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Factors Related to the Perceptions of Academic Honesty Among Campus-Based and Online Undergraduate Students

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This is to certify that the doctoral dissertation by

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has been found to be complete and satisfactory in all respects,
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Abstract

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MS, Walden University, 2004

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Dissertation Submitted in Partial Fulfillment

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Abstract

Academic dishonesty poses a challenge for the online and campus-based learning environment where technology and assessment at a distance may encourage easy and innovative ways of cheating. The purpose of this quantitative study was to assess campus-based and online students' attitudes and perceptions toward academic dishonesty. Data were collected via the Student Academic Honesty Survey to measure student perceptions of academic dishonesty to determine the following: (a) whether biological males and females differed in their perceptions of academic dishonesty, (b) the predictive relationships between perceptions of academic dishonesty and locus of control after controlling for type of school, and (c) online learners and campus-based learners' perceptions of academic dishonesty. Ajzen's theory of planned behavior served as the theoretical framework. The sample consisted of 186 online and 352 campus-based undergraduate students. A two-tailed ANOVA test revealed no statistically significant differences in perceptions of academic dishonesty based on gender. Regression analysis revealed no significant predictive relationship between perceptions of academic dishonesty and academic locus of control after controlling for type of school. A two-tailed ANOVA demonstrated statistically significant differences by type of student, where campus-based students had significantly higher perceptions of academic dishonesty than online students. However, the size of the effect was small. Results may be used to improve educators' understanding of academic dishonesty and student attitudes toward cheating, which may be used to reduce academic dishonesty.

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Chapter 1: Introduction to the Study

Academia has seen a dramatic rise in the number of online and distance education students in the last 2 decades. In 2017, the proportion and number of university and college students taking classes through distance education grew as overall campus-based courses declined (Ginder et al., 2019). The report estimated that in 2018, 33% of students were enrolled in at least one online course, an increase from 29% in 2017. In contrast, Beeson et al. (2019) reported that the overall number of students enrolled in higher education institutions dropped by 1.5% between 2018 and 2019; these data are based on the preliminary number released by the U.S. Department of Education of the 20.1 million students enrolled to higher education in fall 2018. The total number of students enrolled in distance learning at the time of the current study (2023) was 6.7 million, up from 6.4 million in 2018 (Ginder et al., 2019).

Online and distance education was initially conceived for students who could not attend traditional campus courses because of their distance to the institution's campus, conflicting work or family schedules, health, or other impediments to attending an institution of higher education (Beeson et al., 2019). Despite the increasing popularity of online education, many regional and national accreditation agencies, state licensing authorities, the U.S. Department of Education, and employers consider online learning education to be less credible than traditional brick and mortar campus-based education (McPherson & Bacow, 2015; Qayyum et al., 2018). One area of concern that has emerged from increased enrollment in online and distance education is academic integrity.

This chapter provides an overview of academic dishonesty, including the scope and impact of the problem. Next, Ajzen's (1985, 2016) theory of planned behavior is discussed, which provided the framework for the study. I also present the problem and purpose of the study, the research questions and hypotheses, definitions of relevant terms, and the study's assumptions and limitations. The chapter concluded with the scope and significance of the study.

Background

Distance education is not a new phenomenon; the roots can be traced to correspondence education. Distance learning has a longstanding history in the United States, dating back to the early 1900s. In the 20th century, distance learning was on the periphery of corporate training, K–12 institutions, and most universities (Saba, 2011). The use of broadcast media and the internet led to its progressive expansion (Simonson et al., 2019). Since the beginning of the 21st century, distant or remote learning in the United States has experienced considerable expansion (Garten & Meyer, 2009; Saba, 2011). This expansion was preceded by the formation of a postindustrial economy and increased theory development and investigation in the domain. The sustainability of distance learning will rely on how well existing establishments can respond to the postindustrial context by embracing significant conceptual ideas and applying research results, as well as how well institutions can lower the cost of learning while at the same time facilitating access (Saba, 2011).

In recent decades, distance education has evolved due to increased technological advancements. Leal and Albertin (2015) suggested that the adoption and use of advanced

technologies have permitted the establishment of new learning possibilities, a paradigm shift related to distant learning due to its prominence as one of the key drivers of the educational sector's breakthroughs. This change in distance learning has been reflected in several changes in terms of access to technologies such as satellite television, compressed video, CD, and DVD technology, and the advance of the internet (Simonson et al., 2019). Furthermore, distance education in the 21st century challenges the prevailing assumptions and characteristics of traditional campus-based institutions (Barak et al., 2016).

Growth in Distance Education

The growth in online and distance learning courses has been driven by a handful of institutions across the United States, including the University of Central Florida, Colorado State University, American InterContinental University, Liberty University, and Arizona State University (Moody, 2019). "In 2000, undergraduate enrollment in online courses was eight percent. It jumped to 20% in 2008 and increased to 32% in 2012. By the 2015–2016 school year, at least 43% of undergraduate students took at least one online class" (Sasseen, 2021, para. 6). The highest distance learning enrollment has been witnessed in private nonprofit institutions, where students taking online courses increased by 8.2% year over year in the last decade (Ginder et al., 2019).

Over the last decade, colleges and universities across the United States have implemented distance education programs at their institutions. Once viewed as an inferior level of education, distance education has gained support as an acceptable method of teaching and learning (Lang et al., 2019). Mahlangu (2018) argued that universities may

benefit from distance learning because it can offer flexibility to the learning experience through technological implementation and multidisciplinary classroom instruction and learning techniques. Technology and interdisciplinary methods are crucial components of higher education distance learning. The benefit of technology in distance education is that learners can view presentations before class and participate in more collaborative classroom activities (Mahlangu, 2018). Additionally, students may communicate with other learners and depend on the teacher as a facilitator as opposed to a lecturer. Technological incorporation in distant learning also facilitates continuous content delivery because prepared internet lectures may be distributed to the class online.

Academic Dishonesty

Globally, academic misconduct is a significant issue in schools, colleges, and universities (Iberahim et al., 2013). *Academic dishonesty* refers to the student's use of unauthorized help in their assignments to deceive an instructor or anyone assigned to assess students' academic progress in meeting degree and course requirements (Portnoy et al., 2018). L. L. Marshall and Varnon (2017) stated that academic dishonesty's definition and components differ between institutions. Using resources to complete an online test, for instance, may be considered cheating by one instructor offering an online course, whereas another instructor might presume students would use resources when completing online assessments (L. L. Marshall & Varnon, 2017).

Hammerton et al. (2018) asserted that academic dishonesty extends back to the late 19th century and early 20th century when cheating was considered a significant concern at higher institutions in the United States. Vazsonyi et al. (2017) suggested that

although academic dishonesty was not regarded as dishonorable among students in that period, today it appears to be a threat to the integrity of not only traditional campus-based programs but also those of online distance education as it expands within the United States and elsewhere. Rydberg and Carkin (2017) expressed concern that most institutions of higher learning have not adequately addressed the issue of academic honesty within the distance learning environment. Boisvert et al. (2017) also observed that at all levels of education, academic dishonesty has been a problem routinely encountered by teachers.

Academic dishonesty is defined as an act of intentionally using or attempting to use unauthorized materials, information, or study assistance. Eriksson and McGee (2015) asserted that academic dishonesty includes cheating, fabrication of information or citations, facilitation of dishonesty for other students, and plagiarism. Since the 1990s, several cases of academic dishonesty have been reported across the United States. For instance, in 1994, academic dishonesty was reported among the military academies when the United States Naval Academy identified 134 seniors involved in academic dishonesty that made national news (Trex, 2015). Twenty-four midshipmen were expelled, and 62 others were disciplined for honor code violations. In 2002, professors at the University of Maryland set up a sting operation for the final exam using text messaging to distribute a bogus answer key (Henning et al., 2019). Out of the 400 students in the class, 12 turned in an assignment copied from the counterfeit answer key.

Similar incidents of academic dishonesty have been reported, including the 2007 case that involved 34 MBA students enrolled in the Fuqua School of Business at Duke

University (Laduke, 2016). On an open-book test at Fuqua, professors noticed significant similarities in answers on the test. Following an investigation, nine students were expelled, 15 were suspended for a year and received a failing grade, and the remaining nine failed the class. Dickey (2015) noted that several workers at the University of North Carolina in Chapel Hill participated in aiding academic dishonesty through an elaborate scheme that undermined academic integrity. A single university employee operating with the participation and knowledge of other university colleagues developed and promoted a scheme to inflate the GPAs of some learners. The scheme was uncovered in 2011 when student athletes were enrolled in and received As or Bs in paper courses, which required little effort from learners and had no faculty involvement (Wainstein et al., 2014). Over the course of 18 years, more than 3,100 students enrolled in those courses in which no instruction was provided, and students were only required to submit a single paper. The academic dishonesty scheme was devised and managed by assistants who had assigned high grades to students despite the poor quality of work those students had submitted. Wainstein et al. (2014) reported that at least three faculty members were aware of the scheme, which helped facilitate academic dishonesty.

In 2017, over 60 computer science students were summoned to the honor council at one university to face charges of academic dishonesty (Engelmayer & Xie, 2018). This incident attracted criticism from the students and honor council members for the technique used by staff to report academic integrity cases as a single batch case at the end of the semester. The main concern was the late checks on cheating and plagiarism on students' assignments at the end of the fall semester. Such a technique of checking for

academic dishonesty was noted to disadvantage learners, implying that students may be less aware of potential violations of course policies throughout the semester. Laduke (2016) noted that academic misconduct involves many types of dishonesty, including exchanging test information and test answers, having others write one's work, and plagiarism. Husain et al. (2017) conducted a meta-analysis of research on academic dishonesty that involved acts of plagiarism in cyberspace and found that cheating among college students was widespread across the United States.

Traditional classroom students cite numerous reasons for engaging in academic dishonesty, such as performance concerns and external pressures. Many justify their behavior, blaming the teacher for poor teaching or failing to define cheating, citing a classroom emphasis on performance over mastery, or rationalizing that everybody does it (Beeson et al., 2019; L. L. Marshall & Varnon, 2017; Miller et al., 2017). Distance learning students give many of the same reasons for why they cheat. An increasingly competitive academic atmosphere has likely led to more cheating. Online learners cite that being physically separated from the instructor also makes it easier to cheat, especially on tests (Boisvert et al., 2017). Although some academic dishonesty is premeditated, students may commit unintentional acts of cheating due to a lack of understanding about what behaviors their institution's academic integrity policies prohibit or because they lack the necessary skills to avoid committing acts of cheating such as plagiarism (Yu et al., 2016).

Students caught by their instructors engaging in academic cheating frequently plead ignorance, arguing that similar behavior is common among the student body.

Students contend that their actions do not constitute cheating due to an unspoken implication that this behavior is acceptable (Minarick & Bridges, 2015). Yu et al. (2016) examined individual factors that contributed to cheating. Findings showed that certain student attitudes and perceptions were significantly associated with academic dishonesty, including cheating environment; perceptions of faculty toward cheating; and attitudes concerning academic cheating, university experience (e.g., working, extracurricular activities, and the level of academic preparation), and character attributes (e.g., year in college, socioeconomic status, and gender).

Sarita (2015) reported that one potential motivation for cheating includes pressure from teachers and parents. Students are subjected to pressures to attain high academic grades, to graduate, and to enter the competitive job market as soon as possible. Pressure from peers, friends, parents, teachers, and society to become a top student can drive many to academic dishonesty (Miller et al., 2017). This pressure may worsen when parents and teachers compare the student to siblings or classmates (Sarita, 2015). Additionally, Ison (2015) noted that students reported that pressures to obtain high grades from teachers, peers, and parents contributed to academic dishonesty. Other researchers have indicated that students are motivated to cheat due to factors such as lack of money, low academic self-concept, fear of academic failure, lack of effort, insufficient study time, pressure by parents to achieve satisfactory scores, and peer pressure (Kivell et al., 2017; Minarick & Bridges, 2015).

Distance education has been an effective means of increasing the demand for education and training among an increasingly large population of lifelong adult learners

who would not otherwise be able to attend traditional campus-based classes (Soroya et al., 2016; Tolman, 2017). For instructors and institutions involved in the delivery of distance education, an important challenge is understanding why learners cheat and finding ways to stem the rate of academic dishonesty. In the remediation of this problem, students are an invaluable source of information on cheating types and tactics (Quraishi & Aziz, 2017).

Although technological advances have created new opportunities for distance education provided through established colleges and universities, this education delivery system also presents challenges in maintaining academic integrity and program credibility. Knowledge about the extent to which cheating occurs, its type and frequency, and factors that contribute to cheating can help instructors and course developers revise the format of distance learning to inhibit academic dishonesty. Although technological advancements have facilitated distance learning, it is ineffective in rural areas with low or no internet coverage. In other words, learners in rural regions will be less able to cheat as frequently as their counterparts in areas with high internet coverage (Mahlangu, 2018).

Problem Statement

Although distance education has been available for more than a century through correspondence and television-based instruction delivery methods, the use of the internet has increased the number of adults who pursue their degrees through distance education (Meilman & Weatherford, 2015). Some mainstream educators and instructors have viewed internet-based educational programs as questionable in terms of subject content, academic rigor, instructor qualifications, and the ability to control academic dishonesty

(Jian et al., 2018). As a result, developers of internet-based educational programs have struggled to have their programs accepted as equivalent to the education received from traditional campus-based degree-granting higher education institutions (Allen & Seaman, 2015).

Further complicating this effort to gain increased legitimacy is the threat of academic dishonesty among online learners. Tomar (2018) suggested that identifying and dealing with instances of academic dishonesty should be a primary concern of online learning institutions. To contribute to the understanding of this problem, I explored student perceptions regarding academic dishonesty in both online and traditional campus-based institutions. Clark and Soutter (2016) pointed out that cheating has become a prevalent challenge in the United States and across the world. Allen and Seaman (2015) further revealed a growing concern in Australian higher education that the quality of the current university system might be compromised by online cheating. For instance, a 2014 investigation exposed an online business that provided more than 900 assignments to students from almost every university in New South Wales in Australia (Carroll & White, 2022). Because academic dishonesty is a growing challenge that needs to be addressed, student perceptions of academic dishonesty were the central focus of the current study.

Purpose of the Study

The purpose of this quantitative study was to compare the attitudes and perceptions of online and campus-based adult learners toward academic dishonesty in higher education. The independent variables included academic locus of control (ALC; see Pino & Smith, 2003), type of student (online or campus based), gender, and

institution type (online or campus based). Academic dishonesty was the dependent variable (see Rakovski & Levy, 2007). The study contributed to existing research by providing insight into students' perceptions of cheating and academic dishonesty in universities and colleges.

Research Questions and Hypotheses

Three research questions (RQs) with corresponding hypotheses framed this study:

RQ1: How do males and females compare in terms of their perceptions of academic dishonesty?

$H_0$1: There are no statistically significant differences in perceptions of academic dishonesty as measured by the ADQ as a function of gender (male or female).

H_a1: There are statistically significant differences in perceptions of academic dishonesty as measured by the ADQ as a function of gender (male or female). The exclusion of non-binary students from this study is an admitted limitation and is discussed more completely in Chapter 5.

The dependent variable for RQ1 was academic dishonesty, measured using the Academic Dishonesty Questionnaire (ADQ) created by Rakovski and Levy (2007). The independent variable was gender (male or female). Hypothesis 1 was tested using a two-way analysis of variance (ANOVA).

RQ2: What are the predictive relationships between perceptions of academic dishonesty after controlling for type of school (online or campus based)?

$H_0$2: There is no statistically significant relationship between the perceptions of academic dishonesty as indicated by ADQ scores and ALC as indicated by ALC scores after controlling for type of school (online or campus based).

H_a2: There is a statistically significant relationship between perceptions of academic dishonesty as indicated by ADQ scores and ALC as indicated by ALC scores after controlling for type of school (online or campus based).

The dependent variable for RQ2 was academic dishonesty, measured using the ADQ created by Rakovski and Levy (2007). The independent predictor variable was ALC, measured by the ALC Inventory created by Pino and Smith (2003). The independent moderator variable was the type of student (online or campus based). Hypothesis 2 was evaluated using moderated multiple regression.

RQ3: How do online and traditional campus-based learners compare in their perceptions of cheating behavior?

$H_0$3: There are no statistically significant differences in perceptions of academic dishonesty as a function of the type of student (online or campus based).

H_a3: There are statistically significant differences in perceptions of academic dishonesty as a function of the type of student (online or campus based).

The dependent variable for RQ3 was academic dishonesty, measured using the ADQ created by Rakovski and Levy (2007). The independent variable was type of student (online or campus based). Hypothesis 3 was evaluated using a two-way ANOVA.

Theoretical Framework

Human behavior is complex, and researchers have spent years trying to develop ways of predicting and explaining human behavior (Ajzen, 1985, 2016; Ajzen & Dasgupta, 2015). Based on research in cognitive self-regulation, Ajzen (1985) proposed a theoretical model of planned behavior aimed at predicting and explaining the behavior of individuals in defined contexts. The purpose of Ajzen's (1985) research was to provide a means of explaining behavior across different situations and to predict specific behaviors in each situation accordingly.

Ajzen (1985, 2016; Ajzen & Dasgupta, 2015) noted that behavior is a function of relevant behaviors, beliefs, and salient information. According to Ajzen (1985), people adopt behaviors that they believe have desirable consequences. Ajzen (1985) also postulated that people form unfavorable attitudes toward behaviors that they associate with undesirable consequences. Ajzen's (1985) main idea is that the subjective value of the outcome is in direct proportion to the strength of the belief; for instance, the belief reflects a subjective probability that the behavior will produce the outcome in question.

The theory of planned behavior was useful for studying academic dishonesty because most of the research on this phenomenon was empirical and atheoretical (Ajzen, 1985). Over the last several years, researchers have been using Ajzen's (1985) theory as a lens for understanding academic dishonesty (Hendy & Montargot, 2019; Kam et al., 2018). The theory of planned behavior was an appropriate lens for examining student perceptions of academic dishonesty in the current study.

Nature of the Study

I used a quantitative survey research design because quantitative methods are much more structured compared to qualitative methods. This approach helped me facilitate a grounded investigation systematically. Surveys are one of the most commonly used quantitative methods and are optimal for collecting a large amount of data in a relatively short period of time (Wolf et al., 2016). Surveys are a cost-effective way to collect data, and this method enables the researcher to make statistical analyses and comparisons between groups (Queirós et al., 2017). This form of data allowed me to perform the necessary statistical tests to evaluate each hypothesis and the relationship between the independent and dependent variables. Face-to-face interviews would not have been feasible for the amount of data needed in addition to the time and resources available.

A convenience sample of university students was used due to time and resource constraints. Data were collected from traditional on-campus students and online students. On-campus students completed a pencil-and-paper survey; online students completed the same survey in Survey Monkey. The dependent variable was academic dishonesty. The independent variables were ALC, gender, and type of learner (online or campus based). The data analysis consisted of descriptive statistics, two-way ANOVA, and multiple regression analysis using Statistical Package for the Social Sciences (SPSS).

Definitions

Academic dishonesty: This is defined as "deceiving or depriving by trickery, defrauding, misleading or fooling another . . . [and] refers to acts committed by students

that deceive, mislead, or fool the teacher into thinking that the academic work submitted by the student was a student's own work" (Chala, 2021, para. 2).

Academic locus of control (ALC): How students believe the outcome of their behavior is related to their personal characteristics and experience. Internal ALC is a belief that one has control over their academic outcomes. External ALC is the belief that academic outcomes are due to external factors such as one's teacher or school (Sariçam, 2015).

Accountability: The act of being responsible for goals and objectives with the expectation that others may evaluate the individual's acts (Hall et al., 2017).

Cheating: Giving or receiving assistance on academic work without permission or acknowledgment (Witmer & Johansson, 2015).

Deception: Purposefully providing inaccurate information to mislead an instructor, such as a false excuse for not submitting an assignment (Witmer & Johansson, 2015).

Distance learning: Education in which students take academic courses by accessing information and communicating with the instructor asynchronously over a computer network (Singh & Thambusamy, 2016).

Fabrication: The creation of fake data, content, or references in academic assignments (Singh & Thambusamy, 2016).

Generalizability: The degree to which the findings of one study hold meaning for groups other than the study population (J. Brown, 2015).

Institutional image: The concept of an institution held by customers via their interaction and assessment of services they have experienced (Osman & Saputra, 2019).

Internal validity: The degree to which the findings are trustworthy and free from bias based on the design of the study (Rooney et al., 2016).

Plagiarism: The utilization of others' work without proper attribution or acknowledgment (Helgesson & Eriksson, 2015).

Quality control: The process of ensuring the best possible educational environment for students (Levina et al., 2014).

Sabotage: Purposefully preventing others from successfully completing an academic assignment, paper, or exam, such as removing pages from library books or interfering with an experiment on purpose (Witmer & Johansson, 2015).

Validity: The extent to which the test scores or responses measure the attribute(s) they were designed to measure (Witmer & Johansson, 2015).

Assumptions

An assumption made in the present study was that students would be honest in their responses to questions on the three inventories. The most efficient way to establish whether survey respondents give honest answers to questions is to use an external validation measure to substantiate answers. However, validation cannot be accomplished for questions that measure attitudes or beliefs because no external sources are available for comparison (Quraishi & Aziz, 2017). A second assumption was that the data collected would reflect stable beliefs about academic dishonesty. According to Quraishi and Aziz (2017), "a general conclusion that can be drawn from reviewing validation studies

completed over the last four decades is that misreporting is associated with the extent of perceived question threat" (p. 1). Although misreporting can be negligible for nonthreatening questions, it can be higher for questions that can produce both self and outward perceptions of guilt.

Scope and Delimitations

This study focused on perceptions of academic dishonesty rather than instances of academic dishonesty because the behavior is difficult to observe and students may not be honest in reporting instances of academic dishonesty. In addition, the research was bounded by the perceptions of academic dishonesty measured by the Student Academic Honesty Survey (SAHS). Other measures of academic dishonesty may have assessed different attitudes or opinions.

Research indicated that certain characteristics such as gender and ALC may influence behaviors and attitudes related to academic dishonesty. For instance, gender has been found to influence academic dishonesty, where males may have more lenient attitudes than women (Ip et al., 2018) and may engage in dishonest behaviors more than women (Sideridis et al., 2016). Other researchers found ALC to be significant in predicting intention to cheat (Yusliza et al., 2020) and cheating behaviors (Yu et al., 2020). Therefore, gender and academic locus of control were included as independent variables in the current study. In addition, this study addressed whether perceptions of academic dishonesty varied according to types of school because online education was becoming increasingly mainstream at the time this research began. Many educators had concerns about whether the online learning environment presented increased

opportunities for cheating behavior among students in the online learning environment (Clark & Soutter, 2016). Thus, it appeared important to determine whether there were significant differences in student attitudes toward academic dishonesty between the two educational environments.

This study focused on perceptions of academic dishonesty among currently enrolled college and university students 18 years of age and older. Other types of students (e.g., college students less than 18 years of age and high school or younger children) were excluded for practical and theoretical reasons. Different levels of students may have different expectations and pressures regarding academic achievement. Therefore, including other types of students might have complicated the analysis. In addition, parental approval would have been necessary for students under age 18, which would have complicated data collection.

Additional factors that may contribute to academic dishonesty were not included. The attitudes of instructors, the impact of university policies, and aspects of reporting cheating behaviors were beyond the scope of the current study. Ajzen's (1985) theory of planned behavior was used as the theoretical framework for guiding this study. Over the last decade, researchers have increasingly used this theory to understand academic dishonesty. This theoretical framework provided a useful approach to evaluating student attitudes toward academic dishonesty.

Limitations

Although using surveys to collect data offers advantages such as gathering information from large populations in a short period of time, the potential for

generalizing results to other populations, and statistical analysis of data to test hypotheses (Maltese et al., 2017), there are several disadvantages associated with using surveys. Those disadvantages posed a number of limitations to the current study. The first limitation was that academic dishonesty is predicated on how students perceive academic dishonesty (see Sarmiento, 2018). Because different students might perceive academic dishonesty in diverse ways, their self-reported responses to the surveys may vary according to their beliefs, and their beliefs may not be aligned with what university personnel considers academic dishonesty. Consequently, the findings from the study were limited to reflecting student attitudes toward academic dishonesty.

In addition, the items on the SAHS may not have been the most relevant to the issues of academic dishonesty in higher education. Items on the SAHS were developed based on existing research and may not cover what adult learners consider academic dishonesty. Therefore, findings from the study were limited to the aspects of academic dishonesty measured by the SAHS. Other instruments may have measured different aspects of academic dishonesty. Self-selection in the study was also a potential source of bias. The convenience sampling used to recruit participants and their self-selection by volunteering to complete the survey may have introduced a bias into the results. Therefore, it is possible that the results of this study may not be generalizable to all students.

Another limitation of survey research is self-reported data. Cohen et al. (2017) stated that there could be a large difference in the responses gained from self-reporting on surveys compared to data obtained more directly, such as through face-to-face

interactions. The use of self-reporting can introduce bias as respondents may underreport (e.g., to avoid socially undesirable responses) or overreport (e.g., to give socially desirable answers). Self-reporting also requires the researcher to ensure that all respondents understand the question, understand it in the same way, and understand it in the way intended by the researcher (Creswell & Creswell, 2022). The use of self-reported data posed a limitation in that I was not afforded the opportunity to ensure that participants understood the items included in the survey.

Another limitation of surveys is that participants can adopt a response set when answering items on the survey. Response sets in surveys could lead to acquiescence bias in which participants overagree with positive statements or questions (Applequist, 2017). Additionally, surveys are vulnerable to overrater or underrater bias, which occurs when individuals give consistently high or low ratings (Nemec, 2010). Critics of self-report research (Althubaiti, 2016) suggested that there is also a risk of biased or skewed answers to the questions, that responses may not be accurate reflections of actual thoughts or beliefs, or that the responses may capture only thoughts and beliefs at a given time, which may not be truly representative of a participant's perspective.

Social desirability bias is also a possible limitation to the accuracy of data obtained in surveys. Social desirability occurs when respondents provide what they think are socially acceptable responses to survey items rather than what they truly believe (Gittelman et al., 2015). These biased responses tend to skew results, which may result in data that are not a true representation of the beliefs and thoughts of study participants. Although all current study participants were encouraged to be honest in their responses,

there was no means to determine the degree of their honesty, and therefore responses were accepted faithfully (see Meyer et al., 2015).

This sampling method used to recruit participants for the search poses possible limitations to the findings. A convenience sample was used as part of participant recruitment in the current study. Convenience samples are not random. Several researchers have proposed that convenience sampling restricts the degree to which the results may be generalized (Etikan et al., 2016; Heid et al., 2018); according to these authors, researchers should use convenience samples guardedly because the samples may have restricted generalizability. The use of convenience sampling in the current study may limit the generalizability of the results to other college students.

Significance

Online distance education has become an appealing option for those pursuing higher education degrees (Nistor & Comanetchi, 2019). Although many studies have addressed administrator and faculty perceptions of the frequency and pervasiveness of student academic dishonesty regarding internet-based courses, more research is needed to address adult distance education learner attitudes toward academic dishonesty compared to learners in campus-based classrooms. The results of the current study contributed to existing research by providing insight into students' perceptions of academic dishonesty in the online environment compared to the traditional campus environment. This information may assist higher education leaders and instructors in better understanding the motivation behind academic dishonesty, which may contribute to social change.

The better educators understand the phenomenon of academic dishonesty, the easier it may be to prevent the behavior. This is important for society because students who get away with academic dishonesty in the university environment may engage in dishonest behavior in the workforce or other situations. Education is not only about the information transmitted but also the values imbued in students, and an honest society will function much better than a dishonest one. Findings may also prompt educators to devise strategies for minimizing academic dishonesty to promote the academic integrity of online distance education courses, programs, and institutions that offer them.

Summary

The subject of distance learners and their attitudes toward and experiences with academic dishonesty was a timely and critical issue. The significance of formal learning and motivational theories were acknowledged as useful in explaining how and why learners participate in dishonesty activities in the classroom. Many educators refer to learning as a self-directed activity in which the student is responsible for planning, carrying out, and evaluating their learning. But according to studies by the founder of the International Center for Academic Integrity, " more than 60 percent of university students freely admit to cheating in some form" (International Center for Academic Integrity, 2023, para. 2). Tolman (2017) found that academic dishonesty in online classes is no more pervasive than in traditional classrooms.

I sought to assess the attitudes and perceptions of online distance education and campus-based students toward academic dishonesty in higher education. The results of this study were intended to fill the gap in knowledge about academic dishonesty in online

and classroom-based environments. The purpose of this chapter was to introduce the study and its background, the problem statement and purpose, the nature of the study, definitions relevant to the study, assumptions and limitations for the research, the scope of the project, and the significance of the research. Chapter 2 provides a review of the literature related to distance education, online learning, adult learners, and academic dishonesty.

Chapter 2: Literature Review

This chapter presents a literature review that encompasses research relevant to the problem of academic dishonesty in online and offline courses. The theory of planned behavior may help to identify and explain who and why certain students engage in academic dishonesty, and thereby predict violations of academic integrity (Ajzen, 2016). Distance learning has become increasingly popular worldwide with the advent of the internet. However, because of advances in technology, academic dishonesty has become a major concern, particularly in online education where students never meet their teacher or fellow students face-to-face (Bain, 2015).

Students have various motivations for cheating, including internal and external factors and situational and dispositional characteristics (Minarick & Bridges, 2015; Stephens, 2017). Most students have reported never cheating (Eriksson & McGee, 2015), and most students believe such behaviors are unethical (Blau et al., 2021). Common forms of academic dishonesty include cheating, plagiarism (Levine & Pazdernik, 2018), and fabrication (Bos, 2020). There are various ways in which students commit academic dishonesty online, including but not limited to plagiarizing from internet sources (Bain & Bhatnagar, 2015); using paper mills (Hersey & Lancaster, 2015); contract cheating or ghostwriting, where students hire someone to write a paper or complete an assignment; and ghost students, where students hire an individual to take an online course for them (Hollis, 2018). Researching academic dishonesty in online courses is important because cheating is common.

This literature review provides the context for the present study regarding the attitudes and perceptions of adult learners about academic dishonesty in campus-based and distance education courses. The review includes several interrelated topics about academic dishonesty, the adult learner, and online distance learning. First, this chapter presents a discussion of academic dishonesty in higher education related to three areas (student acceptance of the cheating norm, the computer age, and academic dishonesty) followed by an overview of five categories of cheating behaviors. Second, this literature review addresses the relationship of demographic and institutional factors to academic dishonesty. Finally, student attitudes, views, and perceptions regarding academic dishonesty are discussed.

Literature Search Strategy

The search strategy was vital in determining relevant scholarship that addressed academic dishonesty issues in institutions of higher learning. I searched for articles and books in relevant digital databases including Google Scholar, Walden University database, JSTOOR, and other relevant digital websites. Key phrases that related to the research topic were entered into the available search fields. Major search terms used included *academic dishonesty* AND *campus* OR *universities*. Other key phrases included *plagiarism* AND *online* and *offline* courses. These key terms were critical in identifying appropriate research addressing the major focus of this study. The literature search took 4 to 6 weeks to complete.

Theoretical Foundation

According to Ajzen (1985, 2016), perceived behavior control, coupled with behavioral intention, provides the ability to predict behavior directly. First, according to Ajzen (2016), proceeding on the assumption that intention will be a constant, the effort expended to bring a course of behavior to a successful conclusion is likely to increase with perceived behavioral control; hence, one's effort to finish a behavior increases as one perceives increased control over that behavior. Second, perceived behavioral control can often be used as a substitute for a measure of actual control. Whether a measure of perceived behavioral control can substitute for a measure of actual control depends on the accuracy of the perceptions. Third, perceived behavioral control may not be realistic when a person has little information about the behavior, when requirements or available resources have changed, or when new and unfamiliar elements have entered the situation. Under those conditions, a measure of perceived behavioral control may add little to the accuracy of behavioral prediction. However, to the extent that perceived control is realistic, it can be used to predict the probability of a successful behavioral attempt. These ideas provided a useful theoretical background for studies pertaining to cheating in distance education programs.

Ajzen (2016) indicated that the accurate prediction of behavior depends on the instruments used to measure intention, and perceived control is appropriate for the predicted behaviors; Ajzen (2016) further elaborated that perceptions and intentions must be investigated in line with the behavior of interest, and the specified situation needs to be similar to the one where behavior takes place. The accurate prediction of behavior also

depends on the stability of intention and perceived behavior control. If these factors are not stable, then "intervening events may produce changes in intentions or in perceptions of behavioral control, with the effect that the original measures of these variables no longer permit accurate prediction of behavior" (Ajzen, 2016, p. 185). Finally, perceptions of behavioral control must reflect actual control.

Planned behavior has been studied within different contexts that included but were not limited to (a) food consumption choices (Ajzen, 2016), (b) behavior change interventions (Steinmetz et al., 2016), (c) reproductive decision-making (Liefbroer et al., 2015), and (d) activist behavior (de Leeuw et al., 2015). Beck and Ajzen (1991) found that behaviors occur within the context of choice among available alternatives and often when a given behavior does not pose substantial challenges. However, Ajzen (1985) admitted that it is more difficult to predict behavior when total behavioral control is not possible; however, "both predictors, intentions, and perceived behavioral control correlate quite well with behavioral performance . . . [and] the combination of intentions and perceived behavioral control permitted significant prediction of behavior" (Ajzen, 1985, pp. 186–187).

The accurate prediction of behavior depends on the attitude or perception of the individual toward the behavior. This refers to the favorable or unfavorable evaluation the person has about the behavior to be performed (Ajzen, 2016). Accurate prediction is also dependent on the extent that the individual feels social pressure to perform or not perform the behavior (subjective norm). Finally, accurate prediction depends on perceptions about how easy it would be to perform the behavior. These perceptions are formed based on

experience and anticipated barriers to performing the behavior. Ajzen (2016) stated that the more subjective and favorable the norms are concerning behavior, the more likely an individual's perceived behavior control and intention to execute a given behavior under assessment will be.

Beliefs about the resources and opportunities available that would lead to success in performing the behavior also influence perceived behavior control. According to Ajzen (2016), beliefs about the effectiveness of these resources or the extent that opportunities are available are developed based not only on personal experience but also on secondhand information from others. Consequently, an individual's perceived control over behavior is a function of the resources and opportunities they believe they possess and the number of obstacles or impediments they would anticipate. In conclusion, Ajzen (2016) proposed a theory of planned behavior that incorporated three types of beliefs that elped in the prediction of behavior: (a) Do beliefs about the ability to successfully perform the desired behavior exist within a specific situational context? (b) Are beliefs about favorable or unfavorable attitudes held by influential individuals or groups about the behavior? (c) What are the beliefs about the resources that would facilitate and the barriers that would inhibit the ability to perform the desired behavior successfully?

Intention, as it relates to the theory of planned behavior, holds that behavior that would be defined as academically dishonest is simply a consequence of a person's thoughts and intentions established beforehand (Ajzen, 2016). Nevertheless, the degree to which that intention results in behavior is influenced by the degree to which the condition inhibits the behavior. Situations of high constraint tend to inhibit academic dishonesty. In

terms of higher education, situational constraints for a campus-based student would include (a) a testing situation with close proctoring that increases the risk of detection, (b) increased physical distance between students that decreases opportunities to look at the answers of other students, and (c) the use of alternate forms of the test. Consequently, if an intention to engage in cheating were present, it would be less likely in high-constraint conditions.

Literature Review

This literature review provides a context for the present study regarding the attitudes and perceptions of adult learners about academic dishonesty in campus-based and online courses. The review includes several interrelated topics about academic dishonesty, the adult learner, and online distance learning. The chapter first provides an overview of academic dishonesty in higher education related to three areas: (a) student acceptance of cheating, (b) the computer age and academic dishonesty, and (c) an overview of five categories of cheating behaviors.

Academic Dishonesty

Concerns about academic dishonesty have received substantial attention from researchers (Jones, 2011). Researchers have presented a range of perceptions regarding academic dishonesty that provide considerable insight into the vital concepts of the practice. For instance, Akakandelwa et al. (2013) defined *academic misconduct* as any effort to misrepresent, manipulate, or intentionally alter facts, data, documents, or other materials pertinent to a student's attendance in a laboratory exercise or other instructional activity or task. Akakandelwa et al. clarified that academic dishonesty includes cheating

and different types of academic misconduct designed to acquire an undeserved educational advantage. According to Akakandelwa et al., academic misconduct encompasses plagiarism, which is the purposeful presentation of work, phrases, concepts, or ideas taken in whole or in part from an external resource as the learner's original task. Other forms of educational dishonesty encompass faking or inventing data, statistics, or other data pertinent to the learner's involvement in any course or academic activity or interfering with such material as acquired or delivered by the instructor (Akakandelwa et al., 2013). Gillespie (2003) considered academic dishonesty to encompass activities such as cheating, failing to cite a reliable source, and rewriting another author's ideas to make it seem as if they were one's own.

Academic dishonesty is a nationwide challenge and threat to the credibility of colleges and universities and has become evident in online distance education due to new technological advancements. Technology is providing students with easier and novel ways of engaging in academic dishonesty in online as well as campus-based courses. The U.S. Congress has become interested in understanding how online learning takes place, and it has identified ways of verifying that the students sit for the exam (Jones, 2011). Only recently has research been carried out to examine the extent to which students cheat in online distance education courses. Much of the research on academic dishonesty among students in higher education has involved traditional campus-based college-age students. There was a lack of literature about cheating among students taking courses in an online distance education environment.

Distance Learning and Online Education

Since the 1990s, colleges and universities in the United States have experienced rapid growth in distance education. Distance learning can be defined as the process in which students are separated geographically from the educator (Kentnor, 2015). Burns (2011) described distance education as a scheduled educational engagement or instructional approach defined by the quasipermanent separation of teacher and student. Within a distant learning framework, data and messages are sent through electronic and printed media (Kentnor, 2015). Additionally, distance learning is multifaceted and encompasses a substantial degree of diversity; this diversity encompasses the many forms of technology, including radio, television, print media, and computers; a learning structure that includes lectures, seminars, workshops, and laboratories; and contextual factors including subjects covered, different levels of expected engagement, and varying levels of assistance (Burns, 2011).

Forms of electronic technology help accomplish the process of distant education, including computers and television (Kentnor, 2015). Burns (2011) stated that an internet-based distant learning system might incorporate text, audio, video, multimedia, and streaming components. Print-based systems of distant learning often include secondary support such as radio and audio that are as effective for instructor engagement as the dominant model (Burns, 2011). Tsai et al. (2011) posited that online education is becoming available in many parts of the world due to the increased prevalence of technological capabilities. Internet-based instruction has eliminated several barriers to higher education that prevent students from attending college because of the constraints

of time, family, job, and location. Because the typical adult learner works full-time and may be taking courses to obtain a license or certification or to learn new skills that help advance career or meet job requirements, online learning has become common among individuals striving to balance their education with other responsibilities (Carnevale et al., 2015).

There are a few differences between online learners compared to their campus-based counterparts. Online students usually perform in a learning environment in which they are separated from their peers and do not have the benefits of social interactions that their peers in campus-based classrooms enjoy (Lee et al., 2015; Souza et al., 2016; Yang et al., 2013). Nsamba and Makoe (2017) noted that most online learners believe it takes more time to complete an online course than to complete the same course on campus. Afolabi (2017) also described students' need to switch from being passive learners, such as listening to a lecture, to active participants in an online format. Online students experience higher dropout rates than their campus-based peers (Gregori et al., 2018). Students who are most successful in online courses are often personally responsible and independent and know how to plan their work and organize their time (Bretag, 2016; Yang et al., 2013).

There is one fundamental similarity between online and campus-based learners. Each doctoral student has to complete a dissertation or doctoral study. Accordingly, researchers have found that online learners are susceptible to academic dishonesty, similar to campus-based learners. For example, Tolman (2017) and Peled et al. (2019)

revealed that online learners have a lower or equal probability of engaging in academic dishonesty as their campus-based counterparts.

Academic Dishonesty in Higher Education

Cheating in institutions of higher learning is common in most parts of the United States. Williams et al. (2014) reported that 71% of U.S. students admitted to having been involved in academic dishonesty and reported that up to 80% of students surveyed engaged in academic dishonesty. Dishonesty in academic institutions of higher learning is at a critical stage because of technological advancements resulting in easier access to information (Bain, 2015; L. L. Marshall & Varnon, 2017). There are differences in the willingness to admit academic dishonesty among different majors (L. L. Marshall & Varnon, 2017). The prevalence of cheating reported by researchers varies. This, in part, is explained by differences in how academic dishonesty is defined (Mcnair & Haynie, 2017). Regardless of these differences in definition, faculty have noted a significant increase in academic dishonesty in recent years (Paullet et al., 2016; Sayed & Lento, 2015).

A study by Giluk and Postlethwaite (2015) was vital in comparing the prevalence of academic misconduct among high school and college students in the United States. In their latest assessment of more than 20,000 high school learners in the United States, 51% of respondents confessed to cheating on a test, 74% had replicated another student's coursework, and 32% had replicated an online text for a classroom project (Giluk & Postlethwaite, 2015). A similar analysis of dishonesty among university students revealed that around 43% had cheated on tests, 41% had cheated on assignments, 47% had

plagiarized, and 70% had participated in at least one type of academic misconduct (Giluk & Postlethwaite, 2015).

According to Stone et al. (2010), both students who rarely cheat and hardcore cheaters who engage in frequent dishonest behavior participate in malpractice. Hardcore cheaters engaged predominantly in copying homework, allowing others to reproduce their homework, and receiving and giving help on graded assignments. Meanwhile, these same researchers defined occasional cheaters as those who had engaged in dishonest academic behaviors less than five times during their entire academic careers.

Cheating by students is either premeditated or spontaneous. Premeditated or planned forms of cheating include making crib notes to use during a test, copying another student's homework, plagiarizing a source, or obtaining a paper and submitting it as one's own. Spontaneous or panic cheating is often specific to a particular situation, such as when a student who has no plans to cheat panics from not knowing an answer and subsequently opts to look at another student's test for that answer (Winrow et al., 2015). Both Abusafia et al. (2018) and Winrow et al. (2015) found that spontaneous cheating is more common than planned cheating.

Learners are motivated to cheat by both situational and dispositional factors (Stephens, 2017). The most common situational factors students cite for cheating include the pressure to succeed in college, high academic expectations imposed by families, the importance of academic achievement for career advancement, pressing work and social commitments, and heavy course loads (Bretag, 2016; Starovoytova & Namango, 2016). Researchers focusing on dispositional factors associated with academic dishonesty have

investigated cheating and the personality qualities of the students as contributing factors. Cheating has been found to be associated with narcissism and sensation-seeking. Cheaters are more likely to be males, to have low GPAs, and be in the early years of their college education (Minarick & Bridges, 2015). According to a report by The Conversation (2017), about 33.1% of learners said they engaged in dishonest behavior because they were too lazy to participate in all class activities, 29.2% cheated to attain impressive grades, and 12.1% cheated because of the pressure they receive from others.

A study by Peled et al. (2012) has also been useful in understanding student motivation to engage in academic dishonesty. According to the authors, human motivation may be situated along a spectrum of consciousness from internal to external (Peled et al., 2012). The authors used self-determination theory (SDT) as initially described by Deci and Ryan (2012) to understand various motives for academic dishonesty. SDT identified two forms of motivation, intrinsic and extrinsic, which stem from the numerous causes or objectives underpinning a behavior (Deci & Ryan, 2012). Intrinsic motivation refers to engaging in an activity because it is inherently fascinating or gratifying. In contrast, extrinsic motivation relates to engaging in an activity because it results in pleasant but external consequences. In other words, an intrinsically motivated individual is inspired to act due to the enjoyment or stress involved, whereas an extrinsically motivated one is driven by external prods, demands, or incentives (Deci & Ryan, 2012; Peled et al., 2012). The motivational drive may account for variations in the level of creative thinking and learning. The self-directed drive was shown to be

associated with more student engagement, persistence, positive emotions, contentment, and dedication (Peled et al., 2012).

Student Acceptance of Cheating

Rates of self-reported cheating in higher education are high. In one study, researchers state that the majority of participants reported having engaged in various forms of cheating as undergraduate students. Eriksson and McGee (2015) found that two-thirds of their sample justified multiple forms of academic dishonesty. Those who could justify academic dishonesty and saw it as a less serious offense were more likely to cheat. A study that analyzed student attitudes regarding cheating over time saw a decrease in its acceptability between 2005 and 2013 (Molnar & Kletke, 2012). Despite increasing concerns about technology aiding academic dishonesty, a team of researchers that conducted one of the most significant longitudinal studies on academic dishonesty asserted that cheating has decreased since the early 1980s. In 2014, 46.84% of students admitted to cheating, compared to 57.4% in 2004 and 62.2% in 1994. They also found that students with higher levels of academic entitlement, i.e., a tendency to have an expectancy of academic achievement without taking personal responsibility to attain that achievement, were more likely to engage in academic dishonesty (Stiles et al., 2017).

Blau et al. (2021) found that rates of academic dishonesty exceed students' ratings of its acceptability, meaning that an awareness of ethical issues does not stop students from cheating. Interestingly, students found plagiarism to be the most ethically unacceptable behavior in the context of digital courses, but for in-person courses they felt it was the least ethically unacceptable act. The self-concept maintenance model suggests

students desire to preserve their self-image as being honest, even after being caught cheating (Friedman et al., 2016).

Universities have a range of disciplinary actions they can take against violations of academic integrity. These may be mild (remediation) to severe (expulsion). Universities created formal systems as a way to make consequences uniform and identify students who are repeat offenders. However, many professors do not use established systems and instead deal with cheating students directly (Minarick & Bridges, 2015). Students are more likely to cheat when they believe they will not be caught. Term papers, lab, and homework assignments were the most common situations for cheating. A sizable portion of students will also help their classmates cheat because it is difficult to detect (Stiles et al., 2017). Low grades and a close friend in the same course increase the likelihood of cheating (Griebeler, 2017). However, some students justify this behavior by viewing it from a benevolent perspective as helping a friend. Students in more collectivist versus individualistic cultures appear more likely to justify these behaviors (Zhang & Yin, 2019).

Technology and Academic Dishonesty in Online Education

Technology has played a significant part in modern online education (Brimble, 2016). Numerous degree-seeking learners at colleges and universities across the globe now have a new channel for completing their instructional objectives due to the constant evolution of modern technology (Barnes & Paris, 2010). Online courses offered by many higher education institutions are becoming more widespread. Given the concerns posed by instructors and the obstacles experienced by learners when pursuing higher education,

it is likely that certain students would feel compelled to participate in unethical behaviors when attending online courses to obtain the scores they desire (Barnes & Paris, 2010).

Information technology, particularly the internet, has provided an efficient tool for students to engage in academic dishonesty. According to Brimble (2016), a standard practice that learners presently use to complete assignments is copying and pasting directly from internet sources. This technology has made it easy for students to be lazy—and dishonest. Students may find useful published material written by someone else on the internet, use it in a written assignment without citing the source, and make it appear as original writing. Of course, defenses such as Turnitin and even a simple Google search have made this practice less useful if instructors utilize them. In general, the research suggests that, given the rapid expansion of internet-based higher education programs, it is vital for educators and administrators to determine if academic dishonesty in the online distance learning classroom is less than or greater than that which might occur in a traditional campus-based classroom.

In one pertinent study, Yang et al. (2013) reviewed the causes of cheating in campus-based institutions and how these causes are related to student perceptions of cheating prevalence in distance education. The researchers recruited 880 university students ages 18–23 enrolled in different courses at an unnamed university. The participants responded to a set of 10 questions on a Likert five-point scale. The correlation coefficients of product-moment correlation were utilized for performing the assessments between the variables of correlations. Multiple linear regressions, the most widely used and commonly applicable linear regression analysis form, were employed to

determine the independent variable's predictive effects on the dependent variables. When Yang et al. examined the perception and attitudes of students enrolled in online classes as it related to academic dishonesty, the findings showed how students reported the perception that (a) there existed reduced cheating levels recorded in the online classes in comparison to the face-to-face classes, (b) there were higher levels of learning in the online class courses than in the face-to-face classes, and (c) there were lower levels of interactions with the professors and teaching assistants in the online learning courses than in the face-to-face classes.

Regarding premeditated and spontaneous cheating, Burgason et al. (2019) and Stone et al. (2014) determined that online students commit premeditated cheating more often than spontaneous cheating, due in part because tests and assignments are often done in isolation. This isolation provided fewer opportunities for those students to engage in spontaneous cheating. However, each study found the pervasiveness of cheating to be similar for both online and campus-based students. The isolation or lack of proximity to others also resulted in cheating during examinations. Cheating was also facilitated by the pervasive use of quizzes and other online assessments. Regarding testing, online instructors often use online assessments in their online courses because they are easier to create, administer, and grade compared to the forms that are common in traditional educational environments (Munoz & Mackay, 2019). However, the use of assessments online offers students the chance to cheat because they can have another individual take a test without the instructor knowing who is taking the exam (Harmon et al., 2017).

Tools for Academic Dishonesty

Personal computer and cell phone technology have created a means for obtaining, sharing, and transferring documents and other information in a matter of seconds. With recent advances in technology, students have become creative in using a variety of tools to cheat. Electronic devices such as cell phones offer learners the opportunity to engage in cheating by, for example, linking them to the answers on Google or allowing them to take pictures of the question and answer sheet (Bain, 2015; The Conversation, 2017). Many colleges and universities now report cases of academic dishonesty where students cheat primarily with the help of computers and other technological devices.

According to Ison (2015), technological advancement, particularly the growth of the internet, enables students to find and share information and also to plagiarize the work of others. Researchers Levy and Rakovski (2006) addressed (a) the attitudes of the future toward the academic dishonesty severity, (b) the punishments felt by the students to be appropriate, and (c) the students' frequency of engaging in these deceptive acts. Northeastern students at the school's business college completed a survey. Respondents, 1269 in total, were both asked and required to indicate (a) penalties received for cheating, (b) the type of cheating (i.e., passive versus active, exams versus homework), and (c) the students' frequency of engaging in 15 different academic dishonesty behaviors, such as "exam stealing" and "copying and pasting information from the publications on the Internet." The results supported most of the researcher's hypotheses, including how students regard the acts of dishonesty in class to be more significant and more serious problems than acts outside class. Also, students perceive active acts of dishonesty and

exam-based cheating to be more severe than passive acts or course-based dishonesty. In addition, the results supported the hypothesis that students would offer suggestions to the college administration to impart more severe penalties for acts of a serious nature. Lastly, the results supported the hypothesis that more serious acts of dishonesty occur at a lower frequency.

Modern Technologies and Academic Dishonesty

Students now utilize technology to share and spread answers and information via electronic email or to retrieve information from the electronic systems of mail or computer screens of students (Deranek & Parnther, 2015). The internet also makes it possible to access numerous digital sources that students and researchers can use to carry out their projects and studies. Free internet search engines such as Ask.com, Yahoo, and Google make it faster and more convenient for students to copy and paste from online sources (Holbeck et al., 2014). Bain (2015) reported that 12% of learners admitted to indulging in the practices of text copying and pasting from the internet without citation. This was supported by a similar study by Krou et al. (2019).

The advent of digital technologies and the internet has also allowed the rise of "paper mills" and "authorship-for-sale" on the web, a concept that has generated some concern among instructors (Hersey & Lancaster, 2015; Hollis, 2018). In some cases, students will steal an entire paper found online. All students must do is download the paper, write their name on it, and submit the paper. Researchers have noted that, with increasing frequency, students are turning to paper mills as a source of ready-made

academic writing. All one needs to do is search for "free essays" in their search engine to have a plethora of sites from which to obtain their paper (Hersey & Lancaster, 2015).

Contract cheating is another growing form of academic dishonesty, where students hire ghostwriters to create fresh assignments and papers for them, where their cheating efforts will likely go unnoticed. Ghost students may take entire online courses for a fee (Hollis, 2018). The availability of papers over the internet obviously raises the temptation for undergraduates to engage in cheating, and the sheer number of websites offering papers reduces the chances of getting caught.

Five Common Forms of Academic Dishonesty

Cheating

Cheating "is defined as obtaining or attempting to obtain, or aiding another to obtain credit for work, or any improvement in evaluation of performance, by any dishonest or deceptive means" (Cal Poly, 2017). Cheating behaviors include but are not limited to the use of "crib notes," copying the notes or exam answers of others, obtaining non-authorized laboratory write-ups, acquiring unauthorized copies of an exam, and unauthorized use of collaboration on assignments, lab activities, projects, or papers. Levine and Pazdernik (2018) reported that about 40% of learners admit to engaging in cheating during examinations. Balbuena and Lamela (2015) have found that the most prevalent type of cheating occurs on assignments or homework, with 80% of the sample admitting to this practice. Another 67% admitted to cheating on an exam, 57% worked on an individual assignment with a group of other students, and 37% said they plagiarized from published content.

Fabrication

Yang et al. (2013) defined *fabrication* as willingly falsifying or inventing information or citations in academic exercises, including the submission of information that is not factual or real. For example, creating fake results for a laboratory report, fraudulent and falsified use of sources, and the citation of interviews that never took place are also considered fabrication. Fabrication behaviors may include making up sources for the bibliography of a paper or falsifying data for laboratory trials or examination papers (Blau et al., 2021; Sattler et al., 2017). In the traditional classroom, (Blau et al., 2021) found fabrication among the most common forms of academic dishonesty but less frequent in online courses.

Plagiarism

Foltýnek et al. (2019) define *plagiarism* as "the use of ideas, content, or structures without appropriately acknowledging the source to benefit in a setting where originality is expected" (pp. 7–8). Among the different forms of academic dishonesty, plagiarism is among the most prevalent. According to Molnar and Kletke (2012), acts of plagiarism include but are not limited to:

- turning in an academic paper that has been written by a different student
- buying academic papers from commercial sources
- failing to provide proper attributes, quotations, or sources within papers
- issuing representations of another's work or ideas as one's own
- omitting sources from the bibliography

- failure to secure and acquire permission for the tables, figures, or illustrations used in one's work from another's paper
- committing acts of self-plagiarism through the submission of similar papers for the attainment of credit in more than one course without the instructor's permission

Concerning plagiarism, a review of nursing programs found that across studies, between 38% and 60% of undergraduate students engage in plagiarism (Lynch et al., 2017). In Iraq, one study showed that 54.3% of medical and nursing students had plagiarized. Most, 81.1%, committed copy and paste plagiarism. 46.5% did so out of ease or laziness. Astonishingly, only about ⅔ of students were aware of plagiarism, leaving about ⅓ of students in the dark. Of that ⅔, almost 60% committed plagiarism (Ismail, 2018).

Magubane (2018) led a study to determine the extent to which students were aware of plagiarism. This research evaluated students' comprehension of plagiarism in criminology and forensic studies at Howard College in Durban, South Africa and how student awareness of the phenomena impacted their conduct (Magubane, 2018). This research employed qualitative research techniques and was reinforced by descriptive-interpretive frameworks or hermeneutics to understand the social phenomena under investigation (Magubane, 2018). The research employed in-depth semi-structured face-to-face interviews for an in-depth analysis of students' perceptions of plagiarism. The results demonstrated that learners within the program were fully conscious of the presence of plagiarism, and they structured their comprehension from a criminological

viewpoint and regarded plagiarism as a crime (Magubane, 2018). The undergraduates' opinions and recommendations showed that they were clearly aware of plagiarism and sought to prevent it in multiple ways because it was against the university guidelines. Therefore, the study concluded that although plagiarism is a significant practice in universities, many students tend to avoid the issue due to the threat of academic discipline.

Misrepresentation

Academic *misrepresentation* is defined as "falsely representing oneself, efforts, or abilities" (Wa-Mbaleka, 2013). A common example is providing a false excuse to the instructor after missed deadlines and in an attempt to gain more time on an assignment. Instructors have long observed that grandmothers just happen to pass away right before an exam or a paper is due (Tatum & Schwartz, 2017).

A study by Pina (2011) revealed that misrepresentation could result from students' procrastination. To avoid the negative repercussion of procrastinating, between 30% and 68% of students admit to having used false excuses to avoid taking a test when scheduled or to explain why academic tasks had not been completed on time (Pina, 2011). This behavior is facilitated by a majority of faculty who fail to ask for confirmation or proof to verify the student's excuse (Pina, 2011). The need to create a false reason is predominantly based on situational factors; however, although students reap the short-term benefits from the false excuse, they also feel guilty about these behaviors in the long run, indicating a perception that this behavior is wrong. When it comes to "conning" the instructor, however, the majority of students are tolerant of

giving false excuses for missing homework deadlines, missing a test, or marking more than one response on test questions hoping the educator will assume the correct answer was the intended response (Desalegn & Berhan, 2014).

Facilitation

In the context of academic dishonesty, *facilitation* can be defined as "intentional assistance in the academic dishonesty behavior of others" (Friedman et al., 2016). Facilitation includes but is not limited to activities such as allowing another student to copy test answers, providing unauthorized assistance to another student in completing assignments, laboratory activities, term and research papers, or providing completed assignments that students submit as their work (ENQA Report, 2014). In their study on academic misconduct cases sent to the university disciplinary committee, 4.5% of cases involved facilitation (compared to 78% for cheating and 17.5% for plagiarism). Facilitation occurred more frequently in digital contexts than in the classroom. Interestingly, the punishment was more severe for facilitation cases than plagiarism ("marginally significant" at a .07 level) (Friedman et al., 2016, p. 200).

Facilitation appears to be less common than other forms of academic dishonesty. Students commit cheating, plagiarism, and fabrication more often than they help one another engage in academic dishonesty. Many also believe facilitation is a more severe academic offense than other forms of academic dishonesty, particularly in a classroom versus digital setting (Blau et al., 2021). Importantly, there are costs to facilitation. Blau et al. (2021) described a good student who engaged in facilitation, whose assistance helped others improve their class rank, and skewed teachers' perceptions of the most

successful students. In the context of academic competition, this behavior cost her own rank and teachers' positive opinions of her, as those she helped began gaining positive attention.

Demographic Factors Related to Academic Dishonesty

Scholars have conducted numerous studies to investigate the connection between demographic variables such as age, gender, student status, grade point average, and the presence of institutional honor codes, as well as individual perceptions, attitudes, and beliefs regarding cheating (Beasley, 2016; Soroya et al., 2016). Although the results are mixed, a few key results have linked specific demographic factors to academic dishonesty.

Age

First, researchers who have studied the connection between age and academic dishonesty suggest that younger learners engage in examination irregularities more often than older students (Macale et al., 2017; Soroya et al., 2016). Others have found that non-traditional students engage in academic dishonesty more than traditional students (Hodges, 2017). Somewhat related to age (among college students) is class standing. Seniors appear to cheat less often than first-year students. However, there are multiple possible explanations for this difference. Younger students take different classes than older students, which may influence their behavior. Older students may be savvier at cheating, or those who have cheated frequently in the past may have been caught and expelled from school before reaching their senior year. Younger students may also be

unaware of what constitutes academic dishonesty and the consequences of committing infractions (Beasley, 2016).

Gender

Research findings on the perceptions of cheating and actual cheating among men and women are mixed (Korn & Davidovitch, 2016). Some researchers have contended that there used to be a gender difference but it has disappeared in recent years. Beasley (2016) found no significant gender differences in cases reported to the administration, though it remains possible there is a bias in reporting. Others found no relationship as well (Friedman et al., 2016; Ip et al., 2018; Soroya et al., 2016). Yet some studies have found that males cheat more often than females (Korn & Davidovitch, 2016). Males may also have more permissive attitudes toward academic dishonesty (Ip et al., 2018). In addition, women may face less harsh punishments if caught cheating (Witmer & Johansson, 2018).

Student Status

Researchers have examined academic dishonesty as it relates to graduate and undergraduate program status. Cheating occurs among students at all university levels (Hendy & Montargot, 2019). Some studies have found no difference between undergraduate and graduate cheating behaviors (Brown et al., 2019; Soroya et al., 2016). However, among international students, undergraduates were caught cheating and reported seven to ten times more often than graduate students (Fass-Holmes, 2017). Master's level nursing students were less tolerant of cheating than bachelor's degree-seeking students, and undergraduate students appeared to cheat more often than graduate

students (Bultas et al., 2017). Nazir and Aslam (2010) stated that undergraduates still focus on getting high grades, whether or not they acquire the content, but graduate students are more focused on gaining an in-depth knowledge of their area of study, with earning high course grades being a secondary focus.

Others studies have distinguished between class levels amongst undergraduates. Among nursing students, upper division (junior and senior) students are less tolerant of unethical behavior (Bultas et al., 2017). Hodges (2017) found no significant differences in cheating attitude or behavior across first-year, second-year, junior, and senior students.

GPA

Several researchers have investigated the relationship between student GPAs and the prevalence of academic dishonesty. Cuadrado et al. (2019) found a negative relationship between GPA and academic dishonesty. However, even students with GPAs above 3.0 engage in cheating. Hodges (2017) found students with a higher GPA (3.1–4.0) were more likely to engage in academic misconduct, but the effect was small. Students with a lower GPA may be found guilty more often than students with higher GPAs (Beasley, 2016). In contrast, Soroya et al. (2016) found students with a GPA of 3.5–4.0 and 3.0–3.49 are significantly more likely to engage in academic dishonesty than students with a GPA of 2.5–2.99 and 2.0–2.49, though the size of the difference was somewhat small.

Institutional Honor Codes

Honor codes serve to define what the institution views as cheating and the potential punishments for academic dishonesty. However, evidence is mixed on their effectiveness.

Tatum and Schwartz (2017) found students at schools with honor codes perceived the consequences of academic dishonesty to be more severe and understood the process better. In general, honor codes reduce cheating behaviors, though depending on how they are structured, some work better than others (Tatum & Schwartz, 2017). Carefully designed codes of honor at the universities and colleges that speak directly to the ethical and moral standards of the students have been successful in reducing acts of cheating (Brimble, 2016). However, rather than emphasizing punishment and fear of consequences in students, emphasizing integrity, trust, and educational goals through honor codes may be more effective (Tatum & Schwartz, 2017).

Individual Perceptions, Attitudes, and Beliefs

Many students of course attempt to justify their dishonest behaviors (Lee et al., 2015). Students perceive the use of a condensed version of assigned work, such as CliffsNotes, reading an English translation of a foreign language assignment, listing in the bibliography sources that have not been used in the paper, and fudging or using online dictionaries as normal (Anderman & Won, 2019; Patrzek et al., 2015). Some students believe cheating is more justifiable in math and science courses (Anderman & Won, 2019). Others get used to cheating and view their behavior as normal and acceptable. This stabilizes their behavior, making it more likely they will cheat again in the future (Macale et al., 2017). However, students who believe cheating is never justified are less likely to engage in such practices (Quintos, 2017).

Past research has shown that exposure to different types of learning environments was related to student beliefs regarding academic dishonesty. Carmichael and Krueger

(2014) found that student beliefs regarding cheating in online academic courses compared to campus-based courses were related to whether they had taken an online course in the past. The researchers reported that 67% of the total students who had not taken online courses believed that it was easier to engage in cheating in the online learning environment compared to the 50% who had taken at least one online course.

Technologies Used to Prevent Academic Dishonesty

Webcam

Although technology has been thought to facilitate academic dishonesty, it can nevertheless be used as a preventative tool. For instance, a study by Barnes and Paris (2010) was valuable in identifying different tools instructors use to prevent academic cheating, one of which is webcams. A webcam is a camera connected to a learner's computer that transmits video footage instantaneously, allowing tutors to supervise exams and connect with learners (Barnes & Paris, 2010). Numerous online colleges in the United States and overseas have been employing webcams with positive outcomes for some time (Barnes & Paris, 2010; Hylton et al., 2016). With this technology, privacy precautions are applied visibly using photo snapshots taken by the teacher during the pre-registration procedures. Despite the fact that some professors at various schools utilize webcams to conduct their online courses, cost and confidentiality concerns were cited by more than half of the survey respondents as barriers to implementation.

Hylton et al. (2016) led similar research to assess the effectiveness of webcam technology in reducing academic misconduct among learners at higher institutions. The research's major objective was to examine the deterrent impact of webcam-based

proctoring on academic dishonesty during online tests (Hylton et al., 2016). This research used an exploratory approach to an experimental cohort with a placebo group. Both cohorts completed the same program, employed the same e-learning platform, were taught by the same teacher, and completed the same online examinations. According to the study, a web-based proctor observed one cohort; the second was not under any surveillance (Hylton et al., 2016). The researchers stated that there was no statistically substantial variation in the ratings of the two categories; however, the non-proctored group scored somewhat higher on academic misconduct. There was a statistically substantial variation in the time taken for completing online examinations, with the proctored group requiring much less time. A post-experiment poll revealed that individuals who were not under surveillance estimated increased chances of engaging in misbehavior compared to those who an online proctor supervised. Therefore, webcam technology has been shown to be a vital tool in preventing cases of academic malpractice in learning institutions.

Fingerprint Scanners or Biometrics

Besides webcams, fingerprint scanners or biometrics have prevented academic misconduct in some higher learning institutions (Barnes & Paris, 2010; Gao, 2012). Biometrics is the authentication of a person depending on physical and cognitive traits (Gao, 2012). Learners might attempt to have other students take their courses or tests on their behalf to succeed or achieve a better score (Hoffman, 2019). Biometric authentication requires learners to authenticate their identity upon sign-in and at random times by scanning their fingerprints on the scanners (Qinghai, 2012). Some educational

institutions have implemented one of at least three different biometric solutions for distance learning: Securexam, a remote proctor created by Software Secure, Webassessor manufactured by Kryterion. and ProctorU, developed by Axicom (Qinghai, 2012).

Securexam Remote Proctor is a compact device with a 360-degree viewing angle that contains a fingerprint reader, microphone, and recorder (Tomasi et al., 2009). To begin an assessment, learners present their fingerprints for authentication (Frank, 2010). During the test, Qinghai (2012) states that the microphone and webcam watch for anything odd, like an unfamiliar voice or movements on the video. Gao (2012) also cites that Kryterion's Webassessor integrates facial pictures recorded by cameras and keystroke biometrics captured by software to verify the student taking the test and notifies the examiners if there is a modification when someone else has assumed the assessment.

According to Qinghai (2012), ProctorU obtains certain individual information from several databases, notably prosecution documents and property records. The technology employs the data to ask learners a few questions like residence and employment, among others. Learners have to respond to the inquiries appropriately before they may begin the tests. To utilize ProctorU, every learner must book a time slot for a test and have a camera available to observe the assessment setting (Qinghai, 2012). With a webcam, a trained proctor could virtually help a learner in the examination process, thus making fingerprint biometric technologies vital in preventing academic misconduct, because they capture the live feeds of students when undertaking their assessments.

Retinal Scanners

Retinal scanners have also proved vital in helping learning institutions curb academic dishonesty (Qinghai, 2012). Retinal scanners are technological devices that utilize low-intensity light rays for scanning a person's iris (Zibran, 2009). Several schools primarily use retinal scanners to identify learners as they log into a distant or online class session (Andrejevic & Selwyn, 2020). Retinal scanners have been vital in helping instructors be sure that learners engaging in the online class sessions are who they are supposed to be (Qinghai, 2012). This technological tool is effective in preventing academic dishonesty because it is impossible to replicate a human eye. However, although using retinal scanners to prevent misconduct tends to be effective, most schools cannot implement the technology due to its high cost.

Summary and Conclusion

Chapter 2 reviews literature exploring the problem of academic dishonesty, which poses both a challenge and a threat to higher education. It provides a context for the present study regarding the attitudes and perceptions among learners regarding academic dishonesty in online distance learning courses. The review includes several interrelated topics about academic dishonesty, the adult learner, and online distance education, followed by the relationship analysis between the demographic and institutional factors to academic dishonesty. Chapter 3 will discuss the methodologies employed in the study consisting of the survey instrument designed to measure adult learners' perceptions of academic dishonesty.

Chapter 3: Research Method

The purpose of this study was to investigate adult learners' attitudes and perceptions regarding academic dishonesty. I assessed whether there are differences between male and female learners in terms of their perceptions of academic dishonesty. I also examined the predictive relationship between perceptions of academic dishonesty after controlling for the type of school. Further, I examined how online learners and campus-based learners compare in terms of their perceptions of academic cheating behavior. The focus of this chapter is to present the methods and strategies used to collect data from participants.

I begin by discussing the quantitative research approach used in this study, in which data were collected using survey questionnaires. The chapter also addresses the population, sample, and sampling techniques used to recruit participants. Then, the recruitment procedures are discussed before outlining the instrumentation and operationalization of these instruments in data collection. A pilot study that was used is explained, and data validity and reliability issues are discussed. Further, the data analysis process is presented before detailing the potential research limitations of this study and the possible ethical issues emerging regarding the use of human subjects and how they were addressed. The chapter concludes with a summary of the main observations made from the study.

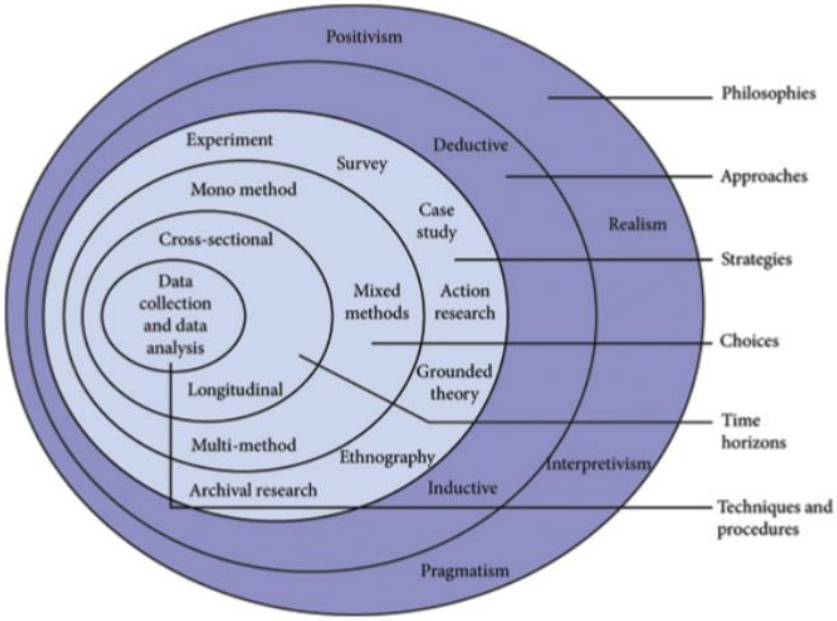
Research Model

The "research onion" is an important concept that researchers use to evaluate instances of academic dishonesty in learning institutions that include online or distant

learning. Saunders et al. (2019) proposed the research onion model, as shown in Figure 1. The research onion is made up of six layers including research philosophies, approaches, strategies, choices, time horizons, and techniques (Melnikovas, 2018).

Figure 1

Research Onion



Layer 1: Research Philosophies

The philosophy of research is the outer part of Saunders's research onion (Alturki, 2021). Research philosophy relates to a set of views about the structure of an investigation. Research philosophy is commonly examined in relation to epistemology and ontology (Saunders et al., 2019). The selection of research philosophy may influence the collection and analysis of data. Positivist and interpretivist research perspectives are the two most prevalent research approaches. These perspectives describe two distinct

ways in which people attempt to comprehend the world around them. According to positivism, the reality is independent of humans, and researchers may examine reality objectively (Saunders et al., 2019). The interpretive approach holds that reality is highly subjective because human views influence it. I used the positivist approach to examine the concept of academic misconduct in distant learning. Positivism is used to test scientific hypotheses and identify statistical or logical conclusions derived from statistical analysis.

Layer 2: Research Approaches

The second layer of the research onion shows the methodologies that a researcher may use when conducting any form of study. According to Saunders et al. (2019), a research strategy might be inductive or deductive. Inductive techniques include creating hypotheses through research, as opposed to beginning a project with a concept as a baseline. In contrast, deductive techniques begin with a hypothesis and are used to test it through investigation. Research approaches depend on study objectives, personal viewpoints, constraints, and options.

I used a deductive approach because my aim was to conduct a quantitative study about academic misconduct in distance learning in higher learning institutions. The rationale for using a deductive strategy in this instance was because quantitative research often starts with a theory-based framework followed by testing of hypotheses.

Layer 3: Research Strategies

The third layer of the research onion identifies how a researcher intends to collect data for a study. Case studies, grounded theory studies, experiments, action research,

surveys, and archival research are examples of data collection approaches. The study strategies of Saunders et al. (2019) help in making the researcher's work easy. The experimental research strategy was the major research strategy used in the current study. The experimental strategy includes altering one parameter (the independent variable) to examine changes in another (the dependent variable), which makes the experimental strategy appropriate for investigating the link between variables (Hafer & Begue, 2005). Experimental research is used to verify, disprove, or reinforce a research theory. The purpose of experimental research is to test known hypotheses and not to generate new concepts.

Layer 4: Research Choices

The fourth stage of the research onion distinguishes between quantitative and qualitative approaches. Research choices include a single method, mixed methods, and multimethods. In a single method, a researcher uses only one approach, either qualitative or quantitative (Saunders et al., 2019). In a mixed-methods approach, researchers use both qualitative and quantitative methods. The purpose of this approach is to combine qualitative and quantitative data to overcome the shortcomings of both methodologies. Under a multimethods approach, the researcher employs both data collection methods. This implies that a researcher can access both quantitative and qualitative data collection methods. However, only one approach may be used for the overall data evaluation.

The current study was quantitative, inferential, and cross-sectional. A quantitative approach was chosen because its data collection methods and data are more structured compared to qualitative methods. Quantitative methods include measurable data with

collection methods that are quite structured. This approach enabled easier comparison of online and campus-based student groups by using the same measures for both groups. This helped facilitate a systematic, theoretically grounded investigation. Objectivity is considered one of the significant benefits of the quantitative approach (Brooks & Hestnes, 2010). The quantitative approach relies on concrete facts and fewer variables. Objectivity can help researchers eliminate existing biases from the study and make results more accurate.

Layer 5: Time Horizons

The fifth level of the research onion is the time horizon, which is concerned with the time during which the research is conducted. Time horizons can be cross-sectional or longitudinal (Saunders et al., 2019). Cross-sectional studies provides a glimpse of a phenomenon at a certain period. Cross-sectional studies also restrict data collection to a shorter time frame. Longitudinal studies are used to examine behavior through the use of concentrated samples collected over a period of time.

Layer 6: Research Techniques and Procedures

Research techniques are situated in the last layer of the research onion. At this stage, researchers concentrate on approaches to collect data and conduct data analysis (Saunders et al., 2019). Survey methodology was used in the current study because it was helpful in collecting a large amount of data in a relatively short period of time (see Wolf et al., 2016). Surveys are the preferred approach to collecting data due to their significant benefits. For instance, surveys are a cost-effective way to collect data, and this method enables the researcher to make statistical analyses and comparisons between groups

(Queirós et al., 2017). With inferential statistics, the researcher can use a sample to make inferences about a more extensive group based on probability (MacRae, 2019). This form of research includes the necessary statistical tests to evaluate each hypothesis and the relationship between the study's independent and dependent variables. A large sample size is needed to perform certain statistical tests, as opposed to the more limited sample size of qualitative research. Given the data needed in the current study, online and paper surveys in a university classroom were practical tools to collect the data.

In contrast, face-to-face interviews would not have been feasible for a large data set. Although experimental methods may yield interesting findings, it would be challenging to study cheating behaviors in a laboratory setting. Inferential, cross-sectional methods were more practical for the research questions in the current study. Developing a survey instrument involves (a) deciding what information to collect, (b) creating an instrument that is reliable and valid, (c) planning how the instrument will be administered and scored, and (d) deciding what statistical methodology will be used for analyzing and reporting the results (Rubin & Babbie, 2021). Advantages of using the survey method compared to other data collection methods include (a) flexibility in designing questions specific to the study topic, (b) the economy of speed, (c) efficiency, (d) decreased researcher bias, (e) increased perception of anonymity and the likelihood of candid responses to sensitive questions, and (f) the ability to gather information from a large study population or sample (Rubin & Babbie, 2021).

Perceptions of academic dishonesty were the dependent variables in the current study. The independent variables were ALC, gender, type of learner (distance versus on

campus), and type of institution (online versus on campus). These were measured using validated instruments combined into the researcher-created SAHS survey. Data were collected from on-campus and online students. On-campus students completed a pencil-and-paper survey, and online students completed the same survey online via Survey Monkey. The data analysis consisted of descriptive statistics, two-way ANOVA, and multiple regression analysis using SPSS.

Population

The population of interest in this study was students enrolled in a college or university during the 2013–2014 school years, the population available at the time this research was begun. The participants for the study were recruited from Walden University and Florida Atlantic University and through Survey Monkey. Walden University and Florida Atlantic University offer virtual academic learning platforms for participants and for the study. Survey Monkey Audience is a survey service launched in late 2011 to assist researchers in reaching a broad group of people or a targeted population. According to its website, Survey Monkey "provides survey takers . . . for over 1,500 projects every month. And helps its customers collect over 100,000 responses every week" (Survey Monkey, 2023, paras. 2–3).

Basic demographic information was collected from all participants to profile the sample. Some of the information collected was used to filter out those considered not part of the study population. Students enrolled in both an online program and a traditional campus-based program were deselected because the intent of the study was to examine differences between the two core groups (see Appendix A, Question 7). Further, students

indicating a half time or less status were filtered out along with students younger than 18 years and older than 59 years. Finally, students enrolled in an online academic program that requires a small portion of the coursework to be taken via academic residency, such as non-electronic or traditional ground-based course delivery courses held at varying locations other than the institution's campus, were classified as online distance education learners.

Sample and Sampling Procedures

The sampling frame was currently enrolled university students between the ages of 18 and 59 years. The sample was a convenience sample. Andrade (2020) asserted that results from a convenience sample can be generalized to the population that sample was drawn from if subjects were selected at random from that population. Given the sampling in the current study, results can be generalized to students between the ages of 18 and 59 who are enrolled at online universities.

To calculate the sample size, I considered several factors including (a) the intended power of the study, (b) the effect size of the research phenomenon, and (c) the level of significance that would be employed to reject the null hypotheses (alpha). The intended power of the study was equal to the probability of rejecting the null hypothesis. Conventionally speaking, .80 is an adequate power level to reject a false null hypothesis (Fisher & Schneider, 2020). Next, the size of the expected effect was an estimate of the strength of the relationship between predictor and criterion study variables. Finally, the level of significance for alpha was set at .05. This meant that the null hypothesis would

be retained if the probability coefficient indicated that the percentage of chance occurrence was greater than 5% (see Renzulli, 2015).

A formal power analysis was conducted to determine the number of participants needed to conduct the study to validate the sample size. To assess a priori sample size, power was set at 0.80, and the expected effect size was set at 0.25. For RQ1, the sample size necessary to determine a statistical difference was 196 participants, where alpha = 0.05. This meant there was an 80% probability that 196 participants would be sufficient to find a statistically significant relationship (effect size of 0.25) between variables where alpha = 0.05. For RQ2, the sample size required was 128 participants where effect size = 0.15, power = 0.80, and alpha = .05 (Fisher & Schneider, 2020). Thus, the minimum sample size selected for this study was the greater of the two numbers, which was 196 participants.

Procedures for Recruitment, Participation, and Data Collection

Palinkas et al. (2015) noted that there are several types of purposeful sampling: typical, homogeneous, extreme or deviant, unique, intensity, critical case, theory-based, confirming and disconfirming case, stratified purposeful, purposeful random, snowball, opportunistic or emergent, and convenience. This study used convenience sampling, a type of non-probability sampling. Specifically, Etikan et al. (2016) suggest convenience sampling is cost-effective, time-effective, and helps the researcher locate and recruit suitable participants from a targeted population of interest.

A major limitation of convenience sampling is that it sacrifices generalization and thus may not adequately represent the target population. Those included in the study may

only represent part of the population under study but not the entire population. Despite its deficiencies, convenience sampling is an excellent method of obtaining a sample population when time and conditions prohibit random sampling (Etikan et al., 2016). When random sampling is not possible, convenience sampling allows a researcher to approximate the truth.

Recruitment Procedures

A non-probability purposive sampling method, as described by Rubin and Babbie (2021), was used to recruit students to participate in the study. Non-probability sampling is a survey strategy in which samples are selected depending on the researcher's subjective assessment instead of random assortment (Vehovar et al., 2016). Non-probability sampling is an approach in which, compared to probability sampling, not all sample individuals have an equal opportunity of engaging in the research. Each individual in the population has a predetermined probability of selection. This sampling technique strongly relies on the knowledge of the researchers. Researchers utilize this technique when random probability sampling is impractical because of price or time constraints. Undergraduate and graduate students taking campus-based and online courses from Walden University and Florida Atlantic University were recruited to participate in the study. The recruitment strategy for campus and online settings differed. Details of the recruitment procedure are listed below.

Campus-Based Setting Steps

1. I contacted campus-based instructors to inquire about the possibility of having them ask their students to participate in the research study that requires completing the SAHS.
2. As approved by Walden University's IRB (#12-02-13-0013460), campus-based instructors handed students the information package containing the introduction letter and the informed consent agreement. Students wishing to participate signed the agreement and returned it to the instructor.
3. Students completed an electronic version of the SAHS before class and submitted it to the instructor. Only students completing the survey that day were included in the data. Students were not allowed to take the surveys home to complete later.
4. Study results were made available on a public webpage that the researcher put up on a HostGator Web server. The URL for this Web site was included in the introduction letter to all participants, so they could look up the study results after it was completed if they so desired.

Online-Based Setting Steps

1. I contacted the Walden University participant pool at https://academicguides.waldenu.edu/research-center/research-ethics/participant-pool.
2. I requested permission to post the SAHS on the Walden University participant pool webpage. Permission was granted.

3. The Informed Consent Agreement was placed at the beginning of the survey, and students had to agree in order to proceed with the rest of the survey. Students who did not agree to the Informed Consent were not able to access the survey and thus were not included in the data.
4. Students used personal computers or other internet-access devices to navigate to the Survey Monkey website, log in, read and sign the Informed Consent Agreement, and complete the survey.
5. Study results were made available on a public webpage that the researcher put up on a HostGator Web server. The URL for this Web site was included in the introduction letter to all participants, so they could look up the study results after it was completed if they so desired.

Use of Web-based Survey Formats

The use of web-based surveys has increased dramatically in recent years because they allow a more significant proportion of a population to be sampled more quickly and at less cost than when surveys are administered using a paper-pencil format (Hayes et al., 2015). Early versions of online survey software packages or web-based programs were fraught with technical problems that made it difficult for respondents to access and complete surveys. This resulted in lower completion rates compared to paper versions of surveys mailed to participants (Truell, 2003). Couper (2000) found that web-based survey completion rates could be lower than mailed paper surveys if the web platform has confusing navigation aids, too many tables or fancy graphics, and unclear directions.

However, in the last decade, current web-based online survey formats have been found to produce comparable results and maintain levels of confidentiality compared to paper formats (Couper, 2000). Additionally, the use of web-based surveys "provides a more uniform and usable delivery format for all respondents, regardless of the computer system used; besides, web forms create fewer technical uncertainties for survey researchers and present few technical problems for respondents" (Dayton, 2003, pp. 262–263). However, paper and web-based surveys have the same sources of error related to sampling, coverage, nonresponse, and validity (Couper, 2000), with the sampling error typically higher for web-based surveys (Hagan et al., 2017).

Survey Monkey

Survey Monkey (2023) interviewing software was used for creating and administering the survey. Survey Monkey is a web-based general survey-writing tool that allows the researcher to compose and administer surveys online. Survey Monkey gives the researcher complete control over the development and administration of the survey. The researcher can design the question and response formats, control the ability to return to a question once it has been answered, password-protect access to the survey, and control repeated logins to the survey by a respondent. Survey Monkey also allows the researcher to export data into a spreadsheet (e.g., Excel, Quattro Pro, etc.) or into formats compatible with statistical analysis programs (e.g., SPSS, SAS, etc.) Finally, it required approximately 15 minutes for students to complete the survey online.

Further, all data collected by the researcher was coded into SPSS and stored in a locked cabinet maintained by the researcher. No personal identifying information was

collected, and the researcher did not attempt to link responses to participating individuals. The researcher has maintained all data in electronic format for seven years and which has not yet been discarded electronically.

Pilot Study

A pilot study is a small-scale initial feasibility study for quantitative research, run in preparation for the main study to evaluate the design and feasibility of the proposed research. It is a model of the main research study but on a smaller scale. In this study, the pilot study was intended to improve the main study design, quality, and efficiency. Further, the pilot study served as a "live" test of the survey methodology. Input from pilot participants regarding unclear language, format, or instructions was adjusted as required before full survey implementation. Due to its smaller size in comparison with the main research, it was restricted to providing limited information on the sources and magnitude of variation of response measures and was not used to test any hypotheses.

The purpose of the pilot study was to (a) ensure that the directions, question formats, and mechanical aspects (grammar, form, content, readability, etc.) of the survey were understandable and appropriate, (b) to check for any difficulties that students might encounter when attempting to complete the survey online, and (c) investigate the internal consistency of the scale of the survey and the items assigned to each scale. Additionally, items considered too narrow in focus or too ambiguous were eliminated from the initial pool. Based on these three steps, improvements were made to the survey questions using a sample of students not in the study sample. Participants were invited to complete the web-based version of the survey. Students taking the pilot test were asked to comment on

its length, wording, and instructions. To assess the survey content, appearance, and readability, participants were given the survey individually and instructed to write notes concerning items they found poorly worded, ambiguous, or confusing. Based on this feedback, adjustments were made to the final version. This pilot test provided an opportunity to test the reliability of the internet link to the Survey Monkey website and examine the internal consistency of the scales using Cronbach's alpha.

In conducting the pilot study, the following steps were followed:

1. A total of 35 students were identified by me and were contacted via email to inquire about the possibility of having them participate in the research study pilot.
2. I identified students through Survey Monkey and contacted then via email.
3. Students were emailed a link to a Web site that presented the information package containing the introduction letter and instructions for navigating to the Survey Monkey website. Students used their personal computers or other internet-access devices to navigate to the Survey Monkey site, log in, read and sign the Informed Consent Agreement and complete the pilot survey.
4. A letter of invitation to participate in the study included (a) a personal introduction and an introduction to the sponsoring institution, (b) a statement of the purpose of the study, (c) an appeal for participation and informed consent (see Appendix C), (d) assurance of anonymity and confidentiality through a disclosure at the beginning of the survey that respondents would

check as having read before proceeding to the test items, and (e) information on how to obtain a summary of the results.

5. With the goal of a 20% response rate, the initial pool for potential respondents was intended to be approximately 1000, and the pool was evenly divided between those pursuing degrees on campus and online. Thus, approximately 500 students were sought from traditional schools and 500 from online institutions.

Instrumentation and Operationalization of Constructions

Whitley's (1998) discussion of student cheating attitudes and academic cheating behavior served as a foundation for the discussion of academic dishonesty among students in online and campus-based higher education courses. The Academic Dishonesty Questionnaire (ADQ) by Rakovski and Levy (2007) and the Academic Locus of Control (ALC) inventory by Pino and Smith (2003) were used to assess differences in perceptions related to academic dishonesty and academic locus of control. In addition, comparisons were made between perceptions of dishonesty based on the type of student (online or campus-based), gender, and type of learning institution (online or campus-based). Finally, an examination of the relationship between dishonesty and academic locus of control was conducted to determine if the relationship is moderated by the type of student (online or campus-based).

Data were collected using the 33-item web-based Student Academic Honesty Survey (SAHS) that is comprised of the Academic Information Survey (AIS) (Appendix A), the ALC developed by Pino and Smith (2003) (Appendix B), and the ADQ developed

by Rakovski and Levy (2007) (Appendix C). The surveys were identified as appropriate by using a literature-based approach. The complete SAHS can be found in Appendix D. The entire survey was constructed using previously developed and validated tests or scales measuring academic dishonesty (ADQ) and academic locus of control (ALC). The two surveys were designed to assess student perceptions about academic dishonesty and ALC in higher education and to explore similarities and differences in these perceptions between online students and campus-based students.

Although data can be collected from any survey, the accuracy of that data collected and the conclusions drawn are dependent upon how well the survey is constructed and administered (Maul, 2017). Using a well-designed instrument can partly offset some weaknesses in the survey method through selected design and analysis procedures. Horowitz (1991) provides four time-tested guiding principles in developing and administering a survey: surveys should be systematic, representative, objective, and quantitative. The survey should be designed systematically to yield the most accurate information related to the study research questions. That is, questions should be developed to assess each factor or variable as briefly or as concisely as possible to reduce the risk of confusion in response choices available to the person taking the survey. A means of ensuring content is appropriate and data can be efficiently collected is to tie survey questions to specific research questions. This was accomplished by identifying survey questions in every hypothesis presented. Second, to be representative, the number of survey items included should be enough to sufficiently represent and adequately distinguish between each factor and variable studied. In addition, questions should be

created and presented as clearly and explicitly as possible to limit the extent to which researcher bias is introduced into the data. Finally, the response formats should be devised so that they yield data that can be stated in numerical terms and analyzed using quantitative procedures. The surveys used in this study were designed with these considerations in mind and validated accordingly.

SAHS

The Student Academic Honesty Survey (SAHS) can be located in Appendix D. The SAHS is divided into three basic sections consisting of (a) personal, academic, and demographic information about the participants in section I, (b) student academic locus of control in section II, and (c) student perceptions regarding academic dishonesty in both online distance education and traditional campus-based classes in section III. Specific information is presented about each in the following paragraphs.

AIS

The Academic Information Survey (AIS) can be located in Appendix A. I developed the AIS, which consists of seven items that solicit demographic information, including gender, age, marital status, academic classification, enrollment status, GPA, and type of course (distance or campus-based). The questions were designed to collect information for developing the participants' full basic demographic profile. All questions are either nominal or ordinal scaled. Below is one sample question:

What type of course deliveries are you currently enrolled in?

- Distance education, where a majority of courses are held online

- Traditional or campus-based, where instruction is given within a physical classroom setting
- Both distance education with online courses and campus-based courses

ALC

The Academic Locus of Control Inventory (ALC) can be located in Appendix B. Pino and Smith (2003) developed the inventory to assess college students' general learning behavior schema. Academic locus of control is an internal schema that reflects a student valuing studies above leisure activities, a student's daily or near-daily study habits, and the extent to which a student's study habits could be described as disciplined, intense, and sober; the nine-item ALC survey was construct-validated and tested for reliability (Pino & Smith, 2003). Factor loadings for the construct were sufficient, with values that exceeded 1.0. Further, results from the Cronbach's alpha test found the ALC latent construct to be reliable at .85 (Pino & Smith, 2003).

Response options for questions 1 through 6 are scaled using a Likert-type format ranging from: 1 = *strongly disagree*, 2 = *disagree*, 3 = *disagree more than agree*, 4 = *agree more than disagree*, 5 = *agree*, to 6 = *strongly agree*. All coded values are scaled at the interval level, where there is an equal mathematical relationship between response options. Question 7 asks respondents to circle the answer that best reflects the number of hours spent doing homework (scaled as 0 <1–2, 3–5, 6–10, 11–15, 16–20, 21–30, 31+). This was coded into the following: 0 hours = 0, < 1–2 hours = 1, 3–5 = 2, 6–10 hours = 3, 11–20 hours = 4, 21–30 hours = 5, and 31 and more hours = 6. Questions 8 and 9 are coded from 1–6 and 1–5, respectively, and reflect perceptions of the intensity of

behavior. ALC survey item 8 (priority to social life and academic work) was coded into the following: 1 = *social life is my most important priority*, 2 = *social life is more important than academics*, 3 = *social life and academics are about equal*, 4 = *academic work is more important than my social life*, and 5 = *academic work is my most important priority*. ALC survey item 9 (study pattern) was coded into the following; 1 = *never study*, 2 = *cramming before exams*, 3 = *cramming before exams and some study during most weeks*, 4 = *weekly study with reviews before exams*, 5 = *studying almost every day*, and 6 = *studying every day including weekends*.

A composite ALC score was computed as the average response by adding responses and then dividing by the number of questions answered. The scores from the survey were generated using the mean scores and standard deviation. The highest mean score on the questions was interpreted as the one participants supported more. In contrast, the lowest mean score revealed items with the most inadequate support or agreement from the participants. See one sample question:

I am easily distracted when studying.

- *strongly disagree*
- *disagree*
- *disagree more than agree*
- *agree more than disagree*
- *agree*
- *strongly agree*

ADQ

The Academic Dishonesty Questionnaire (ADQ) can be located in Appendix C. Designed by Rakovski and Levy (2007), the 16-item ADQ was validated using both factor analysis and Cronbach's reliability analysis. Factor analysis was performed to determine how many latent factors existed within the context of the survey questions. Accordingly, eight out of the 16 acts were part of the factor that indicated serious acts of dishonesty. The other acts loaded on a single factor labeled *less serious*. Each element was well defined, with Cronbach's alpha equal to 0.91 and 0.85 for the first and second factors, respectively.

Participants are asked to respond to each question by using the following introductory statement: To what extent do you agree or disagree that the following behaviors are ethically acceptable? Response options are systematically scaled on a Likert-type scale from: 1 = *strongly disagree*, 2 = *disagree*, 3 = *disagree more than agree*, 4 = *agree more than disagree*, 5 = *agree*, 6 = *strongly agree*. Scale format is at the interval level where there is an equal mathematical relationship between response options. The scale intends to produce a distribution that is most normally distributed. The scores from the surveys were generated and interpreted similarly to the scores from the ALC inventory. ADQ scores were created by taking the average of the 17 ADQ Likert-scaled survey items, where 1 = *strongly disagree* and 6 = *strongly agree*. See one sample question below:

To what extent do you agree or disagree that the following behaviors are ethically acceptable?

Plagiarism

- *strongly disagree*
- *disagree*
- *disagree more than agree*
- *agree more than disagree*
- *agree*
- *strongly agree*

Data Analysis Plan

Data analysis involved a combination of descriptive and inferential statistical measures, including a two-way ANOVA and moderated multiple regressions. The SPSS version 17 was employed for processing the analysis for this research study. The following sections provide a discussion of the variables intended analytic strategy for each hypothesis. However, it is essential to note that before the analysis, the data was cleaned, examined for errors, irregularities, or other issues that threaten validity and tested for normality. Specifically, data hygiene and screening were undertaken before analyzing the first hypothesis to ensure the variables of interest met appropriate statistical assumptions. Subsequently, an ANOVA was run to determine if any differences existed between groups.

In addition, besides evaluating basic assumptions of ordinary least squares (OLS) for Research Question 2, an additional assumption of homogeneity of within-group

variation was evaluated. This assumption evaluated the variance between *Y* (ADQ) and *X* (ALC) across subgroups (type of student). The variance must be equal across moderator subgroups to not violate the assumption. If the assumption is violated, then any inferences taken may be incorrect. The variance must be equal across moderator subgroups.

RQ1: How do males and females compare in terms of their perceptions of academic dishonesty?

$H_0$1: There are no statistically significant differences in perceptions of academic dishonesty as measured by the ADQ as a function of gender (male or female).

H_a1: There are statistically significant differences in perceptions of academic dishonesty as measured by the ADQ as a function of gender (male or female).

The first hypothesis was tested using a two-way ANOVA. The use of a two-way ANOVA permitted the researcher to examine both independent variables as single items while also seizing the opportunity to seek the combined effects of the variables. As the dependent variable, academic dishonesty was measured by survey questions 1–16 in section III of the survey. The independent variables of gender (male, female) and school type (online or campus-based) were measured with Questions 1 and 7, respectively.

RQ2: What are the predictive relationships between perceptions of academic dishonesty after controlling for type of school (online or campus based)?

$H_0$2: There is no statistically significant relationship between the perceptions of academic dishonesty as indicated by ADQ scores and ALC as indicated by ALC scores after controlling for type of school (online or campus based).

H_a2: There is a statistically significant relationship between perceptions of academic dishonesty as indicated by ADQ scores and ALC as indicated by ALC scores after controlling for type of school (online or campus based).

Thus, the relationship between perception of academic dishonesty and academic locus of control does not change for campus-based students when compared to online students.

The complexity of hypothesis 2 demanded the use of moderated multiple regression, whereby the dependent variable of academic dishonesty (as measured by survey questions 1–16, section III) was analyzed using the predictor variable of ALC (as measured by Q1–8, section II) and the moderator of campus-based or online school type. Moderated multiple regression (MMR) is increasingly used in organizational and behavioral research because it allows the researcher to explore data to identify interaction or moderate effects that exert influence on results and hold consequences for both research and practice. The use of MMR is advantageous in this instance because it permits the researcher to look beyond the fundamental interactions of dependent and independent variables to identify relationships between two variables—in this case, dishonesty and ALC—and how that relationship might be moderated by type of school.

RQ3: How do online and traditional campus-based learners compare in their perceptions of cheating behavior?

$H_0 3$: There are no statistically significant differences in perceptions of academic dishonesty as a function of the type of student (online or campus based).

H_a3: There are statistically significant differences in perceptions of academic dishonesty as a function of the type of student (online or campus based).

The dependent variable for RQ3 was academic dishonesty, measured using the composite score from the ADQ. The independent variable was the type of student (online or campus-based), measured by Question 7. Hypothesis 3 was evaluated using a two-way ANOVA.

Handling Missing Data

To handle missing data, item means were computed and inserted for each missing item level scale. Incomplete or multiple responses were recorded as missing and the scale means assigned to the missing value. The method of assigning a constant to the missing items maximizes the amount of data collected and minimizes the effects of missing data. The strategy of replacing missing data with a constant is supported by van Tulder and de Bruijne (2015). They advocated that the practice of filling in missing data with a constant, the mean of the scale, would result in losing the smallest amount of information and increases statistical power. Besides, I focused on asking a specific number of questions the respondents were expected to answer to be included in the research. This approach would be vital in ensuring appropriate responses vital for answering the research questions. In this study, if participants answered fewer than 80% of the questions, the data was not considered for the study.

Threats to Validity and Reliability

There are a number of types of validity, including the internal and external validity of the research being performed. Besides, instrument validity refers to the

appropriateness, meaningfulness, and usefulness of specific inferences made from test scores. Although Rubin and Babbie (2021) consider survey research to be the most appropriate method of data collection for profiling a population, they caution that survey instruments are generally weak in validity. However, survey research weakness can sometimes be offset by ensuring other pejorative conditions affecting the research are mitigated and controlled for.

External Validity

External validity can be defined as the degree to which the study is generalizable to a larger population (Lesko et al., 2017). In general, studies with random sampling have a greater degree of external validity. However, the study population for this project utilized convenience sampling of students attending one of two universities. Although random sampling would have been more desirable, I lacked the resources to use this technique. Thus, external validity was reduced as results may not necessarily reflect study population attitudes because only those immediately available were studied. In situations where convenience sampling is utilized, replicating the study to compare results is ideal.

Internal Validity

Internal validity can be defined by the degree of confidence that change in the dependent variable was solely created as a result of the independent variable and not extraneous variables (Campbell et al., 2021). There exist eight conditions that can reduce confidence in a research study. These threats to internal validity include history, maturation, mortality, testing, instrumentation, regression to the mean, selection, group contamination, compensatory intervention, compensatory rivalry, resentful

demoralization, and statistical conclusion validity (Dunbar-Jacob, 2018). Although all threats may be relevant, the specific threats to this particular study may potentially involve only two—selection and testing. A selection threat indicates that participants may not, in fact, be functionally equivalent at the time of the test. In this study, I made efforts to mitigate the selection threat by gathering a sample size that is sufficient for the study and the statistical technique being used. A testing threat includes testing participants at various times or under various circumstances. Therefore, the study design captured data collected under similar regional conditions and generally during the same period.

Instrument Reliability

According to Taherdoost (2016), a reliable instrument produces scores that are consistent, stable, and accurate over repeated testing sessions and populations. An essential consideration in survey development is internal consistency. Reliability in terms of internal consistency is important to consider because the scores of a series of items will be summed in deriving the total scores for the two main scales. Internal consistency of the ADQ and ALC were assessed using pilot study data and primary study data using Cronbach's coefficient alpha.

Cronbach's measure of reliability was chosen because (a) alpha provides a measure of the internal consistency of the items forming a multi-item scale, (b) it is a generalization of the split-half and parallel forms coefficients, (c) compared to test-retest coefficients, it does not require two levels of measurement nor does it confound true fluctuations in the variable with measurement error, and (d) alpha provides a lower bound estimate of the proportion of variance in the observed measurement scale that is

attributable to the variance of the true underlying construct (Flick, 2015). According to Mohamad et al. (2016), alpha values above .70 are considered appropriate and the instruments are valid for the study. In this study, the focus was to ensure that the items in the ALC and ADQ have alpha values above .70, although alpha levels of .80 or higher are desired levels of internal consistency in most studies. Even so, Taber (2018) pointed out that alpha values above .60 are still considered fairly high and acceptable in social science research in ensuring internal consistency.

In addition to assessing the internal consistency of the scales contained in the survey, an item analysis was performed on the individual scale items as a means of providing information on the internal consistency of single items as they relate to the homogeneity of items in the scale. Based on item-total correlations for each item, items with a correlation of .25 or higher were retained for inclusion in subsequent analyses. This value was used because it represents the critical value of r with alpha set at .01 and $df = 100$ (Barlett et al., 2001). Items with correlations less than .25 were dropped from the survey if excluding the items did not decrease the alpha value of the scale to which the item was assigned (Barlett et al., 2001). Items in sections II and III of the survey were used in the reliability analysis. The means and standard deviations were computed for each of the scales.

Ethical Procedures

Ethical concerns in research are a collection of guidelines that influence the research strategies and methods. Scientists and researchers should always conform to set guidelines for conduct when obtaining data from individuals. Based on ethical principles

adopted among social science researchers (Rwegoshora, 2016), the following procedures were used to protect the rights of participants. First, participation in the study was strictly voluntary, and participants were free to decline participation or to withdraw their permission to be included in the study at any time without penalty. Second, when participants agreed to complete the survey, they were free to refuse to answer any question. Third, all attempts were made to maintain the anonymity of participants. No identifying information was collected on the survey or linked to email information used to contact students to participate in the study. Students were offered anonymity using Survey Monkey software, which allows students to respond anonymously through a secure website. To ensure the confidentiality of the data collected, all scores were reported in aggregated form, and no individual scores were reported. A participant's completion of a survey that included a pre-survey participation consent form with disclosures constituted consent to participate in the study. Additional specifics pertaining to informed consent, anonymity, and confidentiality are reviewed below.

Informed Consent

Informed consent is a significant research consideration when obtaining research data from human participants (Hardicre, 2014). Informed consent refers to a circumstance in which all possible respondents get and comprehend all the necessary data to choose whether or not to engage in a study. Informed consent forms contain details regarding the research's advantages, concerns, financing, and administrative authorization (Mandal & Parija, 2014). In this study, respondents were given a written document to review and were then asked whether they had any objections regarding the study. The participant

signed or initialed the permission form to indicate their willingness to participate in the research. Researchers should translate the research resources for respondents with very poor English competence or work with a translator to ensure they can access all of the content in their native languages.

Voluntary research participation is an element of the informed consent process (Cahana & Hurst, 2008). Voluntary participation implies that all study participants are permitted to decide whether or not to participate without being coerced or blackmailed (P. A. Marshall et al., 2006). All respondents were free to quit or exit the research at any time without being obliged to continue. Respondents were not required to offer a justification for withdrawing from the research. Therefore, researchers need to clarify to respondents that their unwillingness to engage has no adverse effects or ramifications.

Anonymity

Merriam-Webster defines *privacy* as "Freedom from unauthorized intrusion" and can be said to be in the eye of the participant (Merriam-Webster, n.d.). The following passage appears in the Participant Consent Form and describes how privacy was maintained throughout the study:

> Any information you provide will be kept anonymous since you will not provide your name or anything else that could identify you in the study reports. Anonymous data was kept secure by 128-bit encrypted security measures on a flash drive in a locked safe at the researcher's home. Data will be kept for at least five years, as required by the university, and then will be reformatted and scrubbed.

Online students and campus-based students were directed to the Survey Monkey website (2023) through a link created by the Survey Monkey software and provided to participants by the researcher.

Online students were invited to participate using the university participant pool. I personally invited campus-based students to participate on campus. I explained the basics of the study and answered any questions potential participant had. The survey link was then displayed in the classroom that is wired to the internet. The students who volunteered to participate did so at the start of the class and before regular instruction began. Surveys were not available during regular instruction time. When the survey was completed, the participant could no longer access the survey. Only I collected the data, which was subsequently entered into a spreadsheet. The surveys were electronically purged from the Survey Monkey program after review and data collection.

Confidentiality

Confidentiality implies that researchers are aware of the respondents' identities, yet eliminate any identifiable data from the study. All respondents have the right to confidentiality; thus, researchers must safeguard their sensitive information as long as they retain or use it. *Confidentiality* has been defined by the International Organization for Standardization (ISO) as "ensuring that information is accessible only to those authorized to have access" (Carlson, 2001, p. 2). No collection of any direct identifiers, such as names or email addresses, and no information that could allow someone to deduce a participant's identity took place.

Summary

This chapter presents the methods and procedures that were utilized in this study. The research design, instrumentation, population and sample, the data collection process, data analysis procedures, limitations to the research design, and ethical assurances are described. In the following two chapters analyses of the data collection are described, and conclusions are inferred. Further, assumptions and limitations are reviewed, and implications and recommendations are presented.

Chapter 4: Results

The purpose of this chapter is to present the results obtained from the survey questionnaires. I intended to compare perspectives and perceptions on academic dishonesty for online and campus-based students. The RQs and hypotheses were the following:

RQ1: How do males and females compare in terms of their perceptions of academic dishonesty?

$H_0$1: There are no statistically significant differences in perceptions of academic dishonesty as measured by the ADQ as a function of gender (male or female).

H_a1: There are statistically significant differences in perceptions of academic dishonesty as measured by the ADQ as a function of gender (male or female).

RQ2: What are the predictive relationships between perceptions of academic dishonesty after controlling for type of school (online or campus based)?

$H_0$2: There is no statistically significant relationship between the perceptions of academic dishonesty as indicated by ADQ scores and ALC as indicated by ALC scores after controlling for type of school (online or campus based).

H_a2: There is a statistically significant relationship between perceptions of academic dishonesty as indicated by ADQ scores and ALC as indicated by ALC scores after controlling for type of school (online or campus based).

RQ3: How do online and traditional campus-based learners compare in their perceptions of cheating behavior?

$H_0$3: There are no statistically significant differences in perceptions of academic dishonesty as a function of the type of student (online or campus based).

H_a3: There are statistically significant differences in perceptions of academic dishonesty as a function of the type of student (online or campus based).

This chapter presents the participant demographics and response rate of the participants who were invited participate in this study. The chapter also provides descriptive data from the analysis process, including age, marital status, academic level, and study program. Results for internal validity and reliability tests are then presented before the findings on the three research hypotheses. The chapter concludes with a summary and conclusion on the main findings.

Results

Descriptive Statistics

Descriptive statistics are used to characterize the fundamental elements of the survey data, including concise summaries of the sample and measurements (Fisher & Marshall, 2009). Descriptive statistics are distinct from inferential statistics because when researchers use descriptive statistics they are describing what exists or what the data indicate. Using inferential statistics, researchers attempt to draw conclusions that go beyond the present facts. Descriptive statistics facilitate the logical synthesis of vast volumes of data.

The data used in this study were collected from 539 participants; 186 were online students, and 352 were campus based. One participant indicated they were equal parts online and campus based and was therefore removed from the analysis. Additionally, 13 participants indicated they were above 59 years of age; these individuals were also removed from the study. Data from the remaining 525 cases were used in the analysis; 179 (34%) were online students, and 346 (66%) were campus based. Two participants did not indicate a relevant gender and were excluded from analyses in which gender was a grouping variable. The exclusion of non-binary students is discussed as a limitation of this study in chapter 5.

Of the 525 participants examined in the study, 168 (32%) were male, and 355 (68%) were female. Most participants were between 25 and 59 years old (n = 291, 55%), followed by participants who between 18 and 24 years old (n = 234, 45%). Most participants were single and had never married (n = 275, 52%), followed by 151 (29%) who were married. Two hundred and forty five (47%) participants were graduate students, and 425 (81%) participants were enrolled full-time. Most participants had a GPA between 3.75 and 4.00 (n = 360, 69%), followed by 116 (22%) with a GPA between 2.75 and 3.24. Many participants spent 11 to 20 hours a week studying or doing homework (n = 170, 32%), and 239 (46%) rated academic work more important than their social life. Frequencies and percentages of participant demographics are presented in Table 1.

Table 1

Participant Demographics and Frequencies

Demographic	*n*	%
Gender		
Male	168	32
Female	355	68
Age		
18–21	234	45
25–59	291	55
Relationship status		
Divorced	26	5
Domestic partnership or civil union	16	3
Married	151	29
Separated	4	1
Single, but cohabitating	50	10
Single, never married	275	52
Widowed	3	1
Academic classification		
Freshman	101	19
Graduate	245	47
Junior	63	12
Senior	65	12
Sophomore	51	10
Enrollment status		
Full-time	425	81
Part-time	100	19
GPA		
>1.75	4	1
1.75 to 2.24	21	4
2.25 to 2.74	24	5
2.75 to 3.24	116	22
3.25 to 3.75	0	0
3.75 to 4.00	360	69

Hours a week spent studying or doing homework		
0	4	1
<1–2	44	8
3–5	97	19
6–10	92	18
11–20	170	32
Hours a week spent studying or doing homework		
21–30	84	16
31 and up	34	7
Rate of priority regarding academic work		
Social life is my most important priority	9	2
Social life is more important than academics	29	6
Social life and academics are about equal	172	33
Academic work is more important than my	239	46
Academic work is my most important	73	14

Note. Percentages may not total 100 due to rounding errors.

Cronbach's Alpha Tests

Cronbach's alpha tests of reliability were conducted on ADQ and ALC two composite scores. The Cronbach's alpha reliability coefficients (α) were evaluated using the guidelines suggested by George and Mallery (2010), where >.9 = excellent, >.8 = good, >.7 = acceptable, >.6 = questionable, >.5 = poor, and $\leq$.5 = unacceptable. Results from the analyses indicated that the 17-item ADQ scale had good reliability (α = .89). The 6-item ALC scale had questionable reliability (α = .64).

Before computing the scores, I assessed the data for missing values. The missing values were imputed using the series mean. No missing values were found. Afterward, the scores were assessed for univariate outliers by examining standardized values or *z* scores. Standardized values above 3.29 or below -3.29 are considered extreme cases or outliers (Verkoeijen et al., 2018). The ADQ and ALC scores were computed again after removing the outliers. Results revealed that the ALC scores ranged from 1.22 to 5.56,

with $M = 3.43$ and $SD = 0.67$, and the ADQ scores ranged from 1.00 to 4.00, with $M = 1.96$ and $SD = 0.62$.

Research Question 1

RQ1: How do males and females compare in terms of their perceptions of academic dishonesty?

$H_0$1: There are no statistically significant differences in perceptions of academic dishonesty as measured by the ADQ as a function of gender (male or female).

H_a1: There are statistically significant differences in perceptions of academic dishonesty as measured by the ADQ as a function of gender (male or female).

To determine whether statistically significant differences existed in ADQ scores by gender (male versus female). The continuous dependent variable in this analysis was ADQ scores. The independent grouping variable in this analysis was gender. Statistical significance was determined using an alpha of .05. Before analysis, the assumptions of normality and homogeneity of variance were assessed. Normality was assessed using a Kolmogorov-Smirnov test, and the result indicated that ADQ scores were not normally distributed, $p < .001$; thus, the assumption of normality was not met.

Levene's test was then used to determine the homogeneity of variance, and the result indicated that the scores did not violate assumptions regarding equal variances, $p = .383$. Thus, the assumption of homogeneity of variance was met. The observations suggested that there were no differences in ADQ scores by gender; thus, general conclusions (main effects) could be made by gender alone.

H_a1 pertained to the main effect of gender. Results of the main effect of gender (male versus female) were not statistically significant, $F(1, 512) = 2.45$, $p = .118$, indicating that there were no statistically significant differences in ADQ scores between males and females; therefore, I could not reject the first null hypothesis. The means and standard deviations on ADQ scores for RQ1 are presented in Table 2.

Table 2

Two-Way ANOVA on ADQ Scores by Student and Gender

Variable	*M*	*SD*	*n*
Gender			
Male	2.03	0.63	165
Female	1.93	0.61	351
Type of student			
Online	1.82	0.55	175
Campus based	2.03	0.64	343

Research Question 2

RQ2: What are the predictive relationships between perceptions of academic dishonesty after controlling for type of school (online or campus based)?

$H_0 2$: There is no statistically significant relationship between the perceptions of academic dishonesty as indicated by ADQ scores and ALC as indicated by ALC scores after controlling for type of school (online or campus based).

$H_a 2$: There is a statistically significant relationship between perceptions of academic dishonesty as indicated by ADQ scores and ALC as indicated by ALC scores after controlling for type of school (online or campus based).

To address H_a2, I conducted a hierarchical multiple linear regression analysis to determine whether the type of school (online versus campus based) moderated the relationship between ALC scores and ADQ scores. The independent variable in this analysis was the ALC score. The dependent variable was ADQ scores. The moderator was type of school. Statistical significance was determined using an alpha value of .05. Prior to analysis, the assumptions of normality of residuals, homoscedasticity, and absence of multicollinearity were assessed with scatterplots (see D. P. Allen et al., 2018). The normality of residuals was assessed with a normal p-p plot, and little to no deviation was found from the standard line; thus, the assumption was met. Homoscedasticity was assessed with a residual scatterplot, and no nonrandom pattern (a nonrectangular shape) was found; thus, the assumption was met. The absence of multicollinearity between the moderating and independent variable was assessed with variance inflation factors, where a value above 10.0 would indicate the presence of multicollinearity (see Tabachnick & Fidell, 2012). No variance inflation factor values were found above 10.0, and the assumption was met.

The regression model consisted of Block 1 and Block 2. Block 1 addressed whether the independent variable (ALC scores) and the moderator (type of student) predicted the dependent variable (ADQ scores). Block 2 addressed whether the independent variable, the moderator variable, and the interaction term predicted the dependent variable. To create the interaction term (the type of student ALC scores) between the type of student and ALC scores, ALC scores (centered with a mean of zero) were multiplied by the type of student (0 = *online*, 1 = *campus based*).

The results of Block 1 were statistically significant, $F(2, 514) = 27.65$, $p < .001$, $R^2 = .10$, which indicated that type of student and ALC scores predicted ADQ scores. Results from the R^2 value indicated that 10% of the variance in ADQ scores could be accounted for by type of student and ALC scores. The results of Block 2 were also statistically significant, $F(3, 513) = 18.69$, $p < .001$, $R^2 = .10$, which indicated that type of student, ALC scores, and the interaction between type of student and ALC scores predicted ADQ scores. However, the examination of the interaction term (type of student ALC scores) was not statistically significant, $t = 0.89$, $p = .374$, suggesting that moderation could not be supported. The null hypothesis for RQ2 could not be rejected. The results of the hierarchical moderation analysis are presented in Table 3.

Table 3

Results of the Hierarchical Moderation Analysis

Model	*B*	*SE*	β	*t*	*p*
Block 1					
ALC scores	0.2	0.04	0.27	6.2	0.000
Type of student	0.07	0.06	0.1	6.43	0.234

Table 4

Parameter Estimates for Block Two Analysis for Type of School as a Moderator

Model	*B*	*SE*	β	*t*	*p*
Block 2					
ALC scores	0.200	0.07	.22	2.75	.006
Type of student	0.13	0.06	.10	2.30	.022
Type of student*ALC scores	0.08	0.09	.07	0.89	.374

Note. Block 1: $F(2, 519) = 24.096$, $p < .001$, $R^2 = .10$. Block 2: $F(3, 513) = 18.69$, $p < .001$, $R^2 = .10$.

Research Question 3

RQ3: How do online and traditional campus-based learners compare in their perceptions of cheating behavior?

$H_0$3: There are no statistically significant differences in perceptions of academic dishonesty as a function of the type of student (online or campus based).

H_a3: There are statistically significant differences in perceptions of academic dishonesty as a function of the type of student (online or campus based).

RQ3 was addressed by examining the second main effect of the one-way ANOVA. Results of the main effect of type of student (online versus campus-based) were statistically significant, $F(1, 512) = 12.15$, $p < .001$, partial $\eta^2 = .02$, which revealed that there were significant differences in ADQ scores between online students and campus-based students. The ANOVA model's effect size of (partial η^2) .02 indicated the magnitude of the differences in the ADQ scores based on the type of school. Based on these findings, the null hypothesis for research question 3 was rejected. A review of the means was conducted to determine the source of the statistical difference. The data

revealed that campus-based students had statistically higher ADQ scores (M = 2.03) compared to online students (M = 1.82), as seen in Table 5. Campus-based students, therefore, practiced more academic dishonesty than the online students.

Table 5

Means and Standard Deviations on ADQ Scores by Type of Student

ADQ score	*M*	*SD*	*n*
Type of student			
Online	1.82	0.55	175
Campus based	2.03	0.64	343

Summary

This chapter presented results from data analyses exploring three research questions about the relationships between gender, academic locus of control, type of student, type of school, and perceptions of academic dishonesty. Three analyses were performed, one for each research question. Results indicate the null hypothesis cannot be rejected for Research Questions 1 and 2 but can be rejected for Research Question 3. In sum, there was no significant effect on perceptions of academic dishonesty for gender, nor the interaction between academic locus of control and type of school. There was a small yet significant result for the type of student, whereby campus-based students had higher perceptions of academic dishonesty than online students. The following chapter will discuss these results in light of other research findings as well as interpret the results from Ajzen's (1985, 2016) theory of planned behavior. Finally, this dissertation will conclude with recommendations for further research and suggestions for addressing the problem of academic dishonesty more broadly.

Chapter 5: Discussion, Conclusions, and Recommendations

Academic dishonesty is a significant concern in today's institutions, particularly in the context of online and distance learning. This study focused on academic dishonesty in higher education and addressed the following research questions: (a) How do males and females compare in their perceptions of academic dishonesty? (b) What are the predictive relationships between perceptions of academic dishonesty (ALC) after controlling for the type of school (online versus campus based)? (c) How do online and traditional campus-based learners compare in their perceptions of cheating behavior? Ajzen's (1985, 2016) theory of planned behavior served as the theoretical framework for this research.

Ensuring academic integrity in higher learning institutions has become increasingly difficult due to academic dishonesty (Bylieva et al., 2019). Trustworthy relationships among students, educators, and institutions are crucial for the education system to fulfill its role in society. Research on academic dishonesty, particularly in the context of online learning, has produced conflicting findings. Chiang et al. (2022) found that cheating was more common in online environments than traditional classrooms. In contrast, Wahid et al. (2021) reported no significant difference in cheating behavior between online and traditional learners during the COVID-19 pandemic.

Several previous studies informed the interpretation of findings for the current study. First, according to Eshun et al. (2023), there were no significant differences between men's and women's perceptions of academic dishonesty. Second, per Orok et al. (2022), the hypothesis stating a significant relationship between the perception of

academic dishonesty and ALC after controlling for the type of school (online versus campus based) was not supported because the interaction between school type and ALC was insignificant. The third hypothesis, which posited no significant difference in perceptions of academic dishonesty between online and campus-based learners, was supported by a study conducted by Valenzuela et al. (2022). Results showed that campus-based students had a small but significantly higher perception of academic dishonesty.

Interpretation of the Findings

When contextualized in the existing body of research on academic dishonesty, findings obtained from the current study are consistent with those obtained from previous studies. Each of the research questions, hypotheses, and findings are discussed in this section.

Gender and Academic Dishonesty

RQ1: How do males and females compare in terms of their perceptions of academic dishonesty?

The null hypothesis for RQ1 could not be rejected because there were no statistically significant differences in ADQ scores according to gender. The findings of the current study align with findings from previous studies regarding gender and academic dishonesty. For instance, Eshun et al. (2023) and Orok et al. (2022) found that there were no significant differences in academic dishonesty behaviors by gender. Similarly, Bylieva et al. (2019) did not find gender to have a significant effect on attitudes toward academic dishonesty. The non-significant effect of gender in the current study aligns with these findings.

However, some studies found that males were more likely to cheat than females. Chiang et al. (2022) found significant effects for the male gender on cheating behavior. On the other hand, Valenzuela et al. (2022) found gender to be a weak effect, meaning males were more likely to cheat, but the size of the effect was small. Wahid et al. (2021) found that for students during the COVID-19 outbreak, the male gender significantly affected academic dishonesty in online classes and assessments. Regarding attitudes toward cheating, Bylieva et al. (2019) found that males had more permissive attitudes than females. These significant findings of the effect of the male gender diverged from the non-significant results from the first analysis in the current study, where gender did not significantly influence perceptions of academic dishonesty. Eshun et al. (2023) stated that men may experience a gender role conflict being driven toward accomplishment and achievement but may face expectations and worries that lead them to cheat, although some believe that women are more ethical in their work habits than men; however, with changes in gender norms over the last several decades, that gap may be closing.

Academic Dishonesty, Locus of Control, Type of College

RQ2: What are the predictive relationships between perceptions of academic dishonesty after controlling for type of school (online or campus based)?

This research question addressed whether there were predictive relationships between perceptions of academic dishonesty and ALC after controlling for type of school (online versus campus based). Results revealed that the relationship between ALC and perceptions of academic dishonesty was significant, though the effect size was small. Howev

er, the interaction between ALC and school type was insignificant. Thus, the null hypothesis could not be rejected. Other researchers who had studied academic dishonesty found significant relationships between perceived behavioral control and academic dishonesty (Eshun et al., 2023; Orok et al., 2022).

Eshun et al. (2023) studied cheating behavior and found that the top predictors were perceived behavioral control and intention to cheat. In addition, Orok et al. (2022) found perceived behavioral control to be the second strongest predictor of self-reported cheating behavior. Similarly, Valenzuela et al. (2022) found that perceived behavioral control was the strongest contributor to cheating behavior. In the current study, there was a significant though small effect of locus of control on perceptions of academic dishonesty. However, the relationship was much smaller in this study than in previous studies.

Academic Dishonesty: Comparing Online Versus Campus-Based Students

RQ3: How do online and traditional campus-based learners compare in their perceptions of cheating behavior?

This third research question addressed whether online learners and campus-based learners differed in their perceptions of academic dishonesty. The null hypothesis was rejected. This result was significant, though the size of the effect was small. The literature indicated similar levels of cheating for online and traditional forms of education. Bylieva et al. (2019) surveyed students about academic dishonesty and found substantial portions of students in both environments cheat. Chiang et al. (2022) conducted a systematic review, finding rates of online academic dishonesty similar to those in traditional

institutions. Other researchers found cheating to be more common in the traditional classroom than online. Eshun et al. (2023) studied higher education students in Ghana, and discovered that academic dishonesty was less common in online courses than on campus. Orok et al. (2022) found that cheating was more common on campus, in part because of panic cheating that happens with a sense of urgency (such as during pop quizzes). Although most research focused on cheating behaviors, Wahid et al. (2021) explored perceptions of academic dishonesty. Similar to the current study, Wahid et al. found a higher perception of cheating in campus-based students compared to online students. Therefore, the results from RQ3 appear to be in alignment with the recent literature.

In the current study, the type of school influenced cheating perceptions. Online students had a lower perception of cheating than did campus-based students. This suggests online students may have a different definition of cheating influencing different behaviors. Online and campus-based students also have different opportunities to cheat, and constraints against cheating vary according to the immediate environment. Online students may have an easier time using Google to find test answers, but this becomes difficult if their exam is being proctored through monitoring services (Valenzuela et al., 2022). In contrast, campus-based students can pass notes, look at one another's papers, and talk to each other about how to cheat. The type of school, therefore, appears related to perceptions of cheating, which may influence cheating behavior.

Ajzen's Theory of Planned Behavior

Premises from the theory of planned behavior have been used to explain academic dishonesty and self-reported cheating behaviors in a variety of studies (Bylieva et al., 2019; Chiang et al., 2022; Eshun et al., 2023; Orok et al., 2022; Valenzuela et al., 2022; Wahid et al., 2021). Ajzen's (1985, 2016) theory of planned behavior holds that behavior is shaped by different variables. Most immediately, behavior is influenced by behavioral intention, the intention the individual has to commit the behavior. This intention is influenced by several variables: attitudes toward the behavior, subjective norms around the behavior, and perceived behavioral control. These are influenced by behavioral beliefs, normative beliefs, and control beliefs, respectively (Ajzen, 1985, 2016). Research Question 2 in the current study was most directly related to Ajzen's (1985, 2916) theory.

Research Question 2 posited there would be statistically significant relationships between the perception of academic dishonesty and ALC after controlling for the type of school. According to Ajzen's theory (1985, 2016), I would expect a significant relationship between the attitude or perception of academic dishonesty and perceived control, measured as ALC. In the second analysis, the relationship between ALC and perceptions of academic dishonesty was statistically significant. The relationship accounted for 10% of the variance, so although significant, it was small in size. The moderation effect was vital in ensuring that the results failed to reject the null hypothesis. Therefore, the final result of this analysis was a failure to reject the null because of the moderation effect.

Limitations of Study

The current study was quantitative, and the data were collected using survey questionnaires. Thus, the data collected were empirical in nature and only addressed the main trends in the topic. Through the use of quantitative methodology, I could not identify the opinion, insights, and perceptions that participants held toward academic dishonesty. In future studies, researchers could consider collecting qualitative data using interviews or focus groups to explore individual opinions and feelings that participants have toward academic dishonesty. Further, using a mixed-methods approach would be helpful in achieving data triangulation to cross-evaluate the findings obtained from the survey questionnaires and interview sessions or focus group discussions to ensure data validity and reduce subjectivity.

Some participants in the current study might have been reluctant to share their personal experiences or give honest answers. Providing closed-ended survey questions increased the likelihood of participants responding without conscious assessment of the research questions or responses. As a result, the data obtained from individual participants could be subject to bias. However, the limitation of obtaining inaccurate data might be mitigated by using interviews and focus groups as triangulation. Researcher bias may have also contributed to biased findings, in addition to issues arising from a potential experimental error in data collection, analysis, interpretation, and failure to consider all of the possible variables. Other possible biases in the study may have resulted from unintentionally selecting participants who were more likely to generate the desired results, an approach that might have jeopardized impartiality and objectivity in results

interpretation. Therefore, a Likert-type survey, as well as a forced-choice format, was used to assess participant responses.

A limitation of self-report surveys is that they can be susceptible to social desirability response bias. According to Dyer et al. (2020), using self-report measures to explore beliefs related to academic dishonesty is a more ethical approach than using deception to determine the types of dishonest behaviors students deem acceptable. The use of "self-reports provide the best balance between scientific rigor and ethical data collection in research on cheating" (Blankenship & Whitley, 2000, p. 10). Additionally, a Likert-type rating format is often used in measuring attitudes (Miner-Romanoff, 2023) and has been shown to be capable of attaining a prominent level of reliability and validity. Convenience sampling has an important impact on the study's validity and reliability. A reliable experiment, test, or measurement procedure has the same results across multiple tests. That said, study reliability might be diminished because a purely random sample was not obtained. Thus, the results of this research may or may not be replicated using different convenience samples or true random samples from the same population.

In addition, I did not measure the cheating behavior but rather attitudes toward cheating as a proxy. It is difficult to observe cheating as a behavior. To address this challenge, researchers often use self-reported measures. However, the ability to trust self-report is limited when a topic is sensitive and requires the participant to reveal potentially negative information about themselves (Campbell et al., 2021). Students may claim they do not cheat when in fact they do. Therefore, I used the ADQ, which measured cheating

attitudes and perceptions rather than cheating behavior. However, there can be major differences between attitudes, perceptions, and behavior. Attitude may shape behavior in a certain direction, but it is not absolute that a person with a particular attitude will behave accordingly. It is difficult to know whether and how the results of this study would have been different if the behavior of cheating were somehow observable, but it is likely there is an important difference.

One final limitation of this study is the result of the fact that this research was begun nearly a decade ago, which has had one important consequence for this study: non-binary students have not been included in the focus of RQ1. Ten years ago, non-binary concerns were just beginning to be addressed by the social sciences, and, reflecting that bias, I unfortunately did not include non-binary students in my sample. This failure to address non-binary issues in no way is meant to offend the legitimate concerns of the LGBTQ+ community.

Recommendations

The first recommendation is to repeat the study with a larger sample size. Although a power analysis demonstrated the minimum sample size needed, which was met, greater variation may exist in a larger sample, which was missing from this analysis. A larger sample size would likely be more diverse and capture a broader range of student experiences; thus, the analysis might yield different results.

Furthermore, the current study focused on data collected at a single point in time. There may be important differences in perceptions of academic dishonesty as a student grows and matures. There could be significant differences in perceptions of academic

dishonesty between a community college, a 4-year university, and a graduate program. There is evidence academic dishonesty is a problem in community colleges (Stoesz et al., 2019), though there does not appear to be much recent research in this area. However, there does appear to be evidence that students' attitudes toward academic dishonesty change as they age. Blau et al. (2021) found junior and senior university students were less tolerant of academic dishonesty than first- and second-year students.. Although some studies found no difference between undergraduate and graduate students in academic dishonesty (Blau et al., 2021; Brown et al., 2019), others found that undergraduates are caught cheating 7 to 10 times more often than graduate students (Fass-Holmes, 2017) and that master's students are less tolerant of cheating than undergraduates (Blau et al., 2021).

A number of important variables were not included in this study that may play a substantial role in academic dishonesty. Variables such as religion or other background variables like culture may similarly be important in understanding cheating attitudes and behaviors. For instance, religiosity has been found to be negatively correlated with academic dishonesty, as students who purposefully prioritize moral attitudes and behavior may have more negative attitudes toward cheating (Onu et al., 2019). This study did not include any variables related to religion, so it is unknown whether religiosity would have influenced perceptions of academic dishonesty.

Cultural differences can also shape perceptions of academic dishonesty. For example, in China, due to a communist culture where collectivism is valued over individualism, many students do not regard certain cheating behaviors as dishonest (Jian et al., 2018; Zhang et al., 2018). Because the current study took place in the U.S., it is

unknown whether or how students' unique cultural backgrounds influenced their perceptions of academic dishonesty.

In addition, individual personality traits appear to play an important role in attitudes and behaviors regarding academic dishonesty. In their analysis, Jalilian et al. (2016) found that sensation seeking was one of the top three predictors of academic dishonesty, in addition to intention and perceived behavioral control. The authors noted that sensation seeking can be associated with risk-taking, and cheating is certainly a risk. There may be other individual-level personality traits that have an important influence on perceptions of cheating. Future research might well explore the differences between influences on perceptions of academic dishonesty—environment, culture, and personality.

In addition, academic dishonesty could be studied qualitatively. In-depth qualitative interviews could help researchers better understand academic dishonesty from a student's perspective. In-depth interviews are excellent for gaining rich information and allow the researcher to ask follow-up questions instead of being tied to a specific list of questions (Queirós et al., 2017). For instance, a researcher would be able to ask students about a situation where they had an opportunity to cheat and about their thought processes and feelings at the moment. In addition, to explore the influence of variables like religion, race, or culture on the student's attitudes or behaviors regarding cheating, a deeper discussion may help the researcher understand the student's perspective in much more detail than in a survey.

Implications

The findings of this study have several implications. This section will describe the most pertinent impact of the results as they pertain to three areas: social change, theory, and practice. Each of these areas is discussed below.

Social Change

Universities are not only in the business of awarding degrees but also form an important socializing experience for the typical college-aged cohort. Colleges do not simply produce graduates but also instill values and help students develop their integrity and sense of character. However, as college degrees have become increasingly important in today's job market, at least some students may prioritize receiving the degree itself over the learning and character-building aspects of a college education. Disturbingly, many students justify cheating (Makridis & Englander, 2020) and use various psychological techniques to avoid feeling guilty (Stephens, 2017). Some students justify cheating due to performance anxiety, and some learners may engage in academic dishonesty due to academic performance-related anxiousness. They tend to cheat to avoid failing a program or obtaining poor academic scores. However, most students avoid guilt by owning their mistakes and putting more effort in their studies to improve their overall grades.

Trends related to academic honesty present challenges to maintaining the integrity and value of higher education and the credentials it grants. The need for social change relates to increased academic dishonesty among college and university students. The first research question addressed the relationship between academic dishonesty and gender. A

two-tailed ANOVA test revealed no statistically significant differences in perceptions of academic dishonesty based on gender. This means that academic dishonesty was prevalent in both genders.

If a student cheats and does not face any consequences, they may continue to cheat and harm themselves or others in the future. This has negative implications for society overall and may help someone unfairly get into a position they do not deserve. As a college degree is associated with significant prestige, it is assumed that the degree is rightly and fairly earned. Employers look to applicants' educational backgrounds in deciding the best person for the job. When a student has cheated their way through college, however, they may land a job unfairly that a non-cheating student more aptly deserves. This places strain on the workplace and, on a societal level, compromises the character of the community and its members. Students who cheat in school may well cheat in other areas of life, creating more social problems down the line. Thus, understanding attitudes and perceptions of academic dishonesty are essential in not only formulating university policies and procedures for handling cheating but also, on a broader scale, creating a more honest and fair community, state, and country.

Theory

The theory of planned behavior (Ajzen, 1985, 2016; Ajzen & Dasgupta, 2015) appears to provide a sound basis for understanding the topic of academic dishonesty. Although this study did not focus on the behavior of cheating directly, it instead assessed perceptions of academic dishonesty. However, this is appropriate for the theory of planned behavior, as Ajzen (1985, 2016) holds that attitudes towards a behavior play a

significant role in the behavior itself. For instance, the COVID-19 pandemic forced many institutions to conduct distant learning, which made in-person students more likely to engage in online dishonesty. Therefore, this study's findings can help understand variables contributing to cheating behavior even if not studying behavior directly. Students have either a positive or negative attitude towards cheating, which—in accordance with the theory of planned behavior—can be influenced by behavioral, normative, and control beliefs. For instance, if other students at the school cheat regularly, this creates a normative belief that cheating is acceptable at that institution.

Practice

There are important practical implications from the findings of this study. Attitudes towards academic dishonesty are an important consideration in understanding the phenomenon more generally. All universities want their students to behave honestly, and one way to help accomplish this goal may be to address students' attitudes toward cheating. A mandatory course in ethics may help instill values for ethical behavior in the student body and help students focus on why honest college education is important for their personal life, career, and family. Research on honor codes suggests that when the focus is on punishment and fear of consequences, honor codes are less effective at preventing cheating (Tatum & Schwartz, 2017). On the other hand, when honor codes focus on raising students' ethical and moral standards, they have been found beneficial in reducing cheating behaviors (Brimble, 2016). Thus, educating students on ethics may influence their attitudes towards academic dishonesty and ultimately prevent more cheating.

Conclusion

Although the proliferation of technology has made academic participation more accessible to a wider range of the population, students have been simultaneously exposed to increasing opportunities to commit academic dishonesty, and learning institutions have consequently been faced with the task of identifying and addressing a whole new range of dishonest behaviors. Because the number of colleges, universities, and secondary schools offering online courses has increased, the overall rate of academic dishonesty has the potential to increase proportionately. To date, higher education has been slow to respond to the problem effectively, hampered by a lack of quality research into the social, cultural, and psychological reasons why students cheat. More effective strategies are possible by developing evidence based on the causes of this detrimental behavior. Finally, there is a need for both online and campus-based faculty to become more technologically well informed so that they may acquire more efficient and innovative techniques to assess student progress and learning in online courses and to decrease cheating as much as possible.

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Appendix A: Academic Information Survey

SECTION I. DEMOGRAPHIC INFORMATION

1. Gender
Male
Female

2. Age
17-20
21-24
25 or older

3. What is your marital status?
Single, never married
Married
Divorced
Widowed

4. What is your academic classification?
Freshman
Sophomore
Junior
Senior
Graduate

5. What is your enrollment status?
Part-time
Full-time

6. What is your cumulative grade point average (GPA)?
3.75–4.00 (A)
3.25–3.74 (A-)
2.75–3.24 (B)
2.25–2.74 (B-, C+)
1.75–2.24 (C)
1.75 (C- or lower)

7. What type of educational setting are you enrolled in?
Distance education, with at least 75% of the courses held online.
Campus-based, with at least 75% of the courses held in a traditional classroom setting
Equal percentage of both distance education and campus-based courses

8. **How many hours during a typical week do you spend studying or doing homework?**
   0
   <1-2
   3-5
   6-10
   11-15
   16-20
   21-30
   31+

9. **What study pattern fits you best?**
   1. Never study
   2. Cramming before exams
   3. Cramming before exams and some study during most weeks
   4. Weekly study with reviews before exams
   5. Studying almost every day
   6. Studying every day, including weekends

10. **Some college students give a high priority to their social life, others give academic work a high priority. Which of the following is closest to your own position?**
   1. Social life is my most important priority
   2. Social life is more important than academics
   3. Social life and academics are about equal
   4. Academic work is more important than my social life
   5. Academic work is my most important priority

Appendix B: Academic Locus of Control Inventory

SECTION II: The following questions ask you to share your beliefs about your Academic Locus of Control. Please mark the response that best represents how much you agree or disagree with each statement.

1 = *strongly disagree*, 2 = *disagree*, 3 = *disagree more than agree*, 4 = *agree more than disagree*, 5 = *agree*, 6 = *strongly agree*

1. I can easily be talked out of studying

- strongly disagree
- disagree
- disagree more than agree
- agree more than disagree
- agree
- strongly agree

3. I often end up daydreaming when I study

- strongly disagree
- disagree
- disagree more than agree
- agree more than disagree
- agree
- strongly agree

4. I am easily distracted when studying

- strongly disagree
- disagree
- disagree more than agree
- agree more than disagree
- agree
- strongly agree

5. I am often bored in class

- strongly disagree
- disagree
- disagree more than agree
- agree more than disagree
- agree
- strongly agree

6. I usually rely on cramming to prepare for exams and for finishing assignments

- strongly disagree
- disagree
- disagree more than agree
- agree more than disagree
- agree
- strongly agree

7. I often end up daydreaming when I am in class

- strongly disagree
- disagree
- disagree more than agree
- agree more than disagree
- agree
- strongly agree

8. What study pattern fits you best?

1. Never study
2. Cramming before exams
3. Cramming before exams and some study during most weeks
4. Weekly study with reviews before exams
5. Studying almost every day
6. Studying every day, including weekends

9. Some college students give a high priority to their social life; others give academic work a high priority. What about you? Which of the following is closest to your own position?

1. Social life is my most important priority
2. Social life is more important than academics
3. Social life and academics are about equal
4. Academic work is more important than my social life
5. Academic work is my most important priority

Appendix C: Academic Dishonesty Questionnaire

SECTION II: To what extent do you agree or disagree that the following behaviors are ethically acceptable?

1 = *strongly disagree*, 2 = *disagree*, 3 = *disagree more than agree*, 4 = *agree more than disagree*, 5 = *agree*, 6 = *strongly agree*

1. Taking an exam for someone

    a. strongly disagree
    b. disagree
    c. disagree more than agree
    d. agree more than disagree
    e. agree
    f. strongly agree

2. Asking someone to take an exam for you

    a. strongly disagree
    b. disagree
    c. disagree more than agree
    d. agree more than disagree
    e. agree
    f. strongly agree

3. Purchasing a paper

    a. strongly disagree
    b. disagree
    c. disagree more than agree
    d. agree more than disagree
    e. agree
    f. strongly agree

4. Forging university documents

    a. strongly disagree
    b. disagree
    c. disagree more than agree
    d. agree more than disagree
    e. agree
    f. strongly agree

5. Obtaining answers from someone else during an exam (i. e., hand signals)

a. strongly disagree
b. disagree
c. disagree more than agree
d. agree more than disagree
e. agree
f. strongly agree

6. Using crib sheets

a. strongly disagree
b. disagree
c. disagree more than agree
d. agree more than disagree
e. agree
f. strongly agree

7. Stealing a test

a. strongly disagree
b. disagree
c. disagree more than agree
d. agree more than disagree
e. agree
f. strongly agree

8. Plagiarism

a. strongly disagree
b. disagree
c. disagree more than agree
d. agree more than disagree
e. agree
f. strongly agree

9. Collaborating on homework or take-home exams when individual work is specified

a. strongly disagree
b. disagree
c. disagree more than agree
d. agree more than disagree
e. agree
f. strongly agree

10. Handing in the same work for two classes

a. strongly disagree
b. disagree
c. disagree more than agree
d. agree more than disagree
e. agree
f. strongly agree

11. Inappropriately using a tutor or writing center

a. strongly disagree
b. disagree
c. disagree more than agree
d. agree more than disagree
e. agree
f. strongly agree

12. Studying from someone's notes

a. strongly disagree
b. disagree
c. disagree more than agree
d. agree more than disagree
e. agree
f. strongly agree

13. Failing to report a grading error

a. strongly disagree
b. disagree
c. disagree more than agree
d. agree more than disagree
e. agree
f. strongly agree

14. Not contributing a fair share to a group project

a. strongly disagree
b. disagree
c. disagree more than agree
d. agree more than disagree
e. agree
f. strongly agree

15. Delaying an exam or paper submission due to a false excuse

a. strongly disagree
b. disagree
c. disagree more than agree
d. agree more than disagree
e. agree
f. strongly agree

16. Studying from a test from a prior semester

a. strongly disagree
b. disagree
c. disagree more than agree
d. agree more than disagree
e. agree
f. strongly agree

17. Padding bibliography

a. strongly disagree
b. disagree
c. disagree more than agree
d. agree more than disagree
e. agree
f. strongly agree

Appendix D: Student Academic Honesty Survey

SECTION I. DEMOGRAPHIC INFORMATION

1. Gender

- Male
- Female

2. Age

- 17-20
- 21-24
- 25 to 59
- Over 59

3. What is your marital status?

- Single, never married
- Married
- Divorced
- Widowed

4. What is your academic classification?

- Freshman
- Sophomore
- Junior
- Senior
- Graduate

5. What is your enrollment status?

- Part-time
- Full-time

6. What is your cumulative grade point average (GPA)?

- 3.75–4.00 (A)
- 3.25–3.74 (A-)
- 2.75–3.24 (B)
- 2.25–2.74 (B-, C+)
- 1.75–2.24 (C)
- >1.75 (C- or lower)

7. What type of educational setting are you currently enrolled in?

- Distance education, with a majority of courses held online
- Campus-based, with at least 75% of the courses held in a traditional classroom setting
- Both distance education and campus-based courses

8. How many hours during a typical week do you spend studying or doing homework?

- 0
- <1-2
- 3-5
- 6-10
- 11-15
- 16-20
- 21-30
- 31+

9. What study pattern fits you best?

- Never study
- Cramming before exams
- Cramming before exams and some study during most weeks
- Weekly study with reviews before exams
- Studying almost every day
- Studying every day, including weekends

10. Some college students give a high priority to their social life; others give academic work a high priority. What about you? Which of the following is closest to your own position?

- o Social life is my most important priority
- o Social life is more important than academics
- o Social life and academics are about equal
- o Academic work is more important than my social life
- o Academic work is my most important priority

SECTION II: The following questions ask you to share your beliefs about your Academic Locus of Control. Please mark the response that best represents how much you agree or disagree with each statement.

11. I can easily be talked out of studying

- o strongly disagree
- o disagree
- o disagree more than agree
- o agree more than disagree
- o agree
- o strongly agree

12. I often end up daydreaming when I study

- o strongly disagree
- o disagree
- o disagree more than agree
- o agree more than disagree
- o agree
- o strongly agree

13. I am easily distracted when studying

- o strongly disagree
- o disagree
- o disagree more than agree
- o agree more than disagree
- o agree
- o strongly agree

14. I am often bored in class

    - strongly disagree
    - disagree
    - disagree more than agree
    - agree more than disagree
    - agree
    - strongly agree

15. I usually rely on cramming to prepare for exams and for finishing assignments

    - strongly disagree
    - disagree
    - disagree more than agree
    - agree more than disagree
    - agree
    - strongly agree

16. I often end up daydreaming when I am in class

    - strongly disagree
    - disagree
    - disagree more than agree
    - agree more than disagree
    - agree
    - strongly agree

SECTION III: To what extent do you agree or disagree that the following behaviors are ethically acceptable?

17. Taking an exam for someone

    - strongly disagree
    - disagree
    - disagree more than agree
    - agree more than disagree
    - agree
    - strongly agree

18. Not contributing a fair share to a group project

    - strongly disagree
    - disagree
    - disagree more than agree
    - agree more than disagree
    - agree
    - strongly agree

19. Asking someone to take an exam for you

    - strongly disagree
    - disagree
    - disagree more than agree
    - agree more than disagree
    - agree
    - strongly agree

20. Purchasing a paper

    - strongly disagree
    - disagree
    - disagree more than agree
    - agree more than disagree
    - agree
    - strongly agree

21. Forging university documents

    - strongly disagree
    - disagree
    - disagree more than agree
    - agree more than disagree
    - agree
    - strongly agree

22. Obtaining answers from someone else during an exam (e.g. hand signals)

    - strongly disagree
    - disagree
    - disagree more than agree
    - agree more than disagree
    - agree
    - strongly agree

23. Using crib sheets (unauthorized little notes concealed by the test taker and used for quick reference)

    - strongly disagree
    - disagree
    - disagree more than agree
    - agree more than disagree
    - agree
    - strongly agree

24. Stealing a test

    - strongly disagree
    - disagree
    - disagree more than agree
    - agree more than disagree
    - agree
    - strongly agree

25. Plagiarism

    - strongly disagree
    - disagree
    - disagree more than agree
    - agree more than disagree
    - agree
    - strongly agree

26. Collaborating on homework or take-home exams when individual work is specified

    - strongly disagree
    - disagree
    - disagree more than agree
    - agree more than disagree
    - agree
    - strongly agree

27. Handing in the same work for two classes

    - strongly disagree
    - disagree
    - disagree more than agree
    - agree more than disagree
    - agree
    - strongly agree

28. Ippropriately using a tutor or writing center

    - strongly disagree
    - disagree
    - disagree more than agree
    - agree more than disagree
    - agree
    - strongly agree

29. Studying from someone's notes

    - strongly disagree
    - disagree
    - disagree more than agree
    - agree more than disagree
    - agree
    - strongly agree

30. Failing to report a grading error

- strongly disagree
- disagree
- disagree more than agree
- agree more than disagree
- agree
- strongly agree

31. Delaying an exam or paper submission due to a false excuse

- strongly disagree
- disagree
- disagree more than agree
- agree more than disagree
- agree
- strongly agree

32. Studying from a test from a prior semester

- strongly disagree
- disagree
- disagree more than agree
- agree more than disagree
- agree
- strongly agree

33. Padding bibliography

- strongly disagree
- disagree
- disagree more than agree
- agree more than disagree
- agree
- strongly agree