relationship with general chemistry and its instructors, this group is ideal for academic integrity studies.

Additionally, the general chemistry group follows recommended best-practice standards for online examinations (WCET et al., 2009). They have the academic integrity statement in their syllabi and LMS courses. Several use in-class time to discuss definitions of cheating. They give formative assessments to gauge understanding before exams, provide practice exams, and host exam reviews. They use anti-cheating systems such as Respondus Lockdown Browser and Monitor (Respondus.com, n.d.) and in-person moderating when possible. So then, why are their number of academic integrity cases still high?

One possible response is that the COS and CECAS instructors are the main ones to report

academic integrity violations; therefore, their numbers are higher (Simon et al., 2003). Or cheating is a learned behavior from high school, and mostly freshman students commit the infractions (McCabe et al., 1999). The number of academic charges since 2013 being first offenses is 95.2 in introductory-level courses (CU OAI, 2021), suggesting the majority of infractions would be from first and second-year students. However, the data does not necessarily reflect that. Most academic integrity violations come from the Sophomore class, with seniors in second and freshmen having the lowest percentage (CU OAI, 2021). Many first-year students come into Clemson University with Advanced Placement (AP) or other course credits to classify as sophomores. By interviewing faculty teaching introductory-level courses, I gathered insight into why academic dishonesty happens.

Research Methods

This research study was a qualitative phenomenology study focusing on commonalities of participants involving academic dishonesty in online assessments using an improvement science approach.

Improvement Science Approach

Improvement science attempts to answer three questions: "What specifically are we trying to accomplish? What change might we introduce and why? and How will we know that a change is actually an improvement?" (Bryk et al., 2017, p. 114). For this study, my research question focused on the 'why' to pinpoint what change to introduce—finding the 'why' in higher education cheating leads to steps to decreasing the issue. Bryk et al. (2017) explain:

> Effective problem-solving demands that a premium be placed not just on what needs to be fixed but also on knowing why systems currently work as they do and learning how

they might be removed toward the goal of greater efficacy at scale. (p. 33)

I cannot approach the issue to make positive change without knowing the why behind the problem.

In Bryk's six principles of improvement science (2020), the first and most important principle is identifying the problem to solve. Finding the factors that influence a student's cheating decision allowed me to identify the problem to solve. The focus of this project was Bryk's first principle—discovering the specific impetus of cheating. In this study, the outcome is to decrease the amount of cheating in online assessments. To achieve this outcome, I had to identify the factors motivating students to participate in academic dishonesty.

Improvement science emerged from the field of healthcare (Crow, 2019). Researchers using improvement science methodology look at an issue comparable to a doctor diagnosing a patient as a medical model—an initial examination, research or tests to determine the cause, then an applied treatment. If the treatment does not work, doctors try another method. The only exception is when time is of the essence, and doctors must rely on their expertise to apply treatment measures without determining the cause. However, educational leaders usually take time to look into root causes first. Improvement Science is a basic backward design where we look at the desired outcome first and work from there to meet the goal (Bryk et al., 2017).

Another critical facet of improvement science is that effective change cannot occur without "ownership among participants" (Fullan & Quinn, 2015, p. 527). All affected people are considered a stakeholder in the improvement process. In the current state of online assessments in higher education, students and faculty feel they have no voice. They are starting to question the legality of many online proctoring systems. For example, the University of Southern

California Santa Barbara's faculty recently stated that they would no longer use ProctorU (Proctoru.com, n.d.), an online assessment proctoring service, for final exams (UCSB Faculty Association Board, 2020). The faculty were concerned about student privacy issues with the proctoring service brought to light from student protests of information security concerns.

Additionally, Duke University's Learning Innovation department published a blog that indicated they no longer support an online proctoring system and encourage other methods of discouraging academic dishonesty (Tyrone, 2020). Students at Clemson University have also inquired about issues of student privacy. I recently received an email from the Vice President for Student Affairs & Dean of Students requesting a copy of the privacy documents from our supported proctoring systems (C. Miller, personal communication, February 28, 2021). These inquiries show that students want to be involved in the decision-making process related to online assessments, and faculty are questioning online test proctoring systems and services.

Allowing students to help identify the cheating problem at Clemson gives them a voice that will pave the way for increased involvement. "Effective change processes shape and reshape good ideas as they build capacity and ownership among participants" (Fullan & Quinn, 2015, p. 527). By utilizing improvement science methods for my research, students had opportunities to voice their thoughts on learning assessments. Allowing students to help identify motivations for cheating begins the process of students taking ownership in reshaping Clemson University's online assessment procedures.

Additionally, faculty could voice their concerns and issues directly related to online exams. Fullan and Quinn explain that change agents need one central improvement strategy of the "leaders' non-negotiable view of what, over time, will have the greatest impact on improving

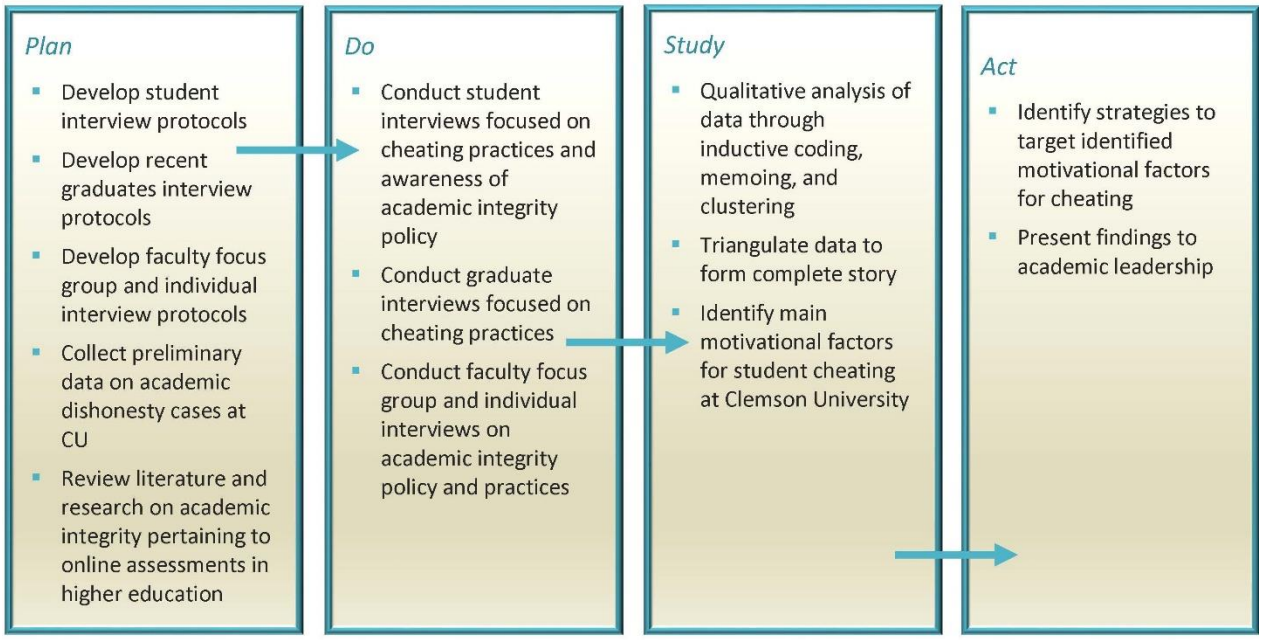
the systems performance for [students]" (2015, p. 401). For this study, identifying the factors motivating students may help pinpoint improvement strategies and provide an outlet for students and faculty to participate as change agents with academic leadership (Fullan & Quinn, 2015).

Plan Do Study Cycle

Using a Plan, Do, Study, Act (PDSA) cycle (Lemire et al., 2017; Klar et al., 2019), my study investigated why students cheat and provided recommendations to curb academic dishonesty. Under normal circumstances, a PDSA cycle is used after a root causal analysis to apply an intervention to the determined root causes of a system's adverse outcomes. The first step in the cycle is the planning of intervention. Step two is implementing the plan. The third step includes collecting and analyzing data, while step four determines changes or modifications before doing the cycle over (if needed) (Lemire et al., 2017). I modified the PDSA cycle slightly to use the basic principles to guide the causal system analysis. The goal of the cycle was to identify motivating factors of student cheating and create recommendations for policies or interventions to decrease the number of dishonest practices in assessments in an online format. Due to course cycles being semester-based, I used the PDSA cycle model to complete the causal system analysis over one academic year, including the Fall, Spring, and Summer semesters. The PDSA cycle in timeline format is in Figure 2.9.

Figure. 2.9

PDSA Design



Note: PDSA models are usually represented in a circular form to show how the cycles are continuous. However, I chose to use a linear form because I will only perform one complete process.

Plan. The Plan stage included creating the Dissertation in Practice proposal and reviewing current literature on academic dishonesty in higher education. This stage took place during the Summer and Fall 2021 semesters.

Do. The Do stage included conducting student interviews, recent graduate interviews, faculty interviews, and a faculty focus group. This stage took place over the Spring 2022 semester. I completed the student and graduate interviews early in the semester. The faculty interviews and focus group occurred within the semester but not during the first two weeks, as that is usually the busiest time for faculty.

Study. The Study stage included thorough data analysis, searching for themes and

commonalities to answer the research questions, and looking for issues related to the technology gap. Because data analysis will run concurrent with data collection, this stage occurred over the Spring and Summer of 2022 semesters.

Act. In the Act stage, I identified significant motivational factors for student cheating in online assessments. Based on the findings, I made recommendations for the next steps in addressing the motivational factors to decrease the number of academic misconduct cases related to online assessments. This stage occurred at the beginning of the Summer 2022 semester.

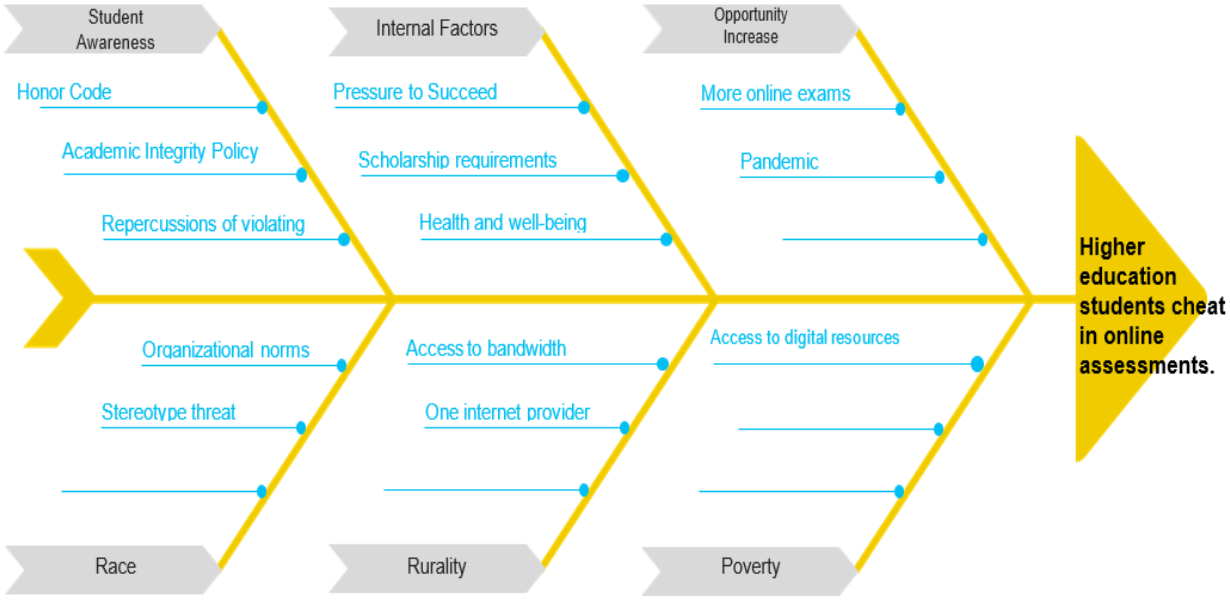
Causal System Analysis

The base of this study was a causal system analysis (also known as a root cause analysis or RCA) to identify the motivational factors influencing Clemson University students to cheat. A causal system analysis identifies the root problems or sources of unsatisfactory outcomes in educational systems (Bryk et al., 2017). An analysis of root causes determines the reason(s) why we have specific outcomes, such as student behaviors like cheating. Through a causal systems analysis, "participants develop a common understanding of the specific problem or problems they are trying to solve" (Bryk et al., 2017, p. 66). One tool that improvement researchers encourage to guide a causal system analysis is a Cause-and-Effect Fishbone Diagram (Bryk et al., 2017; Spaulding & Hinnant-Crawford, 2019). This study will identify the causal factors for the problem of an increase in academic dishonesty practices in online assessments. As designed, a completed fishbone diagram can "foster a conversation about the issues... and, in turn, increase knowledge and awareness" within faculty and leadership at Clemson University (Spaulding & Hinnant-Crawford, 2019, p. 17). Figure 2.10 is the original fishbone diagram of some hypothetical causes based on academic integrity research of higher education cheating in online

assessments (e.g., McCabe et al., 2017; Mutongoza, 2021; Verhoed & Coester, 2021). A fishbone diagram helps organize student surveys and faculty interview findings to help narrow the scope of the research question(s) (Spaulding & Hinnant-Crawford, 2019). I edited and revised the fishbone diagram based on findings throughout the data collection and analysis (see Chapter 4).

Figure 2.10

Fishbone Diagram



Based on research at other academic institutions (compiled by Anderman & Murdock, 2007) and my professional experiences with Clemson University faculty, the above diagram visually represents a hypothesis of the root causes of cheating at Clemson University. The 'bones' represented possible vital factors contributing to cheating. I used the diagram to narrow the hypothesized factors to confirm or disprove each factor.

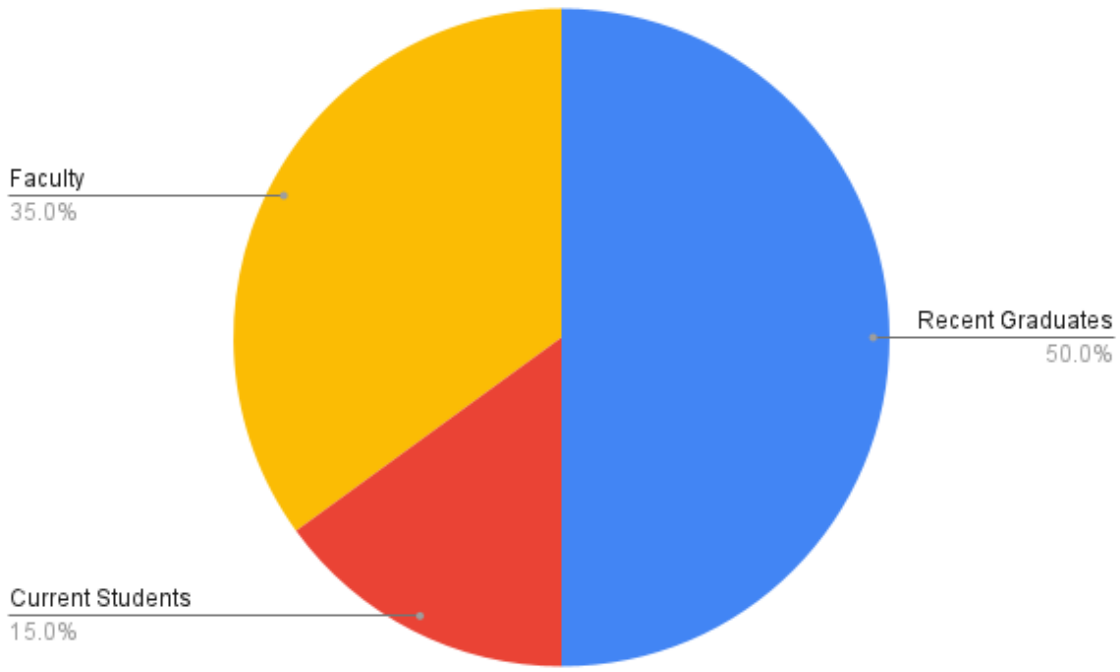
Research Design

Study Participants

This study included interviews with three current students, ten recent graduates, four faculty, and one focus group of three faculty from the same department. Figure 2.14 shows that recent graduates comprised half of the study's participants, with faculty at 35 percent and current students at 15 percent.

Figure 2.11

Study Participant Groups



I removed all identifying data and assigned pseudonyms to protect the participants. I will discuss each participant group in detail in the following sections.

Current Students. The three students varied in age, program, and expected graduation. Table 2.1 below indicates each student participant's area of study or major, college affiliation,

and anticipated graduation year.

Table 2.1

Current Student Participant Information

Pseudonym	**Area of Study**	**College Affiliation**	**Anticipated Grad Yr.**
Anthony	Management	CoB	2023
Bruce	Mechanical Eng	CECAS	TBD
Diedre	Civil Eng	CECAS	2022

Anthony is married with two school-aged children, works full-time, and goes to school part-time. He is a student at The Wilbur O. and Ann Powers College of Business (CoB). While he has enough credits to be a senior, Anthony still has several semesters left and plans to graduate in December 2023.

Additionally, Bruce is similar in that he has enough credits to be classified as a senior, but having transferred from another college, he does not expect to graduate until May 2024. Bruce was at a small liberal arts college but transferred to Clemson's College of Engineering, Computing and Applied Sciences (CECAS). Diedre graduated in May 2022 with an engineering degree and planned to begin a master's degree at Clemson University in the fall. Diedre was heavily involved in extracurricular activities and groups and a self-proclaimed master of time management, calling it "mental gymnastics." Her final semester included 19 credit hours which she considered a "light load."

Recent Graduates. The recent graduates (also referred to as former students) interviewed were a very eclectic group. Overall, participants from this pool were the chattiest. The average length of the former student interviews was 44 minutes compared to the 30-minute

average interview length of current students. The recent graduate participant group did not mind discussing cheating, cheating practices, Clemson courses, or Clemson professors. They were very forthcoming with information, even name-dropping (which I did not encourage and removed from transcripts). Table 2.2 below indicates each recent graduate participant's area of study (major), college affiliation, and graduation year.

Table 2.2

Recent Graduate Participant Information

Pseudonym	**Area of Study**	**College Affiliation**	**Anticipated Grad Yr.**
Adam	Industrial Eng	CECAS	2020
Brenda	Comp Info	CECAS	2021
Craig	Elem Education	CoE	2019
Dennis	Marketing	CoB	2019
Eugene	Chemical Eng	CECAS	2019
Faye	Physics	COS	2018
Greg	Sport Comm	AAH	2020
Haley	Comp Sci	CECAS	2018
Ian	Biochemistry	CoS	2021
Jay	Electrical Eng	CECAS	2019

Adam is an industrial engineering major who graduated in December 2020, and Brenda graduated in December of 2021 with a degree in Computer Information Systems. Faye, who graduated in May of 2018, majored in Physics and minored in Math; Haley received a computer science degree in December of 2018, and Greg is a sports communication major from the class

of 2020. Craig is an elementary school teacher who graduated in May 2019, and Dennis has a marketing degree from December 2019. Eugene also graduated in December of 2019 with a Chemical Engineering degree. Ian was a BioChemistry major who graduated in December of 2021, and Jay is an electrical engineer from the class of 2022.

Of the ten recent graduate participants, there were representatives from five of the seven colleges, including the CoB, CECAS, The College of Science (CoS), Arts, Architecture, and Humanities (AAH), and the College of Education (CoE). The colleges not represented were the College of Agriculture, Forestry, and Life Science (CAFLS) and the College of Behavioral, Social and Health Sciences (BSHS).

Another difference between the current and former student participants is that the recently graduated group mostly turned on their cameras while in the interview in Zoom. One did not because the webcam was not working correctly. Of the students, only Diedre turned on her camera, but she was the most forthcoming in answering questions. She also happened to be graduating in May 2022, less than a month from the time of the interview. While not explicitly evident, displaying an unwillingness to turn on webcams suggests that current students were still nervous about participating. This outcome warrants further research into student beliefs and perceptions about cheating.

Faculty. Lastly, I spoke with seven faculty members, four through interviews and three in a focus group setting. Because focus groups were the original plan for data collection, I scheduled this group first. When no other faculty responded to the focus group request, I directly reached out to specific faculty. I targeted instructors that my department previously worked with on online exam inquiries. The seven faculty represented three colleges: CoS, CECAS, and

BSHS. Table 2.3 below indicates each faculty participant's department, college affiliation, average class size, and the typical number of courses taught per semester.

Table 2.3

Faculty Participant Information

Pseudonym	Department	College	Class Size	Course Load
Dr. Alfred	Biochemistry	CoS	60-100	4
Dr. Brad	Chemistry	CoS	120	3
Dr. Carl	Chemistry	CoS	80	3
Dr. Donald	Chemistry	CoS	100	3
Dr. Evan	Nursing	BSHS	50-55	3
Dr. Fiona	Bioscience	CoS	200-360	3
Dr. Grace	Civil Eng	CECAS	6-90	4

Please note: Dr. Grace teaches four courses that range in the number of students. One class has 45-90, another has 20-25, the upper-level course has 6-10, and the capstone course has 60-100. Except for chemistry, all course numbers vary depending on the semester. For example, Dr. Grace typically has a higher number of students in the spring capstone course compared to the fall.

Dr. Carl, Dr. Brad, and Dr. Donald were in the focus group and from the same department in Chemistry. I targeted this group because of my team's work with them on common exams and anti-cheating tactics (please see Chapter 2). The average class size for the faculty participants ranged from six to 360 students, each teaching three to four courses a semester. The chemistry instructors average 200 to 360 students a class with three to four courses

a semester. Dr. Grace, an engineering instructor, teaches an average of six to ten students per semester for three to four seminar courses. Dr. Alfred and Dr. Fiona, Biological Sciences instructors, also teach from 200 to 360 students in each class with three courses a semester. Dr. Evan, the nursing instructor, usually has 20 to 25 students per course. The chemistry instructors usually have mostly first-year and second-year students. Grace only teaches upper-level courses. Dr. Alfred teaches second-year students, while Dr. Fiona has upper-level courses, including many students who aim to attend medical school. Dr. Evan teaches upper-level nursing courses.

The chemistry instructors teach general education classes and are pre-requisites for specific majors. The biological science courses of both Dr. Alfred and Dr. Fiona are also pre-requisite courses for particular majors. Grace has an engineering capstone class that all students in that discipline require. Dr. Evan's courses in nursing are not pre-requisites but electives in the program. However, Dr. Evan has previous experience teaching clinical courses necessary for students to pass or have to drop the program. All seven instructors have dealt with students caught in cheating practices and have handled issues from within the department and through the Academic Integrity Board.

Methods of Data Collection

For this research, I collected data throughout one academic semester. The analysis began immediately and lasted for an additional academic semester. Qualitative data included semi-structured interviews with current students, recent graduates, faculty, and a faculty focus group.

Student Interviews. This study included semi-structured interviews (Maxwell, 2012) with three Clemson University students. I used participants of convenience (Maxwell, 2012) with students who intern with one of my department's collaborative partner groups. Convenience

sampling allowed me to use easily accessible participants (Maxwell, 2012). Using participants of convenience enabled me to take advantage of prior-established relationships and rapport with the students that offered a level of comfort to be honest (Maxwell, 2012). In qualitative studies, the research relationship between researcher and participants is the "means by which research gets done" (Maxwell, 2012). I used a semi-structured interview protocol (Maxwell, 2012) (Please see Appendix A) to encourage honest responses. The protocols included an outline of questions, but I adjusted for further questions or discussed answers. Using semi-structured interviews, I had the freedom to add follow-up questions and delved deeper into responses requiring more explanation. These interviews lasted 35 to 45 minutes. Using Zoom, a web-conferencing system, I recorded interviews (with participant permission), transcribed, documented, coded, and stored them in a password-protected Google Drive folder under my Clemson Google account. All names were de-identified in the stored data using pseudonyms. Any other potentially identifying data was removed or changed. I interviewed students to determine the impetus behind the action(s) to participate in dishonest practices.

Recent Graduate Interviews. This study included semi-structured interviews (Maxwell, 2012) with recent Clemson University graduates from 2018 through 2021. (Please see Appendix B). The protocols had an outline of questions, but I adjusted for further questions or discussed answers. Using a semi-structured interview, I was free to add follow-up questions and delved deeper into responses requiring more explanation. These interviews lasted up to 40 minutes. Using Zoom, a web-conferencing system, I recorded interviews (with participant permission), transcribed, documented, coded, and stored them in a password-protected Google Drive folder under my Clemson Google account. All names were de-identified in the stored data using

pseudonyms. Any other potentially identifying data was removed or changed. I interviewed former students to determine the impetus behind the action(s) of participating in dishonest practices.

I used participants of convenience (Maxwell, 2012) with former students who either worked in my office or with partner groups or are former interns or GAs. I interviewed ten recent graduates. Convenience sampling allowed me to use easily accessible participants (Maxwell, 2012). Using participants of convenience enabled me to take advantage of prior-established relationships and rapport with the students that offered a level of comfort to be honest (Maxwell, 2012). During interview analysis, I triangulated data for data reliability (Creswell & Poth, 2018).

Faculty Interviews & Focus Group. Lastly, this study included semi-structured interviews with four faculty members and a semi-structured focus group (Maxwell, 2012) with three faculty members. I used participants of purposeful selection for the focus group (Maxwell, 2012) with the general chemistry faculty. Using purposeful selection was appropriate because of this group's unique online assessment experiences, large class sizes, and common exams. Through my role at Clemson University, I am very involved with this group and utilized a previously established rapport to promote honesty. I used a semi-structured interview protocol (Maxwell, 2012) (Please see Appendix C) to encourage discussion. The protocols included an outline of questions, but I adjusted for further questions or discussed answers. This focus group interview lasted about 60 minutes. Using Zoom, a web-conferencing system, I recorded the focus group (with participant permission), transcribed, documented, coded, and stored it in a password-protected Google Drive folder under my Clemson Google account. All names were de-identified in the stored data using pseudonyms. Any other potentially identifying data was removed or

changed. I utilized the faculty focus group to gain insight into their views of academic integrity and experiences (if any) with violations of educational policies in courses.

I used participants of convenience for the faculty interviews (Maxwell, 2012). Convenience sampling allowed me to use easily accessible participants (Maxwell, 2012). Using participants of convenience enabled me to take advantage of prior-established relationships and rapport with the faculty that offered a level of comfort to be honest (Maxwell, 2012). I used a semi-structured interview protocol (Maxwell, 2012) (Please see Appendix D) to encourage discussion. The protocols included an outline of questions, but I adjusted for further questions or discussed answers. The interviews lasted about 40 minutes. Using Zoom, a web-conferencing system, I recorded the interviews (with participant permission), transcribed, documented, coded, and stored them in a password-protected Google Drive folder under my Clemson Google account. All names were de-identified in the stored data using pseudonyms. Any other potentially identifying data was removed or changed. I utilized the faculty interviews to gain insight into their views of academic integrity and experiences (if any) with violations of educational policies in courses. During focus group and interview analysis, I triangulated data for data reliability (Creswell & Poth, 2018).

Data Analysis

I began the data analysis process simultaneously with the data collection. The analysis included reading and listening to the interview and focus group transcripts, writing notes or memos while reading and listening, and reading observational notes from the interviews and focus groups(Maxwell, 2012). I used a coding strategy to categorize the memos and narrative analysis to understand the data in context by using the MaxQDA coding software (Maxwell,

2012). Coding by narrative analysis allowed me to look for relationships that connected statements from participants into a coherent theme (Maxwell, 2012).

Positionality

Qualitative research inquirers should clarify their position (Creswell & Poth, 2018, p. 229). Practicing positionality, or what Creswell and Poth (2018) refer to as "reflexivity" (p. 229), is necessary. As an only child, I am curious, which leads me to stick my nose where it does not belong or get involved in many projects. In my current position, I help create and conduct online assessments at Clemson University. Additionally, I work closely with undergraduate-level general education classes that often include large enrollments and common exams where thousands of students take the same test simultaneously. My work group researches and encourages academic integrity practices.

My curiosity wanted an answer to the question: Why are students attempting to cheat? Instructors can use a variety of best practices and tools to discourage dishonesty, but cheating still happens. Why? According to Milner (2007), this is an "unseen danger" of a negative stereotype about "certain groups of students and their situations" (p. 394).

Being raised in a Christian household where morals are a part of our belief system, I have difficulty understanding the decision to cheat. Additionally, being from a rural area where everyone knows everyone (or is related to everyone), when you get in trouble at school, your parents know before you get home which kept most of my classmates and me from having disciplinary issues--including cheating. Therefore, it is imperative to practice research positionality (Perry et al., 2020) to remain impartial and unbiased. By acknowledging my belief system and position, I was aware of my "personal identities" (Perry et al., 2020, p. 112) and how

these identities affected the research process.

During the research on factors motivating students to participate in dishonest practices in online assessments, my position at Clemson University would likely profile me as an insider working with insiders (Creswell & Poth, 2018; Perry et al., 2020). An insider profile is where the "scholarly practitioner is studying their context in collaboration with others who are part of the organization" (Perry et al., 2020, p. 112). As the associate director of learning technology, I help and advise instructors in creating and administering their online assessments. However, because I am not a faculty member or undergraduate student, I could also be regarded as an outsider working with insiders (Creswell & Poth, 2018; Perry et al., 2020) where the "scholarly practitioner is outside of the organization studying with those who are inside" (Perry et al., 2020, p. 112).

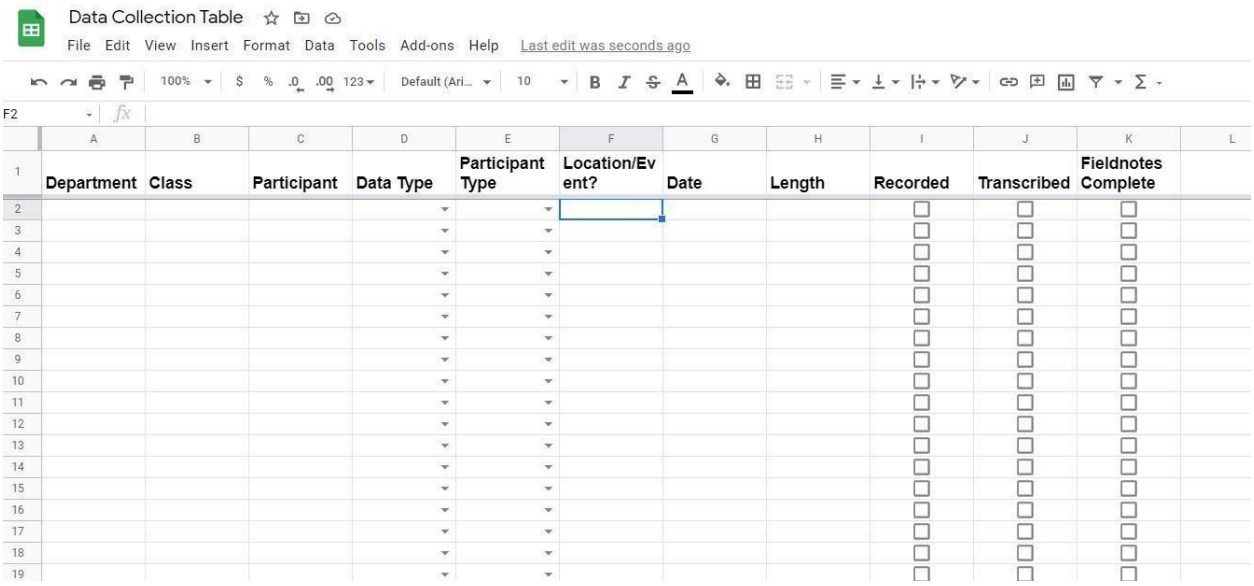
As an employee conducting my study, I needed to be mindful of my perspective as support staff. I consider many faculty members my friends and should not allow personal relationships to affect the research process and look at the information gained critically and with an unbiased view (Perry et al., 2020). Additionally, I found it difficult at times to remain impartial or non-judgmental to student perspectives considering I conducted interviews with students, former students, and faculty I knew personally. However, I needed to stay "neutral and unbiased" (Perry et al., 2020, p. 111). My research was also necessary to be "problem-focused and user-centered" (Perry et al., 2020, p. 115). Because my group has put much effort into helping instructors, I feel invested in our strategies. I had to remain impartial, especially when finding some of our methods were ineffective or not culturally responsive.

Coding Process

I managed the data collected from focus groups and interviews in a Google Sheet. Figure 2.11 shows the headings of the data collection table in Google Sheets.

Figure 2.12

Data Collection Table in Google Sheets



Note: This figure represents a screenshot of the data collection table created in Google Sheets. The table was also password protected behind a multi-factor authentication account.

The file naming system of transcripts and data began with either a student pseudonym (StudA), recent graduate pseudonym (GradA), or faculty pseudonym (FacA). It included participant pseudonyms with the date for file saving purposes. For example, if I conducted a student interview on March 15th, I would have a file name of StudentA_3.15.21.

Analysis Process

As Miles et al. (2018) encouraged, data analysis ran concurrently with the data collection process. This study analyzed data from interviews, a focus group, and analytic memos. After every interview and focus group session, I began the analysis by processing and reviewing the

raw data, including cleaning up the transcripts for accuracy. “Raw data must be processed before available for analysis (Miles et al., 2018, p. 70). After processing the raw data, I reviewed the data by listening and reading the transcripts. During the data review, I utilized analytic memoing by making notes or memos reflecting on the data (Miles et al., 2018). Memoing allowed me to “capture emerging thematic details” (Creswell & Poth, 2018, p. 194). I also practiced reflexivity by writing reflexive comments, including observations, hunches, and reactions to the data (Creswell & Poth, 2018).

Analytic memoing. I utilized memoing throughout the analysis process. Memos included noting commonalities, background information, follow-up questions, and any surprising or confusing data (Miles et al., 2018). Most importantly, citing outliers or disconfirming evidence allowed for more profound exploration and analysis validity (Miles et al., 2018). Also, while memoing, I highlighted excerpts that were good for quoting, such as short, eye-catching quotations or quotes to embed, as encouraged by Creswell and Poth (2018).

After conducting focus groups and interviews, I used analytic memoing methods to reflect on the collected data (Miles et al., 2018). Memoing allows a researcher to reflect on the study’s research questions. I also used memoing methods during and after coding to look for emergent patterns and networks among the codes and analyzed the data for potential problems (Miles et al., 2018). The analytic memos were dated for reference and captioned for easy retrieval (Saldaña, 2013).

Inductive coding framework. I used qualitative data analysis to code interviews and focus group results. “Coding is a data condensation task that enables you to retrieve the most meaningful material, assemble chunks that go together and further condense the bulk into readily

analyzable units" (Miles et al., 2018, p. 73). I utilized an inductive coding framework to assign symbolic meaning to the information compiled during the study. "The primary purpose of the inductive approach is to allow research findings to emerge from the frequent, dominant, or significant themes inherent in raw data, without the restraints imposed by structured methodologies" (Thomas, 2006, p. 238). Inductive coding methods differ from a deductive analysis, where key themes are often masked or reframed because of pre-developed codes and preconceptions in the data collection (Thomas, 2006).

To stay organized and help with coding and clustering, I purchased the MaxQDA software (Maxqda.com). At the recommendation of a colleague who is a Ph.D. candidate, I wanted to utilize the software to help analyze the focus group discussions and interviews.

I assigned codes to data chunks to an inductive coding framework to detect recurring patterns through the MaxQDA software. I used inductive coding methods by generating In Vivo and descriptive codes. Inductive coding In Vivo codes created from "significant statements" were later clustered into "clusters of meaning" or themes (Creswell & Poth, 2018, p. 79). I used descriptive codes to assign labels to data to summarize the primary topic of a passage of data (Miles et al., 2018). A codebook stored codes and definitions and was regularly updated to ensure that coding stayed consistent throughout all interview analyses (Miles et al., 2018). Results were sorted and displayed in a spreadsheet by commonalities and themes. The coding process and data analysis allowed for identifying descriptive patterns. Figure 2.12 is an example of a coded segments spreadsheet generated from MaxQDA.

Figure 2.13

Sample of a spreadsheet containing coded segments sorted by one code

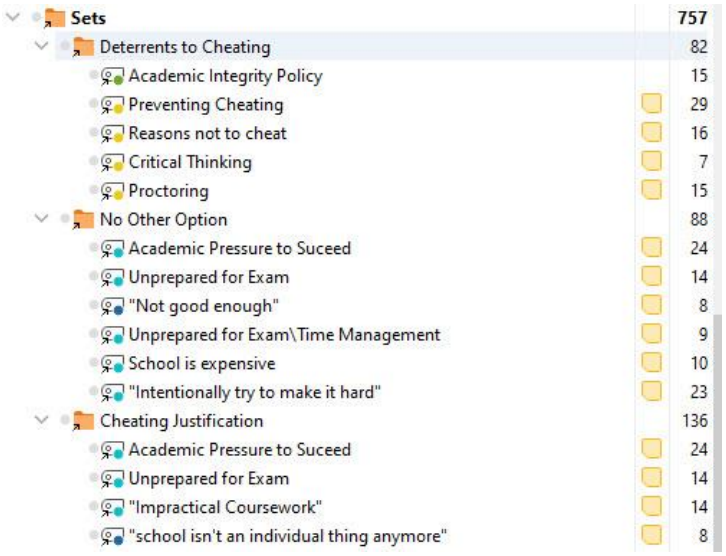
Document name	Code	Segment
StudA_Recording.transcript	Academic Integrity Policy\Student Awareness of Academic Integrity Policy	I think the most of them do, and the ones that are ones that are kind of like flirting with the line are the ones that don't care about most things until her car.
StudB_Recording.transcript	Academic Integrity Policy	i've skimmed it. I haven't really read it thoroughly.
StudB_Recording.transcript	Academic Integrity Policy\Student Awareness of Academic Integrity Policy	I think they have an idea of the policy and i'm pretty sure they are aware, because, like I think every Every syllabus has has it at the very end.
StudB_Recording.transcript	Academic Integrity Policy\Student Awareness of Academic Integrity Policy	I think the vast majority don't.
StudD_Recording.transcript	Academic Integrity Policy	Probably not super high
GradI_Recording.transcript	Academic Integrity Policy	yeah if I read it, it was a long time ago.
GradI_Recording.transcript	Academic Integrity Policy\Student Awareness of Academic Integrity Policy	They don't know the specifics
GradI_Recording.transcript	Academic Integrity Policy\Student Awareness of Academic Integrity Policy	I think most people GradI care about doing the right thing.
GradI_Recording.transcript	Academic Integrity Policy\Student Awareness of Academic Integrity Policy	people are just interested in doing the right thing. There are some people that i've run into Who are I don't know ambitious or they don't care and they're they're okay with doing whatever it takes to get a grade Which is unfortunate. but that's how how it is sometimes. but, generally speaking, I think people are wanting to do the right thing they want to follow whatever tests protocol or procedure, the professor's asked of them.
GradJ_Recording.transcript (2)	Academic Integrity Policy	I definitely did not ever read it. did not know I think i'd probably was told where to find it, but if I was, I was not paid, I did not pay attention to that.
GradJ_Recording.transcript (2)	Academic Integrity Policy\Student Awareness of Academic Integrity Policy	I would say no. I would like to think of myself as average student and I didn't really know.
GradJ_Recording.transcript (2)	Academic Integrity Policy\Student Awareness of Academic Integrity Policy	I think they care about either have those that are cheating that care about not getting caught or because they're not going to cheat who care about themselves just sticking to their gut not cheating. but I don't think anyone's going to take the time to really go read the The policy or understand what would really happen to them. I think there is more just I don't want to cheat or i'm gonna cheat on don't want to get caught.

Note: This figure represents a screenshot of coded segments exported from MaxQDA sorted by unique codes using inductive coding methods.

Analytic clustering. Additionally, I used a structured analytical approach to look for "significant phrases, developing meanings, and clustering them into themes" (Creswell & Poth, 2018, p. 202). I used MaxQDA sets for the clustering process and color-coded them to help with the grouping process and triangulation from all data points to validate data. Figure 2.13 below shows an example of a few clusters, including grouped color-coded codes.

Figure 2.14

Screenshot of the Analytic Clustering of Codes in MaxQDA



Note: This figure represents a screenshot of Sets in MaxQDA clustered by theme and color-coded codes using inductive coding methods.

Validity

One problem of qualitative research is that each researcher is a "one-person research machine" (Miles et al., 2018, p. 293). A qualitative researcher must be mindful of "analytic bias" that could weaken the findings (Miles et al., 2018, p. 294). I continuously reviewed the research questions to maintain validity throughout the analysis process. Studying research questions allowed me to stay on target, focus on the research projects and goals, and help define themes and look for commonalities (Maxwell, 2012). For coding, I used Inter-Rater Reliability methods by reviewing the codebook before each coding session and documenting all needed updates to the codebook. Applying codes consistently across the data set helped ensure analytic reliability (Miles et al., 2018). I used data to guide this research study through the PDSA cycles. I used the triangulation of multiple data sources to validate data analysis (Creswell & Poth, 2018).

Additionally, I used peer review for hypothesis testing. I routinely met with two thought partners to discuss findings and explore alternative hypotheses (Creswell & Poth, 2018). Lastly, I practiced positionality throughout the research by including "reflexive comments as the study progressives," including my hunches and reactions (Creswell & Poth, 2018, p. 229). Collectively, these practices enabled me to reflect on my positionality and assess the validity of major findings.

CHAPTER 3

FINDINGS

This research study aimed to determine why students at higher education institutions such as Clemson University cheat, especially on online assessments. The root causal analysis is essential to address these factors that motivate students to cheat. Through this study, I found interesting perceptions of cheating at Clemson University. In the following sections, I will discuss my main findings: first, students acknowledge cheating happening at Clemson; second, students cheat because of the pressure of grades; and third, personal pressures lead students to feel they have no other options than to cheat. Lastly, I will discuss what students claim to keep them from cheating.

As a leader in educational technology, I am fortunate enough to have the ability to encourage and promote a change in best practices, including learning technology, learning environments, and online assessments. While this study's results could be considered common sense, the key findings are enlightening as the first phenomenology to affirm anecdotal evidence about academic dishonesty at Clemson University. This chapter's headings contain direct quotes from study participants that summarize the results.

Data Collection

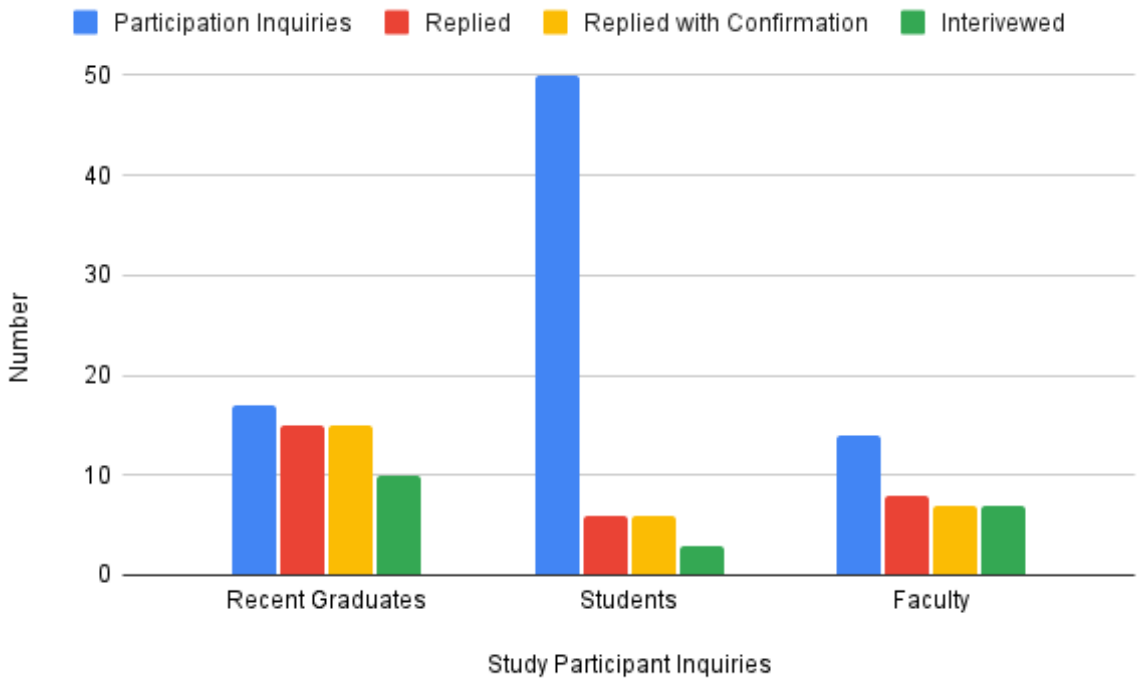
Several issues occurred during data collection concerning the research topic. Before discussing key findings, I want to point out that the controversial topic of academic dishonesty was evident among college students. Half of the current and former students participants wanted confirmation that their comments would remain anonymous.

"This is Anonymous, Right?"

This wariness about the subject of cheating was evident during attempts to find current student participants. I originally planned to conduct at least three or four focus groups, each with three to four students. Figure 3.1 shows the number of each group (current students, recent graduates, and faculty) I asked to participate in the study. As indicated in the figure, most of the current students invited to participate did not respond. “Participation Inquiries” include the number of those in the data group asked to participate in the study. “Replied” is the number who gave a response to being invited to participate. “Replied with Confirmation” includes the number whose response was a willingness to participate. “Interviewed” is the actual number of those willing participants I interviewed.

Figure 3.1

Study Participation Inquiries



Out of 50 inquiries, I could only find three current students to interview—none of whom wanted to be in a group with other students. One student I asked to participate replied, “This feels like a trap,” and flatly refused. Two of the three students and one of the recent graduates wanted confirmation that their comments would remain anonymous even though I addressed this in the invitation email, consent notification, and at the beginning of the interview.

On the other hand, former students (recent college graduates) were eager to talk to me. All but two of the recent graduates I asked to interview agreed to participate; the two that declined had schedule conflicts. My original assumption that former students would be the most challenging group to gain participants from was inaccurate. This group responded the quickest and was the most accommodating.

Lastly, I hoped to interview at least eight faculty in three to four focus groups to have a third source for data triangularization. This plan also did not work out, as I could only conduct one focus group of three faculty members from the same department. I then conducted individual interviews with four other faculty members. The responses of faculty who did not participate were not so much that they were unwilling to talk to me but that there were time constraints. Most others never responded. However, all of the interviewed faculty provided insightful information, including suggestions on combatting cheating at Clemson University.

Study Findings

My study examines the problem of practice that some students at Clemson University cheat in online assessments (see Figures 2.4 and 2.5) (CU OAI, 2021) by asking the following research question: Why are students motivated to participate in dishonest academic practices in online assessments? I found further evidence that cheating happens at Clemson, and students find

cheating easy. For the efficiency and ease of interviews, although the study focuses on assessments, the definition of cheating used for the participants and data collection involves any infraction of the academic integrity policy (see Definitions in Chapter 1).

The two main motivational themes of academic dishonesty include the emphasis on grades and the personal pressures such as family, the expense of education, and time management skills. While many other factors play a role in the decision to cheat, such as the maturity level of students, morals and ethics, and a low level of respect for instructors, most fit within the two themes listed. Additionally, cheating may align with students' lack of awareness of Clemson's academic integrity policy. Lastly, this study also revealed what motivates students not to cheat. I will discuss each key finding in detail in the following sections.

Cheating Occurs at Clemson University

Even though University data shows that cheating occurs at Clemson and is on the rise, current and former students and faculty verified that cheating exists. The official academic cheating data may be inaccurately low. According to this study's participants, most cheating goes unreported. Several current and former students mentioned instances of classmates caught cheating but not being taken before the Academic Integrity Board. The faculty participants also stated that most faculty prefer to handle academic integrity issues personally or within their department. They suggest the process is too complicated, time-consuming, and convoluted with little to no recourse for students. For these faculty participants, they stated it was easier to handle infractions personally.

"100% Beyond a Doubt It Happens." The first key finding is the perception that cheating occurs regularly at Clemson University. Every participant—current students, recent

graduates, and faculty—indicated that cheating occurs. Most had an immediate affirmation or laughed when asked, “Does cheating occur at Clemson?” Former student Faye responded with, “every single day.” Adam, a recent graduate, stated, “I would say, probably 95% of the students at Clemson have cheated at least once, and I would say 85% of students would cheat if given the chance.” Echoing Adam, Greg, another recent graduate, stated, “I’m almost certain the majority of the student body at one point or another has cheated.” Current student Diedre pointed out that in a university of over 20,000 students, there is no way that every single person is honest. The current and former student participants in this study consistently implied that cheating happens regularly on their campus.

Faculty participants concurred that cheating occurred and suggested it goes underreported. Dr. Evan reported that his department handles all academic integrity issues in-house. Dr. Fiona said she prefers to address cheating issues herself. Dr. Brad explained that during the Spring 2021 semester, he did not officially report students he caught cheating. He suggested that reporting a student to the academic board was convoluted and complicated. He went on to say, “I don’t really go looking for that kind of thing. I just don’t have the time.”

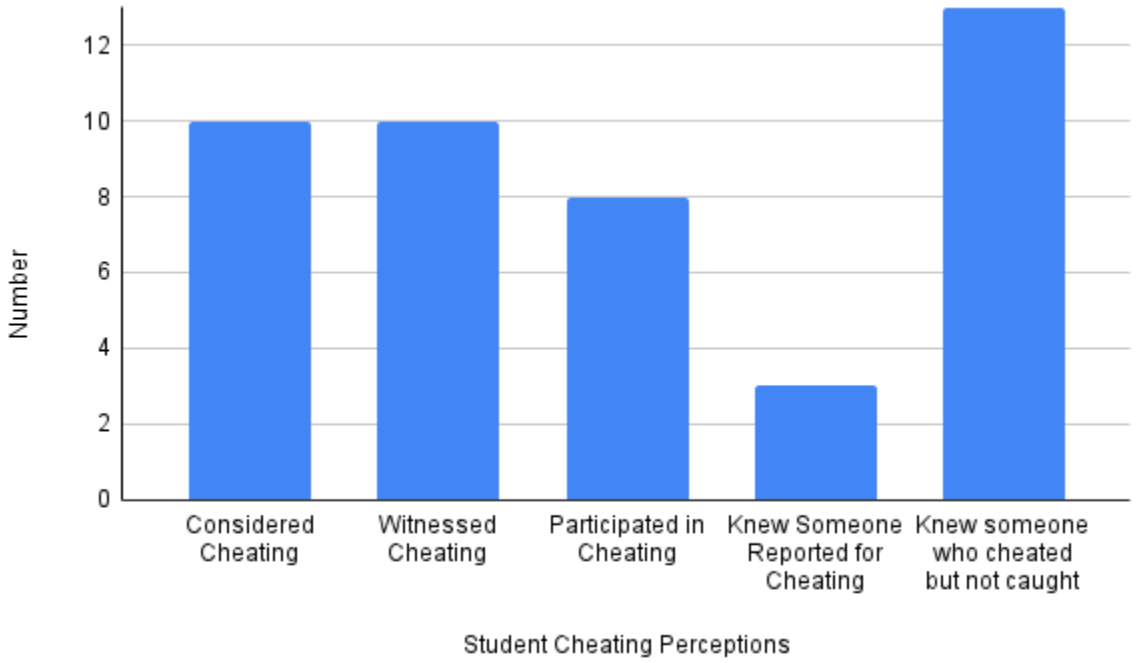
Additionally, Dr. Alfred commented that he usually caught cheating students by accident. He stated, “I don’t know how many people have gotten away with stuff, but I honestly only caught stuff because I was going back through to correct an exam for points.” While not overtly seeking out cheating students, the faculty in this study still found evidence of dishonesty on exams. Faculty value time, and the amount of time they already spend on assessments is vast. Adding to that process to look for cheating appears to be not worth the expense.

Figure 3.2 shows the number of study participants who have participated in, witnessed, or

know of students who cheated. I specifically asked all former and current student study participants if they considered cheating during their time at Clemson University. I also asked participants to tell me about their own experiences with cheating and if they had witnessed cheating. Ten of the 13 participants admitted to having considered cheating at least once, ten of the 13 participants were eyewitnesses to classmates cheating, and eight of the 13 admitted to cheating. Three knew someone personally reported for cheating (only one had their instructor submit the case to the academic board for formal charges. The other two were handled by their instructor personally or their instructor's department chair). Lastly, 13 of 13 personally knew someone who had cheated without getting caught. As a result, students witnessed cheating, and most students admitted to cheating.

Figure 3.2

Student Cheating Perceptions at Clemson University



"School Isn't an Individual Thing Anymore." Clemson students perceive that cheating is rampant and that it is widely accepted. Many participants indicated that students view cheating as the norm at Clemson. "It's just something people did," commented Greg. The participants commented in various ways how they felt students know cheating is wrong, but because "it's not hurting anyone," as Greg indicated, they view it as okay. Academic dishonesty has become an accepted practice.

Additionally, several former and current student participants expressed that group collaboration is a resource and, therefore, is not cheating. "If it's literally everybody, then it's just like using a resource. They think they are using a resource versus academic integrity," stated Adam. He went on to add, "School isn't an individual thing anymore." Students perceive working collaboratively on assignments as standard and not academic dishonesty. This way of thinking seems prevalent among this study's participants.

Over half of the current student and recent graduate participants, such as Greg, Craig, and Dennis, mentioned collaboration and resource use as a "gray area" of cheating. Brenda gave this example:

> I think there's also a gray area where people justify it. I think there's a gray area where people are willing to kind of overstep the limits but justify to themselves that it's not cheating, even though a professor or another person would probably disagree. Like, for example, let's say an instructor says this test is open book, open notes. A lot of people might interpret that as open Google. So, is that cheating? Or does that still kind of fall within the open notes thing? That's kind of where that gray area comes in, I think.

This collaborative "gray area" seems to differ from course to course and instructor to instructor.

However, the gray areas of cheating appear to be any form of collaboration or resource usage that may or may not be allowed. Students regularly use search engines to find answers to everyday questions, so it appears to be expected to look up answers to course material. Additionally, students proclaim they can use colleagues and resources in real-world applications, so why not in the classroom? To them, these are logical justifications for participating in the gray areas of cheating.

Greg said a student group he was a member of regularly met up to what they referred to as studying but, in reality, was working together on assignments. “It was just something people did,” he stated. In Greg’s example, studying meant sharing notes, homework answers, and taking quizzes and exams collectively. Collective work is how students believe the real world operates and, therefore, is how they should tackle coursework.

Another justification or “gray area” of cheating is taking advantage of loopholes. Dennis used search engines to look up answers on an exam. He stated, “I didn’t see it in writing anywhere that I couldn’t do this during an exam, so I did it.” Students appear to interpret cheating in various ways. Dr. Jeff Appling confirmed by stating that not all students reported for cheating “realize their shortcut is considered dishonesty.” What may be considered cheating in one course may be acceptable in another. Dr. Evan stated something similar, implying that not all students understand the definition of cheating. “They [students] don’t understand what a violation of academic integrity is. They literally think it means I have a book, and I’m looking into this book for answers. They have in their head ideas of what they see as cheating.” These loopholes seem acceptable to students and not necessarily cheating.

Ian pointed out that different instructors have different policies, which can be confusing.

One semester, he had instructors that allowed the use of notes for exams, but others did not. He stated, “More often, I think people don’t know what the rules are specific to a class. People may unknowingly do that sort of thing.” In these instances, policy differences can be confusing and result in students not having a clear definition of academic dishonesty. Students’ perception of cheating does not always align with what faculty or administration consider cheating. The students either do not know or understand that these “gray areas” are regarded as academic integrity violations or see them as acceptable forms of cheating.

“Cheating is Easy.” Participating students and recent graduates admitted that finding ways to cheat is easy. For example, students cheat using mobile phones to take pictures or screenshots of test questions to share with classmates. Another frequently mentioned resource was a shared Google Document or a messaging app like GroupMe. Students will start a document or messaging thread with a test question asking for help or the answer. Using the available class list, they will email the link to everyone in the class, hoping that someone will know the answer. These conversations will continue throughout the exam and future assignments. Resources such as Google Documents and GroupMe are free (except for purchasing a phone or laptop), easy to use, and not easily traced. The only way students can get caught is by another student turning them in or (usually unknowingly) adding the instructor to the document or thread. Students also mentioned using Quizlet, Coursera, or a quick Google search as resources. These sites are open, and students worldwide contribute by adding test questions and answers. It is not difficult to find a whole exam with an answer key on these sites.

Additionally, students are inventive. Several former student participants mentioned seeing students store notes on graphic calculators for exams. Faye told a story of seeing a

classmate use a water bottle to sneak in notes for an exam by writing on the back of the label. Dr. Donald once caught a student with formulas written on his arms covered up by a sweater. Whatever the method, the student participants all perceived finding ways to cheat seemed easy.

Student participants also reported that the ease of cheating depends on the professor. Brenda stated,

> There have been some [instructors] that put a lot of effort into caring. You know they really do their due diligence. And then there are others who are like whatever, do whatever, I'm just gonna leave the classroom where you guys are taking a test. I gotta take a phone call. Be right back."

In this case, students communicated with each other or used unapproved resources while the professor was gone. Brenda was not the only student to mention a lack of oversight during exams. Anthony, Craig, Dennis, and Greg also stated similar instances with instructors not monitoring during in-person and online exams. Greg mentioned that many of his online instructors during the pandemic did not use monitoring or anti-cheating software for exams. To him, this made cheating more accessible. He stated, "Without even Lockdown Browser, you could pop open a window and browse Google for the answers." Again, this ties into the student-proclaimed "gray areas" of cheating where if the instructor has not put any deterrents in place, they are essentially leaving the door open for students to cheat.

Dr. Brad echoed the lack of faculty oversight by stating:

> "I'm not convinced that a lot of my colleagues across campus take cheating seriously. And the ones using Canvas exams, I suspect, are not aware of some of the things that students are going to do to get around their policies. I think they trust students when they

shouldn't."

Dr. Brad alluded to faculty not caring as much about cheating as he believed they should or assuming our students are honest and will not cheat. Dr. Brad and his chemistry colleagues, Drs. Carl and Donald, explained that instructors make academic dishonesty seem acceptable by not taking cheating seriously in the classroom. In Dr. Brad's opinion, "They [students] are not going to go actively look for a way to cheat, but if you give them the opportunity, if you leave the door open, they'll walk through the door." According to participants and their examples of classmates finding ways to cheat, academic dishonesty at Clemson may be both easy to accomplish and commonplace.

"One Thousand Percent Easier to Cheat Online." I asked the recent graduates and current students if it was easier to cheat on online exams. When asked if cheating is easier online than in person, 100 percent of the current and former participants replied affirmatively. One common perception of the former and current students is that it feels safer to cheat online, making them less likely to get caught. Craig stated, "I think it probably happens more online—feeling safer in your environment. [You] feel more comfortable to do it, you have a little bit more confidence when you're kind of at a distance. I think that happens more online than in person." Six of the 13 current and former students mentioned feeling comfortable or safe in cheating online, and four of the six specifically stated the word "safe" or "safer." Dennis reiterated, "I think that you feel safer online, and you feel safer in your environment." Greg admitted to cheating on tests during the pandemic. "Especially the take-home tests during the pandemic, we would have tests online, and you could Google the answers. Yeah, without a doubt, I almost certainly more than once cheated on a couple of quizzes and tests." Students

claimed the online experience gave them a feeling of ease in cheating. Students express a sense of safety in cheating while taking online exams, whether sitting in their favorite chair in pajamas or not being watched. While not expressly stated, this comfortability or feeling of safety may align with the "gray areas" of academic dishonesty by leaving doors open to cheating or using resources as normal real-world behavior.

In comparison, some faculty have a different perception of online assessments. Several faculty members in this study asserted that online exams could be created in a way that makes cheating difficult. For example, Dr. Alfred utilized test banks to ensure each student's exam questions were in a different order and locked questions so students could not go back to previous questions and share answers. Dr. Grace administers her in-person exams through Canvas but monitors by watching from the back so she can see all of the computer screens. Dr. Brad and Dr. Carl believed their Canvas exams were more challenging to cheat on than the previously used paper versions. Dr. Brad explained how their process of using test banks to generate a different test for every student makes cheating harder. Additionally, he and his department have testing protocols that deter cheating, such as passwords, Respondus Lockdown Browser, and sign-in and sign-out procedures. However, all of these methods take time to create and implement. This may be additional work that some instructors are not willing to do. Dr. Fiona stated she prefers paper exams because they are less work than creating online exams with cheating deterrents.

Deterring Online Cheating. In this study, current and former student and faculty participants mentioned proctoring systems in online assessments. Most current and former students agree that proctoring systems deter cheating in online exams. Dennis stated,

> "I think they [proctoring systems] work because I can tell you that I took exams during my undergraduate career with Remote Proctor. I took a lot of Lockdown Browser, but I took four remote exams proctored, and I remember exploring ways like how, how can I cheat on this? I did not. They're [proctoring systems] hard."

Students stating that proctoring systems help deter cheating is essential because the University pays for these systems. If they are not helpful, resources should be reallocated. Also, faculty support units like Clemson Online can use this information to tell faculty what student perceptions of the proctoring systems are so that more instructors may be inclined to use it. Nine of the 13 current and former students mentioned proctoring tools as deterrents that help curb cheating. Most of the participants who mentioned proctoring systems did so as one of the reasons not to attempt to cheat.

However, Adam indicated he knew how to bypass these types of systems. "It's not that I couldn't like try to sneak around the proctoring system." Anthony mentioned, "Give me five minutes of Googling a product, then I know its exploits, and it will be easier for me to cheat." It is also essential for faculty to know these systems are not fool-proof, nor will they work 100 percent. Instructors need to know that students are creative and can bypass specific deterrents. Dr. Brad stated, "I look at exams and exam security as kind of like an arms race. The students get better at figuring out their way around our protocols and security measures every year, so we've got to continually look at ways to make things better." Dr. Brad and his colleagues are concerned about cheating because their courses contain foundational material that students need to master to succeed in higher-level future courses.

Cheating on In-Person Exams. Even though all current students and recent graduates

indicated they believe it is easier to cheat online than in-person on exams, data collected also showed that in-person cheating does happen. In the example below, Dennis and his friend both went to Dennis's class. Dennis's friend took the test and put Dennis's name on that test. Dennis did not put a name on the test he turned in. Because there were so many students in the course, no one noticed the non-Clemson student or even cared there was an additional test being turned in with no name. Dennis explained:

> There were 701 people taking the exam. Essentially there would be an extra exam because we would turn in both exams because couldn't leave the exam taking area without turning in an exam. The TAs that we're grading the exam probably found an extra exam and never cared to bring it to light or bring it to the instructor's attention because we did not just do it once. We did it twice.

This example indicates how creative and inventive Clemson students are when it comes to cheating. It also suggests that cheating happens in all learning environments and modalities, regardless of online or in person.

"[Internet] Was Not an Issue, No." One of my original hypotheses (see Chapter 2) included the digital divide affecting students and being a motivating factor in cheating. However, this study's findings showed that the wireless connectivity or digital devices were not an issue, were not a hindrance to academic learning, nor did they cause students to cheat. Even the off-campus students had no significant problems with access to adequate wireless connectivity.

Most current and former student participants indicated that wireless connectivity was not an issue where they lived except for when they experienced occasional storms or bad weather. Brenda did suggest that her wireless provider did go down at one point for a few days. However,

the participants indicated that it did not negatively impact their coursework even during these instances. “I could just go to campus if I needed to,” stated Jay. Only one participant indicated that connectivity was occasionally a hindrance to coursework. Haley’s coursework required reliable high-speed internet. She stated,

> With computer science, a lot of our work is done in Linux, and unless you’ve got a computer that you’ve got Linux on most of the time, we SSH into lab computers in McAdams, and, if the internet’s down, you just can’t do that. So, like you can drive to the lab, but, you know, if it’s late at night and you’re working on a project, McAdams probably isn’t open. If the Internet is down, you’re kind of out of luck.”

Even though internet connectivity was an issue with Haley, she did not indicate that this caused her to cheat or consider cheating. While the digital divide could cause problems for some students, access to devices and internet connectivity was not an issue with this study’s participants. Further research is needed to fully understand if an issue exists with a larger student population.

Why Do Students Cheat?

The focus of this research study was to ascertain the underlying causes of academic dishonesty at Clemson University. The participants indicated that the two main motivational themes of academic dishonesty include the emphasis on grades and the pressure to pass courses and graduate. I will discuss each key finding in detail in the following sections.

GPA Pressure: “Grades are Everything.” The central theme that arose from this study’s data collection and analysis is that there is immense pressure on Clemson students to have and keep specific grades or GPAs. This pressure leads some students to resort to drastic

measures. Every participant mentioned grades as a reason for cheating, if not the main reason. Current and former student participants highlighted the emphasis at Clemson University on good grades and maintaining high GPAs. Faculty participants suggested seeing and hearing similar sentiments being expressed to students. Dr. Fiona witnessed colleagues telling their students they must make an A in their courses to get into medical school. She went on to add that this is false. She stated, "I've had students who made Bs in Biology courses and still get into med school." Dr. Fiona explained that students feel pressured to make good grades, like getting into graduate school. However, if students believe and are told they must make As in their courses to continue in their chosen career paths, they will do what they can to make that A, including cheating.

Faye, a recent graduate, discussed cheating being a mode of survival. "For a lot of them [students], it's like I need to make the GPA so I can continue to get federal financial aid and finish this degree." 11 of the 13 current students and recent graduates mentioned the importance of GPA. Seven of the 13 current and former participants said feeling the pressure to keep a high GPA for scholarships. Greg mentioned how he lost a scholarship due to his GPA dropping. "I lost my Life Scholarship because one of my classes dropped down to a C." When a GPA means a difference of thousands of dollars, students will consider cheating as an alternative. Dr. Carl explained that his experience with student cheating is related to keeping scholarships. "It's about money. They must have a certain GPA average, and it's a lot of money which is painful." Regardless of the overarching reason for needing a high GPA, at Clemson University, there appears to be a push for students to keep and maintain high grades.

One facet of grades is the personal pressure of having never failed or even never making a B before college. Craig mentioned how he took anything less than an A as a personal offense.

Many students come to college with a stellar GPA but little studying experience. These students have never made a B or lower. Some experience a culture shock in college after initial college exams. Adam stated, “I got like a 34 on one of my exams, and I like never failed a class ever and like never failed a test and got a 34. I was like, what the hell?” After these experiences, students may feel like a failure and begin to struggle to catch up or take drastic measures like cheating to ensure they do not have a repeat failed performance on the next exam.

Many current students and recent graduates saw cheating as a way to combat the perceived unfairness of some exams. Eight of the 13 current and former students discussed courses intended to be “weed out” classes that were “unnecessarily hard” or taught in a way that made the material “harder than it needed to be.” In many of these courses, students consider exams “make it or break it” where the option to cheat seems like a viable choice to pass the course and continue in the program. Ian stated, “If I did poorly on a previous exam, I was like, okay, it’s make or break here, and that would be when I would really consider anything like that [cheating] in an act of desperation really.” When put in these situations, student participants said cheating feels like the only option left.

Anthony also explained the peer pressure of grades in his statement, “Sometimes I think it’s like you got to keep up the stigma of I have to have the absolute best grades.” To him, making good grades was about maintaining an image his peers associated with a high GPA and doing whatever it takes to keep that image, including cheating.

In her interview, Brenda discussed the pressure of getting good grades as a rational justification for cheating practices. She stated,

Yeah, I think people are generally probably inherently good—most people, I think. But

> you put enough pressure on somebody, and what they'll do will change. I do think that to probably some degree, that pressure to have good grades or at least pass classes probably plays a pretty big role. I don't think [cheating] is something that people would go out of their way to do for no reason.

Brenda's perception of cheating is that students will consider almost anything when under pressure to perform. As Greg indicated, "when push comes to shove, people start taking risks." This study's participants suggested that cheating is a risk many students are willing to take to make or keep good grades. Dr. Fiona witnessed students experiencing the pressure of grades. "It was a pressure brought on by needing to have a certain grade." She caught a student cheating on a major exam and found out the student cheated because he needed a particular grade in her class or his parents would not let him do a study abroad program. The need for a grade outweighed the risk of getting caught.

Additionally, Dr. Donald mentioned that students cheat because their focus is on grades. He stated, "Unfortunately, it's a society or cultural problem here [Clemson University] that the emphasis is not on learning, but it's on getting the grade by whatever means necessary." This study's participants perceive that grades are an essential aspect of a college career. As Dr. Donald indicates, Clemson University as a community appears to put grades above anything else. Students are told they must maintain a specific GPA to stay in a program, keep scholarships or good standing in student organizations, or need particular grades to get a good job or graduate school. All current and former student participants mentioned needing good grades or GPA to keep scholarships or get a good job after college. This perception indicates that the focus of the campus community may be more on maintaining a high GPA than on actually learning material

and gaining knowledge.

"What I Gotta Do to Get Out of Here?" This study's participants explained that the primary goal of college is to pass the course(s) and graduate. Besides maintaining a certain GPA, this is the most crucial aspect of a college student's life. Students and recent graduates confirmed the academic pressures to succeed with statements such as, "I must pass this class," or, "I had to make an A." Greg discussed during his interview how he had to apply for his program of study three times because his GPA was not high enough. His lower GPA caused him to extend his college career by three extra semesters, and he did not graduate "on time" because of what he deemed expensive "crap courses." Greg referred to his general education classes as the "crap courses" because they were not relevant to his major and seemed like a waste of time. These were the courses he stated he was most likely to cheat on because they were not meaningful to him. He also considered the three extra semesters worthless because he took irrelevant classes to get his GPA high enough to get into his intended program. He did not mention the program offering any student resources, only that he had to keep reapplying to get in finally.

Similarly, many current and former students indicated that cheating is considered acceptable on courses or material unrelated to their major or what they want to do in the "real world." Diedre stated, "It's really hard for me to be invested in a class when I can't see the point." Students emphasized that they enjoyed classes where the material was relatable, and they were less likely to cheat when engaged with the coursework. Also, most current and former student participants mentioned cheating as acceptable in courses where the professor required memorization for assessments. For example, Faye stated, "You know, I can answer the question. I can do the math, and I can do the things, but, like, I'm not going to spend my time memorizing

these things." Memorization was a waste of time and not worth the effort to these students. Suppose good grades are the most critical aspect of a student's academic life, as indicated by this study's participants. In that case, students do not feel they need to learn material that does not seem applicable. Therefore, cheating is a viable option.

Also, if the situation does not parallel what students consider real-world scenarios, then cheating is seen as acceptable. Bruce gave this example:

> I considered cheating just because, in a real-world scenario, I would have access to my notes to double-check on something. And I also considered cheating just because, like, I worked for an engineering firm for a year and a half, and you always have time to like consult with your notes real quick. So, it's like, yeah, you should know this off the top of your head, but it's always good to double-check. Especially with math, it's like it's one thing to pull up the formula, but you would still have to have an understanding of how that formula worked. I didn't feel like it was cheating just because I still have to have an understanding of how this math worked, or I would still get the question wrong.

Eight of the 13 current and former student participants made similar points. Greg even mentioned how he did not feel the need to learn content because he would not be in a job that would be life-threatening. He stated, "I'm not on a career path that will threaten someone's life. Engineers building a bridge, if that bridge breaks and kills people, they are liable for that." If the content is not applicable or parallel to real life, students believe it is not relevant, and cheating is acceptable.

Additionally, several students mentioned that their programs of study were very rigorous, with pre-requisite courses that they had to pass to stay in their program of study. These

participants suggested that this pressure of passing courses made them consider cheating. They felt they were out of options—cheat or fail and switch majors. Dr. Evan teaches in a rigorous program with several pre-requisite courses and required assessments. Additionally, the students must maintain a GPA above the University set GPA. Certain courses require an A to pass or a specific score to continue to move on in the program. In one assessment, students must make a perfect score to continue. Dr. Evan stated, "They [students] have to take a math test and have to make 100 on it. If they don't make 100 after three tries, they're out of the program." He indicated that this type of high-stakes testing sets up issues for academic integrity. The program's national certification requires this special assessment to maintain accreditation. All students in this program nationwide must pass this assessment with a perfect score before continuing. While they offer tutoring and office hours to help students prepare for this exam, the program continues to have issues with the risk of academic dishonesty.

For this department at Clemson, high-stakes assessments and required courses help ensure students are prepared and adequately trained before moving on to the industry. A national governing body mandated this rigorous coursework and high-stakes testing and cannot be changed or removed without losing accreditation. However, these types of pre-requisite courses and high-stakes testing cause pressure that could make students feel like they are out of options.

The option-less feeling of cheating as a last resort comes from various things. One factor that came up with recent graduate participants was feeling they could not meet the expectations of the course, instructor, or program. Eugene explained it this way:

> I feel like the reasons why students cheat is just because I feel like sometimes it might be that no matter how hard they really try and how much time or hours or, you know,

> months or weeks they spent preparing for an exam or a quiz or even some homework assignments, that feeling of still not being good enough to meet an expectation set by the professor. No matter what you do, or how hard you work, or even if you come talk to the professor, I feel like situations like that definitely drive students to cheat because it seems like there's no other option other than for them to try and find a way around it that would appease or meet whatever expectation is set by the Professor or the course or the standards.

If students feel there are no achievable standards, they consider cheating. Four of the ten recent graduate participants mentioned feeling like they were in an "impossible situation." Jay told a story of his experience with a five-question exam.

> I studied so much for it. I thought I was ready for it. We could take in sheets of notes. We could write equations down. We can do pretty much whatever we wanted to bring to this test. I got to the test. I'd never seen some problems like this before in my life, and when you get to that point, and you see that, you can't help but just kind of give up.

It was at this point that Jay considered attempting to cheat. Yeah, you're kind of just defeated when you see something like that," Jay explained, "but yeah, I remember vividly knowing that I was going to fail it." He stated that he would have cheated if he could, but there was no realistic way to cheat with the test, mainly critical thinking and applying learned materials. These higher-order critical thinking assessments make cheating harder to accomplish because there is nothing the students can look up. They cannot Google and answer or look over their notes. They must apply knowledge and not regurgitate information.

> Lastly, cheating appears to be more common in the courses or exams perceived as unfair

and justified as a way to "level the playing field." Additionally, if other students are seen cheating and making better grades, they have an unfair advantage, are "blowing the curve," and inadvertently making exams harder. Jay mentioned, "You're not going to get the curve at the end when they [classmates] are going to be cheating and be above average and get a good grade. So, I think that's when it crossed my mind the most. To be able to keep up, you almost had to [cheat]." Therefore, students view cheating as an acceptable way to keep up with their classmates and maintain a good grade to pass the class.

"Yeah, It's the Most Important Line on Your Resume." Students also feel pressure to keep a high GPA to maintain financial aid, get a good job, or get into graduate school. Eugene felt the pressure to cheat and explained, "there were a few exams that I was so panicked and overwhelmed and stressed that I did consider [cheating]. I don't want to impact my GPA to the point where I can't get a good job." Many industries and companies look for the GPA line on resumes. One recruiter explained that if he has two qualified candidates for one position, the hiring manager is most likely to go with the one with the highest GPA out of college. Students are aware that GPAs matter for hiring purposes. Former student Haley explained that this applies especially to students aspiring to enter a competitive field. She suggests these students will consider cheating before taking a C and ruining their GPA. Although it is unclear how important GPA scores are to employers, the majority of students *believed* the scores matter.

Personal Pressures: "It was About Survival." The second theme arising from this study about why students cheat is that students feel personal pressures to succeed, leading to cheating. These pressures include family pressure, the expense of education, and time management skills. As indicated, the pressure to succeed takes many forms. Ian summed it up

this way:

> Not every exam is going to end your career or whatever. But at a certain point, especially if you have high expectations for yourself or your family is on your back or something, I think people, at least generally speaking, they just want to do well. You know if someone is in a bad spot especially passing a class, because not passing a class means like delayed graduation depending. It can mean losing a scholarship. It can mean like your parents not paying for your tuition or something. I've heard all kinds of scenarios like that, I mean, just push people to do what they have to do.

At this point, students may consider cheating—when they feel they have no other choice. Ten of the 13 current and former participants mentioned feeling this type of personal pressure in one form or another.

"People are pressured to live up to these expectations." Family pressures were mentioned but not as often as the personal motivations to succeed that students put on themselves. Diedre stated that some parents push their children to go to college when they may not be ready. She went on to explain that for many students, college is the expected next step, and depending on the student's maturity level or willingness to work, they may not be ready for college. She believed that she was not prepared and that a year at a community college or working would have been better than going straight into a four-year institution. For Diedre, almost failing out of school the first year caused anxiety, and she considered cheating to stay enrolled.

Faye explained a similar experience with a challenging course. "I failed almost. I had to withdraw. I went through a lot of emotional stuff. It was the first time I'd ever had to withdraw

out of a course and get a W." Fay added, "It was a tough conversation to have with my family." For Faye, failing and disappointing her parents was motivation to consider cheating. Several student participants expressed feeling personal pressures to succeed and familial pressures. These pressures can motivate students to take extreme measures like cheating to prevent having difficult conversations with family. Brenda summed it up this way, "As long as people are pressured by peers and parents and other people to live up to these expectations, there's always going to be the temptation to cheat." These expectations include making good grades, keeping a high GPA, maintaining scholarships, graduating, and getting a job. All of the study participants stated experiencing at least one of these expectations.

"School is Expensive." Five of the 13 current and former student participants mentioned the economic pressures of the cost of tuition and student debt as justification to cheat. Repeating a class can not only delay graduation but is expensive. "There's a financial motivation as well, so you don't have to pay to take those classes again," stated Bruce. However, Dennis mentioned the threat of losing funding as a deterrent:

> I was very scared of losing my funding. You know, I was a first-generation college student. My parents are immigrants, and money was very tight growing up throughout my entire childhood. Losing my funding was very scary, and I'm pretty sure it was also reality if you do get caught with any type of academic integrity issue, that maybe the public South Carolina Scholarships like Life and Palmetto Fellows or Hope, you know, those get taken away. So, I was very good. That was real, and if I hadn't had my South Carolina scholarships and grants and all these types of different types of funding, I mean, I wouldn't been able to go to school.

While Dennis used funding as a reason not to cheat, Craig felt the opposite, stating, “Everyone realizes college tuition is overpriced. Everyone realizes that many people who do not do all the work and still get just as good grades.” Additionally, Greg mentioned that because degrees are expensive, students need “every little bit to help you get where you need to go.” In his case and others, that help included cheating.

“Time Management Definitely Was a Big Part of It.” Eleven of the 13 interviewed current and former students mentioned situations where they felt unprepared for a test or exam. Unpreparedness not only added stress and, in some cases, test anxiety but exacerbated the motivation to attempt to cheat. One recurring remark from the former student group includes the undergraduate student experience attributed to inadequate preparation for exams. Eugene explained that the “newfound responsibilities” of being in charge of your own academic and personal lives and financial responsibilities add to the already stressful load of coursework and internships. He stated, “I think it has a lot to do with the fact that you’re young, and there are so many different responsibilities you are juggling at a young age.” Dennis explained that his focus in college was more on the student experience than coursework. He stated, “There’s a lot of things that are valuable to them [students], and they value more like the social life experiences and stuff like that. There were plenty of times where I didn’t write a paper because I went to a concert that night with my friends.” Dr. Brad confirmed that he believed his students run into time constraints. He explained that students are not managing their time well or over-scheduled. Whether it is the new responsibilities of being a young adult or the priority of experiencing college life, many students appear to have issues with time management when it comes to studying.

Additionally, several participants mentioned not being prepared for exams because they did not prepare enough or did not study the right things. Diedre discussed feeling overwhelmed by the amount of material to learn. She stated, “Especially with a lot of senior-level classes, there’s just so much material that you’re covering per exam that it can feel somewhat daunting to figure out what even to study.” Craig and Ian mentioned that the most challenging exams they had were the ones that the instructor did not give many details about, and they did not know what to study. Craig stated, “There was no study guide to go along with it. I didn’t really know what exactly was going to be on the test.” Both felt stressed at the exam because of being ill-prepared. This stress can cause students to resort to considering cheating. Overall, students want to succeed and will do what they can to achieve success.

Participants also discussed finding out they did not study the right thing and panicked at the exam. Ian gave this example, “I get to an exam, and I don’t know what I’m looking at.” He explained how he felt prepared, “I had spent a good bit of time preparing and watching the videos,” however, the exam did not align with the course material. While this does not appear to be commonplace, at least four current and former student participants mentioned not being prepared for an exam because they did not study the “right thing,” or the homework and course material did not match the exam. Entering an exam and finding you do not know the material may cause students to panic and look for an alternative, such as cheating, so they do not fail.

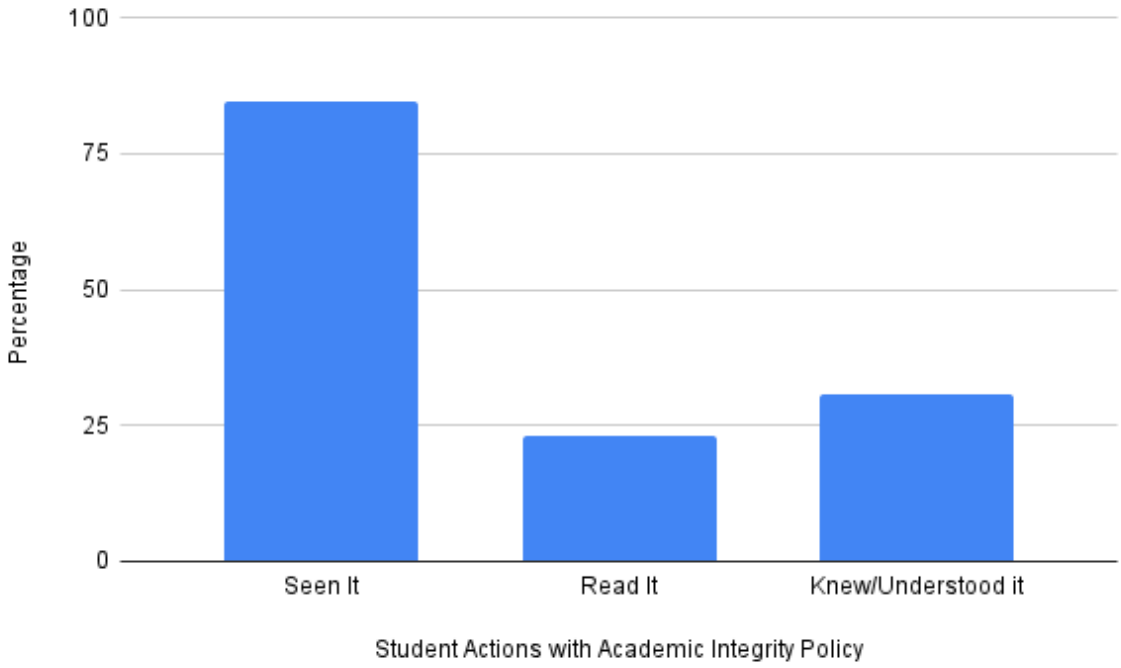
Student Awareness of Academic Integrity Policy: “I Know it Exists Somewhere.”

Because previous academic integrity studies show that institutions with academic integrity policies or honor codes usually have fewer reported cheating incidents, I asked all current and former student participants about Clemson University’s academic integrity policy.

Questions included whether they had seen or read the policy, and I asked them to explain their interpretation of it. Figure 3.3 shows the results. Of the 13 participants, 11 had seen it, three had read it, and four felt they had some understanding of the policy.

Figure 3.3

Student Awareness of Clemson University's Academic Integrity Policy



I also talked with faculty about how they cover academic integrity in their courses. All seven believed that the University covers academic integrity at orientation or the required first-year course CU 1000. I could not find evidence that either area covers academic integrity for students. This research site's Senior Associate Dean for Curriculum confirmed and stated, "We have to depend on our instructors to send the messages." However, the instructors indicated that the responsibility should not fall on them. Dr. Grace stated, "Now, is it my responsibility to teach them this or discuss it? I don't think it is, but I do because I don't know where they're getting it

from." 12 of the 13 current and recent graduate students indicated that none of their instructors covered academic integrity outside the syllabus's blurb. This study suggests that most students are unaware of Clemson's academic integrity policy details, considering only 23 percent of the participants admitted to reading the policy.

Unawareness of the academic integrity policy may be the study's most important finding because it shows how perceptions of academic leadership and faculty are different. The administration expects faculty to discuss academic integrity with their students, but faculty assume the University covers this at the beginning of a student's Clemson journey. What appears to happen is that academic integrity is briefly covered at new student orientation, which does not include transfers, and is in each instructor's syllabus, which many students do not read. Therefore, students are not getting in-depth discussions or instruction on academic integrity or Clemson University's academic integrity policy.

"What Keeps Students from Cheating?"

Even though the focus of this research study did not include identifying factors that keep students from cheating, through the unstructured interview process, the topic of why they did not cheat or did not consider cheating came up with the majority of participants. The findings were significant enough to include, and I will also discuss the potential interventions section in Chapter 4.

"I'm Too Scared of Getting Caught." The main deterrent to cheating explained by participants was the threat of getting caught. Because most students know the consequences, they choose not to cheat because they do not want to fail a course or get expelled. Seven of the 13 current and former students mentioned the threat of getting caught as a reason not to cheat. Greg

stated he felt that attempting to cheat in the classroom was too risky. “I wouldn’t cheat while I’m in the classroom, but that’s because of my own fears of getting caught, and I thought it was riskier.” Craig explained his thoughts on the risk this way, “I’m too scared of getting caught. I’m just not bold enough. I never considered it from fear of being caught.” To these students, the consequences of cheating were not worth it.

“Just Being an Honest Person.” Two of the three current students and several recent graduates mentioned personal integrity as to why they did not cheat. Faye attributed it to the way she was raised and that her father’s influence on personal integrity had a significant impact on deterring any thoughts of taking shortcuts in life. Additionally, Anthony, a parent, mentioned that he never cheats because he needs to be a good role model for his children. He stated, “How can I tell my kids not to cheat or take shortcuts if I do it?” Lastly, Diedre also mentioned that her personal beliefs and parents’ influence kept her from even considering cheating. She stated, “I was raised by my parents with a very strong moral compass.” Personal integrity kept these students from cheating even when the opportunities were there to cheat.

“Respondus Keeps Honest People Honest.” Because of my position at Clemson University and as the head of the team that administers and supports our online proctoring tools, I did not include any questions about proctoring systems in the interviews. However, participants did mention the effectiveness of proctoring tools like Respondus Lockdown Browser, Respondus Monitor, RPNow, and in-person monitoring through Zoom. The students and recent graduates who discussed proctoring systems stated that these systems decrease cheating but do not prevent it.

“I Don’t Know What I Would’ve Done to Cheat.” Several current and former students

mentioned taking exams where cheating would be impossible. Participants said that exams with higher-level thinking were not conducive to cheating. These included exams with critical thinking problems or problem-solving questions. Participants specifically mentioned questions involving the application of material such as theories, equations, or formulas. For example, Adam explained, “Even if I wanted to cheat, I don’t know what I would have done to cheat. It’s not like I could Google the exact question. It was like critical thinking.” Four of the 13 current and former student participants mentioned having experiences with tests where cheating was not an option because the tests contained critical thinking and problem-solving questions.

Additionally, participants mentioned that being allowed to use notes, the textbook, or formula sheets not only discourages cheating but also alleviates test-induced stress and anxiety. Ian explained, “Once I realized we were able to use their notes, it was like a relief.” Faye also mentioned that she and her classmates felt less likely to cheat when they could use notes and formula sheets because the pressure of spending time memorizing was gone, and they had more time to study the material.

Findings Conclusion

This research study aimed to determine why students at higher education institutions such as Clemson University cheat, especially on online assessments. Through a root causal analysis and data analysis, I identified two main factors contributing to cheating: the emphasis on grades and personal pressures that make students feel they have no other options. Additionally, I found a significant lack of student awareness of Clemson University’s academic integrity policy.

During analysis of interview data, current and former students and faculty identified the emphasized importance of grades and the personal pressures of family, the expense of education,

and time management skills. This study suggests there is a culture of academic success at Clemson that focuses on grades as the definition of success. This type of culture may be cultivating a norm of cheating. This study's findings prompt further questions about the campus perceptions and beliefs about the definition of academic success. However, a more extensive investigation is warranted.

As a former educator and currently in an educational technology leadership role, these findings also show how cheating is a systemic problem. Improvement science can be used to address the need to review how Clemson University instructors assess content mastery and create assessments. Former student Brenda stated, "I think to really eliminate cheating would require a fundamental shift in several areas." I will further discuss suggestions for intervention implementation to best address these issues in the next chapter.

CHAPTER 4

DISCUSSION OF FINDINGS

This study's findings suggest that cheating exists in higher education institutions such as Clemson University and that cheating practices come from pressures on students. Considering the recent scandals at prestigious institutions like Yale and West Point, these findings align with experiences at other institutions. A Yale anthropology instructor brought formal charges against eighty-one students for cheating on an exam (Krebs, 2022). West Point, an institution that prides itself on integrity and honor, experienced a cheating scandal in which 72 first-year students were accused of cheating on a calculus final in May 2022 (Brook, 2021). Less than a year later, the school expelled eight cadets and required over 50 cadets to repeat a year of instruction. My research is a significant contribution to the field of academic integrity in higher education as I confirm anecdotal evidence through a qualitative phenomenology.

In this chapter, I discuss the significance of my findings in relation to research and practice. I also make recommendations for interventions and provide suggestions for future research.

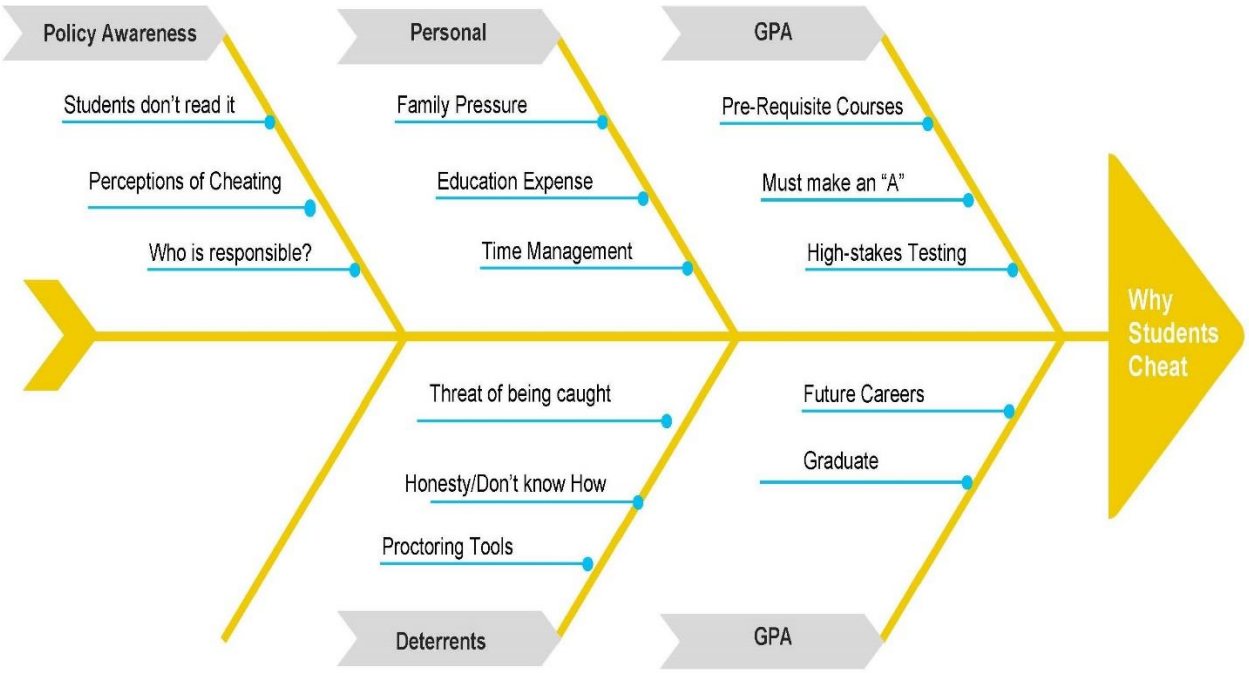
Why Students Cheat

Most research into academic integrity among college students is in the form of surveys of a large population of undergraduate students. Freiburger et al. (2017) found that higher education student cheating depends on self-control, the likelihood of getting caught, their perception of right and wrong, and experience with prior dishonesty. While this study reflected Freiburger et al.'s (2017) findings, such as the likelihood of getting caught as a significant deterrent for cheating, my conversations with current and former students indicate two

justifications for cheating: GPA pressures and personal pressures. GPA (grade) pressure is the number one reason students cheat. Participants expressed the need to get specific grades and a high GPA to pass a course, keep scholarships, continue in a program, and get a good job. Personal pressures such as family expectations, time management skills (or lack thereof), and college expenses were the second finding of why students cheat. I included a summary of my conclusions in Figure 4.1 below. The fishbone diagram consists of the identified issues motivating Clemson University students to cheat. The figure gives a brief overview of the main topics identified, which can help foster conversations about cheating with academic leadership and faculty (Spaulding & Hinnant-Crawford, 2019).

Figure 4.1

Clemson University Academic Integrity Fishbone Diagram



The bones in the above figure represent this study's identified root causes of cheating at Clemson University. The gray boxes indicate the significant categories of specified reasons students cheat. The blue lines are specific reasons participants gave for cheating. Two GPA areas indicate this was the central theme of cheating motivators. The Policy Awareness and Deterrents categories show two more relevant findings from this study: students are not aware of the academic integrity policy, and there are deterrents to cheating that work.

GPA Pressure

One significant finding from the study is that students experience pressure to cheat from GPA requirements, including minimal passing grades for pre-requisite courses, high-stakes testing, financial assistance requirements, graduation requirements, and future job prospects. GPA is often associated with academic dishonesty (e.g., McCabe & Trevino, 1997; McCabe et al., 1999). Previous research suggests that many students feel the need to get ahead or experience a fear of failure (e.g., Simkin & McLeod, 2010; Ip et al., 2016; Whitley, 1998), leading to cheating. Prior studies provide evidence that students are more likely to cheat in highly competitive situations or when they perceive a focus on grades (e.g., Anderman et al., 2007). Lambert et al. (2003) found that students cheated for a better grade or felt justified to cheat to graduate. This study found that the pressure of grades and making good grades is the number one reason students give for cheating.

Personal Pressures

The second significant finding from the study is that students feel personal-related pressure to cheat. These pressures are from three primary sources: family, time management, and the expense of education. All student participants in this study identified experiencing at least

one of these pressures causing them to consider cheating. Over half experienced two of the three pressures, while four participants mentioned feeling all three during Clemson University.

Family. In this study, participants admitted that family pressures caused them to consider cheating. One participant experienced pressure from family because of being a first-generation college student and dependent upon financial aid to attend a higher education institution. The other participants who mentioned family pressure felt it due to maintaining good grades, a high GPA throughout high school, and the expectation to perform at the same level in college. These participant experiences align with multiple studies that concluded that college students experience pressure to succeed from individual factors like family (e.g., Hughes & McCabe, 2006, McCabe et al., 1999, 2017). One study found intense family expectations and pressures as an excuse for cheating (McCabe et al., 1999). Usually, this comes from a family's financial situation and reliance on funding (e.g., Mensah et al., 2018), which I discuss in greater detail in the Education Expense section below.

Time Management. This study's findings included that time management was an issue with students that led to academic dishonesty considerations. Half of the current and former participants considered cheating because of being unprepared for an exam. Two participants specifically mentioned time management, while the others explained that undergraduate students feel football games, parties, concerts, and the on-campus student experience is more important than studying. This study's findings echoed research on student involvement in extracurricular activities linked to increased cheating (e.g., McCabe & Trevino, 1997; McCabe et al., 2017).

Additionally, research suggests that being unprepared increases cheating (Schraw et al., 2007). Another recent research study found that students are dishonest during online exams due

to feeling overwhelmed and stressed because of a lack of time management (Verhoef & Coetser, 2021). My findings support the research that a student's lack of preparation is a motivating factor for cheating.

Education Expense. While academic integrity research rarely mentions students' financial stress, the expense of education was a significant finding in this study. In this study, participants identified the cost of higher education as a constant pressure to succeed and encouraged thoughts of cheating. Sabri et al. (2020) found a link between academic performance and financial stress, noting, "Financial stress can lead to dropping out of school, loss of sleep, poor ability to concentrate, etc." (Sabri et al., 2020, p. 267). Financial stress can also lead to considerations of cheating, as found in my study. Parks-Leduc et al. (2021) discussed behavioral economics as a justification for cheating. "The introduction of the price causes people to shift from social behavior's concern for outcomes of others to financially rational behavior's concern with selfishly maximizing outcomes for oneself" (Parks-Leduc et al., 2021, p. 4). The study suggests once finances are involved in one's decision-making, selfish behavior is justifiable. This research supports my finding that cheating is considered justifiable behavior because of financial concerns.

Mensah et al. (2018) found that students cheat because of the extra cost of retaking a failed course. These situations become "a financial strain on their meager income and increasing the cost of education" (Mensah et al., 2018, p. 98). Several participants in my study made similar statements that cheating was an alternative to re-taking classes or extending graduation dates. This research shows that the connection between financial stress and cheating warrants further study.

Student Awareness of the Academic Integrity Policy

The third significant finding is that most students are unfamiliar with the institution's academic integrity policy. Clemson University has an honor code as part of the Student Code of Conduct and an Academic Integrity Policy. Over half of this study's participants never read Clemson University's academic integrity policy. Additionally, faculty participants admitted to not going over it beyond syllabus day and believed it to be covered elsewhere. Minimal understanding of the policy could contribute to many cheating practices (McCabe et al., 2017). Most of McCabe's research on academic integrity revolves around honor codes and creating institutional environments that encourage academic integrity to deter cheating in higher education (e.g., McCabe et al., 2017 & 1999). Because honor codes and educational integrity policies should help prevent cheating. Since Clemson has these in place, I included questions in interviews about the policy to determine students' level of awareness of the policy. However, academic integrity violations happen and are on the rise. This study's findings suggest one factor of breaches could be the lack of awareness of the policy among students.

Implications and Intervention Recommendations

While eradicating cheating is very unlikely, Clemson University's academic leadership and faculty can work to decrease the amount of cheating through student education and by closing gaps where the potential to cheat is open. The findings from this study have implications for higher education academic leadership and faculty interested in decreasing the amount of academic dishonesty at their institution. If institutions like Clemson University can make strides in reducing academic dishonesty, other South Carolina institutions and similar R1 universities can try similar methods.

Four recommendations may help leadership and faculty increase academic integrity awareness and decrease cheating. First, the University needs to work to reduce the GPA pressures on students. Second, student awareness and understanding of the academic integrity policy must increase. Third, students need more academic coaching opportunities and access to time management resources. Last, leadership should encourage faculty support groups to offer faculty development on assessing student learning. I will discuss each recommendation further in the following sections.

Intervention Recommendations for Clemson University Leadership

This section will focus on recommended interventions for Clemson University Leadership to decrease academic dishonesty cases among undergraduate students. University leadership should create a task force or steering committee to review current policies around grades and GPAs to make recommendations. Additionally, the University should commission the creation of a required academic integrity course for all students.

Decrease Pressure of Grades. This study found that the pressure of grades and GPA is the primary students consider cheating. Tannock (2017, p. 1354) argued that grading in student assessment "undermines collegiality and collaboration while fostering inequality and competition." Participants in this study maintained that many of their classes focused on grades as the measure of success and not collaboration or even application of learned material. While it would be near impossible to rid higher education of grading altogether, institutions must look for and find ways to decrease the pressure of grades without adding stress to students. Even though this is a lofty goal, it is attainable. Tannock (2017, p. 1347) calls for discussions about what public higher education should look like, including "contesting the central place of grading in

assessment as a vital piece of developing this ideal model of the public university." To start this process at Clemson University, leadership should appoint a steering committee to examine current policies and procedures related to GPA. An appointed committee can take a deeper look into the role of grading and assessments at Clemson and investigate ways to encourage intrinsic motivation to develop our students as "independent, critically engaged, self-directed learners" (Tannock, 2017, p. 1350). The committee should have representatives from the student body and faculty, including representatives from the Office of Undergraduate Studies, financial aid, admissions, career services, the Registrar, student advising, student affairs, and the Academic Success Center. The steering committee would identify procedures needing updating and provide policy change recommendations.

Required Academic Integrity Course. Another finding of this study is that many students lack awareness of Clemson University's academic integrity policy. If honor codes and educational integrity policies deter cheating in higher education (e.g., McCabe et al., 2017), then students must be aware and understand of such policies. One misconception identified in this study is that faculty believe students hear about academic integrity at orientation or through CU 1000, an introductory course required by all first-year students. However, the academic integrity module in CU 1000 is non-existent. In reality, students only hear about the academic integrity policy through a brief presentation at orientation.

By increasing awareness of the policy and exploring specific and actual examples of academic dishonesty, students may be less likely to consider cheating (e.g., McCabe et al., 2002, 2004, 2017; Trevino & McCabe, 1997). To increase awareness and understanding of the academic integrity policy among all students, the University should implement a required

asynchronous online course covering academic integrity. For example, Kansas State University (KSU) developed an online version of an integrity course. Roberts et al. (2009) gave an overview of the course in their article for the Merlot Journal of Online Learning and Teaching. Roberts et al. (2009) stated, "An online development and integrity course serves as an important function in a university's overall approach to academic integrity by offering opportunities for rehabilitation and further learning" (p. 193). A significant limitation, however, is that KSU created the course for students found in violation of their academic integrity code. Even though this course has exhibited success, it is a reactive intervention against dishonesty. I recommend Clemson University create a similar class to reach new students *before* they have the opportunity to cheat, as required integrity courses are a way to foster an integrity environment known to decrease cheating (McCabe et al., 1999).

An asynchronous online course would be a simple way to ensure all students get an overview of the academic integrity policy and receive information on the definitions of cheating and the repercussions of violating the policy. Students would automatically be assigned to the course and have their first semester to complete it. Designing the class in an interactive format with videos, situational quizzes, and testimonials would ensure student engagement and encourage students to complete the course.

Intervention Recommendations for Student Services

This section will focus on recommended interventions for Clemson University Student Services to assist students with time management skill building and academic coaching opportunities. First, student services should provide more resources on honing time management

skills. Additionally, the University should give student services additional resources to have more academic coaching available.

Time Management Resources for Students. The second significant finding of this study is that students are pressured to cheat when personal stressors make them feel that they have no other options. The main issue this study's participants discussed was being unprepared for exams due to a lack of time management. Participants defined time management issues as feeling overwhelmed or having different priorities than studying. Van der Zanden et al. (2018, p. 64) found that students "who were better able to plan, manage tasks, set goals, and persist were more likely to achieve academically in the first year." My study's finding reflects this research but oppositely. Student participants claimed their academics fell short due to unpreparedness and considered cheating to achieve their goals. Time management, especially studying, is linked to better academic adjustment. Va Rooij et al. (2018, p. 760) identified a correlation between students who could "effectively regulate their study behavior" with the ability to cope with the academic demands of college. Maintaining study schedules increased a first-year student's chances of being well-adjusted. My research suggests that time management issues can be a motivating factor for cheating behaviors. Prior research indicates that regular study habits can help with academic achievement and school adjustment. In that case, providing access to time management resources may help students be more prepared for exams and not feel the need to cheat.

Clemson University can address time management skills by increasing resources allocated to student services in response to students' time management and prioritization issues. With more resources, student services can increase training for time management skill-building.

Time management and study skills help and training for students come from Counseling and Psychological Services (CAPs) under the Redfern student medical facility. CAPs and Student Services could partner to create training opportunities or resources for students, specifically honing time management skills related to prioritization and studying.

Academic Coaching Opportunities for Students. In addition to being unprepared, several study participants added that they did not know how to study or what to study for in many of their exams. Schraw et al. (2007), in their study about academic cheating, suggest providing supporting materials to reduce unpreparedness, such as websites, peer collaboration, and frequent review sessions. Van der Zanden et al. (2018) found that participation in these programs contributed to first-year student success. As indicated earlier, if student success is directly related to preparedness, and my study suggests that unpreparedness is linked to cheating, institutions should provide resources to help students feel prepared for assessments.

To help students with study skills, they need more academic coaching opportunities, meaning more allocated funding to student services, especially the Peer Assisted Learning (PAL) program. Every year the PAL leader program at Clemson University receives additional requests for courses for PAL leaders. Required general education courses take precedence and have the most PAL leaders. However, all students can benefit from having more academic coaching opportunities. Expanding programs like PAL would decrease a student's need to cheat because of unpreparedness and help reduce the stress of grades. For example, in a study conducted at CU Boulder, Grassley (2019) found that increasing the amount of academic coaching saw improved GPA and retention in all grade levels. Not to mention, student participants in this study expressed a desire to have more PAL leaders in classes outside of the general education courses.

Helping students feel prepared is essential to academic success and should decrease the perceived need to cheat.

Intervention Recommendations for Faculty

This section will focus on recommended interventions for Clemson University Faculty to decrease the amount of cheating on assessments in their courses. Studies have shown that students believe instructors are responsible for preventing cheating and should treat dishonesty seriously (e.g., McCabe et al., 2001). Participants in my study gave examples of instructors not monitoring students during tests or seemingly not caring about oversight during exams. Anderman et al. (2017) stated, "Lax monitoring of students' behavior or failing to act on cases of cheating will create an environment that will encourage further dishonesty" (p. 224). My findings suggest that students will take advantage of not being monitored. Deterring and preventing cheating at any institution cannot be done without faculty awareness and monitoring.

First, instructors should be encouraged to discuss academic integrity more than on syllabus day in their courses. Syllabus day is the first day of class when the faculty usually only review the course objectives and syllabus. My study's participants claim this is the only time where academic integrity is brought up in a course, if at all. Studies have shown that students believe instructors are responsible for preventing cheating (e.g., McCabe et al., 2001). Faculty can help prevent cheating in various ways, including monitoring student behavior and discussing academic integrity. Anderman et al. (2007) encourage instructors to discuss the "distinction between collaboration and dishonesty" (p. 224) and to clarify the limits of what is and what is not acceptable behavior. Several of this study's participants claimed that the definition of cheating changed depending on the instructor and was sometimes vague. If so, instructors need

to discuss their course expectations and clearly define what is considered dishonesty violations. Also, support units should provide faculty training on the thoughtful creation of assessments, including information on proctoring tools. Lastly, some faculty may benefit from exploring alternate assessments such as critical thinking assignments instead of only multiple-choice tests.

Academic Integrity Reminders. Due to the finding of this study that many students lack awareness of Clemson University's academic integrity policy, students need to not only hear about the academic integrity policy but also need reminders throughout their academic career. Increasing the number of academic integrity reminders throughout the course can help curb cheating practices (e.g., McCabe & Trevino, 1997, 1999; McCabe et al., 2017; Anderman et al., 2007). Research shows that talking to students about cheating will decrease the likelihood of participating in academic dishonesty (e.g., McCabe et al., 2017; Anderman et al., 2007)). Therefore, instructors need to include more information and discussion about academic integrity in their classes.

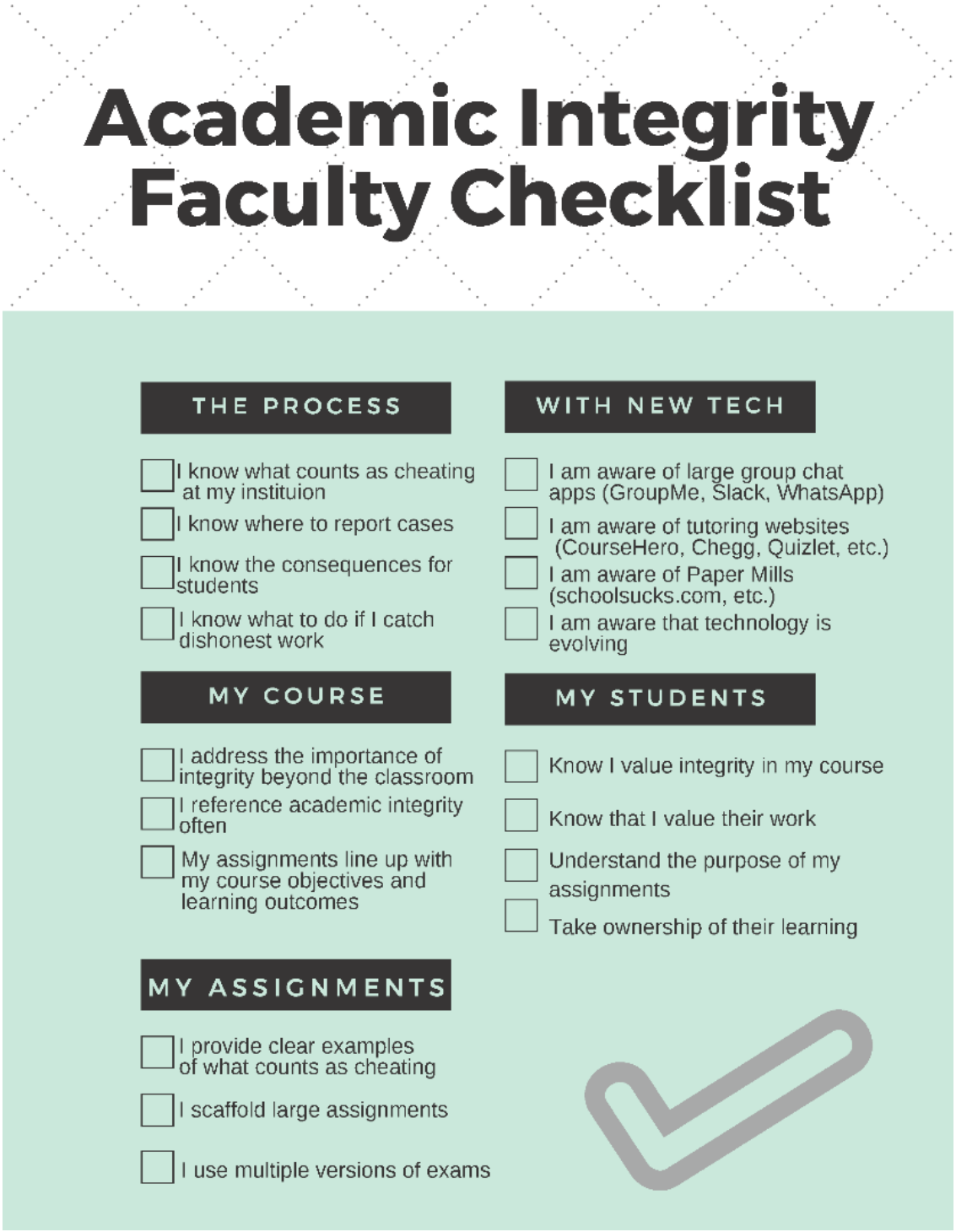
Faculty can assist in fostering an environment of academic integrity by adding academic integrity reminders into their courses. Examples of academic integrity reminders include a short learning module in Canvas, definitions of cheating before major assessments and assignments, and academic integrity statements and affirmations at the beginning of exams and assessments.

One tool to help faculty with academic integrity reminders is the ICAI faculty checklist (Instructors Educational Resources, 2022). Figure 4.2 below shows a sample checklist for faculty. The list includes ensuring faculty are familiar with the institution's policy and process, aware students have access to and use technology, and reminders to address academic integrity

in their courses. A similar checklist given to new faculty would remind them to talk with their students about cheating.

Figure 4.2

ICAI Academic Integrity Faculty Checklist



Note. This figure is a checklist adapted from ICAI resources for instructors on this site: https://academicintegrity.org/instructors-educational-resources and licensed under a Creative Commons Attribution-Non Commercial 4.0 International license.

A checklist such as the one above is helpful for instructors to be reminded of the University's policy and process and reference academic integrity throughout a course.

Academic Integrity Module. While one recommendation for the University is to create an academic integrity course required for all incoming students, a mini-version of this course could be established in a Canvas module format and put into a shared space for instructors to add to their classes. A module at the beginning of a course would help keep academic integrity at the forefront instead of just a rote by-product of syllabus day (Roberts et al., 2009).

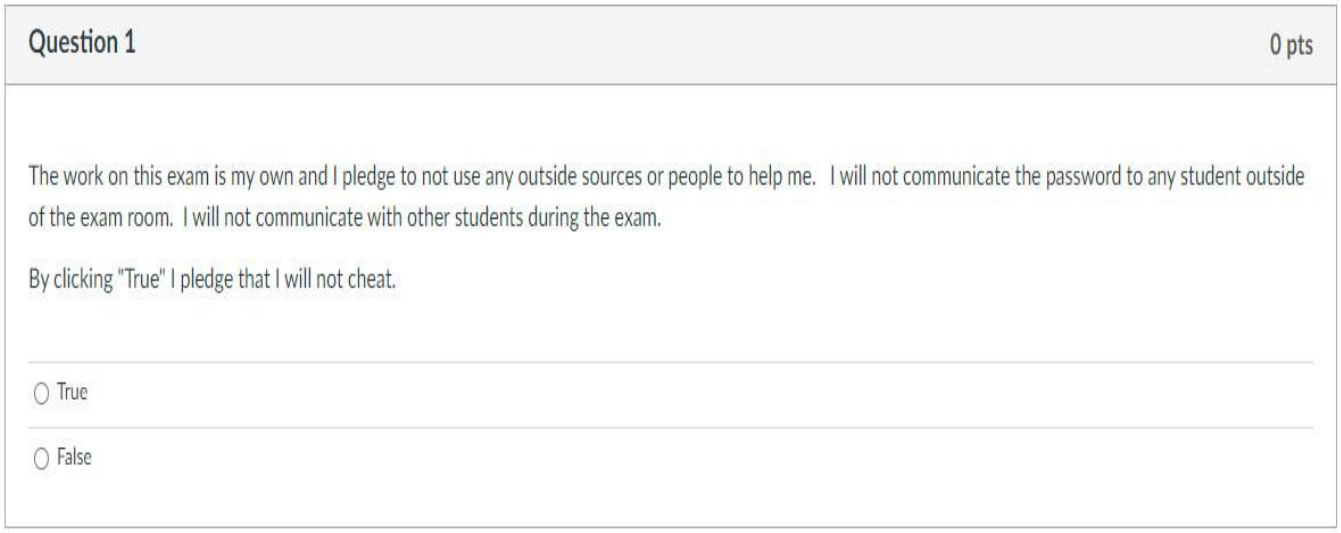
Define Cheating. The ambiguity of cheating definitions was evident in this study as some student participants stated that what was acceptable in one course was not in another. Also, one recent graduate participant mentioned never having cheated but later admitted to writing papers for a friend. "The definition of cheating seems relative not only on the particular act itself but also on the situation or circumstances surrounding the act" (McCabe et al., 2017). Eisenburg (2004) suggests incorporating activities into their classes to discuss the differences between collaboration and dishonesty. McCabe et al. (2017) indicated that the definition of cheating might be a moving target "unless we can get students and faculty to agree about what exactly it is" (p. 175). One quick and easy recommendation for faculty is to define cheating before assessments. If instructors take the time to discuss their definitions of what is considered cheating, students will know what is unacceptable behavior.

Academic Integrity Statements and Affirmations. Several faculty participants in this study utilize academic integrity statements and affirmations in their courses. These types of practices show students that instructors take academic dishonesty seriously. Such student perceptions discourage cheating. For example, McCabe and Trevino (1997) found that students are less likely to cheat in classes where faculty include statements about university honor codes. WCET (2009) and ICAI (2022) encourage instructors to post the academic integrity policy in the learning environment and ask students to read and sign an agreement.

One simple way of posting an academic integrity affirmation is through a question in an online exam. Figure 4.3 below is an example of a question at the beginning of an online exam in Canvas where students must acknowledge that the answers they submit are their own.

Figure 4.3

Academic Integrity Exam Question



Note. This exam affirmation question was taken from an actual exam given during the Spring 2022 academic year and used with permission from the instructor.

In this instance, the instructor has this question at the beginning of each exam that students must acknowledge before continuing.

Assessment Training. In this study, I found that students are less likely to cheat on critical thinking or problem-solving exams. Most faculty outside of education have limited pedagogical training. Faculty development opportunities about learning objectives, instruction, and assessment would benefit instructors and potentially help increase students' perceptions that they are being fairly evaluated and are, therefore, less likely to cheat (Murdock & Stephens, 2007). Instructors need to consider questions such as 'What are you trying to assess?' and 'What is the best way for students to exhibit mastery of material?' These questions can help drive assessment creation related to course goals and objectives. It can also help determine and refine the material to include in exams. Murdock & Stephens (2007) suggested that training professors on the connection between learning objectives and assessment will decrease the amount of cheating.

Faculty support and development are essential aspects of teaching and learning. One part often overlooked, though, is assessments. Participants in this study claimed it was easier to cheat on multiple-choice question-type tests than on a test with critical thinking questions or assignments dealing with the application of course material. Gibbs and Simpson (2004) identified assessment as the most influential factor in student learning. Clemson Online provides faculty training on assessment creation but is more focused on assessment creation using the technology and not necessarily on how to align exams with course goals and standards. Faculty need more training to create assessments that align with learning objectives, including more higher-level thinking questions.

Additionally, faculty still need the training to create assessments in the learning management system, including tips and tools that discourage dishonesty. According to the faculty participants in this study, some believe their colleagues are unaware of how students cheat or how they can use tools like Canvas and Respondus to discourage cheating.

Alternate Assessments. Lastly, another way to incorporate higher-level thinking is to use non-traditional assessments. Non-traditional assessments usually require students to use critical thinking and application of knowledge instead of rote memorization. Leighton (2019, p. 445) stated:

> Performance assessments are desirable evaluation tools because they can provide more direct measures of what usually can be inferred from traditional multiple-choice assessments—*can a test taker solve a real-world task*. Because these assessments required the coordination of well-learned knowledge, skills, and attributes to solve complex problems.

These alternate assessments measure "high-level cognitive competencies" (Leighton, 2019, p. 444). The assessments are primarily associated with real-world tasks and situations. Students provide evidence of their competencies by completing the assessment.

While not widely accepted in higher education, alternate assessments are popular in K-12 education. Williams (2014) encourages universities to adapt to new formats of assessing learning. Arastoopour et al. (2016) recommended providing authentic experiences for learners. In their study on virtual internships for engineering students, Arastoopour et al. (2016) found that using virtual internships in addition to coursework provided advantages over just coursework alone. Arastoopour et al. (2016, p. 1549) stated, "Virtual internships provide an environment in

which students with no prior engineering training can engage in authentic engineering practices as they frame, investigate, and solve realistic engineering design problems." One recurring theme from my study showed that students desire more real-world application in their courses and assessments. Several current and former student participants stated they did not consider cheating in classes where the material was applicable because they saw the value in learning the course material. However, students claimed they were more likely to cheat in courses with a perceived lack of applicability.

Providing faculty development on non-traditional assessments would be beneficial. These are often called alternate assessments, performance assessments, or authentic assessments (Leighton, 2019; Williams, 2014; Di Stasio et al., 2019). In contrast to standard assessments, "non-traditional approaches are based on realistic contexts and performance-oriented" (Di Stasio et al., 2019, p. 107). Williams (2014, p. 568) gave the following non-traditional assessments examples:

> Authentic assessment can variously include formative assessments in stages over time rather than just summatively; involve mastery learning; involve students more actively in collaborating and assessing; employ portfolios and reflective logs; be more likely to employ problem-solving and inquiry-based learning, and be contextualized in a real-world or closely simulated applications.

These assessment techniques increase student engagement and retention (Williams, 2014).

While alternate assessment forms are not possible for all courses, many instructors would benefit from using new and different assessment forms. However, creating "non-traditional assessments "can be very time-consuming and labor-intensive to implement" (Williams, 2014, p.

568). The time involved is the primary concern for instructors, such as the general chemistry faculty study participants.

There is a middle ground, and while multiple-choice-type standardized testing is not going away, instructors can benefit from faculty development opportunities on non-traditional assessment techniques. While not everyone can use the methods, instructors can find best practice elements to apply to all assessment types.

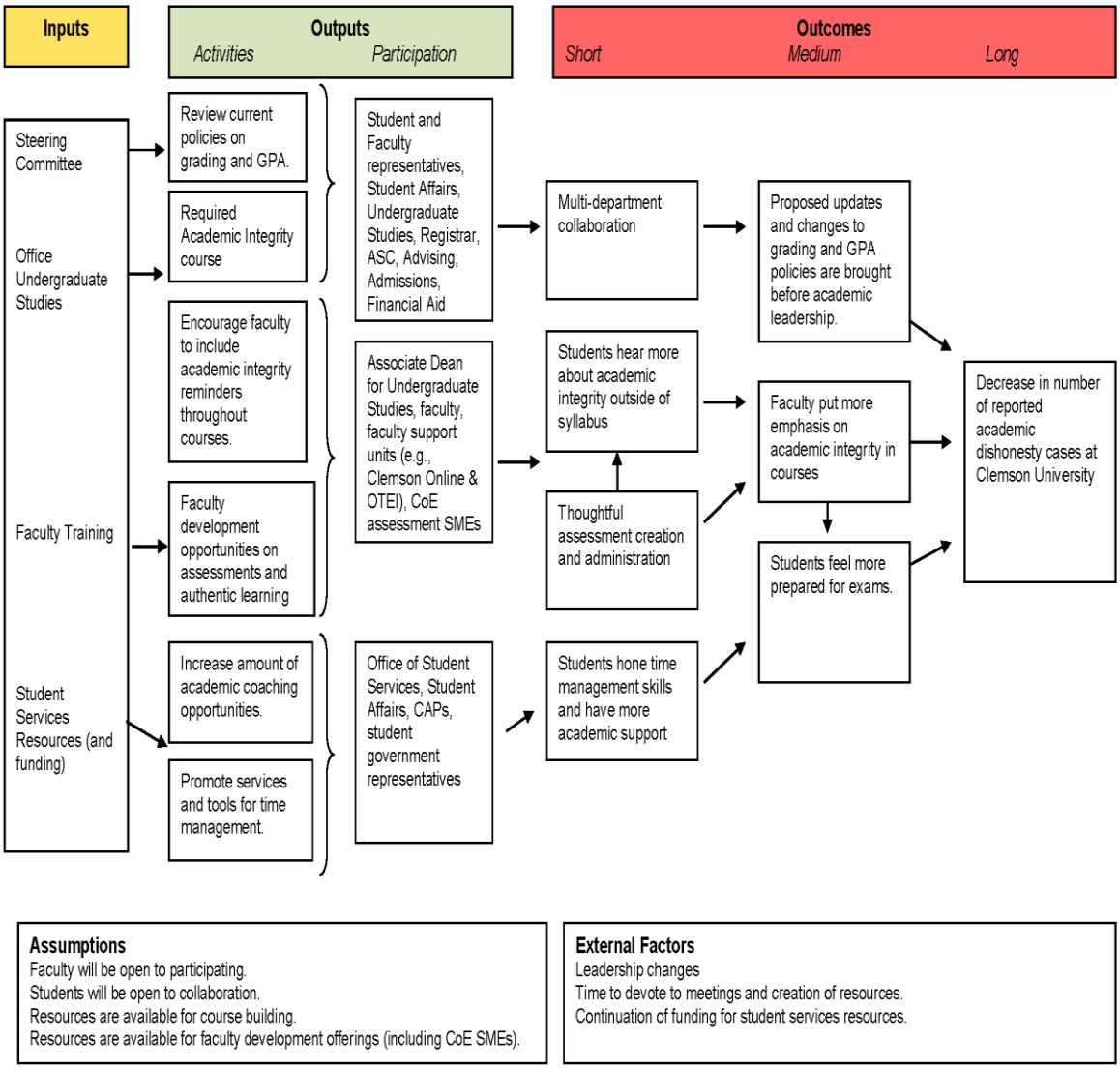
Academic Integrity Logic Model

Figure 4.2 below shows a logic model with interventions to implement. Improvement Science encourages practitioners to use logic models to easily show implementation plans at one glance. For this study, my logic model includes inputs from the four intervention recommendations. Outputs include the activities involved with each intervention and who should be included. Last are outcomes, including short-term effects to our goal of a decrease in academic dishonesty cases.

Figure 4.4

Academic Integrity Logic Model

Program: Decrease Cheating at Clemson University **Logic Model**
Situation: Academic Integrity issues with student cheating is on the rise.



Limitations

As a qualitative phenomenology study, the findings of this study may be transferable to

other academic contexts, but they are not generalizable due to the sample size. Therefore, I recommend conducting a larger quantitative study to assess the generalizability of the key findings. Another limitation of the study design was using participants of convenience for student, recent graduate, and faculty interviews. There was potential for inferences from nonrepresentative sample cases because of the non-selective sampling (Miles et al., 2018). However, I validated the data from participants of convenience through triangulation of data (Miles et al., 2018) and peer-review (Creswell & Poth, 2018). Additionally, themes about student perceptions and values of learning and assessment emerged during data collection. However, data collection instruments did not include questions about student perceptions. Therefore, the validity of emergent themes about student values is beyond the scope of this research but may merit future research to determine and fully understand the broader values on the campus of Clemson University.

Recommendations for Further Research

While researchers have advanced academic integrity studies in higher education, further research is needed. One recommendation is to administer a student survey based on the findings of this study. Because this study was limited to a small number of current and former students, getting feedback from a larger student population could verify the findings and narrow the scope to more specific cheating motivators. Additionally, the survey could include open-ended questions focused on identifying if a correlation exists between instructor respect and cheating or the applicability (real-world relevance) of course material and the amount of cheating.

Additionally, educators and administrators need targeted research on the impact of COVID-19 on cheating. Many institutions are blaming the pandemic on the increased levels of

cheating. Is the increase due to virtual learning and online opportunities, or is the increase an effect of instructors being more vigilant because of the move online?

This study specifically focused on cheating at the undergraduate level. Further research into academic dishonesty at the graduate level is warranted. Two participants in this study stated that since they were older, more mature students, they were not as likely to cheat. This finding suggests that cheating should be low at the graduate level. However, high-profile cases of plagiarism and academic dishonesty in higher education suggest this may be more widespread or have more severe consequences.

Lastly, students not wanting to discuss academic dishonesty warrants further research into student beliefs and perceptions about cheating. This study found that cheating seems commonplace or the norm among students, but they do not want to discuss it, suggesting moral and ethical considerations. Research into the views of cheating among students will produce results on if cheating is commonplace because it is easy or because students believe there is nothing wrong. This study suggests the former in that students cheat because it is easy while knowing it is wrong.

Conclusion

In their study on academic dishonesty, Lambert et al. (2003) stated, “Future research in academic dishonesty needs to move beyond simply looking at different levels of cheating based upon personal characteristics and focus more on the underlying causes” (p. 10). This research attempted to further academic integrity research by identifying these underlying causes—why students cheat. Through improvement science, I found that students are motivated to cheat because of GPA pressure and personal pressures such as family, lack of time management skills,

and education expenses. Grades and personal pressures are the two main motivational factors influencing students' decision to participate in academic dishonesty.

By identifying the motivations to cheat, academic leadership can begin to identify resources to address the underlying issues. Such resources include faculty development on assessments, more intensive academic integrity training, and academic coaching for students. Additionally, an overall look into the pressures of grades and the policies behind the burdens is warranted.

Decreasing the number of academic dishonesty violations is crucial at Clemson University and all higher education institutions. Addressing cheating through deterrents is only a band-aid. Institutions must focus on the root causes that motivate students to cheat to decrease and even curb cheating effectively. Universities should begin to see a decrease in violations if they can find a way to reduce the pressures of grades and provide students with resources to help decrease personal pressures.

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APPENDICES

Appendix A

Student Interview Protocol

Thank you. No one at Clemson University will have access to your individual data. Your responses will be treated anonymously. Only I will have access to your responses. Please answer all of the questions frankly and honestly. If you have any questions about any aspect of this study, please contact Anne Marie Rogers at anner@clemson.edu.

- What's your major?
- When do you expect to graduate?
- Do you live on-campus or off-campus?
    - If off, what county?
    - Do you have adequate internet bandwidth where you live? (yes or no)
        - If no, what is the reason for low bandwidth?
- How is the semester going? How is school?
- Any courses you particularly like? Don't like? Why?
- Describe your favorite professor? Least favorite.
- Most challenging class?
- Most challenging exam so far?
- Did you consider cheating on that exam?
    - Why or why not?
- Have you taken any exams in an online format (like on Canvas)?
    - If yes, did you consider cheating on those exams?
        - Why or Why not?

- What is your understanding of the university's academic integrity policy? Have you read it?
- Does the academic integrity policy define what constitutes misconduct?
- Does the policy provide examples of behaviors that violate its requirements?
- Does the policy specify consequences?
- Overall, do you think most students are aware of the academic integrity policy?
    - Do you think they care?
- This semester, how many of your instructors went over the Academic Integrity policy in class?
- Do you think cheating occurs here at Clemson? If so, why?
- Do you know anyone who has been reported for cheating? If so, What happened to them?
- Do you know anyone who cheated but did not get caught?
    - If so, how or why did they not get caught?
- Do you have any experiences with cheating? If so, please explain.
- Any other thoughts about academic integrity or why students cheat?

Appendix B

Recent Graduate Interview Protocol

Thank you for speaking with me today. No one at Clemson University will have access to your individual data. Your responses will be treated anonymously. Only I will have access to your responses. Please answer all of the questions frankly and honestly. If you have any questions about any aspect of this study, please contact Anne Marie Rogers at anner@clemson.edu.

- What was your major?
- When did you graduate?
- Did you live on-campus or off-campus?
    - If off, what county?
    - Did you have adequate internet bandwidth where you live? (yes or no)
        - If no, what is the reason for low bandwidth?
- Any courses you particularly liked? Why?
- Any courses you didn't like? Why?
- Describe your favorite professor? Least favorite.
- What was your most challenging class?
- Describe your most challenging exam?
- Did you consider cheating on that exam?
    - Why or why not?
- Did you take any exams in an online format (like on Canvas)?
    - If yes, did you consider cheating on those exams?

        - Why or Why not?
- What is your understanding of the university's academic integrity policy? Did you read it as a student?
- Does the academic integrity policy define what constitutes misconduct?
- Does the policy provide examples of behaviors that violate its requirements?
- Does the policy specify consequences?
- Overall, do you think most students are aware of the academic integrity policy?
    - Do you think they care?
- Did any of your instructors ever go over the Academic Integrity policy in class?
- Do you think cheating occurs at Clemson? If so, why?
- Do you know anyone who was reported for cheating? If so, what happened to them?
- Do you know anyone who cheated but did not get caught?
    - If so, how or why did they not get caught?
- Do you have any experiences with cheating? If so, please explain.
- Any other thoughts about academic integrity or why students cheat?

Appendix C

Faculty Focus Group Interview Protocol

Thank you for speaking with me today. No one at Clemson University will have access to your individual data. Your responses will be treated anonymously. Only I will have access to your responses. Please answer all of the questions frankly and honestly. If you have any questions about any aspect of this study, please contact Anne Marie Rogers at anner@clemson.edu.

- How many students on average do you teach per course?
- How do you set up your exams?
    - Are exams conducted in-person or online (or a mixture of both)?
- Do you use any strategies to prevent cheating?
    - Are these strategies effective?
- Who on your campus is responsible for educating undergraduates about academic integrity and your academic integrity policy?
- Does the policy specify the responsibilities/obligations of students? Of faculty?
    - Do these obligations include reporting or taking other action in response to student cheating?
- Does the policy specify consequences for the failure of students, faculty, or others to uphold their obligations?
- Are faculty and other teaching staff required to agree to uphold this policy as a condition of employment? If so, what form does that agreement take?

- Are faculty and other teaching staff required to discuss the academic integrity policy in class and/or to include it in course syllabi?
- Do you include any instruction on academic integrity in your class(es)?
- Have you ever reported a student for academic misconduct?
    - If so, what are some reasons/excuses students have given you for cheating?
- Why do you think students cheat?

Appendix D

Faculty Interview Protocol

Thank you for speaking with me today. No one at Clemson University will have access to your individual data. Your responses will be treated anonymously. Only I will have access to your responses. Please answer all of the questions frankly and honestly. If you have any questions about any aspect of this study, please contact Anne Marie Rogers at anner@clemson.edu.

- How many students on average do you teach per course?
- How do you set up your exams?
    - Are exams conducted in-person or online (or a mixture of both)?
- Do you use any strategies to prevent cheating?
    - Are these strategies effective?
- Who on your campus is responsible for educating undergraduates about academic integrity and your academic integrity policy?
- Does the policy specify the responsibilities/obligations of students? Of faculty?
    - Do these obligations include reporting or taking other action in response to student cheating?
- Does the policy specify consequences for the failure of students, faculty, or others to uphold their obligations?
- Are faculty and other teaching staff required to agree to uphold this policy as a condition of employment? If so, what form does that agreement take?

- Are faculty and other teaching staff required to discuss the academic integrity policy in class and/or to include it in course syllabi?
- Do you include any instruction on academic integrity in your class(es)?
- Have you ever reported a student for academic misconduct?
    - If so, what are some reasons/excuses students have given you for cheating?
- Why do you think students cheat?

Appendix E

Policy Brief Draft

Academic integrity violations are on an upward trajectory at higher education institutions, including Clemson University. This policy brief is intended for Clemson University academic leadership to begin addressing the issues of cheating.

Key messages and Recommendations

Problem: Higher education students participate in academic dishonesty practices.

Recommendations:

1. Investigate the pressure(s) of grades at Clemson University.
2. Increase awareness of the Academic Integrity Policy
3. Increase student services resources.
4. Provide assessment resources for faculty.

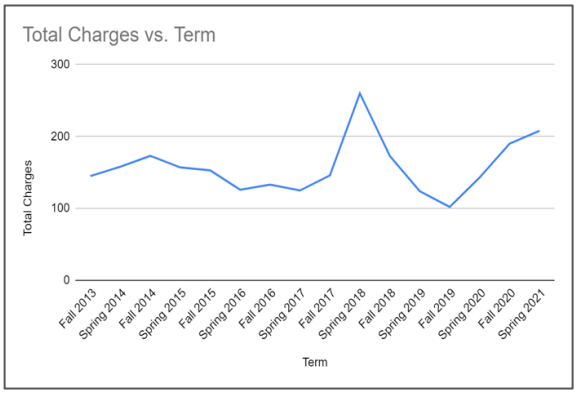
Introduction

Academic integrity has been a prevalent issue even before the COVID-19 pandemic. However, due to the recent increase in online learning modalities, cheating is at the top of faculty concerns. **Preventing cheating at Clemson University is essential because academic dishonesty leads to the devaluing of coursework and research, inaccurate student progress, a reduction in the ability of instructors and instructional leaders to identify and support [failing] students, and students not being adequately prepared for success.** Additionally, academic dishonesty leads to students having a skewed view of unethical behavior that could follow them to the workplace (Anderman & Murdock, 2007; Nonis & Swift, 2001).

> “Integrity is the cornerstone of academia” (McCabe et al., 2017 p. 4)

About the Study

Because the proportion of higher education students who cheat is increasing, my research aimed to identify the motivational factors influencing a student’s decision to participate in academic dishonesty. Before we can address cheating practices, we need to understand why it happens. Therefore, I conducted a qualitative phenomenology study as a root causal analysis to identify why students cheat.



Study Results

My study examines the documented evidence that Clemson University students cheat in online assessments (CU OAI, 2021). I address this problem of practice by asking the following research question: **Why are students motivated to participate in dishonest academic practices in online assessments?**

I found further evidence that cheating happens at Clemson, and students find it easy to cheat. Students are motivated to commit academic dishonesty because of 1. perceived importance of grades, 2. personal pressures such as family, 3. the expense of education, and 4. time management skills. Additionally, cheating may align with students' lack of awareness of Clemson's academic integrity policy.

Recommendations to Address Academic Dishonesty at Clemson University

1: Investigate the Pressure(s) of Grades

Participants in this study maintained that many of their classes focused on grades as the measure of success and not collaboration or even application of learned material. While it would be near impossible to rid higher education of grading altogether, institutions must look for and find ways to decrease the pressure of grades without adding stress to students. To start this process at Clemson University, leadership could appoint a steering committee to examine current policies and procedures related to GPA. An appointed committee can take a deeper look into the role of grading and assessments at Clemson. The committee should have representatives from the student body and faculty, including representatives from the Office of Undergraduate Studies, financial aid, admissions, career services, the Registrar, student advising, student affairs, and the Academic Success Center. The steering committee would identify procedures needing updating and provide policy change recommendations.

2: Increase Awareness of the Academic Integrity Policy

Many students lack awareness of Clemson University's academic integrity policy. By increasing awareness of the policy and exploring specific and actual examples of academic dishonesty, students may be less likely to consider cheating. To increase awareness and understanding of the academic integrity policy among all students, the University should implement a required asynchronous online course covering academic integrity. An asynchronous online course would be a simple way to ensure all students get an overview of the academic integrity policy and receive information on the definitions of cheating and the repercussions of violating the policy. Students would automatically be assigned to the course and have their first semester to complete it. Designing the class in an interactive format with videos, situational quizzes, and testimonials would ensure student engagement and encourage students to complete the

Recommendation 3: Increase Student Services Resources

The second significant finding of this study is that students are pressured to cheat when personal stressors make them feel that they have no other options. The main issue this study's participants discussed was not being prepared for exams due to a lack of time management. Student participants claimed their academics fell short due to not being prepared and considered cheating to achieve their goals. Time management, especially studying, is linked to better academic adjustment. Clemson University can address time management skills by increasing resources allocated to student services in response to students having time management and prioritization issues. With more resources, student services can increase training for time management skill-building. **To help students with study skills, they need more academic coaching opportunities, meaning more allocated funding to student services, especially the Peer Assisted Learning (PAL) program.** Every year the PAL leader program at Clemson University receives additional requests for courses for PAL leaders. Expanding programs like PAL would decrease a student's need to cheat because of unpreparedness and help reduce the stress of grades.

Recommendation 4: Provide Assessment Resources for Faculty

Participants in my study gave examples of instructors not monitoring students during tests or seemingly not caring about oversight during exams. My findings suggest students will take advantage of not being monitored. Deterring and preventing cheating at any institution cannot be done without faculty awareness and monitoring. Faculty can help prevent cheating in various ways, including monitoring student behavior and discussing academic integrity. **Support units should provide faculty training on the thoughtful creation of assessments, including information on proctoring tools.** Lastly, some faculty may benefit from exploring alternate assessments such as critical thinking assignments instead of only multiple-choice tests. Participants in this study claimed it was easier to cheat on multiple-choice question-type tests than on a test with critical thinking questions or assignments dealing with the application of course material. **Faculty need more training to create assessments that align with learning objectives, including more higher-level thinking questions.** Additionally, faculty still need the training to create assessments in the learning management system, including tips and tools that discourage dishonesty.

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