EXAMINING THE RELATIONSHIP BETWEEN LEARNING IN THE COLLEGE DISCIPLINARY PROCESS, LOCUS OF CONTROL, AND READINESS TO CHANGE

by

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(Under the direction of Diane L. Cooper)

ABSTRACT

The purpose of this study was to examine the relationship between learning in the college disciplinary process, locus of control, and readiness to change. Specifically, the potential relationship between Locus of Control and Readiness to Change in the context of the college disciplinary process was explored, as well as correlations between these two constructs and achievement of specific, disciplinary process learning outcomes. The study also looked at differences in achievement of disciplinary process outcomes based on participants' sex, age, violation type, method of resolution, and how long ago the disciplinary process was completed.

A quantitative design was utilized, with a sample (n = 40) drawn from 2 private, selective, majority undergraduate research institutions. The *University of Rhode Island Change Assessment* (McConnaughy, DiClemente, Prochaska, & Velicer, 1989), the *Internal Control Index* (Duttweiler, 1984), and disciplinary process outcome items (Allen, 1994) collected data on the Locus of Control, Readiness to Change, and disciplinary process outcome achievement, respectively. Several significant findings at both the .05 and .01 alpha levels were identified based on the data analysis.

This study found a relationship between Readiness to Change and achievement of disciplinary process outcomes, and provides support for applying the Transtheoretical Model of behavior change (of which Readiness to Change is a component) to the college disciplinary process in order to maximize achievement of learning outcomes.

INDEX WORDS: College disciplinary process, Student conduct, College administration, Student affairs, College student, Locus of control orientation, Readiness to change

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DEDICATION

This work is dedicated to Bryan Raybon, whose fight against cancer taught me that it is not about winning or losing the fight, but about living your life.

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CHAPTER 1

INTRODUCTION

Statement of the Problem

There is a lack of knowledge about what outcomes are produced as a result of students participating in the college disciplinary process. College disciplinary processes have been a part of American higher education since the founding of Harvard in 1636. Despite this long history, there are just two studies, both conducted in the past 20 years, which explored student learning as a result of their participation in the college disciplinary process. Expanding research in this area is important for practitioners. American colleges and universities face increased calls for accountability (Ewell, 2009). There has been an explosion of governmental regulations directed at higher education in the United States in the past 50 years (Kaplin & Lee, 2007), particularly in the area of college disciplinary processes (Gehring, 2001). Dannells (1997) used the term "creeping legalism" to describe the rising focus on procedural issues versus developmental and educational issues in college disciplinary processes. Increasing knowledge of how the college disciplinary process achieves learning is critical to answering calls for accountability, for enabling practitioners to improve the design of the process to maximize that learning, and to ensure that the educational character of the process is not subsumed by "creeping legalism."

A Brief History of College Disciplinary Processes

The college student disciplinary process has been a part of United States higher education since the founding of Harvard, the first American college, in 1636. During the colonial era, colleges had a distinctly religious bent, and discipline was an inseparable part of the educational

experience (Dannells, 1997). Colleges had extensive rules to control the inherent moral depravity of their students (Rudolph, 1962). Corporal punishment was a common form of discipline, and the president, the faculty, and boards of trustees shared responsibility for the investigation and enforcement of rules. As time passed and the United States became an independent nation, the country's demands on higher education grew more complex. The denominational grip that shaped the development of college disciplinary processes loosened during a period of rapid expansion both of the country and of the number of colleges (Brubacher & Rudy, 1997). Student malcontent often pushed back against perceived injustices, leading to rebellion and riots, some of which resulted in significant damage and even loss of life (Rudolph, 1962).

After the Civil War, the Germanic model of university education took hold, and faculty abdicated from their prior role as disciplinarians (Smith, 1994). At the same time, a shift to a more humanistic viewpoint was taking hold as it related to the administration of college discipline (Dannells, 1997). Extracurricular clubs and intercollegiate athletics arose as outlets for students' exuberance, and the riots that were common in earlier times subsided (Rudolph, 1962). With faculty no longer involved in student discipline, the task was given to professionals who would become the first members of the nascent field of student personnel (Brubacher & Rudy, 1997). These first personnel workers responsible for the administration of student discipline adopted a humanistic philosophy (Dannells, 1997). In the modern era, college disciplinary processes are shaped by an extensive landscape of state and federal law and regulations, which has led to tension between the developmental viewpoint espoused by the field of student affairs and the administrative, legalistic viewpoint seen as being forced on colleges and universities by government (Gehring, 2001).

Research Regarding College Disciplinary Processes

Despite over 300 years of experience coordinating college disciplinary processes, there is scant information to tell college administrators what these processes are doing, or how well they are working (Dannells, 1997). In a review of 30 years of literature, Stimpson and Stimpson (2008) found just one article that examined learning as a result of the college disciplinary process. Against the backdrop of this dearth of information, colleges and universities face extraordinary pressure for accountability in the programs and services from the government and the public (Ewell, 2009). Administrators are asked to provide data to demonstrate the effectiveness of their programs and services, and yet in the area of college disciplinary processes there is an utter lack of research to speak to what effectiveness may look like. Caruso, in 1978, noted that:

> many are still highly critical and suspicious of the proposed benefits of the student discipline system. It becomes increasingly necessary for disciplinary specialists to clarify the advantages of the disciplinary system and dispel any related myths in the process. Particularly important is the dissemination of the idea that the system has a rehabilitative, educational basis underlying its seemingly legalistic operation. (p. 126)

While there has been little research into the effectiveness of college disciplinary processes itself, there is research describing the characteristics of students who typically enter the process, as well a research evaluating the effectiveness of programs that students participating in a college disciplinary process are mandated to complete as a result of the process, particularly when it comes to alcohol-related policy violations.

Janosik, Davis, and Spencer (1985) portrayed the characteristics of students who enter the conduct process: typically male students, generally in their first and second year of attendance.

Their findings make sense: younger students often reside in on-campus residential facilities, where they are subjected to higher levels of supervision than students living off campus. Also, these students make up the bulk of the under-21 age group for colleges, making alcohol use illegal and against institutional policy. Coupling these facts with their anticipated lower level of maturity under models of psychosocial and moral development, it is unsurprising that first and second year students may both commit more violations as well as be caught more often than their older peers. Substantiating Janosik, Davis, and Spencer's findings, Low, Williamson, and Cottingham (2004) found that students engaged in law breaking tended to be male, as well as more impulsive than their peers and report a higher socioeconomic status than those who were less likely to engage in law breaking.

While there is little research on the effects of the college disciplinary process, the adoption of intended learning outcomes and the use of evidence-based practices has begun to infuse the practice of student discipline. The Council for the Advancement of Standards in Higher Education (CAS), an interdisciplinary group comprised of 36 member associations representing professional associations relating to the administration of higher education, has promulgated standards for student conduct programs. These standards include the requirement that institutions must "provide learning experiences for students who are found to be responsible for conduct which is determined to be in violation of institutional standards" (2009, p. 359). One example of these learning experiences takes the form of alcohol-related sanctions.

The use and misuse of alcohol has been a perennial problem for colleges, and this has led to a proliferation of interventions designed to change college student alcohol use. Many of these interventions have been adopted for use as outcomes of college disciplinary processes. They are assigned to students found responsible for alcohol-related violations of institutional policy.

Some of these interventions are built on behavior change models such as the Transtheoretical Model, a health change theory that deals with stages of change people cycle through as they undertake a health related behavior change (Prochaska & Velicer, 1997). One example is the Electronic Checkup To Go (eCHUG) program. eCHUG is a web-based personalized normative feedback tool. The student inputs information on age, sex, alcohol consumption habits and beliefs about how much and how often peers drink. eCHUG uses this information to generate personalized normative feedback, providing the student with information to increase readiness to change alcohol consumption habits. Studies have found eCHUG produces statistically significant reductions in alcohol consumption and alcohol-related consequences (Doumas & Anderson, 2009; Hustad, Barnett, Borsari, & Jackson, 2010). Another example is the Brief Alcohol Screening and Intervention for College Students (BASICS), which has been shown to reduce frequency and quantity of alcohol use (Borsari & Carey, 2000; Larimer et al., 2001), along with alcohol-related negative consequences (Baer, Kivlahan, Blume, McKnight, & Marlatt, 2001; Marlatt et al., 2001).

Research on the college disciplinary process outcomes.

As noted earlier, there is little research examining the outcomes of college disciplinary processes. The outcomes-based research thus far has studied how different types of institutional policies are correlated with volume of incidents, rate of appeals, recidivism, and lawsuits (Fitch & Murray, 2001), as well as student satisfaction with the college disciplinary process (Donaldson & Steyer, 1997; Janosik, Spencer, & Davis, 1985). While these are both outcomes in the fullest sense of the word, they do not meet the generally accepted definition of outcomes-based assessment for student affairs. Terenzini and Upcraft (1996) defined outcomes-based assessment as a process of determining the effect of a program or service on the student's learning,

development, academic success, or other intended outcome. Research that examines college disciplinary process outcomes in this sense is scant. In 1994, Allen completed a doctoral dissertation that surveyed college administrators to determine what outcomes they perceived as most important, and then also surveyed students who had recently engaged in a college disciplinary process to determine their achievement of those administrator-identified outcomes. Howell, in 2005, built on Allen's work by conducting qualitative research examining the outcomes students felt they had achieved as a result of their participation in the college disciplinary process. These two studies represent the totality of research into college disciplinary process outcomes to date.

Purpose of the Study

This study adds to the existing literature examining the outcome of the college disciplinary process on student learning and development. The purpose of this study was to examine the relationship between achievement of intended learning outcomes for the college disciplinary process, locus of control orientation and readiness to change. Specifically, this study sought to determine if the learning attained by students participating in the college disciplinary process can be explained by their locus of control and readiness to change. Additionally, this study assessed if there were differences in achievement of disciplinary process learning outcomes based on sex, age, the nature of the institutional policy violated, the method of resolution, and how long ago the resolution took place.

Significance of the Study

This study adds to an extremely small body of existing research on achievement of intended learning outcomes for the college disciplinary process. It provides additional grounds for future research based on the findings and limitations of this study. Locus of control and

readiness to change are constructs used in psychology to understand people's decision-making. As psychological constructs, both locus of control and readiness to change have been studied extensively. Studies have found these constructs can play a significant role in predicting behavior. Prior research has examined these variables in related contexts, though they have not been applied to learning achieved as a result of the college disciplinary process. Understanding the relationships between these constructs within the context of the college disciplinary process, as well as the impact of these constructs on the achievement of college disciplinary process learning outcomes, represents a valuable addition for scholars and practitioners of college discipline. If these constructs can predict, in part, outcome achievement, then practitioners may find it useful to consider these constructs when designing and implementing college disciplinary processes. For instance, a college disciplinary process that accounts for and intentionally addresses low motivation or an external locus of control may experience greater outcomes achievement than one that does not account for and intentionally address these constructs.

Research Questions

The following questions directed this study:

1. Is there a relationship between locus of control and readiness to change in the context of the college disciplinary process?
2. Is there a relationship between locus of control and achievement of college disciplinary process learning outcomes?
3. Is there a relationship between readiness to change and achievement of college disciplinary process learning outcomes?

4. Can locus of control and readiness to change explain the achievement of intended learning outcomes for the college disciplinary process by students participating in that process?
5. Are there differences in the achievement of disciplinary process learning outcomes based on sex, age, the nature of the institutional policy violated, the method of resolution, and how long ago the resolution took place?

Delimitations

This study utilized a quantitative approach. Quantitative methods are appropriate for examining a "human or social problem, based on testing a theory composed of variables, measured with numbers, and analyzed with statistical procedures, in order to determine whether the predictive generalizations of the theory hold true" (Creswell, 1994, p. 2). While quantitative methods can test theories, they cannot answer questions of how and why, which are the domain of qualitative research (Creswell, 1994). Therefore, this study is unable to answer questions of how and why Locus of Control, Readiness to Change, and learning that takes place as a result of the college disciplinary process are related to another. It can only test whether or not such relationships exist.

The population chosen was intentionally limited to two institutions. This limitation was necessary given the timeframe available to complete the study. It was also based on convenience: both institutions were willing to make their students available to the researcher. The two institutions are substantially similar to one another, as classified by the Carnegie Foundation for the Advancement of Teaching. Both are private research institutions, are majority undergraduate, have an arts and sciences focus with a high level of graduate co-existence, are primarily four-year, full-time, highly residential, and selective. Both were located

in the southeastern United States. While these similarities made it possible to treat the data collected from each site was one unified set for analysis, it also limits the generalizability to other institution types.

Rather than drawing a random sample, an entire identified population was studied. All students over 18 years of age who were found responsible for violating a policy as a result of their participation in their institutions' disciplinary process during the 2011 fall semester were invited to participate in the study. The sample was the members of the population who participated in the study. This sampling method was chosen to address concerns about potential low response rate. However, lack of a random sample also limits the ability to generalize the results of the study, and raises concerns that participants may be different from non-participants. Particularly given the fact that two of the constructs being studied deal with motivation, and that motivation can be an impacting factor in deciding to participate in the study, there could be a bias in the sample towards an internal locus of control and a higher level of readiness to change.

Finally, the quantitative data collection method used was self-reports from participants obtained through a questionnaire. Questionnaires allowed for economical data collection procedures and a quick turn around time. However, self-reported data can be unreliable. Participants' may feel internal pressure to provide responses they believe the researcher will want (Crowne & Marlowe, 1960). Participants may also be unable to accurately assess their own learning (Bowman & Seifert, 2011). Participants may not conceptualize their learning or define some of the questionnaire terms in the same way practitioners and researchers might, and a self-reported data collected via questionnaire does not allow the researcher the chance to follow-up with participants to ensure a common understanding of what the questionnaire is asking or what

information the participants are providing. This could lead to faulty data, which could in turn lead to erroneous conclusions.

Definitions

College Disciplinary Process

This term refers to the administrative process that an institution of higher education has established to handle alleged violations of institutional policies by students.

Disciplinary Process Learning Outcomes

For the purpose of this study, disciplinary process learning outcomes are defined as "changes in knowledge, mental processes, affect, feeling, or motivation that are attributable to the students' participation in the college disciplinary process." This definition is informed by Bloom's (1956) taxonomy that describes three domains for educational activities: cognitive, affective, and psychomotor. The cognitive domain focuses on knowledge and intellectual abilities: the acquisition of content-specific knowledge, as well as increasing the level of complexity utilized in processing information. Changes in knowledge and mental processes could include changing how students think about certain issues or behaviors, as well as increasing knowledge to facilitate behavior change. The affective domain focuses on attitudes, feelings, and motivations. Changes in these areas could include increasing students' empathy for others or increasing respect for institutional policies. This study did not address the psychomotor domain.

Locus of Control

For the purpose of this study, locus of control refers to individuals' beliefs that they control rewards they receive for their actions, or that their rewards are controlled by chance, luck, or powerful others.

Readiness to Change

For the purpose of this study, readiness to change is defined as "the degree to which an individual is motivated to change problematic behavior patterns. As an index of motivation, it implies a willingness, or behavioral readiness, to initiate behavior change" (Carey, Purnine, Maisto, & Carey, 1999, p. 245).

CHAPTER 2

LITERATURE REVIEW

The purpose of this study is to determine the relationship between learning achieved by students participating in a college disciplinary process, locus of control and readiness to change. This chapter begins by reviewing the history of college disciplinary processes in the United States, including how learning occurring as a result of these processes has been explored. Following that overview, the concepts of locus of control, and readiness to change are each explored, including how these concepts came into being and how understanding have these concepts has changed over time through research.

College Disciplinary Processes

Since their inception, colleges and universities in the United States have been concerned with the discipline of their students. In the colonial period, colleges viewed discipline as an inseparable part of educational experience (Dannells, 1997). The moral and religious indoctrination of students was co-eminent in importance with the intellectual training colleges provided. The philosophy of *in loco parentis*, where colleges stood in place of the parent in disciplining the student, was a byproduct of the long distances students traveled as well as the tendency for the colonies to be highly involved in the disciplining of youth (Leonard, 1956). College life was highly regulated, and punishment was harsh, often corporal, in the colonial period. After the United States gained its independence, it embarked on a campaign of massive expansion. As the nation grew, so did the number of colleges, and the nation's expectations for college education expanded beyond the moral and intellectual and into the practical needs of the

fledgling nation (Brubacher & Rudy, 1997). This increased emphasis on citizenship and gradually diminishing role of religion resulted in a slow shift away from harsh and paternalistic disciplinary systems of the colonial era. Change was slow however, and student unrest frequently resulted in rebellion and riots, some of which were extremely violent (Rudolph, 1962). The pace of change would quicken after the Civil War, when the influence of the Germanic model of education would remove faculty from the work of student discipline, leading to the appointment of specialist deans to perform disciplinary work, along with other student personnel functions (Brubacher & Rudy, 1997). A proliferation of clubs, fraternities, and intercollegiate athletics, provided students with outlets for their energies, and rebellions common in earlier eras saw a marked decrease (Smith, 1994). As the curricular and extra-curricular pursuits of college life became increasingly bifurcated, a humanistic attitude towards student discipline evolved (Dannells, 1997). Finally, the modern era of student discipline administration has been characterized by a tension between a legalistic orientation and a developmental one, as courts and the government have staked out limitations on the once unfettered discretion of college officials to handle their students' misconduct (Gehring, 2001).

The Colonial Period

When the colonists arrived in the new world, among their first acts was the establishment of colleges to ensure the preservation and transmission of learning (Rudolph, 1962). The early settlers saw the establishment of educational systems as imperative to ensuring the continuation of their way of life and the perpetuation of their religious beliefs. During the colonial period nine colleges would be founded, the first being Harvard. Established in 1636, Harvard imported wholesale the precedents of its English forbearers at Oxford and Cambridge. The British mold

of higher education would perpetuate, with minor modifications, to the other eight colonial colleges, which used Harvard as the template for their own genesis (Brubacher & Rudy, 1997).

The colonial colleges had as one of their central aims the training of young men for the ministry (Leonard, 1956). Each college had a particular religious character, and often children travelled long distances to receive their education at a college established by their family's church (Brubacher & Rudy, 1997). In the English model adopted by the colleges, moral education was inseparable from intellectual learning (Smith, 1994). Religion and denominational influences had a strong influence on discipline. For example, Calvinism was a driving influence at Harvard during the colonial period, and the Calvinist tradition held that man was naturally depraved. This belief lead to paternalistic, highly structured rules to save young men from their own depraved nature (Smith, 1994). Every aspect of collegiate life was tightly controlled and carefully regulated for the young charges of the college, who were, in some cases, as young as eleven (Leonard, 1956).

Colonial governments, since their establishment, had taken an active role in the discipline and upraising of children. Laws gave the government broad authority to act in place of the parent in disciplining children. For example, one colonial regulation stated that children who insulted their parents were to be put to death (Leonard, 1956). This authority to stand *in loco parentis*, or in place of the parent, extended to the colonial colleges, allowing them to promulgate rules and punish students to the extent allowed by their charters.

At Oxford and Cambridge, rules were enforced by specialized personnel known as deans or proctors, rather than by faculty. This allowed positive bonds to form between faculty and their students. In contrast to the English model of deans and proctors, in the colonial colleges the enforcement of discipline rested with the trustees, the president, and the faculty (Dannells, 1997).

Most of this burden would fall on the college president, with responsibility for more serious issues being shared with the college's trustees, while the responsibility for lesser matters was often shared with the faculty (Leonard, 1956). This responsibility created an adversarial relationship between the professoriate and the students. Discipline consisted of censures, fines, corporal punishment, suspensions, and expulsions. Corporal punishment was generally administered by the president. For example, flogging was the in vogue form of corporal punishment at Harvard until 1718, when it was replaced with a gentler form of corporal discipline: boxing, or having the student kneel before the disciplinarian to receive sharp smacks on the ear (Rudolph, 1962). The administration of this punishment was often preceded and followed by prayer (Leonard, 1956). The driving force behind college discipline in this time was the need for moral submission, and was consistent with the strict, Puritanical laws of the colonies.

Students in the colonial era had limited involvement in college discipline. At Harvard the first student monitor was appointed in 1655. These monitors were responsible for reporting on absenteeism, reporting misconduct to the president, and sometimes imposing and collecting fines for minor offenses (Leonard, 1956). Such monitors were limited in their success; students often refused to tattle on their fellow students.

From Independence to the Civil War

The post-colonial period saw an increase in the number of colleges; the addition of new colleges paralleled the growth of the nation. While religion remained a powerful force in the establishment of colleges, the more practical problems of the new United States also emerged as an increasingly large part of the motivation for the establishment of new colleges. The goal of educating students to be citizens was co-eminent with religious instruction, or in some cases, pre-

eminent in the charters of colleges created during this period (Leonard, 1956). Even so, moral education remained an important outcome for these colleges. During this period there was a slow, but clear shift from the premise that a college education was meant for the elite to one that college should be available for the common man (Brubacher & Rudy, 1997).

The character of the college and its students did not immediately change after the United States won its independence. Instead, change came gradually to student life and its regulation. Students continued to travel long distances to study at a college, and continued to be young (Leonard, 1956). The practice of *in loco parentis* continued to be the framework for the relationship between colleges and their students. Colleges in the early federal period continued to expect all students to reside in dormitories, and faculty members lived in close quarters with their charges, expected to carefully monitor students for any suspicion of rule-breaking. The plethora of rigid rules from the colonial era was generally unchanged at pre-existing colleges and was often adopted with little or no change at newly established college (Leonard, 1956). Change that did come tended to be attitudinal: the harsh methods of enforcement that characterized discipline in the colonial colleges was tempered over time, with colleges gradually adopting a philosophy of persuasion and role-modeling over one of authoritarianism and fear (Leonard, 1956). The floggings of the colonial period fell into disfavor while confessions, fines, and reprimands become more common. Just as it had been prior to the American Revolution, college discipline during this period continued to be a shared responsibility between the trustees, the president, and the faculty. As such, the relations between students and faculty continued to be sour, and were punctuated with riots, rebellions, and insurrections. Malcontent was particularly strong in the South, where young college men saw the high-handed, paternalistic codes of discipline as more befitting slaves than gentlemen (Brubacher & Rudy, 1997).

Some student bodies sought a measure of self-governance, or at least a declaration of their basic rights. College officials, holding firm in their belief that they had both the authority and the imperative to rigidly control the lives of their students, rejected such calls for reform (Smith, 1994). These refusals were met with insurrection on the part of the students, and such uprisings were often violent, resulting in property damage, injury, and death (Dannells, 1997). Colleges' response to these rebellions were unyielding: at Princeton one hundred twenty five students were suspended after a riot in response to the college's rejection of students' petition for fairer treatment; 29 Harvard men were cast out under similar circumstances (Smith, 1994).

Yet, not all colleges were opposed to allowing students some measure of self-determination. Some did begin experimenting with systems of student self-governance as a way to address disciplinary issues (Dannells, 1997). Prime among them was the University of Virginia, presided over by Thomas Jefferson. A firm believer in students' ability to govern themselves, Jefferson attempted to create student-run disciplinary system, complete with a university court and jail (Brubacher & Rudy, 1997). Unfortunately, like most experiments with student self-governance at the time, Jefferson's efforts were short lived and unsuccessful, and the tension between the old world systems of discipline and students' desire to throw off what they saw as an oppressive yoke would continue until after Civil War.

As the United States grew after the Revolution, college officials' attitudes towards student discipline made a graduate shift away from strict, religiously-based rules and harsh methods of enforcement. Sectarian and denominational rules gave way to more generalized regulations as a growing number of colleges competed with one another for students and as the nation expected colleges to place an increasing emphasis on preparing students for the challenges of citizenship (Rudolph, 1962). While some experiments with student involvement in discipline

took place during this period, most efforts were short-lived and unsuccessful, as students remained resistant to the idea of tattling on their peers. This continued to leave the enforcement of discipline in the hands of trustees, presidents, and professors, although the harsh, corporal punishment that common during the colonial era dwindled in popularity (Leonard, 1956). Student discontent with perceived mistreatment resulted in continual unrest, which commonly resulted in riots, some of which were notably violent (Brubacher & Rudy, 1997).

The Post Civil War Era

The evolution of college student discipline between the Civil War and the First World War was influenced by several trends in higher education. First, the Germanic model of university education was reaching its ascendency in the United States. In this model, intellectual education was the sole concern of the institution towards the student, what happened outside of the classroom was not germane to the educational process (Smith, 1994). It was during this time that Harvard decoupled academic grades from disciplinary records (Dannells, 1997). The Germanic model was also characterized by the specialization of the professoriate, which left them little time to attend to the disciplinary roles they had fulfilled in earlier time periods.

At the same time that the Germanic model was rising, an enlightenment of disciplinary philosophy was also taking hold. The paternalistic, highly regulated view of student discipline was giving way to a more humanistic view (Dannells, 1997). The last vestiges of the paternalistic, highly-regulated system of rules and discipline seemed increasingly out of place in a nation characterized by principles of democracy, equality, and freedom (Smith, 1994). Under these principles, methods of discipline continued to become more humane, with greater attention paid to the rights of students (Dannells, 1997). Again at Harvard, President Charles Eliot stated that colleges owed their students certain essential rights, among these rights was a system of

discipline which set responsibility for conduct squarely in the hands of the student (Brubacher & Rudy, 1997). The often violent student revolts that marked earlier periods was on the decline, in large part based on the proliferation of extracurricular activities such as intercollegiate athletics, literary societies, clubs, and social fraternities as an outlet for students' exuberance (Rudolph, 1962).

With college presidents and faculty preoccupied with the now distinct sphere of academic life, responsibility for students' extracurricular experience, including their discipline, was delegated away from the president and the faculty (Leonard, 1956). On some campuses this delegation was made to student groups. Amherst College, for example, established a system of student governance for disciplinary matters in 1883 (Smith, 1994). On other campuses these duties were delegated to specialists who often carried the title of dean (Dannells, 1997). Discipline was a part of the portfolio of these early student personnel specialists, who were charged with weaving a coherent curricular and extracurricular experience together for students (Brubacher & Rudy, 1997). Finally, the twentieth century American university had reached the same solution its predecessors at Oxford and Cambridge had set upon nearly two hundred years later. Philosophically, these early deans were humanists:

> They approached discipline with the ultimate goal of student self-control or self-discipline, and they used individualized and preventative methods in an effort to foster the development of the whole student. Counseling became a popular form of corrective action, and student involvement in disciplinary systems was generally encouraged. (Dannells, 1997, p. 8).

Through Two World Wars to the Present

The last one hundred years of United States history includes two World Wars, the Great Depression and the civil rights movement. While these events took place the nascent profession of student affairs was organizing itself, and foundational documents for the field such as the *Student Personnel Point of View* (American Council on Education [ACE], 1937) were being published. All of these activities impacted higher education in the United States, and by extension, the practice of student discipline in higher education. By the 1960s the death knell would toll for the three hundred year old philosophy of *in loco parentis*, and the rights students had rioted for since the first days of colonial colleges would be enshrined through the decision of the United States Supreme Court (Dannells, 1997).

The GI Bill resulted in a large influx of students into higher education. Returning veterans of World War II, these students were older and more motivated than prior generations of students. At this time, student involvement in college discipline increased (Smith, 1994). However, some questioned the ability of students to effectively discipline their peers (Mueller, 1961), and literature of the time placed an emphasis on the role of the dean and faculty committees in the conduct of student discipline (Smith, 1994). As veterans returned after World War II there was also an increased adoption of the philosophy of rehabilitation, and disciplinary counseling, rather than punishment, became increasingly popular (Dannells, 1997).

The 1960s and the civil rights movement was a period of great unrest on college campuses. During this time the administration of student discipline was just as often a platform for dissent as a means for managing unrest (Brubacher & Rudy, 1997). In this time the courts began a re-examination of their longstanding deference to colleges' ability to manage their internal affairs, including the disciplining of students. The United States Fifth Circuit Court of

Appeals' decision in the 1961 case of *Dixon v. Alabama State Board of Education* provided that, at public institutions, students had a constitutional right to certain procedural protections in college disciplinary processes (Gehring, 2001). While the same constitutional rights were not applied to private institutions, subsequent court actions and the ratification of the Twenty Sixth Amendment, lowering the voting age to 18, would move private colleges and universities away from their longstanding parental relationship with their students to a contractually-based one (Smith, 1994). The willingness of students to challenge college officials' decisions through legal venues and the further willingness of the courts to hear students' claims have resulted in an increasingly legalistic orientation to the administration of student discipline (Dannells, 1997). That willingness by the courts, as well as increasing regulation by state and federal policy makers, has resulted in the increasing encroachment of legalism in college disciplinary processes.

Measuring Learning in College Disciplinary Processes

There is a dearth of research that measures learning that students experience as a result of participating in a college disciplinary process. In 1965, Brady and Snoxell noted that there was only a meager body of knowledge on college disciplinary processes. Caruso, in 1978, repeated that, warning that a lack of research into the impact of college disciplinary processes was a major failing of the profession. Dannells, in 1997, bluntly wrote: "although institutions of higher education in the United States have been engaged in the practice of student discipline for more than 300 years, we know surprisingly little about the effectiveness of our efforts" (p. v). In their review of over 27 years of research articles on college disciplinary processes ranging from 1980 to 2007, Stimpson and Stimpson (2008) found just one article that examined learning as a result of the college disciplinary process. In that 2005 article, Howell used a qualitative approach to

examine the meaning students made of their experience. Interviewing 10 students across 3 institutions, Howell identified four themes that he associated with learning attained as a result of the process: consideration of consequences, the development of empathy, gaining familiarity with judicial procedures, and no perceived learning.

Martin built on the work of Allen, whose 1994 dissertation examined the college disciplinary process as a catalyst for learning. In her dissertation, Allen surveyed both college administrators to determine what outcomes those administrators identified as most important, and students who had been involved in a college disciplinary process to determine what outcomes were most successfully achieved. Administrators in Allen's study identified four outcomes as most important: accepting responsibility for one's actions, understanding the effects of one's actions on others, making constructive changes in behavior, and understanding the seriousness of one's behaviors. Students, meanwhile, cited an increased inclination to think through actions before acting, accepting responsibility for actions, and abiding by college policies in the future as the outcomes they felt were the most successfully achieved.

Locus of Control

Locus of control is a construct of social learning theory. First articulated by Julian Rotter in his 1954 book, *Social Learning and Clinical Psychology*, the theory was Rotter's attempt to offer a method for the prediction human behavior that could be explained using purely psychological, rather than physiological, drives. The original publication does not mention locus of control as a distinct concept. The term was introduced in 1966, when Rotter published a paper in *Psychological Monographs* titled Generalized Expectancies for Internal Versus External Control of Reinforcement. That paper summarized 10 years of research by Rotter and his students, and established locus of control as a measurable variable to help understand and predict

human behavior, compliments of the I-E Scale also featured in the paper (1966). Since that publication, the locus of control concept has enjoyed widespread use in research, particularly in health psychology. In fact, the locus of control concept became far more popular than Rotter anticipated (Furnham & Steele, 1993). Its success has been attributed to four factors: its precise definition, its existence within a broader theory, the existence of a measurement tool that is based on theory, and its wide dissemination (Rotter, 1990).

Social Learning Theory

Social learning theory is a theory of personality. James Rotter, a clinical psychologist, developed it while he was serving as a faculty member at the Ohio State University. In contrast to the dominant, Freudian theories at the time, Rotter postulated a psychological, rather than physiological, basis for behavior (Rotter, 1982). Rotter based his theory on the empirical law of effect, which states that people are motivated to seek out positive stimulation and to avoid unpleasant stimulation (Rotter, Chance, & Phares, 1972). Social learning theory is built in a set of assumptions about behavior:

- *"The unit of investigation for the study of personality is the interaction of the individual and his meaningful environment"* (Rotter, 1954, p. 88). Differentiating from the psychoanalytic theories of the time, which placed the origin of behavior in physiological needs of which the individual was not aware, Rotter believed that behavior was a function of a person's interaction with the environment (Rotter, Chance, & Phares, 1972; Mearns, 2009).
- *"Personality constructs are not dependent for explanation upon any constructs in any other field"* (Rotter, 1954, p. 88). While correlations may exist, it is not appropriate to reduce psychological constructs to physical processes. The value of theory is in its

ability to describe reality for the purpose of prediction, and that psychological constructs need not be reduced to physical processes to retain their predictive utility (Rotter, Chance, & Phares, 1972).

- *"There is unity to personality"* (Phares, 1976, p. 11). Personality is an individual's learning about what behaviors result in which reinforcements, and how these reinforcements are valued relative to one another. Over time, personality develops stability. That is, as more and more experience is added on to an individual's learning, personality becomes less influenced by any single event (Phares, 1976).
- *"Behavior as described by personality constructs has a directional aspect. It may be said to be goal-directed"* (Rotter, 1954, p. 97). This principle ties in the empirical law of effect, and his Rotter's affirmation that individuals pursue actions that maximize positive reinforcement while minimizing negative reinforcement (Rotter, Chance, & Phares, 1972).
- *"The occurrence of a behavior of a person is determined not only by the nature or importance of goals or reinforcements but also by the person's anticipation or expectancy that these goals will occur"* (Rotter, 1954, p. 102). Behavior is a function of an individual's ability to expect or predict future reinforcement. Other theories had given immediate reward primacy in determining behavior. Rotter gives primacy in predicting behavior to people's ability to look ahead to future reinforcement (Phares, 1976).

To summarize, Rotter adopted a view that behavior is a function of a person's interaction with the environment, rather than based on internal drives. He focused on the ability of learned human behavior, and that the constant, cumulative effect of learning shapes personality over a lifetime. He adopted the empirical law of effect, assuming that individuals seek to maximize

positive reinforcement and minimize negative reinforcement, while holding that anticipation of future reinforcement influences choice. Rotter held that personality is not immutable after a particular developmental point (Mearns, 2009), but that it does become more stable as the weight of any one experience is relatively small compared to a lifetime of learning up to that moment.

The social learning theory creates a predictive model for behavior using four variables: behavior potential, expectancy, reinforcement value, and psychological situation (Rotter, Chance, & Phares, 1972). "Behavior potential may be defined as the potentiality of any behavior's occurring in any given situation or situations as calculated in relation to any single reinforcement or set of reinforcements" (Rotter, Change, & Phares, 1972, p. 12). It is likelihood of adopting a particular behavior in a given circumstance. This means that each potential behavior available to an individual in a given circumstance has a potential. The behavior selected is that which has the highest potential (Rotter, 1954).

Expectancy is the subjective probability that the given behavior will lead to reinforcement (Rotter, 1954). For example, having a high expectancy means that the individual is confident that an action will lead to reinforcement while low expectancy means that the individual believes it is not likely an action will lead to reinforcement. If all reinforcements are valued the same, then behavior potential would be highest for the behavior the individual had the highest expectancy for.

Reinforcement value can be defined as the degree of the person's preference for that reinforcement to occur if the possibilities of occurrence of all alternatives were equal (Rotter, Chance, & Phares, 1972). In short, reinforcement value measures how desirable the reinforcement is. Those things a person wants to see happen will have a high reinforcement value. Those things that are undesirable will have a low reinforcement value.

The social learning theory model states that behavior potential is a function of expectancy and reinforcement value. The coefficients for expectancy and reinforcement value are not explored, nor is the nature of the relationship between expectancy and reinforcement value, though it is hypothesized to be multiplicative (Rotter, Chance, & Phares, 1972). The fourth variable, psychological situation, does not fit directly into Rotter's predictive equation, but is an acknowledgement that an individual's subjective perception of the situation is a determining factor (Phares, 1976). The subjective nature of expectancy, reinforcement value, and psychological situation come up repeatedly in social learning theory. An example of how subjectivity plays out is in children who act out: while one child might perceive parental punishment as something to be avoided (having low reinforcement value), another may view any attention as better than neglect (Mearns, 2009).

Locus of Control

Locus of control was first mentioned as a distinct concept in Rotter's 1966 publication titled Generalized Expectancies for Internal Versus External Control of Reinforcement, which was printed in *Psychological Monographs*. Locus of control is a way of understanding an individual's generalized expectancy for reinforcement. Rotter defined it thus:

> When a reinforcement is perceived by the subject as…not being entirely contingent upon his action, then, in our culture, it is typically perceived as the result of luck, chance, fate, or under the control of powerful others, or as unpredictable because of the great complexity of the forces surrounding him. When the event is interpreted in this way by an individual, we have labeled this a belief in *external control*. If the person perceives that the event is contingent upon his own behavior or his own relatively permanent characteristics, we have termed this a belief in *internal control* (p. 1).

Locus of control became a highly popular concept in psychological literature. By 1975, when Rotter published on problems and misconceptions he saw in the field, he commented that over 600 published articles existed on the topic. When commenting on the enduring popularity of the construct in 1990, Rotter attributed its success to four factors: its precise definition, its placement within a larger theory (social learning theory), a measurement scale for the construct that was derived from theory (the I-E Scale), and its wide dissemination through a research monograph (the *Psychological Monographs*).

Critiques of Locus of Control

While, locus of control has been widely written on in the literature of a variety of disciplines and has found general acceptance in psychology as a construct for understanding human behavior, there are critiques. These critiques generally focus on the unidimensionality of the construct and its measurement. Rotter's explanation of locus of control was of a continuum with internal and external loci at either end of the spectrum (Mearns, 2009). His original measurement scale, the I-E Scale, was developed with that explanation in mind, with locus of control as a unidimensional construct. Subsequent research has not supported Rotter's original conception though, and other researchers have found multiple dimensions. Mirel (1970) and MacDonald and Tseng (1971) both found at least two factors present: personal control and social system control. Meanwhile, Reid and Ware (1974) reported finding three distinct factors: self-control, personal control, and social system control.

Rotter himself has cautioned against misconceptions and misuse of locus of control. In 1975, he published an article noting several conceptual issues he saw present in literature up to that point. He pointed to researcher's lack of treatment of reinforcement value. Rotter noted that reinforcement value was an equally important variable in the predictive model for behavior

potential postulated by the social learning theory, yet most literature up to that point made no effort to understand the impact of the value of the reinforcement on the topic being studied. He pointed to frequent attempts to use a generalized instrument (the I-E Scale) to understanding locus of control in a specific context, and then being dismissive of the results when they were not found to have strong predictive value. In rebutting such dismissiveness, Rotter points to his explicit statement in his original work that individuals may have one orientation in a generalized context, but adopt another in a specialized context where they have learned that that behavior, rather than luck, dictates reward. Scholars had been assuming universal desirability of an external orientation, an assumption Rotter also disputed. In fact, he held that in considering social learning theory and psychopathology, he believed gross distortions in subjective views regarding expectancy and reinforcement values were both underlying sources of pathology.

Modern Use of Locus of Control

Locus of Control continues to enjoy wide spread acceptance and use in a variety of fields as a means of understanding human behavior. A review of scholarly journals since 1967 searching for the keyword locus of control returns 16,804 articles on a diverse set of topics including employee attitudes (Szilagyi, Sims, & Keller, 1976), performance of learning disabled adolescents (Bendell, Tollefson, & Fine, 1980), martial quality (Myers & Booth, 1999) and sensitivity to injustice (Zitny & Halama, 2011). Rotter's I-E Scale, published in 1966, continues to enjoy widespread use as the most common tool for measuring generalized locus of control, but dozens of other instruments have been created for the measurement of locus of control in specialized circumstances such as alcohol use, intellectual achievement in children, weight loss, and work beliefs (Furnham & Steele, 1993).

Readiness to Change

Much like locus of control, readiness to change (RTC) is situated in the context of a larger theory, the transtheoretical model. The transtheoretical model appeared in 1982, and was authored by James Prochaska and Carlos DiClemente, who based their theory off of their work with smoke cessation clients. The transtheoretical model was an attempt to develop an integrated theory that brought together different therapeutic systems (Prochaska & DiClemente, 1982). The model features several key constructs, the most well-known being the stages of change. These stages describe a cyclical path individuals traverse as they make behavior changes (Miller & Rollnick, 1991). RTC is the construct that quantifies motivation, as defined in the TTM, into a measurable variable. A variety of instruments have been created to measure RTC, which in turn has allowed researchers to place individuals into the stages of change.

The Transtheoretical Model

The Transtheoretical Model (TTM) was developed by Prochaska and DiClemente, and was first published in 1982, then revised in 1992 and again in 1997. The TTM is a theory that explains how individuals engage in behavior change. It was based on Prochaska and DiClemente's work with patients engaged in smoking cessation, though research has examined its usefulness in understanding change relating to other health behaviors such as weight control, safer sex, sunscreen use and exercise acquisition (Prochaska et al., 1994) as well as a diversity of non-health behavior changes including academic progress (Rojas, 2003), anger management (Williamson, Day, Howells, Bubner, & Jauncey, 2003) and overspending (Grubman, Bollerud, & Holland, 2011). The current iteration of the TTM includes five core constructs: stages of change, processes of change, decisional balance, self-efficacy and temptation (Prochaska & Velicer, 1997).

Stages of Change.

The stages of change are one of the five core constructs of the TTM, and have been present, with minor variation, since the 1982 formulation of the model. Each stage is comprised of a set of attitudes, intentions, and range of motivation (Prochaska & DiClemente, 1984). The original model listed 5 stages: contemplation, determination, action, maintenance and relapse (Prochaska & DiClemente, 1982). When Prochaska, DiClemente, and Norcross revised the TTM in 1992 the precontemplation stage was added, relapse was removed, and the determination stage was relabeled as preparation. The last revision added termination as the final stage (Prochaska & Velicer, 1997). The current stages are (a) *precontemplation*, the stage at which an individual has no intention to change behavior in the foreseeable future; (b) *contemplation*, the stage in which the individual intends to make a behavior change within the next 6 months; (c) *preparation*, the stage in which an individual is preparing to take action in the immediate future to change behavior; (d) *action*, the stage defined by behavior change that has taken place within the past 6 months; (e) *maintenance*, the stage when behavior change has been sustained, use of change processes is diminished, and the individual is focused on preventing relapse; and (f) *termination*, the stage at which behavior change has become permanent and there is no temptation to relapse (Prochaska & Velicer, 1997). Prochaska and DiClemente normalize the possibility of cyclic repetition through the stages of change, noting repeated movement through the stages is common before a permanent change is achieved. So, if the model is a wheel, an individual's movement through it can be visualized as a spiral, with each rotation bringing an individual closer to the outer boundary, until permanent change is reached (DiClemente, 1992).

Processes of Change.

The processes of change represent the activities and strategies that individuals employ to move between the stages of change. Ten unique processes of change have been consistently identified across each iteration of the TTM: consciousness raising, dramatic relief, self-reevaluation, environmental re-evaluation, self-liberation, social liberation, counterconditioning, stimulus control, contingency management and helping relationships (Prochaska & DiClemente, 1982; Prochaska, DiClemente, & Norcross, 1992; Prochaska & Velicer, 1997). In the TTM, each process of change is linked to one or more of the stages of change. This means that certain processes of change are more effective when utilized during a linked stage of change, and less effective when used during a non-linked stage of change. For example, consciousness raising is a process linked with the precontemplation stage, while counterconditioning is linked to the action stage (Prochaska & Velicer, 1997).

Measuring the Stages of Change: Readiness to Change

Readiness to change (RTC) is the construct that quantifies motivation into a measurable variable. Carey, Purnine, Maisto, and Carey (1999), define readiness to change as "the degree to which an individual is motivated to change problematic behavior patterns. As an index of motivation, it implies a willingness, or behavioral readiness, to initiate behavior change" (p. 245). A variety of methods to measure RTC exist, the most common method being a self-administered questionnaire.

Criticisms of the TTM

Davidson (1992) points out five criticisms of the TTM: (a) she asserts there is insufficient evidence to demonstrate that all individuals move through the TTM's stages of change, (b) there is a lack of measurement and replication regarding the stages of change, (c) that the relapse stage

may not be a true stage, (d) that behavior change can occur absent motivation to change, and (e) that there is a lack of evidence to show that treatment interventions can be optimized as a result of stage placement. Though her criticism appeared in 1992, her concerns remain valid, particularly her final concern regarding a lack of evidence showing that matching treatment to stages can result in better outcomes: studies in this decade have found no evidence to support the conclusion that assigning treatment based on the stages of change produces more effective outcomes than non-stage based interventions for a variety of behavior changes (Riemsma, et al., 2003; Bridle, et al., 2005). Further, studies have failed to show evidence supporting a linkage between processes of change and movement through the stages of change (Kleinjan, et al., 2008; Guo, Aveyard, Fielding, & Sutton, 2009).

CHAPTER 3

METHODS

The purpose of this study was to examine the relationships between the psychological constructs of locus of control and readiness to change and the achievement of learning outcomes as a result of the college disciplinary process. The extent to which these relationships may be impacted by variables such as age, how long ago the adjudication took place, method of adjudication, nature of violation adjudicated, and sex was explored. This chapter describes the instruments, participants, data collection procedures, and analysis protocols that were conducted for this study. These methods were intended to answer the following research questions:

1. Is there a relationship between locus of control and readiness to change in the context of the college disciplinary process?
2. Is there a relationship between locus of control and achievement of college disciplinary process learning outcomes?
3. Is there a relationship between readiness to change and achievement of college disciplinary process learning outcomes?
4. Can locus of control and readiness to change explain the achievement of intended learning outcomes for the college disciplinary process by students participating in that process?
5. Are there differences in the achievement of disciplinary process learning outcomes based on sex, age, the nature of the institutional policy violated, the method of resolution, and how long ago the resolution took place?

Sample

The target population for this study was students who were found responsible for a violation of institutional policy as a result of participating in a college disciplinary process. A convenience sample was selected from Emory University and Vanderbilt University. The sample consisted of all students at these institutions who participated in a disciplinary process and were found responsible for a violation of institutional policy during the fall 2011 semester. Students under the age of 18 were excluded from the study sample.

Emory University and Vanderbilt University were chosen as host sites for this study because the researcher has professional relationships with administrators at both institutions that allowed him access. Emory and Vanderbilt are substantially similar institutions, which made it reasonable to draw on both institutions for the purpose of this study. Both are private, liberal arts institutions in the southeastern United States located in urban areas. Each was founded with Methodist affiliations, though in their modern forms are considered non-secular in their approach to undergraduate education. Undergraduate enrollments at both institutions are comparable to one another. The Carnegie Classification, a framework for describing United States institutions of higher education, uses six characteristics to describe institutions, with five of these six being applicable to undergraduates (Carnegie Foundation for the Advancement of Teaching, 2011). On all five of these characteristics, Emory and Vanderbilt are classified identically: both have an undergraduate instructional program described as Arts & Sciences, with a high graduate co-existence; both have an enrollment profile described as majority undergraduate; the undergraduate profile for both is described as full-time, four-year, more selective with a low transfer-in rate; the size and setting of each school is described as large four-year, highly

residential; and the basic classification for both schools are that of research universities with very high research activity.

In terms of their college disciplinary processes, Emory University and Vanderbilt University have substantially similar processes. Again, this made it reasonable to draw on these two institutions as host sites for this study. Both universities house their college disciplinary processes within the student affairs division. At both institutions, students meet with an administrator to review an allegation of misconduct. The student then determines the means to resolve the allegations, whether that is accepting responsibility or having a hearing.

Emory University is a private institution located in Atlanta, Georgia with an undergraduate enrollment of 7,231 students (Emory University Office of Institutional Research and Effectiveness, 2010). The Office of Student Conduct is the administrative unit of the university designated to handle violations of institutional non-academic, behavioral policy by undergraduate students. Students alleged to have violated university policy meet with an office staff member trained to resolve alleged misconduct. The employee and student review the allegations. If the employee believes a formal charge is warranted, the student chooses to either accept responsibility or contest the charge at a formal hearing with the University Conduct Council. If the student accepts responsibility or is found responsible at a formal hearing, a sanction is imposed. The office states that the foremost aim of sanctions is to educate the student and promote future success. In the past three years, the office reviewed an average of 552 cases of alleged misconduct per year, and about 75 percent of those cases resulted in the student being found responsible for violating institutional policy. Each case represents one student's alleged misconduct in a specific situation. For the fall 2011 semester, 103 Emory University students

were found responsible for a violation of institutional policy as a result of their participation in the college disciplinary process.

Vanderbilt University is a private university located in Nashville, Tennessee with an undergraduate enrollment of 6,879 (Vanderbilt University, 2011). The Office of Student Conduct and Academic Integrity (OSCAI) reviews alleged violations of university policy by undergraduate students. Students alleged to have violated university policy initial meet with an office staff member to review the charges and select a resolution mechanism. Students can choose a hearing with an OSCAI staff member or a hearing with the Conduct Council, which includes students, a faculty member, and a non-voting delegate from the OSCAI. If the student is found responsible then a sanction is imposed. In the fall 2010 semester the OSCAI reviewed 473 cases. As with Emory University, a case represents 1 student's alleged misconduct in a specific situation. Of those cases, 358 resulted in a finding of responsibility (K. Jackson, personal communication, November 7, 2011). For the fall 2011 semester, 151 Vanderbilt University students were found responsible for a violation of institutional policy as a result of their participation in the college disciplinary process.

The total sample for this study was 254 students from Emory University and Vanderbilt University. Students were sent an invitation to participate in the study via their university email address; the invitation included a link to the online survey instrument. Students who did not complete the survey were contacted with up to three follow-up email reminders. All students who were invited to participate in the study were offered the chance to enter a drawing to win a $50 American Express gift card. The survey instrument was administered using SurveyMonkey, a web-based survey hosting application. The cover page of the instrument explained the purpose of the study; what participation in the study entailed; benefits, risks, and protections of

confidentiality; and a statement that proceeding on to the next page of the survey instrument constituted agreement to participate in the study. The Institutional Review Boards for Emory University, Vanderbilt University, and the University of Georgia approved the sample selection, email invitations, informed consent statements, and the survey instrument.

Instruments

Measuring College Disciplinary Process Learning Outcomes

For the purpose of this study, disciplinary process learning outcomes are defined as changes in knowledge, mental processes, affect, feeling, or motivation that are attributable to the students' participation in the college disciplinary process. This definition is informed by Bloom's (1956) taxonomy that describes three domains for educational activities: cognitive, affective, and psychomotor. The cognitive domain focuses on knowledge and intellectual abilities: the acquisition of content-specific knowledge, as well as increasing the level of complexity utilized in processing information. Changes in knowledge and mental processes could include changing how students think about certain issues or behaviors, as well as increasing knowledge to facilitate behavior change. The affective domain focuses on attitudes, feelings, and motivations. Changes in these areas could include increasing students' empathy for others or increasing respect for institutional policies.

There is little scholarship that has explored learning outcomes associated with college disciplinary processes. Stimpson and Stimpson conducted an extensive literature review on the topic in 2008, and found one peer-reviewed article. That article described a qualitative study by Martin Howell, conducted in 2005. Howell's study was informed by the dissertation work of Susan Allen, whose 1994 quantitative study examined the college disciplinary program as a catalyst for learning. The work of both Allen and Howell informed this study.

Allen (1994)'s dissertation looked at the college disciplinary program as a catalyst for learning. Her dissertation had two major components. First, Allen surveyed college disciplinary program administrators at 115 institutions in order to define the educational dimensions of an effective college disciplinary program. Allen's questionnaire to administrators contained seven statements classified as educational dimensions of student discipline. Examples include "immediate feedback to the student by the judicial officer or committee," "student participation in disciplinary decisions," and "confronting the student with the consequences of her or his actions." The questionnaire also contained twenty statements classified as educational outcomes of the college student discipline program. Examples include "the student analyzes the motives for her or his behavior," "the student understands why her or his behavior was unacceptable," and "the student acquires insight into the rules, regulations, and authority of the college." Administrators checked all statements in each section they believed to be important educational dimensions or education outcomes.

Next, Allen surveyed 282 college students at three small, liberal arts institutions who had participated in their institution's disciplinary program. Items endorsed by at least two-thirds of college disciplinary program administrators as important educational outcomes of an effective college disciplinary program were included in the students' questionnaire. A total of thirteen statements met this requirement. These items were reworded based on feedback from administrators and students. For example, "the student reflects on her or his values" was rewritten as "I have given more thought to what was right or wrong." Items relating the disciplinary process were also included in the student questionnaire. Factor analysis was used to evaluate item responses, and a six-factor solution was found. The six factors identified were behavior change, relationship, rights, standards, timeliness, and sanctions. Of these factors,

behavior change, relationship, and rights included items Allen identified as educational outcomes. The behavior change factor was comprised of six items, all six of which were educational outcomes. This factor also accounted for thirty six percent of the variance seen in responses. The relationship factor included four items, one of which was an educational outcome. The rights factor had one item.

Students in Allen's study identified some educational outcomes as more successfully achieved by the college disciplinary program than others. Those outcomes included an increased inclination to think through one's actions, accepting responsibility for actions, and abiding by college policies. Educational outcomes students identified as least successfully achieved were: increasing awareness of why their behavior was a problem, discussing how their behavior affected others, and addressing personal problems.

Allen's student questionnaire is the only available questionnaire that measures learning outcomes (Allen used the term educational outcomes, but her defined outcomes also meet the criteria for being learning outcomes). It was developed with input from college disciplinary administrators, and has been previously utilized with college student samples from three institutions. Internal consistency was satisfactory with a reported Cronbach's alpha of .93. Allen's advisor gave consent for the student questionnaire to be adapted for use in this study.

Howell (2005) conducted a qualitative study seeking to understand the impact and meaning of an informal, non-academic campus judicial process for undergraduate students. He observed the disciplinary meetings of ten students and subsequent to those meetings interviewed each student. A part of Howell's study specifically addresses learning attained. Four subcategories were identified under learning attained: consideration of consequence, empathy, familiarity with judicial procedures, and no perceived learning.

Three of the four learning attainment categories identified by Howell connect with one or more items from Allen's study. For example, consideration of consequences is similar to Allen's student questionnaire item "I am more inclined to accept responsibility for my actions." Empathy relates to with Allen's item "understanding the effect of her or his actions on others" from the administrator questionnaire. Familiarity with judicial procedures relates to "I have a better understanding of how the campus disciplinary process works and my rights as an accused student." The fourth category, "no perceived learning" has no equivalent item in Allen's study. While three of the four categories correspond to items from Allen's study, the four learning attained categories identified by Howell do not correspond with the educational outcomes students in Allen's study identified as being most successfully achieved by the college disciplinary process. Overall, Howell's findings compliment Allen's, given the overlap between the learning attainment identified by Howell and educational outcomes Allen utilized in her study. This overlap strengthens the case for utilizing Allen's student questionnaire for this study.

Disciplinary process learning outcomes were measured in this study using a modified version of Allen's 1994 student questionnaire. Allen's questionnaire asked about process-oriented dimensions and learning outcomes associated with the college disciplinary process. Since the current study is examining learning outcomes, only those items identified as learning outcome-oriented were included. Allen's original questionnaire included the following thirteen learning outcome-oriented items:

1. [The disciplinary board or administrator] helped me understand why my behavior was unacceptable.
2. [The disciplinary board or administrator] talked with me about how my behavior affected others.

3. I am more aware of why and how this behavior is a problem for me.
4. I have made changes in my behavior.
5. I have identified more options and alternative responses to the conduct, which caused me difficulty.
6. I have given more thought to what is right and wrong.
7. I have learned to control myself better.
8. I am more inclined to accept responsibility for my actions.
9. I am more inclined to think through my actions before acting.
10. I have addressed a personal problem I may otherwise have ignored.
11. I have a better understanding of how the campus disciplinary process works and my rights as an accused student.
12. I have a better understanding of the reasoning behind the rules I violated.
13. I am more inclined to abide by college/university policies.

Item 4 and items 6-10 comprise the factor Allen identified as behavior change. Item 2 loaded with Allen's relationship factor. Item 10 is Allen's rights factor. The five remaining items did not associate strongly with any of Allen's six factors.

Items 1 and 2 were rewritten as "I" statements to match the formatting of other statements. After pilot testing with a small group of undergraduate students, the minor wording adjustments were made to several items to improve their clarity. A fourteenth item, "I do not believe I learned anything" was added, consistent with Howell's (2005) findings. Appendix A contains the revised items. As in Allen's administration, participants indicated their level of agreement with each statement using a 4-point Likert scale. Allen's original use of the instrument analyzed each item independently of the others. However, the definition of learning

outcomes for this study includes all changes in knowledge, mental processes, affect, feeling, or motivation that are attributable to the students' participation in the college disciplinary process. Under this definition it is appropriate to combine the item responses to form an interval-level score that represents the totality of change achieved as a result of students' participation in the college disciplinary process.

Measuring Locus of Control

For the purpose of this study, locus of control refers to individuals' beliefs that they control rewards they receive for their actions, or that their rewards are controlled by chance, luck, or powerful others. Locus of control has been measured using a plethora of instruments. The most widely used is Rotter's I-E Scale. Rotter first published this scale in the journal *Psychological Monographs* in 1966. The I-E Scale consists of 29-paired statements. Each paired statement contains one response that that has an internal orientation and one response with an external orientation. Participants read each set of paired statements and select the statement they more strongly believe in. An example of a paired statement from the I-E Scale is: "many unhappy things in people's lives are partly due to bad luck" or "people's misfortunes result from the mistakes they make." The I-E Scale is designed to measure how external individuals' locus of control is. The greater the number of externally-oriented statements the individual selects, the more that individual believes reward is controlled by chance, fate, or powerful others.

While the Rotter I-E Scale has enjoyed widespread use, it has also received criticism. Rotter's initial publication suggested that the I-E Scale measured one construct. However, further research (Gurin, Gurin, Lao, & Beattie, 1969; Mirels, 1970; Cherlin & Bourque, 1974) has found that the I-E Scale measures multiple constructs relating to externality. This led researchers to develop scales that measure the subsets of externality. For example, Levenson

(1981) developed the IPC scales, which breaks out externality into the subscales of chance and powerful others. Other examples include Reid and Ware's Multidimensional Locus of Control Scale, Lefcourt's Mutidimemsional-Multiattributional Causality Scale, Paulhus and Christie's Spheres of Control Scale, and Duttweiler's *Internal Control Index* (Furnham & Steele, 1993). Of these, Duttweiler's *Internal Control Index* (ICI) was deemed to be the most suitable for measuring locus of control for this study.

Patricia Duttweiler developed the *Internal Control Index* (ICI) in 1984. The ICI was developed to address perceived defects associated with Rotter's I-E Scale. These defects include the I-E Scale's multidimensionality (the fact that it may measure multiple constructs relating to externality rather than a single construct) and its paired response format, which was criticized as more difficult to understand and more susceptible to social desirability (Duttweiler, 1984). Individuals completing the ICI read and respond to a set of 28 statements, indicating what their normal attitude, feeling, or behavior would be. Sample items include: "when faced with a problem I _____ try to forget it," "I _____ get discouraged when doing something that takes a long time to achieve results," and "when part of a group I _____ prefer to let other people make all the decisions." For each statement, the individual selects from 5 possible responses that indicate how often the attitude, feeling or behavior is true, in increasing order of frequency: rarely, occasionally, sometimes, frequently, and usually.

The ICI is scored by assigning numeric values to each response (1 to 5). Half of the items are reverse scored. The numeric value for each item is summed to produce a score that can range from 28 to 140. Higher scores equate to a higher internal locus of control orientation. This orientation towards internality in scoring is unique among available instruments measuring

locus of control, which tend to measure the degree to which a person displays an external orientation.

Several studies have evaluated the reliability and validity of the ICI. In Duttweiler's original publication of the ICI in 1984, she reported a Cronbach's alpha of .84, as well as a moderate, negative correlation (r^2 = -.385) between ICI score and Mirel's Factor I of the Rotter I-E Scale, which measures an individual's tendency towards an external orientation. In 1987, Goodman and Waters examined the convergent validity of five Locus of Control scales, the ICI being one of them. They reported a Cronbach's alpha of .83 for the ICI, low to moderate negative correlations (ranging from -.28 to -.38) with instruments measuring externality, and a low to moderate, positive correlation with Levenson's internality subscale (.33). Meyers and Wong (1988) compared the ICI to Rotter's I-E Scale and found the ICI had "better correlates, greater internal consistency and homogeneity" (p. 760). Jacobs (1993) evaluated the psychometric properties of the ICI by administering it to a group of university students in the southern United States. Jacobs reported a Cronbach's alpha of .82. Maltby and Cope (1996) administered the ICI with three samples from the United Kingdom, with two of those three groups being undergraduate students. They reported Cronbach's alphas of .86 and .87.

While the Rotter I-E Scale enjoys the broadest use, the ICI has gradually seen increased utilization in research studies since its inception. Wade, Tiggemann, Martin, and Health (1997) used the ICI to evaluate, in part, techniques for assessing eating disorders. In 2001, Maltby and Day used the ICI as part of a study examining the relationship between personality, attitude, health factors, and attitudes towards men. Palmer, Rysiew, and Koob (2003) used the ICI as part of an exploration of the differing relationships between self-esteem, locus of control, and suicide risk in White and African American women in an inpatient psychiatric unit. In both 1999

(Tarver, Canada & Lim) and 2010 (Stachowiak), researchers have used the ICI to explore the relationship between locus of control and job satisfaction.

This study used a modified version of Duttweiler's *Internal Control Index* (ICI) to measure locus of control. The ICI's statements were modified to remove the blanks from each statement, and the directions were modified to direct participants to select the response that best identifies how often the participant participates in the behavior the statement describes. Appendix A contains the revised ICI. Consistent with the design of the study, the ICI produces a measurement of an individual's internal orientation, rather than external orientation with regard to locus of control. The ICI has been tested extensively with college student populations, and has consistently reported high internal reliability scores (Cronbach's alpha.83 and above) with this population. Two studies have explored the ICI's convergent validity with other locus of control instruments and found low, negative correlations with instruments measuring externality, and low positive correlations with instruments measuring internality. Finally, the instrument's creator has granted permission for duplication and use (Fischer & Corcoran, 2007).

Measuring Readiness to Change

For the purpose of this study, readiness to change is defined as "the degree to which an individual is motivated to change problematic behavior patterns. As an index of motivation, it implies a willingness, or behavioral readiness, to initiate behavior change" (Carey, Purnine, Maisto, & Carey, 1999, p. 245). Readiness to change has been measured two ways: as a nominal, staged variable or as an interval-type score. Since readiness to change is part of the larger Stages of Change construct, many instruments measuring readiness to change are designed to identify what stage an individual identifies with most strongly. However, some of these

instruments have displayed versatility in their scoring and have been used to generate interval-type scores for analysis purposes.

One example of a broadly adopted instrument for measuring readiness to change that can be used to produce either a categorical stage placement or an interval-type score is the Readiness to Change Questionnaire (RTCQ) developed by Rollnick, Heather, Gold, and Hall (1993). The RTCQ is a 12-item questionnaire with three subscales: precontemplation, contemplation, and action. The RTCQ was designed "to measure [readiness to change] for individuals in medical settings who had not sought help for alcohol-related problems" (Carey, Purnine, Maitso, & Carey, 1999, p. 252). Items include "I don't think I drink too much," "sometimes I think I should cut down on my drinking," and "I have just recently cut down on my drinking." Individuals completing the RTCQ indicate their agreement to each statement using a 5-point Likert scale. Responses on each subscale are tallied, and the subscale with the highest score is deemed to be the stage the individual most closely identifies with. The RTCQ's developers examined the internal consistency, test-retest reliability of the instrument (Rollnick, Heather, Gold, & Hall, 1993), and predictive validity (Heather, Rollnick, & Bell, 1993) and found them satisfactory.

While the RTCQ was originally designed to produce a stage placement based on which subscale scored highest, it has also been used to generate an interval-level score by adding the contemplation and action subscales, and deducting from that total the precontemplation subscale. Sitharthan, Kavanagh, and Sayer utilized this method in their 1996 study evaluating an alcohol use intervention, as did Blume and Schmaling (1997) in their study examining the predictive value of classes of symptoms in determining readiness to change for dually diagnosed patients. Forsberg, Ekman, Halldin, and Rönnberg (2004) examined the practice of stage assignment

versus continuous readiness to change scoring for the RTCQ, and found both methods had satisfactory reliability, and both correlated with measurements of alcohol consumption and change-related behaviors.

While the RTCQ has been used in studies examining college student populations, the most extensive use of the RTCQ has been in samples of excessive drinkers participating in in-patient treatment programs, and the instrument was originally developed for use with this population (Rollnick, Heather, Gold, & Hall, 1993). Significantly, the RTCQ was developed to assess readiness to change as it relates to problematic drinking, which makes it inappropriately limiting for use in this study. While alcohol use is a common issue adjudicated in college disciplinary processes, it is not the sole issue, which makes the RTCQ a poor choice for measuring readiness to change. Rather than focusing on alcohol consumption, an instrument that addresses readiness to change in a broader context is necessary for the purpose of this study.

The *University of Rhode Island Change Assessment* (URICA) Scale is a non-behavior specific instrument measuring readiness to change. Developed in 1989 by McConnaughy, DiClemente, Prochaska, and Velicer, it is designed to measure readiness to change for a variety of behaviors. It accomplishes this by directing individuals completing it to respond based on the problem they identify at the start of the instrument. It has been used to measure readiness to change with different populations and with respect to variety of issues, including alcohol use interventions (Bates, Pawlak, Tonigan, & Buckman, 2006), eating disorders (Feld, Woodside, Kaplan, Olmsted, & Carter, 2001), vocational counseling for persons with mental illness (Gervey, 2010), and rehabilitation programming for prison inmates (Polaschek, Anstiss, & Wilson, 2010). In college student populations, the URICA has been used to evaluate readiness to

change relating to alcohol use (Hufford, Shields, Shiffman, Paty, & Balabanis, 2002) and anxiety (Dozois, Westra, Collins, Fung, & Garry, 2004)

The URICA consists of four subscales: precontemplation, contemplation, action, and maintenance. Each subscale contains six statements, for a total of 24 statements in the entire instrument. For each statement, individuals report their level of agreement using a 5-point Likert scale. Example statements include "as far as I'm concerned, I don't have any problems that need changing," "I think I might be ready for some self-improvement," "I am finally doing some work on my problem," and "it worries me that I might slip back on a problem I have already changed, so I am here to seek help." Like the Readiness to Change Questionnaire (RTCQ), the URICA was originally designed to yield a stage placement, with the highest scoring subscale representing the stage of change that best represented the individual's level of readiness. Also like the RTCQ, the URICA has alternatively been scored by adding together the contemplation, action, and maintenance subscale scores, then deducting the precontemplation subscale score from this total to produce an interval-type readiness to change score. Several studies have utilized this scoring method (Belding, Iguchi, & Lamb, 1996; Budd & Rollnick, 1996; Williamson, Day, Howells, Bubner, & Jauncey, 2003; Eckhardt, Babcock, & Homack, 2004), and it has met with general acceptance in the literature.

Reliability and validity measures for the URICA have been found satisfactory. In their initial development, McConnaughy, Prochaska, and Velicer (1983) reported internal consistency ranging from .79 to .84. DiClemente and Hughes (1990) reported Cronbach's alphas between .69 and .82. Subsequent studies have reported similar ranges. Cluster analysis by the developers demonstrated criterion-related validity, and subscale scores correlated with expected related measures. Carney and Kivlahan (1995) and DiClemente and Hughes (1990), analyzed the

URICA and reported, consistent with the developer's findings, a four-factor solution supporting the four established subscales. Examining twelve instruments for measuring readiness to change, Carney, Purnine, Maisto, and Carey (1999) found that the URICA demonstrated adequate internal consistency and satisfactory test-retest reliability.

This study used a modified version of the *University of Rhode Island Change Assessment* (URICA) Scale to measure readiness to change. The items were reworded to describe readiness to change behavior, rather than readiness to change a problem. Appendix A contains the revised URICA statements. The URICA was developed specifically to measure readiness to change. There is data substantiating the reliability and validity of the URICA. There is prior use of the URICA in college student populations, the target population for this study. Scoring the URICA to yield a continuous, interval-level score is an accepted practice in the literature, which will be of benefit in the data analysis phase of the study. Finally, the URICA is available for use in the public domain at no cost.

Measuring Demographics

Five items were be used to collect demographic information. Sex was collected as a categorical variable, with participants able to select female, male, or transgendered. Age was collected using an interval level variable, with participants providing their age as a whole number. Participants selected all applicable institutional policy they were accused of violating, with an open-ended option to provide a policy violation not listed. The options for policy violations represented the seven most common policy violations for Emory and Vanderbilt universities (personal communications, E. Hoffman, September 12, 2011; personal communication, K. Jackson, November 6, 2011). Participants selected from one of three options for method of resolution: resolved by meeting with an administrator, meeting with an all student

panel, or meeting with a panel of faculty, staff, and students. The item measuring how long ago the resolution took place had six options: one month ago, two months ago, three months ago, four months ago, five months ago, and more than five months ago.

Data Collection

An online questionnaire combining Allen's student questionnaire, the *Internal Control Index* (ICI), and the *University of Rhode Island Change Assessment* (URICA), and the demographic items was administered to participants via SurveyMonkey (see Appendix A). SurveyMonkey is an online tool for the creation and administration of questionnaires. SurveyMonkey uses different kinds of collectors to receive questionnaire responses. Two types of collectors were used: an email collector and a web link collector. An email collector allows the researcher to input a list of participant email addresses and create targeted messages to send to the list of participants based on criteria (e.g., a message for all participants or for participants who have started, but not finished the questionnaire). Each participant's email message contained a unique survey web address linked to that participant's email address. Using this relationship, SurveyMonkey was able to report which participants had completed the questionnaire. Individuals were not linked to their responses, allowing for anonymity while still allowing the researcher to send targeted reminders only to participants who had not completed the questionnaire. By contrast, a web collector creates one URL that can be enclosed in email addressed, linked to on a web page, or advertised in other media. Since all participants used the same URL it was impossible to determine who had completed the questionnaire, and therefore it was impossible to send targeted reminders.

Data collected from Emory University used SurveyMonkey's email collector. At the time the study was conducted, the researcher was an employee of Emory University assigned to

the University's Office of Student Conduct. In this capacity, the researcher had direct access to the records of students who have participated in the institution's disciplinary process. Consent was given for the researcher to access these records for the purpose of this study. Data collected from Vanderbilt University used SurveyMonkey's web collector. The web collector had to be used because the researcher did not have direct access to the list of students who participated in the institution's disciplinary process. The Director of Vanderbilt's Office of Student Conduct and Academic Integrity sent eligible students the initial invitation to participate in the study, along with the three follow-up reminders.

The initial invitation was sent to all eligible participants on January 24, 2012 by email. The initial invitation described the research study, explained risks and benefits, and contained a link to the questionnaire. Three follow-up emails were sent, once a week, on different days of the week and times of the day. For Emory University participants, follow-up emails were sent to participants who did not completed the questionnaire and who had not indicated they did not wish to receive further reminders. For Vanderbilt University participants, follow-up emails were sent to all eligible participants.

Data Analysis

Responses from the questionnaire were statistically analyzed using bivariate correlations, analyses of variance, and regression analysis. All analyses were performed using IBMM SPSS Statistics, version 19. Reliability was examined for each scale by calculating Cronbach's alpha (URICA $\alpha = 0.846$, ICI $\alpha = 0.832$, DPOS a = 0.924), and was consistent with prior studies. For all statistical tests, an alpha level of 0.05 was used as the threshold for declaring significance. This means that there is a 5% chance that the findings in this study were due to chance.

Research Question 1

Research question 1 asked: is there a relationship between locus of control and readiness to change in the context of the college disciplinary process? As operationalized for this study, the locus of control score and the readiness to change score were continuous variables. For the purpose of statistical analysis, the null hypothesis was that there is no relationship between locus of control and readiness to change in the context of the college disciplinary process. A Pearson's product-moment correlation was run to determine the relationship between the two score variables. Correlation is a statistical technique that can show the strength of relationship between variables (Gay & Airasian, 2003). Pearson's product-moment correlation is appropriate when both variables are quantitative in nature, and the variables produce raw scores (Huck, 2002). Pearson's product-moment correlation produces a value between -1.00 and 1.00, with the absolute value of the correlation representing its strength, and the direct representing whether the correlation is direct (positive) or inverse (negative).

Research Question 2

Research question 2 asked: is there a relationship between locus of control and achievement of college disciplinary process learning outcomes? As operationalized for this study, the locus of control score and the college disciplinary process outcome score were continuous variables. Just as with research question 1, the null hypothesis was that there is no relationship between locus of control and achievement of college disciplinary process learning outcomes. A Pearson's product-moment correlation was run to determine the relationship between the two score variables.

Research Question 3

Research question 3 asked: is there a relationship between readiness to change and achievement of college disciplinary process learning outcomes? As operationalized for this study, the readiness to change score and the college disciplinary process outcome score were continuous variables. Just as with research questions 1 and 2, the null hypothesis was that there is no relationship between readiness to change and achievement of college disciplinary process learning outcomes. A Pearson's product-moment correlation was run to determine the relationship between the two score variables.

Additionally, the URICA is traditionally scored by assigning a stage (precontemplation, contemplation, action, or maintenance) based on the subscale that the individual most highly endorses. When there is a tie between subscales, the later subscale is selected. Subscale scores were computed for each participant, and a stage was assigned based on the highest endorsed subscale. An analysis of variance (ANOVA) was performed to determine if there was a significant difference in the disciplinary process outcome score based on stage assignment. ANOVA is a statistical procedure that examines the effect of a nominal, or grouping variable, on a continuous-measure dependent variable (Stevens, 2007). ANOVA makes use of three assumptions: that each observation is independent, that the population variances for the groups are equal (also called homoscedasticity), and that the observations are normally distributed (Stevens, 2007). Since each observation was collected from a unique student, the first assumption is met. Levene's Test of Equality of Error Variances was performed, and it was found that the second assumption was met. To test the third assumption, a histogram for disciplinary process outcome scores was generated and inspected. Visual inspection of the histogram suggested that the observations were normally distributed. However, violations of the

third assumption, that observations are normally distributed, general do not have a significant impact on ANOVA (Stevens, 2007).

Research Question 4

Research question 4 asked: can locus of control and readiness to change explain the achievement of intended learning outcomes for the college disciplinary process by college students participating in a college disciplinary process? As operationalized for this study, all of these variables were continuous in nature. For the purpose of statistical analysis, the null hypothesis was that locus of control and readiness to change cannot explain disciplinary process outcome score. A stepwise, multiple regression was used to determine the explanatory value of locus of control and readiness to change with regard to disciplinary process outcome score.

Regression is a form of statistical analysis that examines the combined and separate effects of independent, quantitative variables on a dependent, quantitative variable (Pedhazur, 1997). A multiple regression describes a regression that uses more than one independent variable to attempt to predict or explain change in the dependent variable (Huck, 2002). G*Power, version 3.1.3 was used to calculate an a priori sample size. An estimated effect size of 0.181 was calculated based on an average of effect sizes reported in the literature for past students on locus of control and readiness to change. Given the type of analysis (regression), an alpha level of 0.05, a power level of 0.8, an effect size of 0.181, and 2 independent variables, G*Power calculated that a sample size of 57 was needed. The study did not yield the required participant number, thus the results should be interpreted with caution.

Research Question 5

Research question 5 asked: are there differences in the achievement of disciplinary process learning outcomes score based on sex, age, the nature of the institutional policy violated,

the method of resolution, and how long ago the resolution took place? Each of these variables was categorical in nature. The null hypothesis was that there are no significant differences in the disciplinary process outcome score based on sex, age, the nature of the institutional policy violated, the method of resolution, and how long ago the resolution took place. Analyses of variance were used to determine if there were differences in the disciplinary process outcome score based on each of the aforementioned variables. ANOVA makes use of three assumptions: that each observation is independent, that the population variances for the groups are equal (also called homoscedasticity), and that the observations are normally distributed (Stevens, 2007). Since each observation was collected from a unique student, the first assumption was met. Levene's Test of Equality of Error Variances was performed, and it was found that the second assumption was violated for this data set. Therefore an ANOVA that does not assume equal variance was performed. To test the third assumption, a histogram for disciplinary process outcome scores was generated and inspected. Visual inspection of the histogram suggested that the observations were normally distributed. However, violations of the third assumption, that observations are normally distributed, general do not have a significant impact on ANOVA (Stevens, 2007).

CHAPTER 4

RESULTS

The purpose of this study was to examine the relationship between learning in the college disciplinary process, locus of control, and readiness to change. This chapter presents the data that were collected, as well as the results from the statistical analyses as they relate to the research questions.

Sample Description

Sixty nine students participated in the research study by either partially or fully completing the questionnaire. Of the 69, forty completed all parts of the questionnaire. Of those who did not fully complete the questionnaire, 29 participants viewed the first page of the questionnaire (containing the elements of informed consent). Thirteen of those 29 completed the second page of the questionnaire (measuring Readiness to Change), and one of the 29 completed both the second and third pages (measuring Readiness to Change and the Disciplinary Process Outcomes). The data analysis that follows, except where indicated, used only the data from participants who fully completed the questionnaire (n = 40). Invitations were sent to 254 potential participants, for a response rate of 15.7%.

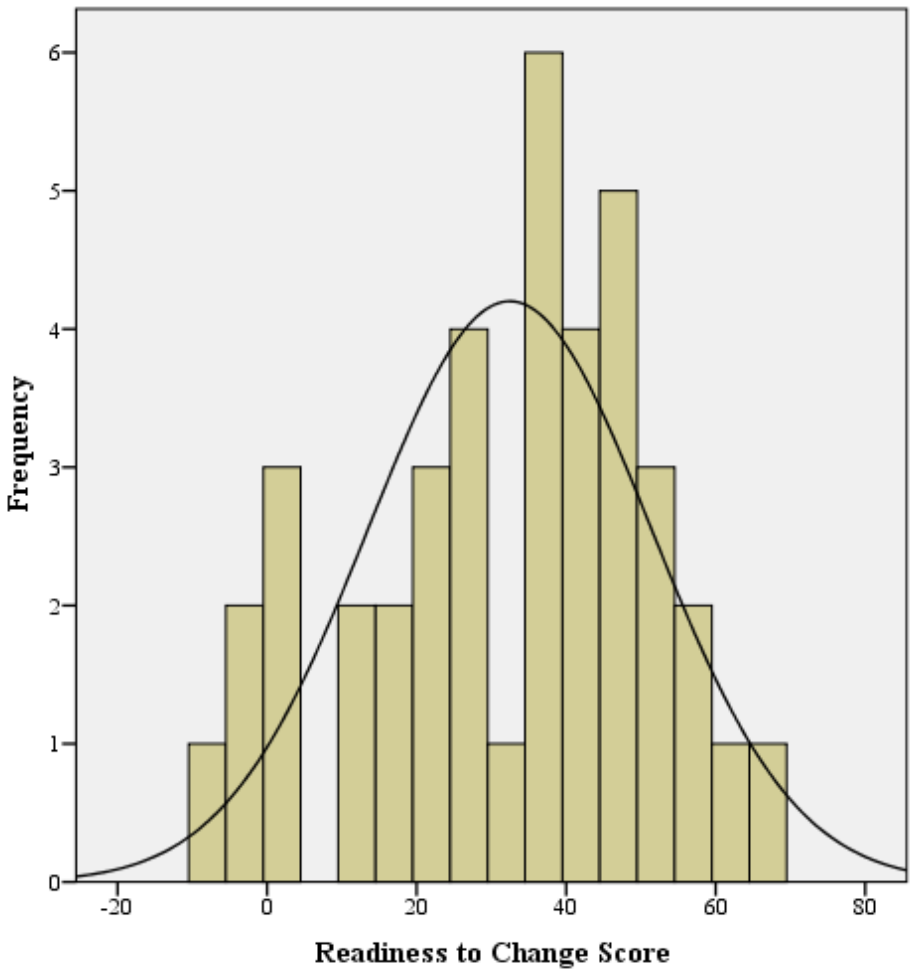
Twenty four responses were from Emory University, 16 were from Vanderbilt University. Sixteen respondents were males, 24 were females. Ages ranged from 18 to 21, with a mean of 19.33, a median of 19, a mode of 19, and a standard deviation of 1.023.

Readiness to Change

Readiness to Change scores were calculated. A determination of each participant's stage placement in the Stages of Change was also made. Figure 1 shows the distribution of Readiness to Change scores.

Figure 1

Distribution of Readiness to Change Scores



Readiness to Change scores ranged from -8 to 68, with a mean of 32.45, a median of 35.5, a mode of 44, and a standard deviation of 18.99. The lowest possible score is a -12, and the

highest possible score is an 84. When placed into the Stages of Change, 12 participants were grouped into the precontemplative stage, 4 were placed in the contemplative stage, 16 were placed in the action stage, and 8 were placed in the maintenance stage.

Readiness to Change scores were calculated and stage placement was determined for each of the 13 partially completed questionnaires. The mean score for the fully completed group was 5.07 points higher than the partially completed group. There was also slightly higher variation in scores for the partially completed group. These were then compared against the 40 fully completed questionnaires to examine possible differences in Readiness to Change scores and stage placement between these two groups. Table 1 shows the comparison between these two groups. More the of the partially completed group tended to be placed in the precontemplative stage, while more of the fully completed group tended to be placed in the action stage.

Table 1

Readiness to Change Scores and Stage Placements for Fully and Partially Completed Questionnaires

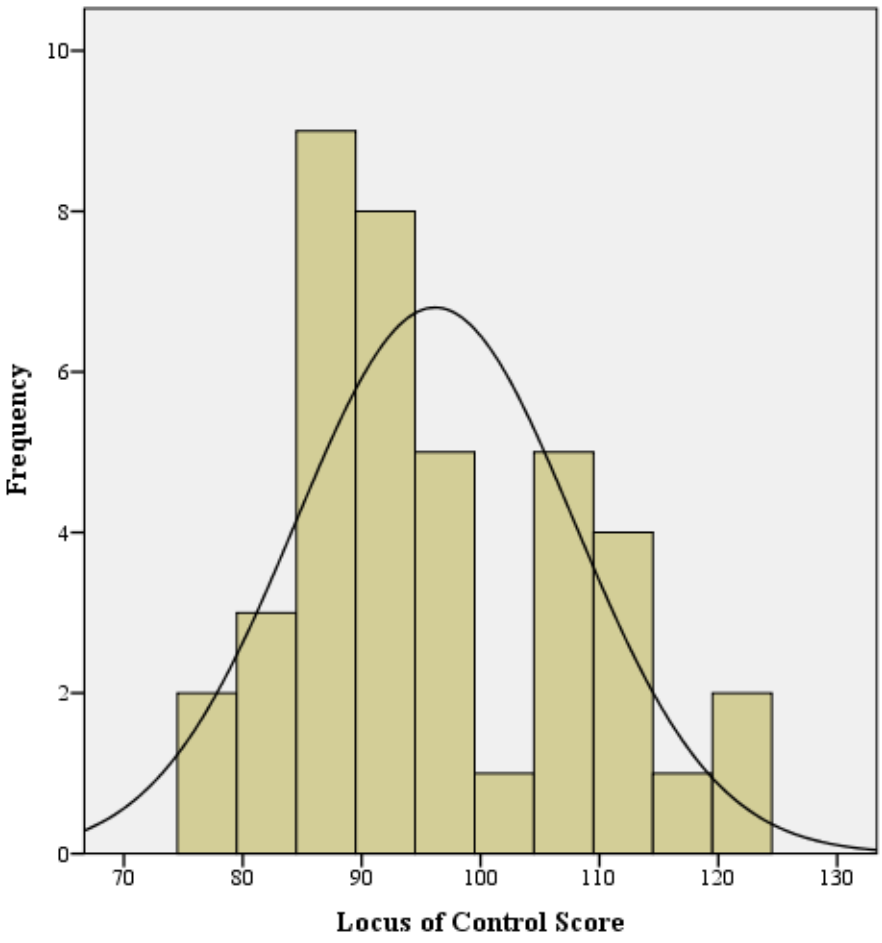
	Partially Completed Group n = 13	Fully Completed Group n = 40
Mean RTC score	27.38	32.45
Standard deviation	19.32	18.99
Stage of Change Placement		
Precontemplative	5 (38.5%)	12 (30.0%)
Contemplative	3 (23.1%)	4 (10.0%)
Action	3 (23.1%)	16 (40.0%)
Maintenance	2 (15.4%)	8 (20.0%)

Locus of Control

Locus of Control scores were calculated. Figure 2 shows the distribution of Locus of Control scores.

Figure 2

Distribution of Locus of Control Scores



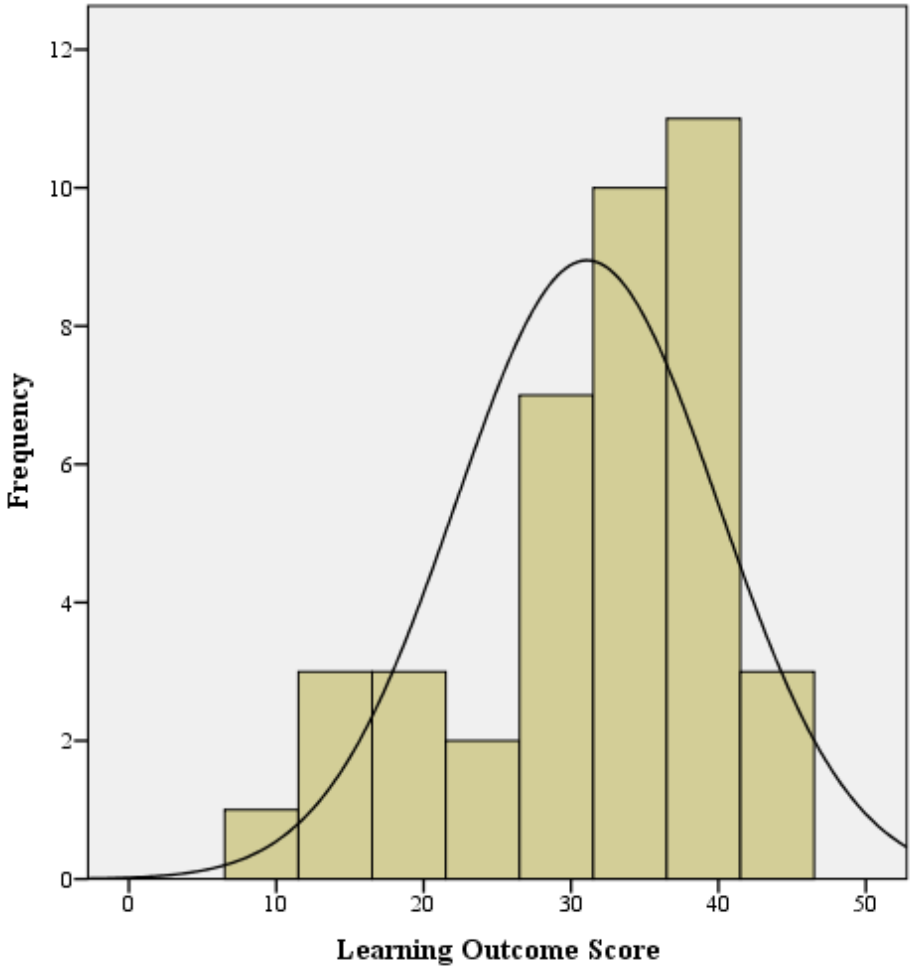
Locus of Control scores ranged from 77 to 121, with a mean of 96.18, a median of 94, a mode of 86, and a standard deviation of 11.73. The lowest possible score for the *Internal Control Index* is a 28, and the highest possible score is a 140.

Disciplinary Process Outcomes

A Disciplinary Process Outcome score was calculated for each participant. Figure 3 shows the distribution of Disciplinary Process Outcome scores.

Figure 3

Distribution of Disciplinary Process Outcome Scores



Disciplinary Process Outcome scores ranged from 9 to 46, with a mean of 31.08, a median of 33, a mode of 37, and a standard deviation of 8.91. The lowest possible score is an 8, and the highest possible score is a 64.

The fourteen individual Disciplinary Process Outcome items were also examined independently. For reporting purposes, items were grouped into four categories: Awareness, Behavior Change, Rights, and an ungrouped category. Two of these 3 groups, Behavior Change and Rights, come from Allen's (1994) factor analysis. Behavior Change consists of 6 items:

- I have made changes to my behavior.
- I have given more thought to what is right and wrong.
- I have learned to better control myself.
- I am more inclined to accept responsibility for my actions.
- I am more inclined to think through my actions before acting.
- I have addressed a personal problem I may otherwise have ignored.

The Rights group consists of a single item: "I have a better understanding of how the disciplinary process works and my rights as an accused student." The Awareness group comprised three items, all were awareness oriented: "I better understand why my behavior was unacceptable," "I better understand how my behavior affected others," and "I am more aware of why and how this behavior is a problem for me." Finally, 4 items were not placed in any group: "I have identified more options and alternative responses to the behavior which got me in trouble," "I have a better understanding of the reasoning behind the rules I violated," "I am more inclined to abide by university policies," and "I do not believe I learned anything." Due to the length of the items, each item was assigned a label for subsequent reporting in this chapter. Table 2 lists each item and its label. Appendix B contains the breakdown of responses for each Disciplinary Process Outcome item. Table 3 reports the descriptive statistics for each Disciplinary Process Outcome item.

Table 2

Disciplinary Process Outcome Item Labels

Item	Label
Behavior Change Items	
I have made changes to my behavior	BC1: Made Changes to Behavior
I have given more thought to what is right and wrong.	BC2: Given More Thought
I have learned to better control myself.	BC3: Better Control of Self
I am more inclined to accept responsibility for my actions.	BC4: More Inclined to Accept Responsibility
I am more inclined to think through my actions before acting.	BC5: More Inclined to Think Things Through
I have addressed a personal problem I may otherwise have ignored.	BC6: Addressed a Personal Problem
Awareness Items	
I better understand why my behavior was unacceptable.	AW1: Understand Why Behavior Unacceptable
I better understand how my behavior affected others.	AW2: Understand Effect on Others
I am more aware of why and how this behavior is a problem for me.	AW3: Understand Effect on Self
Rights Items	
I have a better understanding of how the disciplinary process works and my rights as an accused student	RT1: Better Understand Process and Rights
Ungrouped Items	
I have identified more options and alternative responses to the behavior which got me in trouble.	UN1: Identified Alternative Responses
I have a better understanding of the reasoning behind the rules I violated.	UN2: Better Understanding of Rules
I am more inclined to abide by university policies	UN3: More Inclined to Follow Rules
I do not believe I learned anything.	UN4: No Learning

Table 3

Descriptive Statistics for Disciplinary Process Outcome Items

	Mean	Median	Mode	SD
BC1: Made Changes to Behavior	2.6	3.0	3	.93
BC2: Given More Thought	2.5	2.5	3	.93
BC3: Better Control of Self	2.8	3.0	3	.90
BC4: More Inclined to Accept Responsibility	2.7	3.0	3	.85
BC5: More Inclined to Think Things Through	3.0	3.0	3	.82
BC6: Addressed a Personal Problem	2.7	3.0	3	.97
	Mean	Median	Mode	SD
AW1: Understand Why Behavior Unacceptable	2.4	2.5	3	.90
AW2: Understand Effect on Others	2.4	2	2	.98
AW3: Understand Effect on Self	2.3	2	3	.92
RT1: Better Understand Process and Rights	2.7	3.0	3	.97
UN1: Identified Alternative Responses	2.7	3.0	3	.83
UN2: Better Understanding of Rules	2.4	2.5	3	.86
UN3: More Inclined to Follow Rules	2.7	3.0	3	.85
UN4: No Learning	2.3	2.0	2	.93
Overall Disciplinary Process Outcome Score	31.1	33	-	8.91

N = 40

Demographic Information

Descriptive statistics in relation to the outcomes for demographic data were analyzed. The results are presented in table 4.

Table 4

Descriptive Statistics for Demographic Data

Demographic Variable	N	Mean DPOS	Std. Dev.
Sex			
Female	16	30.8	10.5
Male	24	31.3	7.9
Demographic Variable	N	Mean DPOS	Std. Dev.
Age			
18	10	32.6	9.6
19	13	32.0	8.7
20	11	30.1	9.9
21	6	28.3	7.6
Length of time			
1-2 months	10	25.6	8.9
3+ months	30	32.9	8.3
Method of resolution			
Administrator	32	31.4	9.2
Panel	8	29.6	7.8
Violation type			
Alcohol-related	15	33.5	8.1
Non-alcohol related violation	25	29.6	9.2

Due to small cell counts, several categories were collapsed. Length of time since resolution of the participant's disciplinary process was collapsed from six groups to two: 1-2 months or 3+ months. The method of resolution was collapsed from three groups to two:

administrator or panel. Violation type was collapsed from eight groups to two: alcohol-related and non-alcohol related. These collapsed groupings were used as the basis of further analysis in this chapter.

Comparisons of Data Collection Sites

Since the data were collected from two sites, an analysis of variance was performed to examine potential differences between the sites. ANOVAs were run to examine potential differences in Readiness to Change score, Locus of Control score, and Disciplinary Process Outcome score. Table 5 reports the statistics associated with this analysis. Additionally, chi-square analyses were run to examine potential relationships between sex, age, length of time since resolution, method of resolution, violation type, and data collection site. No significant relationships were found in any of these comparisons. Therefore, all subsequent analyses in this chapter treat data from both sites as a unified set.

Table 5

Means for Readiness to Change Scores, Locus of Control Scores, and Disciplinary Process Outcome Scores, Grouped By Data Collection Site

Data Collection Site	Readiness to Change	Locus of Control	Disciplinary Process Outcome
Emory University	33.8	97.8	30.4
Vanderbilt University	30.4	93.7	32.1

Analysis for Research Question 1

Research question 1 asked if there was a relationship between Locus of Control and Readiness to Change in the context of the college disciplinary process. A Pearson's product-moment correlation was run to determine the relationship between the two variables. The correlation between Locus of Control and Readiness to Change was -.090, a weak, negative correlation. This correlation was not significant at the .05 level ($p = 0.579$). Therefore, the null hypothesis is accepted, and the conclusion is that there is not a relationship between locus of control and readiness to change in the context of the college disciplinary process.

Analysis for Research Question 2

Research question 2 asked if there was a relationship between Locus of Control and achievement of Discipline Process Learning Outcomes. Pearson's product-moment correlations were run to determine the relationships between locus of control scores and the means for each disciplinary process learning outcome item as well as the overall Disciplinary Process Outcome score. Table 6 displays the reported correlations.

Table 6

Reported Correlations Between Disciplinary Process Outcome Scores and Locus of Control

Disciplinary Process Outcome Item	Pearson's Correlation with DPOS
BC1: Made Changes to Behavior	-.02
BC2: Given More Thought	-.02
BC3: Better Control of Self	-.06
BC4: More Inclined to Accept Responsibility	-.05
BC5: More Inclined to Think Things Through	.07
BC6: Addressed a Personal Problem	-.17
AW1: Understand Why Behavior Unacceptable	.01
AW2: Understand Effect on Others	-.24
AW3: Understand Effect on Self	-.14
RT1: Better Understand Process and Rights	-.04
UN1: Identified Alternative Responses	-.02
UN2: Better Understanding of Rules	-.13
UN3: More Inclined to Follow Rules	.08
UN4: No Learning	.17
Disciplinary Process Outcome Score	-.10

N = 40

The reported correlations ranged from -.24 to .17, with most of the items reporting a very weak, negative correlation with Locus of Control scores. None of these correlations were significant at the .05 level. Therefore, the null hypothesis is accepted, and it is concluded that there is no relationship between locus of control and achievement of disciplinary process learning outcomes.

Analysis for Research Question 3

Research question 3 asked if there was a relationship between Readiness to Change and achievement of college disciplinary process learning outcomes. Pearson's product-moment

correlations were run to determine the relationships between readiness to change scores and the means for each disciplinary process learning outcome item as well as the overall Disciplinary Process Outcome score. Table 7 displays the reported correlations.

Table 7

Reported Correlations Between Disciplinary Process Outcomes and Readiness to Change

Disciplinary Process Outcome Item	Pearson's Correlation with Readiness to Change	
BC1: Made Changes to Behavior	.66	**
BC2: Given More Thought	.41	**
BC3: Better Control of Self	.58	**
BC4: More Inclined to Accept Responsibility	.49	**
BC5: More Inclined to Think Things Through	.41	**
BC6: Addressed a Personal Problem	.34	*
AW1: Understand Why Behavior Unacceptable	.48	**
AW2: Understand Effect on Others	.37	*
AW3: Understand Effect on Self	.53	**
RT1: Better Understand Process and Rights	.27	
UN1: Identified Alternative Responses	.44	**
UN2: Better Understanding of Rules	.25	
UN3: More Inclined to Follow Rules	.15	
UN4: No Learning	-.37	*

N = 40

* $p < .05$
** $p < .01$

The reported correlations ranged from -.37 to .66. Of the fourteen outcomes, 11 were statistically significant. The significant correlations were all in the moderate to strong range. Given these findings, the null hypothesis is rejected, and it is concluded that there is a

relationship between readiness to change and the achievement of disciplinary process learning outcomes.

Additionally, Readiness to Change is traditionally scored by assigning a stage (precontemplation, contemplation, action, or maintenance) based on the subscale that the individual most highly endorses. When there is a tie between subscales, the later subscale is selected. Subscale scores were computed for each participant, and a stage was assigned based on the highest endorsed subscale. An analysis of variance was performed to determine if there was a significant difference in the Disciplinary Process Outcome score based on stage assignment. Table 8 reports the descriptive statistics associated with the analysis. Table 9 shows the results of the ANOVA.

Table 8

Descriptive Statistics for Disciplinary Process Outcome Score and Stages of Change

Stage	Disciplinary Process Outcome Score		
	N	Mean	SD
Precontemplation	12	22.9	9.1
Contemplation	4	36.5	4.9
Action	16	35.3	6.3
Maintenance	8	32.3	6.6

Table 8 shows that participants who were placed in the precontemplation stage had the lowest mean Disciplinary Process Outcome score, as well as the greatest score variance. Participants in the contemplation stage had the highest mean score, and the lowest variance.

Table 9

ANOVA Results for Disciplinary Process Outcome Score and Stages of Change

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	1206.4	3	402.1	7.650	.000
Within Groups	1892.4	36	52.567		
Total	3098.8	39			

Table 9 shows that there is a significant difference between groups. A Tukey HSD post-hoc test was performed to explore the differences between the stages. The post-hoc test showed a significant difference between the precontemplation and all other stages, but no significant differences between the other stages.

Analysis for Research Question 4

Research question 4 asked if Locus of Control and Readiness to Change could explain the achievement of disciplinary process learning outcomes by college students participating in a college disciplinary process. Given the fact that Locus of Control did not significantly correlate with any of the Disciplinary Process Outcome items, Locus of Control was excluded from consideration as an independent variable in this analysis. A linear regression was run for each outcome item as well as the overall Disciplinary Process Outcome score, with Readiness to Change scores used as the independent variable. Table 10 reports coefficients and adjusted R^2 values for each regression model.

Table 10

Model Values for Disciplinary Process Outcomes Regressed on Readiness to Change

Disciplinary Process Outcomes	Coefficients for Regression Model		Adjusted R^2
	B	β	
BC1: Made Changes to Behavior	.03	.66	.42**
BC2: Given More Thought	.02	.41	.15**
BC3: Better Control of Self	.03	.58	.32**
BC4: More Inclined to Accept Responsibility	.02	.49	.22**
BC5: More Inclined to Think Things Through	.02	.41	.14**
BC6: Addressed a Personal Problem	.02	.34	.09**
AW1: Understand Why Behavior Unacceptable	.02	.48	.21**
AW2: Understand Effect on Others	.02	.38	.12**
AW3: Understand Effect on Self	.03	.53	.26**
RT1: Better Understand Process and Rights	-	-	n.s.
UN1: Identified Alternative Responses	.02	.44	.17**
UN2: Better Understanding of Rules	-	-	n.s.
UN3: More Inclined to Follow Rules	-	-	n.s.
UN4: No Learning	-.02	-.37	.12**
Disciplinary Process Outcome Score	.27	.58	.32**

N = 40

** $p < .01$

As with correlations found for RQ3, eleven of the 14 disciplinary process learning outcomes had significant regression models, with readiness to change predicting from 12 to 42% of the variance in the scores for each item. The regression model for the overall Disciplinary Process Outcome score was also significant, with the model predicting 32% of the variance in Disciplinary Process Outcome scores for participants. All of the significant models were significant at the .01 level. Therefore, the null hypothesis is, in part, rejected and it is concluded that readiness to change can predict achievement of disciplinary process learning outcomes.

Analysis for Research Question 5

Research question 5 asked if there are differences in the achievement of disciplinary process learning outcomes based on sex, age, the nature of the institutional policy violated, the method of resolution, and how long ago the resolution took place. Analyses of variance were run looking at the differences between Disciplinary Process Outcome scores for each grouping variable. No significant differences were found in Disciplinary Process Outcome scores based on sex, age, violation type, or method of resolution. A significant difference was found in Disciplinary Process Outcome scores based on how long ago the resolution took place. Table 11 reports the descriptive statistics associated with the analysis. Table 12 shows the results of the ANOVA.

Table 11

Descriptive Statistics for Disciplinary Process Outcome Score and Length of Time Since Resolution

Length of Time	Disciplinary Process Outcome Score		
	N	Mean	SD
1-2 months	10	25.6	8.9
3+ months	30	32.9	8.3

Table 11 shows that participants who resolved their disciplinary process 1-2 months prior to completing the questionnaire had a lower mean Disciplinary Process Outcome score versus those who completed the questionnaire 3 months or longer after the completion of their disciplinary process. Disciplinary Process Outcome scores for participants in the 1-2 month group also had a larger standard deviation.

Table 12

ANOVA Results for Disciplinary Process Outcome Score and Length of Time Since Resolution

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	399.675	1	399.675	5.627	.023
Within Groups	2699.100	38	71.029		
Total	3098.775	39			

Summary of Results

A total of 40 questionnaires were completed and formed the basis of analysis. No significant differences were found in the data between the two collection sites, so the data were

analyzed as a unified set. Bivariate correlations, analyses of variance, and linear regression were the inferential statistical procedures run to answer each of the research questions. Based on this data, no significant relationship was found between Locus of Control and Readiness to Change within the context of the college disciplinary process. No significant relationship was found between Locus of Control and achievement of Disciplinary Process Outcomes. Significant relationships were found between Readiness to Change and the achievement of Disciplinary Process Outcomes for 11 of 14 Disciplinary Process Outcome items as well as the overall Disciplinary Process Outcome score. Length of time since the resolution of a participant's disciplinary process was also found to produce a significant difference in Disciplinary Process Outcome scores.

CHAPTER 5

CONCLUSION

This chapter includes a summary of the study, study limitations, a discussion of significant findings and implications for practitioners. The chapter concludes with recommendations for further research.

Summary of the Study

This study examined the relationships between locus of control, readiness to change, and the achievement of learning outcomes as a result of participation in a college disciplinary process. Additionally, the study explored the impact of demographic variables such as sex, age, nature of institutional policy violated, method of resolution, and how long ago the resolution took place on the achievement of learning outcomes. Data were collected from undergraduate students at two private, highly selective, liberal arts-based institutions in the southeastern United States. Participants had been found responsible for a violation of institutional policy as a result of their engagement in their university's disciplinary process during the preceding fall semester.

A web-based questionnaire collected information on participants' locus of control, readiness to change, learning outcome achievement, and demographic characteristics such as sex, age, the nature of the policy violated, the method of resolution, and how long ago the resolution took place. The questionnaire incorporated the *University of Rhode Island Change Assessment* (URICA), the *Internal Control Index* (ICI), and an unpublished disciplinary outcomes instrument from prior dissertation research. Data collection took place in the 2012 spring semester. Two

hundred fifty four students were invited to participate in the study; 40 completed, usable questionnaires were received for a response rate of 15.7 percent.

Participants from Emory University completed 24 of the questionnaires; the remaining 16 were from Vanderbilt University. Most (60%) of the participants were male, between the ages of 18-20 (85%), had met with an administrator to resolve their case (80%), and had an alcohol-related violation (62.5%). Locus of control scores ranged from 77 to 121, with a mean of 96.2, a median of 94, a mode of 86, and a standard deviation of 11.7. Possible locus of control scores for the ICI range from 28 to 140, with higher scores representing a greater tendency towards an internal locus of control. The ICI does not assign a cutoff point at which an individual is considered to have an external versus internal locus of control orientation. Readiness to change scores ranged from -8 to 68, with a mean of 32.4, a median of 35.5, a mode of 44, and a standard deviation of 19. The possible range of Readiness to Change scores for the URICA range from -8 to 84, with higher scores representing a greater readiness to change behavior. Participants were also placed in a change stage based on their responses, with 12 falling into the precontemplative stage, 4 into the contemplative stage, 16 into the action stage, and 8 into the maintenance stage. Finally, Disciplinary Process Outcome scores ranged from 9 to 46, with a mean of 31.08, a median of 33, a mode of 37, and a standard deviation of 8.91. The lowest possible score is an 8, and the highest possible score is a 64.

Bivariate correlations, analyses of variance, and linear regression were performed to explore relationships between Locus of Control, Readiness to Change, and Disciplinary Process Outcomes. Significant relationships were found between Readiness to Change and Disciplinary Process Outcomes, with Readiness to Change scores predicting between 12 to 42% of the variance in the scores for each Disciplinary Process Outcome item. There was also a significant

difference in Disciplinary Process Outcome scores based on stage placement: those in the contemplative, action, and maintenance stages scored significantly higher than those in the precontemplative stage.

Discussion of Significant Findings

The study resulted in several significant findings:

- There is no relationship between Locus of Control and Readiness to Change in the context of the college disciplinary process
- Locus of Control is not significantly correlated with the achievement of disciplinary process learning outcomes
- Readiness to Change is significantly correlated with the achievement of disciplinary process learning outcomes

No Relationship Between Locus of Control and Readiness to Change

Both Locus of Control and Readiness to Change are subcomponents of larger theoretical constructs that explain how people engage in decision-making. Locus of Control has been used to predict or explain outcomes in a variety of contexts, including perception of risk for individuals convicted of a DUI (Cavaiola & Strohmetz, 2010), academic achievement and retention in the college setting (Gifford, Briceño-Perriott, & Mianzo, 2006), and health-related behavior change including alcohol consumption, depression, and weight loss (Furnham & Steele, 1993). Likewise, relationships between Readiness to Change and success in anger management treatment (Williamson, Day, Howells, Bubner, & Jauncey, 2003), participation in treatment of substance abuse (Carey, Purnine, Maisto, & Carey, 1999), and placement on academic probation (Rojas, 2003) have been evaluated.

The college disciplinary process is a nexus where many of the behaviors studied previously intersect: students exist in a collegiate academic environment and are referred into the process often for issues relating to anger management or alcohol use (Dannells, 1997). Given their commonality as means for explaining decision-making, it makes logical sense to infer that a greater orientation towards an internal Locus of Control would correlate with a greater Readiness to Change. However, research to date has not confirmed a relationship between these constructs. This is the first study to specifically examine the potential relationship between these two constructs, and the fact that a relationship was not found is a significant finding. There are a number of possible reasons why no relationship was found. First, it could be that there is a relationship, but it was not present in this sample. Second, it could be that a relationship exists, but not within the specific context of the college disciplinary process. Third, it could be that no relationship exists in general between these two constructs.

Locus of Control and Achievement of Disciplinary Process Learning Outcomes

As noted above, Locus of Control is part of a larger theory, the Social Learning Theory, that explains how individuals make decisions. Also as noted above, Locus of Control is a popular theory in the literature and has received extensive investigation in a variety of contexts, including academic achievement and retention, perceptions of risk, and health-related behavior change. All of these concepts intersect with the student conduct process. It was, therefore, logical to hypothesize that there was a relationship between students' Locus of Control and their achievement of disciplinary process learning outcomes. The proposed theory of action was that a more internal Locus of Control orientation would mean individuals feel that rewards are directly controlled by their own actions, and therefore they would be more likely to learn from their participation in the college disciplinary process since they'd view that learning as useful in

improving their chances of future reward (avoiding a future referral into the disciplinary process in the future). However, that was not found to be true in this sample.

While it could be true that a relationship between Locus of Control and achievement of disciplinary process learning outcomes exists, it may also be that there are other confounding factors that moderate that relationship. One potential factor is student perception of the purpose of the college disciplinary process. Students may participate in the process and have the perception that process is unfair or predetermined. This perception could then mediate the effect of the student's Locus of Control on achievement of disciplinary process learning outcomes. It could also be that students do not perceive the outcomes measured in this study as helpful towards assisting them in achieving the reward of not participating again in the college disciplinary process. Students may have other, completing rewards and be weighing the usefulness of learning from the college disciplinary process against other, more desirable outcomes, such as social participation. Another possibility is that the generalized Locus of Control measured by the Internal Control Index is insufficiently vague. While a generalized Locus of Control can be measured, research has also found that individuals can develop specialized loci of control for specific situations. These specialized loci of control can be different from the individual's general Locus of Control and from one another, and are developed based on past experience and the individual's determination that certain situations may have different opportunities to exert control over the possibility of reward for behavior (Rotter, 1975, Furnham & Steele, 1993). While instruments exist to measure certain specialized loci of control (e.g., academic performance, alcohol-use, and career satisfaction), there exists no instrument to measure a specialized locus of control for the college disciplinary process.

Readiness to Change and Achievement of Disciplinary Process Outcomes

The study results show that Readiness to Change correlated with achievement of Disciplinary Process Learning Outcomes in this sample, with three exceptions: no significant correlation was reported for increased understanding of the students' rights in the disciplinary process and how that process worked, improved understanding of institutional rules, and an increased inclination to follow institutional rules. The first two non-correlating items make sense, since they are not behavior change oriented, and Readiness to Change is designed to gauge motivation to change behavior. The third though, is puzzling. Participants agreed with item that stated they had made changes in their behavior, yet disagreed that they were more likely to follow institutional policies. These two responses seem contradictory to one another. Perhaps students felt their behavior changes would be more inclined to help them avoid being detected in the future, versus not committed a violation of institutional policy.

The disciplinary process learning outcome items that correlated with Readiness to Change tended to come from the Behavior Change and Awareness categories. This makes sense for several reasons. The items in the Behavior Change category closely relate to the wording of the items in the *University of Rhode Island Change Assessment* (URICA)'s Action subscale. Items in the Awareness category do not align closely with any of the URICA subscales, but fit with the Contemplation stage, where individuals are aware of the effects of their behavior and are considering changing their behavior. Additionally, many of the participants' violations were alcohol-related, and the Transtheoretical Model (of which Readiness to Change and the Stages of Change are a part) is designed to explain health change behavior, including changing alcohol use behavior.

Limitations

There are several important limitations that should be taken into consideration when interpreting the results of this study. First, the study suffered from a low response rate of 15.7 percent. This low response rate forced the collapse of some categorical variables in order to permit analysis where a small cell size would otherwise have prohibited any statistical procedure from being performed. Further, this low response rate raises concerns about how generalizable the results of the study are to other college disciplinary processes. More critical than low response rate is how similar respondents are to the population they are meant to represent. Some individuals completed parts of the questionnaire, and on the parts that were completed no significant differences were detected between partial completers and the fully completed questionnaires that formed the basis of the analysis. However, there is no way to determine what the unobserved data from non-responders looked like to know if responders and non-responders are substantially similar. The data are consistent with descriptive statistics provided by the data collection sites on the basis of sex, age, method of resolution, and violation type. That similarity provides confidence that the sample is like the population it was drawn from.

The timeframe of the study limited the data collection period to one month during the 2012 spring semester. This timeframe may have limited participation within certain length of time since resolution categories, one of variables that were observed. Fewer people from the longer time frame categories would have existed when data collection took place, and this may mean these individuals are underrepresented in the sample. Since the number of participants in these later timeframe categories was small, the variable was collapsed from 6 groups to 2 for the purpose of analysis.

The data showed a skew towards higher Locus of Control and lower Readiness to Change scores. The *Internal Control Index* (ICI), the instrument used to measure Locus of Control in this study, has a possible score range of 28 to 140, with a midpoint of 84. The mean Locus of Control score for the sample was 96.18, the median was 94, and the mode was 86. The Readiness to Change score, which was measured by the *University of Rhode Island Change Assessment* (URICA), has a range of possible scores from -12 to 84, with a midpoint of 36. The mean Readiness to Change score for the sample was 32.45, the median was 35.5, and the mode was 44. These skews towards higher Locus of Control scores and lower Readiness to Change scores may mean the respondents were significantly different than non-responders, if these scores can be expected to have a normal distribution in the population.

The Disciplinary Process Outcome score is an untested measure originally developed by Allen in her 1994 dissertation. Allen conducted a factor analysis that grouped the items into several factors, she analyzed each item individually rather than combining them to form subscale scores or an overall score. While the approach of combining the items has a conceptual framework that makes sense, and while the high Cronbach's alpha supports there being consistency between the items, results using the combined Disciplinary Process Outcome score should be interpreted with caution. Additionally, the Disciplinary Process Outcome items from the Behavior Change group closely match the wording of items making up the URICA's Action stage subscale. This makes sense: persons in the action stage have made changes to their behavior (Prochaska & Velicer, 1997). However, it also raises the concern that this set of items from the URICA may not be contributing to the prediction of the Disciplinary Process Outcome items so much as the two are measuring the same underlying construct.

A final limitation comes from the inferential statistical procedures performed. Fifty-two inferential statistical procedures were performed: 31 bivariate correlations, 21 analyses of variance, and 15 linear regressions. While the assumptions for each test were examined and were found to not have been violated, there is an increased risk that with each additional test run, the probability of committing a type I error increases. The threshold for declaring statistical significance was set at the .05 level, which is a commonly accepted threshold for social science research. However, if a Bonferroni adjustment had been used to keep the overall alpha level to .05 for all tests, the individual threshold for each test would have been increased to .001 (Stevens, 2007). Therefore, given the number of tests run and the significance threshold used, it is possible that some type I errors were committed.

Future Research and Potential Practice Implications

Future Research

The results of this study encourage research in several areas. It is one of the few studies that evaluated learning as a result of participation in a college disciplinary process. Given the long history of the college disciplinary process in the United States, this is a large gap in the literature that future research should continue to fill. In their review of 30 years of student conduct related literature, Stimpson and Stimpson (2008) found one article that examined learning as a result of the college disciplinary process. There are efforts underway in the profession to gather and analyze data on learning taking place as a result of the student conduct process, the largest of these being, the National Assessment of Student Conduct Adjudication Processes (NASCAP). While founded by trained researchers who have heavy engagement in the profession, the NASCAP is a commercial assessment tool, not a research study, and its results have, at present, not been published in any research journal. The profession should continue the

work begun Allen's dissertation, continued in Howell's 2005, and further expanded in this study, to grow its knowledge base around learning that occurs as a result of its work. Practitioners and researchers should work together to collect data and keep an eye towards the practical applications of research. This study suggests several possible avenues for future research, as well as potential partnerships between researchers and practitioners that could benefit the profession.

This study examined one specific institutional type: the private, selective, majority undergraduate school. Both institutions in the sample were in the southeastern United States. While this is a limitation of the study, it also presents a venue for future research in attempting to replicate this study with other institution types and in other geographic localities to test the generalizability of the results presented here.

Defining and measuring intended outcomes is critical to the evaluative process utilized both in program assessment and research (Upcraft & Schuh, 2006). This study utilized research from a 1994 dissertation that identified intended outcomes for the college disciplinary process based on literature and on a survey of practitioners. Since 1994 there has been an explosion of work done in the area of defining outcomes for student affairs (Ewell, 2009), but little concrete guidance has been offered to practitioners working with student conduct. Researchers and practitioners should consider this an important area for collaboration. Are there universal intended outcomes that students should be expected to achieve as a result of participation in the college disciplinary process? Allen's 1994 dissertation and the more current National Assessment of Student Adjudication Programs (NASCAP) seem to assert that there are, but future research can and should evaluate agreement within the profession for these outcomes, as well as provide evidence that these outcomes are being met.

This study focused only on the outcomes of the college disciplinary process itself; no effort was made to tease out the impact of the process's constituent parts. For example, most institutions would divide the process into at least two parts: a stage in which information is gathered and a decision made, then the assignment of sanctions. While some research has been done evaluating the impact of sanctions on behavior change, particularly alcohol-related behavior change (see Borsari & Carey, 2000; Baer, Kivlahan, Blume, McKnight, & Marlatt, 2001; Marlatt et al., 2001; Doumas & Anderson, 2009; Hustad, Barnett, Borsari, & Jackson, 2010), there is a dearth of research examining the impact of other sanctions, or investigating the outcomes associated with other parts of the college disciplinary process.

The small sample size issue that limits this study poses a challenge to future research in this area. How can researchers encourage students to honestly share their experience with a process they often do not want to participate in, and may harbor ill will towards? Low response rates make inferential statistical analysis problematic and introduce concerns regarding generalizability of results, so future research must address the issue of adequate sample size in its design. It may be a research question worth of inquiry in itself: how can researchers maximize response rates for questionnaire-based research from students? Given the drive for increased assessment in higher education (Ewell, 2009), it is likely that data collection methods like questionnaires will be used with increasingly frequency. This can lead to "survey fatigue," and problems with response rate, again, making the question of how to maximize response rate a needful one to be addressed.

While Locus of Control was not correlated to Readiness to Change or achievement of disciplinary process learning outcomes, it is an interesting concept. The profession would be ill served to dismiss it from consideration in future research based on the results of one study with a

limited sample size. Future studies should continue to explore the theoretical relevance and practical significance of Locus of Control within the context of the college disciplinary process. There is room not only for additional measurement, but also for the development of better instruments to more narrowly measure the specific locus of control that may develop around the college disciplinary process.

Variations in achievement of disciplinary outcomes based on input variables such as sex, age, method of resolution, violation type, and length of time since the process was concluded are an additional area fruitful for future research. While this study found significant differences in achievement of disciplinary process learning outcomes based only on the length of time since the process was concluded, future research should continue to test for differences based on the other input variables listed, as well as other variables not considered in this study, such as residential living environment, major, or grade point average. Uncovering these relationships, where they exist, may help inform practitioners in their efforts to improve the design of the college disciplinary process.

Potential Practice Implications

This study provides a starting point for practitioners to consider changes to the college disciplinary process that could maximize learning. The results of this study raise some intriguing possibilities that should be studied further, and if replicated, could benefit the profession. For example, one of the major findings in this study was that there is a relationship between Readiness to Change and achievement of Disciplinary Process Outcomes. Readiness to Change could provide a useful framework for practitioners seeking to conceptualize the process through a different theoretical lens. The Transtheoretical Model (TTM) was developed as a model to explain health change behavior (Prochaska & DiClemente, 1982), and has become popular in the

literature for use with a variety of change behaviors and therapeutic interventions. Given that many of the behavior changes sought through the conduct process mirror those the TTM was designed to explain, particularly alcohol use and substance use, use of this model could prove useful for practitioners. In fact, the Stages of Change, Processes of Change, and other components of the TTM are already enjoying some utilization in the college disciplinary process, as part of the theoretical underpinning for disciplinary sanctions such as the Electronic Check Up To Go (Doumas & Anderson, 2009; Hustad, Barnett, Borsari, & Jackson, 2010) and the Brief Alcohol Screening and Screening and Intervention for College Students (Borsari & Carey, 2000; Larimer et al., 2001).

Given the potential utility of the TTM and its components as a lens for understanding how students make behavior change decisions in the conduct process, this could be a fruitful area for partnership by practitioners and researchers. Further studies looking at the benefits of utilizing the TTM and its parts to different aspects of the conduct process (e.g., training of conduct office staff and hearing panels, incorporating appropriate change processes into a conduct meeting with a student based on Readiness to Change, or sanctioning students to interventions based on Readiness to Change) could help shape the contours of a more effective, evidence-based student conduct process.

Summary

This study examined relationships between Locus of Control, Readiness to Change, and achievement of disciplinary process learning outcomes. A quantitative method was used, with a questionnaire serving as the data collection instrument. The study had several limitations: a low response rate, a short timeframe for data collection, skewness of the distributions for Locus of Control and Readiness to Change, and a possibility of type I errors given the high number of

statistical tests. However, analysis did suggest that the data in the sample are representative of the population. Statistical analyses of the data yielded there were a number of significant results, which can be summarized into three key findings: based on this sample, there is no relationship between Locus of Control and Readiness to Change in the context of the college disciplinary process; Locus of Control is not significantly correlated with the achievement of disciplinary process learning outcomes; and Readiness to Change is significantly correlated with the achievement of disciplinary process learning outcomes. From a practical standpoint, these findings suggest practitioners may wish to partner with researchers to continue exploring, through assessment and research, the potential benefits of integrating components of the Transtheoretical Model of behavior change (of which Readiness to Change is a component) into the college disciplinary process in order to maximize achievement of learning outcomes. From a research perspective, this study adds to the small body of literature that has examined student learning in the context of the college disciplinary process. Further, it provides avenues for additional research through the replication of this study's results as well as additional directions for future inquiry.

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APPENDIX A

Copy of Survey Questionnaire

Student Learning and the College Disciplinary Process

Dear Student:

I am a graduate student under the direction of Dr. Diane Cooper in the Department of Counseling and Human Development Services at The University of Georgia. I invite you to participate in a research study entitled "Examining the Relationship Between Learning in the College Disciplinary Process, Locus of Control, and Readiness to Change." The purpose of this study is to examine learning that occurs as a result of participating in a college disciplinary process, and how certain psychological factors influence the degree to which learning takes place.

You were selected to participate in this study because you were involved in a college disciplinary proceeding during Fall 2011. Over 500 students from several university campuses are included in this study; because each student's situation is unique, we hope to hear back from everyone.

Your participation will involve completing a web-based questionnaire and should only take about 20 minutes. Your involvement in the study is voluntary, and you may choose not to participate or to stop at any time without penalty or loss of benefits to which you are otherwise entitled. The Internet is not a completely secure form of communication, and as a result there is a limit to the confidentiality that can be guaranteed due to the technology itself. However once your responses are received, they will not be linked to you in any way. The results of the research study may be published, but your name will not be used. In fact, the published results will be presented in summary form only. Your identity will not be associated with your responses in any published format.

The findings from this project may provide information that will help college disciplinary administrators to design processes that will more effectively encourage learning. There are no known risks or discomforts associated with this research. In return for your participation, you can enter into a drawing to win a $50 American Express gift card. You can enter the drawing even if you do not participate in the study. Ten gift cards will be drawn. To enter the drawing you must provide your email address, which will be used to notify you if you win a gift card.

If you have any questions about this research project, please feel free to call me at (404) 727-6195 or send an e-mail to jzerulik@uga.edu. Questions or concerns about your rights as a research participant should be directed to The Chairperson, University of Georgia Institutional Review Board, 629 Boyd GSRC, Athens, Georgia 30602; telephone (706) 542-3199; email address irb@uga.edu.

By completing the questionnaire you are agreeing to participate in the above described research project. Thank you for your consideration! Please keep this letter for your records.

Sincerely,
Jonathan Zerulik

Please select one of the following options to continue:

- I agree to participate in this study.
- I do not agree to participate in this study.

Student Learning and the College Disciplinary Process

DIRECTIONS: Read each statement. When the statement says "behavior," think about the behavior that led to your participation in your school's disciplinary process. To what extent do you agree with each of the statements below? Select the option that best represents your level of agreement with each statement.

Some of the statements sound very similar to one another. This is intentional. Please respond to each statement.

	Strongly Disagree	Disagree	Undecided	Agree	Strongly Agree
My behavior hasn't caused me any issues, so I don't need to change it.	○	○	○	○	○
I'm finally working on changing my behavior.	○	○	○	○	○
I've been thinking I might want to change my behavior.	○	○	○	○	○
I'm working on changing my behavior, but sometimes it's hard to change.	○	○	○	○	○
It's a waste of time to think about changing my behavior since it isn't a problem.	○	○	○	○	○
I'm hoping to change my behavior.	○	○	○	○	○
I guess we all have faults, but there's nothing that I really need to change.	○	○	○	○	○
I am really working hard to change my behavior.	○	○	○	○	○
My behavior can be a problem, and I really think I should work at changing it.	○	○	○	○	○
I've tried to change my behavior, but I haven't been as successful as I want to be.	○	○	○	○	○
Even though I'm not always successful, I am at least working on changing my behavior.	○	○	○	○	○
I thought once I changed my behavior I'd be done, but sometimes I still struggle to not go back to how I used to act.	○	○	○	○	○
I wish I had more ideas on how to change my behavior.	○	○	○	○	○
I think I could change my behavior with some help.	○	○	○	○	○
I may need a boost to help maintain the changes I've made to my behavior.	○	○	○	○	○
Some people might say my behavior is a problem, but I don't think it is.	○	○	○	○	○
I hope that I can get some help with changing my behavior.	○	○	○	○	○
Anyone can talk about changing; I'm actually doing something about it.	○	○	○	○	○
If I really wanted to change my behavior, I think it would be pretty easy.	○	○	○	○	○
I've made a change to my behavior, and now I'm really hoping I can stick with it.	○	○	○	○	○
It's frustrating, but I feel like I'm slipping back into my old way of acting.	○	○	○	○	○
I'm not perfect, but no one is. Why waste time trying to change my behavior?	○	○	○	○	○
I am actively working on changing my behavior.	○	○	○	○	○

Student Learning and the College Disciplinary Process

After all I have done to try and change, every now and then I still act the way I used to.

Student Learning and the College Disciplinary Process

DIRECTIONS: Read each statement. As a result of participating in your school's disciplinary process, to what extent do you agree with each of the statements below? Select the option that best represents your level of agreement with each statement.

	Strongly Disagree	Disagree	Agree	Strongly Agree
I have a better understanding of the reasoning behind the rules I violated.	○	○	○	○
I am more aware of why and how this behavior is a problem for me.	○	○	○	○
I better understand how my behavior affected others.	○	○	○	○
I better understand why my behavior was unacceptable.	○	○	○	○
I am more inclined to think through my actions before acting.	○	○	○	○
I have learned to better control myself.	○	○	○	○
I do not believe I learned anything.	○	○	○	○
I have given more thought to what is right and wrong.	○	○	○	○
I have identified more options and alternative responses to the behavior which got me in trouble.	○	○	○	○
I am more inclined to accept responsibility for my actions.	○	○	○	○
I have a better understanding of how the disciplinary process works and my rights as an accused student.	○	○	○	○
I am more inclined to abide by university policies.	○	○	○	○
I have addressed a personal problem I may otherwise have ignored.	○	○	○	○
I have made changes in my behavior.	○	○	○	○

Student Learning and the College Disciplinary Process

DIRECTIONS: Please read each statement. For each statement select the response that best represents how often you behave the way the statement describes. Of course, there are always unusual situations in which this might not be the case, but think of what you would do or feel in most normal situations.

	I never act like this				I always act like this
I prefer to learn the facts about something from someone else rather than have to dig them out for myself.					
What other people think has a great influence on my behavior.					
I like to have a say in any decision made by any group I'm in.					
When part of a group, I prefer to let other people make all the decisions.					
I need someone else to praise my work before I am satisfied with what I've done.					
I get discouraged when doing something that takes a long time to achieve results.					
I will accept jobs that require me to supervise others.					
I have a difficult time saying "no" when someone tries to sell me something I don't want.					
I enjoy trying to do difficult tasks more than I enjoy trying to do easy tasks.					
Having someone important tell me I did a good job is more important to me than feeling I've done a good job.					
When something is going to affect me, I learn as much about it as I can.					
When I'm involved in something, I try and find out all I can about what is going on, even when someone else is in charge.					
I prefer situations where I can depend on someone else's ability rather than just my own.					
I let other peoples' demands keep me from doing things I want to do.					
When faced with a problem, I try to forget it.					
I consider the different sides of an issue before making any decisions.					
I stick to my opinions when someone disagrees with me.					
For me, knowing I've done something well is more important than being praised by someone else.					
If I want something I work hard to get it.					
When I have a problem, I follow the advice of friends or relatives.					
I am sure enough of my opinions to try and influence others.					
I do what I feel like doing, not what other people think I					

Student Learning and the College Disciplinary Process

ought to do.

I decide to do things on the spur of the moment.					
I change my opinion when someone I admire disagrees with me.					
When something good happens to me, I feel it is because I've earned it.					
I like jobs where I can make decisions and be responsible for my own work.					
I need frequent encouragement from others for me to keep working at a difficult task.					
I enjoy being in a position of leadership.					

Student Learning and the College Disciplinary Process

Do you identify as female, male, or transgendered?

- Female
- Male
- Transgendered

What is your age in years? ***Please enter a whole number.***

How long ago was your disciplinary experience?

- One month ago
- Two months ago
- Three months ago
- Four months ago
- Five months ago
- More than five months ago

What rule or policy were you accused of violating? ***Check all that apply.***

- Alcohol use
- Causing or threatening harm
- Disruptive behavior
- Drug use
- Other (please specify)
- Residence hall policies
- Theft
- Vandalism

Who was the person or group you met with who decided if you violated your school's policy?

- I met with an administrator.
- I met with an all student panel.
- I met with a panel of faculty, staff, and students.
- Other (please specify)

Please feel free to use the space below for any comments, suggestions, or critiques of your school's disciplinary program. Your responses will not be linked to you.

APPENDIX B

Responses for Disciplinary Process Outcome Items

Disciplinary Process Outcome Item	Response Options			
	Strongly Disagree	Disagree	Agree	Strongly Agree
Behavior Change Items				
I have made changes to my behavior	7 (17.5%)	6 (15.0%)	22 (55.0%)	5 (12.5%)
I have given more thought to what is right and wrong.	7 (17.5%)	13 (32.5%)	15 (37.5%)	5 (12.5%)
I have learned to better control myself.	4 (10.0%)	10 (25.0%)	18 (45.0%)	8 (20.0%)
I am more inclined to accept responsibility for my actions.	5 (12.5%)	7 (17.5%)	23 (57.5%)	5 (12.5%)
I am more inclined to think through my actions before acting.	2 (5.0%)	7 (17.5%)	20 (50.0%)	11 (27.5%)
I have addressed a personal problem I may otherwise have ignored.	9 (22.5%)	15 (37.5%)	14 (35.0%)	2 (5.0%)
Awareness Items				
I better understand why my behavior was unacceptable.	7 (17.5%)	13 (32.5%)	16 (40.0%)	4 (10.0%)
I better understand how my behavior affected others.	8 (20.0%)	13 (32.5%)	13 (32.5%)	6 (15.0%)
I am more aware of why and how this behavior is a problem for me.	9 (22.5%)	12 (30.0%)	16 (40.0%)	3 (7.5%)
Rights Items				
I have a better understanding of how the disciplinary process works and my rights as an accused student	6 (15.0%)	8 (20.0%)	18 (45.0%)	8 (20.0%)

Disciplinary Process Outcome Item	Response Options			
	Strongly Disagree	Disagree	Agree	Strongly Agree
I have identified more options and alternative responses to the behavior which got me in trouble.	5 (12.5%)	8 (20.0%)	23 (57.5%)	4 (10.0%)
I have a better understanding of the reasoning behind the rules I violated.	8 (20.0%)	12 (30.0%)	18 (45.0%)	2 (5.0%)
I am more inclined to abide by university policies	3 (7.5%)	13 (32.5%)	17 (42.5%)	7 (17.5%)
I do not believe I learned anything.	7 (17.5%)	22 (55.0%)	5 (12.5%)	6 (15.0%)

N = 40