

Thematic content analysis of literature regarding academic misconduct
and the use of technology

by

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B.M.E., Pittsburg State University, 1990
B.S., Montana State University-Northern, 1993
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AN ABSTRACT OF A DISSERTATION

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Abstract

Academic misconduct continues to be an endemic problem in schools. This study uses a broad systematic literature review of one-hundred papers covering 79,821 students to explore the factors causing moral disengagement to occur in order to identify the underlying motivations which are pressuring students into behaviors such as plagiarism and cheating. This study examines the prevalence of these behaviors and evolution through four eras of technology which are labeled “old-school”, “retro-tech”, “high-tech”, and into the fledgling era of “AI”. In doing so, the study investigates student-reported causes of academic dishonesty and rationalizations given as motivations prompting moral disengagement as defined by Bandura, and specific triggers tipping the risk-reward balance in favor of academic dishonesty. Examination of these factors was accomplished through content analysis of a selected body of primary research literature of unique studies, cataloging data from those studies using ethnographic thematic analysis to create comparisons of qualitative, quantitative, and mixed methods studies. It was found, using a subjective inter-study comparison looking at technology, not chronology or geography, that although the concern with some types of academic misconduct increased such as falsification of work and plagiarism increased, the overall prevalence of academic misconduct as well as factors contributing to moral disengagement, decreased with the advancing levels of technology. The implication of these findings is that educators should continue their strategies addressing unintentional and intentional academic misconduct. This study shows a clear relationship between academic misconduct and the technology available. However, more research is needed to establish a more granular baseline by which to evaluate the fledgling technology of artificial intelligence and its effects on academic misconduct.

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Academic misconduct continues to be an endemic problem in schools. This study uses a broad systematic literature review of one-hundred papers covering 79,821 students to explore the factors causing moral disengagement to occur in order to identify the underlying motivations which are pressuring students into behaviors such as plagiarism and cheating. This study examines the prevalence of these behaviors and evolution through four eras of technology which are labeled “old-school”, “retro-tech”, “high-tech”, and into the fledgling era of “AI”. In doing so, the study investigates student-reported causes of academic dishonesty and rationalizations given as motivations prompting moral disengagement as defined by Bandura, and specific triggers tipping the risk-reward balance in favor of academic dishonesty. Examination of these factors was accomplished through content analysis of a selected body of primary research literature of unique studies, cataloging data from those studies using ethnographic thematic analysis to create comparisons of qualitative, quantitative, and mixed methods studies. It was found, using a subjective inter-study comparison looking at technology, not chronology or geography, that although the concern with some types of academic misconduct increased such as falsification of work and plagiarism increased, the overall prevalence of academic misconduct as well as factors contributing to moral disengagement, decreased with the advancing levels of technology. The implication of these findings is that educators should continue their strategies addressing unintentional and intentional academic misconduct. This study shows a clear relationship between academic misconduct and the technology available. However, more research is needed to establish a more granular baseline by which to evaluate the fledgling technology of artificial intelligence and its effects on academic misconduct.

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Chapter 1 - Introduction

Introduction

Academic misconduct is an epidemic in secondary schools, colleges, and universities in America and in other parts of the world (Allyn, 2012). A survey of over 3,600 American high school students reported that 95% of students admitted to engaging in at least some form of academic misconduct (Stephens & Wangaard, 2016). At the post-secondary level, the epidemic continues with most college students reporting having cheated at least once in their college career (Wright et al., 2018) with a survey of 336 students by the Yale Daily News (Hamamy & Chang, 2021) reporting that 28.57% of respondents admitted to committing academic misconduct at Yale. In Texas, a qualitative study of a cohort at “large, very selective R1 institution of higher education” showed that well over half of the students engaged in unpermitted collaboration that broke the boundary into collusion (McNabb et al., 2023). In Mexico, an extensive survey of 8,240 university students showed an academic misconduct rate of 38% (Yukhymenko-Lescroart et al., 2022).

Academic misconduct is an issue affecting schools across other continents as well. In Pakistan, Central Asia, a study with 250 students reported a rate of 96% (Rahman et al., 2023). In the Czech Republic, European Union, a study with 660 students reports a rate of 70% (Dannhoferová et al., 2022). In Ethiopia, Africa, a survey with 1,246 students reports a rate of 80% (Dejene & Hui, 2021). In South Africa, a university study with 98 students in several classes showed an 82% rate of plagiarism in an introductory class (Mahomed et al., 2023). In Oceania, a survey of 4,493 students in New Zealand reports that about two-thirds in the RAINZ universities engaged in at least one form of academic misconduct during the 2022 School year

(Stephens et al., 2024). The only continent for which searching did not yield any incidents or academic misconduct, cheating, or plagiarism is Antarctica.

Cheating can be subtle and almost impossible to ascertain. It can be the quiet visual communication of friends in the classroom, or it can be blatant. There was an incident in India in which some 600 high school students were expelled for cheating after a televised incident where parents were scaling the walls of the school to give answers to the students inside. The police and fire services could be seen in the video, standing-by, keeping order to make sure the whole operation was safe and none of the parents injured themselves by falling (Associated Press, 2015). In short, academic dishonesty is everywhere.

Academic misconduct, dishonesty, and integrity defined

Academic misconduct is the broad umbrella that covers all unethical behaviors, both intentional and unintentional with behaviors that are intentional being an attempt to gain an advantage in an academic setting (Stephens et al., 2024). Although the terms, “academic misconduct”, “academic dishonesty”, and “cheating” are often used interchangeably and synonymously (Jurdi et al., 2011; Marques et al., 2019; Sorgo et al., 2015; Stephens et al., 2024), there are subtle differences. “Academic dishonesty” is an intentional behavior, the use of work not belonging to the student or assistance received or given without permission (Maramark & Maline, 1993; Soylemez, 2023) including activities such as plagiarism, fabrication, deception, cheating, or sabotage (Marquez et al., 2019; Peterson, 2019), is a subset of academic misconduct. Academic misconduct of various types during a test or exam would typically fall into the category of “cheating” (Sorgo et al., 2015).

Plagiarism is a special academic misconduct occurring in writing and would be copying or claiming the writing from someone else and attempting to pass them off as their own

(Johnson, 2023), succinctly defined in the Kansas State University Honor Code (2020) as the, “Taking of credit for someone else’s ideas, work, or words.”

Other less common forms of misconduct and dishonesty include “contract cheating” which would be hiring someone else to write a paper or essay (Dawson & Sutherland-Smith, 2018; Newton, 2018; Rahimi et al., 2024), “collusion” which collaboration without permission or unauthorized “working together” (Amua-Seyki, 2016; Johnson, 2023; Kansas State University, 2020). Other academic misconduct falling into the category of unethical and fraudulent in terms of gaining an advantage and manipulating a grade, but not technically academic dishonesty, occurring on an assignment such as brown-nosing the teacher (Yukhymenko-Lescroart, 2014), hacking the school information system or physically changing the grade sheet (Yukhymenko-Lescroart, 2014), and parents or students applying undue influence on the instructor or administration to change a grade (Contreras-Pacheco et al., 2024, Knepp & Knepp, 2022). Many honor codes go as far as to, sometimes even quoting a dictionary, comparing plagiarism with theft, the stealing of ideas from another (Johnson, 2023, Levine & Pazdernik, 2018; Kansas State University).

Academic integrity is the exact opposite of what was described in the paragraph above embodied by, “Honesty, courtesy, and open dealing with others,” (Kansas State University, 2020). Even though this paper examines the issue of unintentional academic misconduct, the coverage and concern about intentional misconduct in the form of academic dishonesty was a primary concern of most works. As can be seen in Appendix B, only 19 out of 100 included studies spent significant space investigating unintentional academic misconduct.

Background and Statement of the Problem

The varieties of academic misconduct which can be found are virtually unlimited by the boundless ingenuity of students attempting to shortcut the academic process. Students who have morally disengaged and are ready to execute academic dishonesty and cheat have an array of techniques at their disposal and are exceedingly inventive and ready to innovate in their pursuit of their goals (Starovoytova & Arimi, 2017). For “in-person” courses, the methods of cheating include everything from passing notes, secret codes, strong peripheral vision of the paper next door, obtaining questions in advance of an exam, or just copying something from a friend’s paper. In online courses, consulting Wikipedia or some form of cut-and-paste plagiarism is more common (Tolman, 2017).

Motivations, causes, and who is affected

Most academic misconduct is the result of the pressure to meet or exceed a performance goal providing a temptation to disengage morally from the task (Dejene & Hui, 2021; Hamamy & Chang, 2021; Kapoor et al., 2022). Students susceptible to these pressures include students allowing insufficient time to complete their work, non-native English speakers who must spend additional time processing information, and students unprepared for their current classes due to lack of proper prerequisites. Performance goals can motivate students to achieve, but the dark side of high-performance goals is the link to unethical behavior including academic dishonesty. (Schweitzer, Ordonez, & Douma, 2004; Welsh & Ordóñez, 2014)

The motivations of intentional academic dishonesty occurring after a moral disengagement vary from place to place (Bandura, 2002; Brent & Atkisson, 2011; Diego, 2017; Gentina et al., 2017), but the goal is always the same. Outside of North America and Western Europe, many countries lack extensive coverage of social services. For these students, it is the

foundational Maslowian needs paramount to survival of the family which motivate (Fritz et al., 2023; Ramzan, 2012). Salaries are determined not by skill but by networking and the status of the university attended (“In China”, 2002). In Hong Kong, there is a strong need for relationship and societal goals to conform with one’s peers (Tsui & Ngo, 2016). In Romania, there are examples where cheating was a part of social networking (Topiceanu, 2017). Even in challenged urban districts in the United States, there is academic dishonesty and corruption. In one instance in the Atlanta Public Schools, it was school administration cheating on behalf of their students to protect the livelihood of their teachers and themselves (Royal & Dodo Seriki, 2018).

For some, academic misconduct may be the result of inexperience or ignorance (Divan et al., 2015). If the student came from a home-school environment or from a foreign country which was more one-on-one with the instructor in its teaching, the student may not have faced the temptation or opportunity, let alone the consequences of academic misconduct (Ramzan et al, 2012; Razek, 2014). So, he or she has not had the ready opportunity to cheat or plagiarize because of direct interaction with the instructor. For these students, it is important to educate them on the agreed-upon requirements of academic integrity before they face consequences for violating these policies in ways which are foreign to their everyday thinking (Ramzan et al., 2012). In addition, students coming from an environment where a significant portion of their evaluation is done on a one-to-one verbal or performance basis may have a low awareness of behaviors which would be contrary to a consensus of honor codes (Razek, 2014).

Academic dishonesty is not uniform, and who cheats changes from situation to situation. In some cases, a major motivator is loyalty to family and friends, the cultural support of the people close to one’s heart exemplified by the well-intentioned concept of *utang na loob*, debt to the inside (Diego, 2017). In some situations, it is popular girls who sometimes manipulate their

circle of friends to enable various forms of academic dishonesty (Gentina et al, 2017). However, for other situations, it is the unpopular boys who are most likely to take shortcuts to achieve a coveted success (Gentina et al., 2017).

Theoretical Foundation

Bolin's Four Considerations

Academic dishonesty is not always a neat, clean, clearly discernable phenomenon (Razek, 2014). As with any discipline situation with a student, a standard practice is to apply the stasis theory to the investigation. Bolin (2010) lists four considerations before drawing a hard and fast conclusion when looking at plagiarism in specific. However, these can also be applied to any situation involving dishonesty.

The first consideration is conjecture. Conjecture involves determining whether an incident of potential academic dishonesty has occurred and whether it was intentional. The second consideration is to define the action involved in the situation and determine whether it truly is academic dishonesty. Bolin (2010) remarks regarding plagiarism that, "Almost every definition available is distressingly vague" (p. 16). Cutting and pasting a paper out of Wikipedia would be a clear-cut case of plagiarism. However, some examples are not as clear.

The third consideration mentioned by Bolin (2010) is quality. This involves ascertaining the intention of the student and the seriousness of the issue. Part of this would be based upon the age group, culture, and experience of the student in question. A third-grader hand-copying a paragraph out of Wikipedia is plagiarizing in the same manner as a high school freshman, or a college freshman for that matter. However, the intent of the third grader is likely quite different than that of the high school freshman comprising a major difference (Royal & Dodo Seriki, 2018).

Figure 1-1. Bolin's Four Considerations

Bolin's four considerations when encountering potential plagiarism:

1. Conjecture (Intent): Has an incident of academic dishonesty occurred? Is it intentional?
2. Define the Action (Extent): What occurred? Is it truly academic dishonesty?
3. Quality (Impact): What was the student's intent? How serious is the issue? What are the potential consequences?
4. Policy (Context): What is the appropriate response given the situational environment in which the plagiarism occurred?

(Bolin, 2010)

Finally, the fourth consideration is policy. This requires deciding what action should be taken. The approach to action should not be a one-size fits all for every child or student from elementary school all the way to university (Clark & Soutter, 2016).

Bandura's moral agency

Moral agency is the foundational theory underlying this research. Humans have an innate moral compass which gives us the ability to know the difference between right and wrong, and hopefully do the right thing (Palmer, 2008). With the exception of very young children, almost everyone we encounter on a daily basis has the capability to act as a moral agent, knowing the difference between right and wrong, and is held accountable for his or her actions. Underpinning the research is the concept that it is possible to selectively disengage specific elements of a person's moral agency (Bandura, 2002). The premise is that moral disengagement, also known as moral dissociation in Spanish language literature cited in this study, is the foundation of intentional cheating.

Opportunity

After a student has made the decision to disengage morally and has dropped the internal regulatory control barrier to academic dishonesty (Bandura et al., 1996), it does not mean the student will actually execute an action of intentional academic dishonesty. He or she now looks for the opportunity to cheat. (Sorgo et al., 2015; Wormeli, 2017) Setting the action into motion is a matter of risk assessment and an informal assessment of the risks and rewards. When inaccurate, rational students can make decisions which seem senseless to an observer but make perfect sense to the student at the time (Chapin et al., 2017). The problem is that most institutional consequences for cheating assume a rational individual even though that risk/reward threshold varies irrationally. Interestingly, even though most students believe academic dishonesty is never justified with the majority never cheating, 61% in one study at the University of Missouri Columbia, some students were ready and willing to cheat whenever the opportunity availed itself (Brent & Atkisson, 2011).

That opportunity makes the cheater is well confirmed (Sorgo et al., 2015), and a major function of any new technology to enter into the academic space is to provide new and different opportunities (Gentina et al., 2017). With the advent of inexpensive writing utensils and paper, the cheat-sheet was developed. With the advent of the cellular telephone that would fit in one's pocket, carrying one of these devices became ubiquitous. By 2012, a survey of 269 college students in 21 different majors at a university in the northeastern United States, 95% of the students reported they bring their cell phone to class every day with 97% of those reporting they had sent or received a text message at some point during class time (Tindell & Bohlander, 2012). In that era with physical keyboards, some students were well-practiced enough with the physical keyboards of the cell phones of the era, they could send a text message without ever removing

the phone from their pockets. With the advent of the smart phone, students were now walking around with computers in their pockets—read to be utilized in all sorts of activities. Recently, a study in Russia showed that 70% of students admitted to having used a mobile phone to Google or access notes during examinations (Maloshonok & Shmeleva, 2019).

Statement of the Purpose

The purpose of this study was to look at academic integrity issues, both unintentional and intentional in a longitudinal fashion through progressive areas of technology, attempting to locate changes and trends in attitudes, triggers, and behaviors. This study explored the reported causes for unintentional academic dishonesty in cases where moral disengagement has and has not occurred and identify the underlying motivations, which are pressuring students to cheat. Additionally, this research studied factors as delineated from several sources which enable moral disengagement to occur. The findings address the problem but should illuminate the way to approaches that are being used as a foundation for proactive practices and policies to prevent moral disengagement in this age of quickly developing technologies.

Paradigms of existing preventative strategies

Most preventative measures taken to discourage academic dishonesty are reactive and aimed at preventing students who are already disengaged from having an easy opportunity to cheat or at catching students after they have already cheated or plagiarized (Holt, 2012). This is an external regulation focused on a faulty assumption that everyone will cheat if given the opportunity. Many students will not willfully cheat even if given the opportunity. The current system of preventions incentivizes those who have decided to practice academic dishonesty to become more proficient at locating and utilizing opportunities rather than persuading the student not to cheat in the first place (Kiviniemi, 2015). Ideally, an unethical action such as cheating is

prevented by internal regulation where the student's internal control system remains intact and engaged (Bandura et al., 1996).

Conversely, many educators assume automatically that all academic misconduct they find is malicious dishonesty, when sometimes it is not (Ramzan et al., 2012; Razek, 2014). The proportion of intentional to unintentional academic misconduct among groups is unknown with most data being part of qualitative studies. Locating groups at high risk of unintentionally violating a school's honor code could be quite useful so they can be provided with training and education, which could prevent those infractions (Razek, 2014; Holt, 2012).

Categories

The categories of basic motivational reasons prompting moral disengagement correlating toward academic dishonesty show similar themes in almost every study cited in this paper. Not every category is mentioned in every study, but taken together, all of them are mentioned multiple times. What appears to differ is the magnitude of representation in each of those categories. As an example, economic survival of an institution, family, or individual is a major motivating factor in some places ("In China", 2002). Even though the economic factor is not as prominent in western countries, the economic motivation does also have a representation all places including the United States. (Royal & Dodo Seriki, 2018).

Categories which trigger morally disengaged students to commit acts of academic dishonesty are basically the same in each of the studies surveyed. A significant amount of research has been done in cheat-proofing testing environments and catching plagiarizers. However, what is unknown is how the variance of representation of these triggers has changed in how they are affected by recent advances in technology such as AI which is not yet fully developed to the extent that its effects can be truly known.

Research Questions

To better understand the purpose of this dissertation, I used thematic content analysis to investigate a collection of 100 articles eligible for inclusion in the study to address the following research questions: In existing studies,

1. At the secondary and post-secondary educational levels, what is the general prevalence of academic misconduct?
2. How frequent is unintentional academic misconduct as compared to intentional academic misconduct?
3. What reasons do students give as their motivations which prompt them to morally disengage, resulting in academic dishonesty, and how frequent is the reported occurrence of each?
4. What do students report as the specific triggers which led to a decision that the reward of cheating outweighed the risk of getting caught in specific situations, and how do the frequencies of each cause compare to each other?
5. What do students report in these studies would cause them to not feel the need to cheat?
6. How do the answers to these questions differ throughout the old-school, retro-tech, high-tech, and A.I. technological eras?

Significance of the Study

Currently, a vast corpus of qualitative and quantitative primary studies exists each with its own snapshot of time and place. Studies also abound reviewing the literature, focused on the era in which it was composed. However, the purpose of this study was to look at academic

integrity issues, both unintentional and intentional in a longitudinal fashion through progressive eras of technology, attempting to locate changes and trends in attitudes, triggers, and behaviors.

Educators around the world are an inventive lot, and with necessity being the mother of invention, a myriad number of solutions to a myriad number of different types of academic dishonesty have been found. Some are preventative and some are punitive. This study looked for patterns using a step-by-step method of thematic analysis (Naeem et al., 2024) to understand better how academic dishonesty has been manifested in different technological eras instead of cultures, geography, or even chronology as they made and implemented their decisions and choices.

Even more importantly is the opportunity this data has to illuminate the way toward potential possible ways to deal with the multiple issues of academic misconduct. Coupled with the other factors investigated, being utilized with various cultures in other places but at a common era of technology comes the ability to analyze and compare their data by technological era rather than just comparing culture to culture or simply by time. By learning vicariously through others, data has been obtained which could assist in informing best practices to prevent and deal with academic dishonesty to provide incremental options between doing nothing and expulsion of the student.

Summary and Overview of Chapters

The problem, as described in Chapter 1, academic misconduct, is endemic in all schools and the varieties of it are virtually unlimited, adapting constantly to surrounding circumstances (Starovoytova & Arimi, 2017) motivated by many different causes (Welsh & Ordóñez, 2014) both unintended and intended following moral disengagement (Bandura, 2002) which is fueled by the perception, whether correct or not, that, “Our school system values grades more than

students value learning,” (Tyson, 2013). In Chapter 2, I unpack the literature regarding the causes, prevalence, types, methods, and current approaches to academic dishonesty as well as the theoretical framework of Dr. John Bolin’s Four Considerations (2010) and Dr. Albert Bandura’s concept of moral agency (Bandura, 2002; Bandura et al., 1996). In Chapter 3, I described how a step-by-step method of thematic analysis (Naeem et al., 2023) was used to examine, from an ethnographic point of view (Schultz, 2024), the research questions via continual refinement of phrases, coding, and development of themes throughout the literature review process. In Chapter 4, the results are interpreted through an interpretation of the themes and codes (Naeem et al., 2023), analyzed quantitatively (Braun & Clark, 2006; Krippendorff, 2019) and expressed visually in the form of tables and charts (Naeem et al., 2024; Schultz, 2012). Chapter 5 discusses the findings of this work in terms of the research questions as well as the implications for the practice of education practitioners.

Chapter 2 - Literature Review

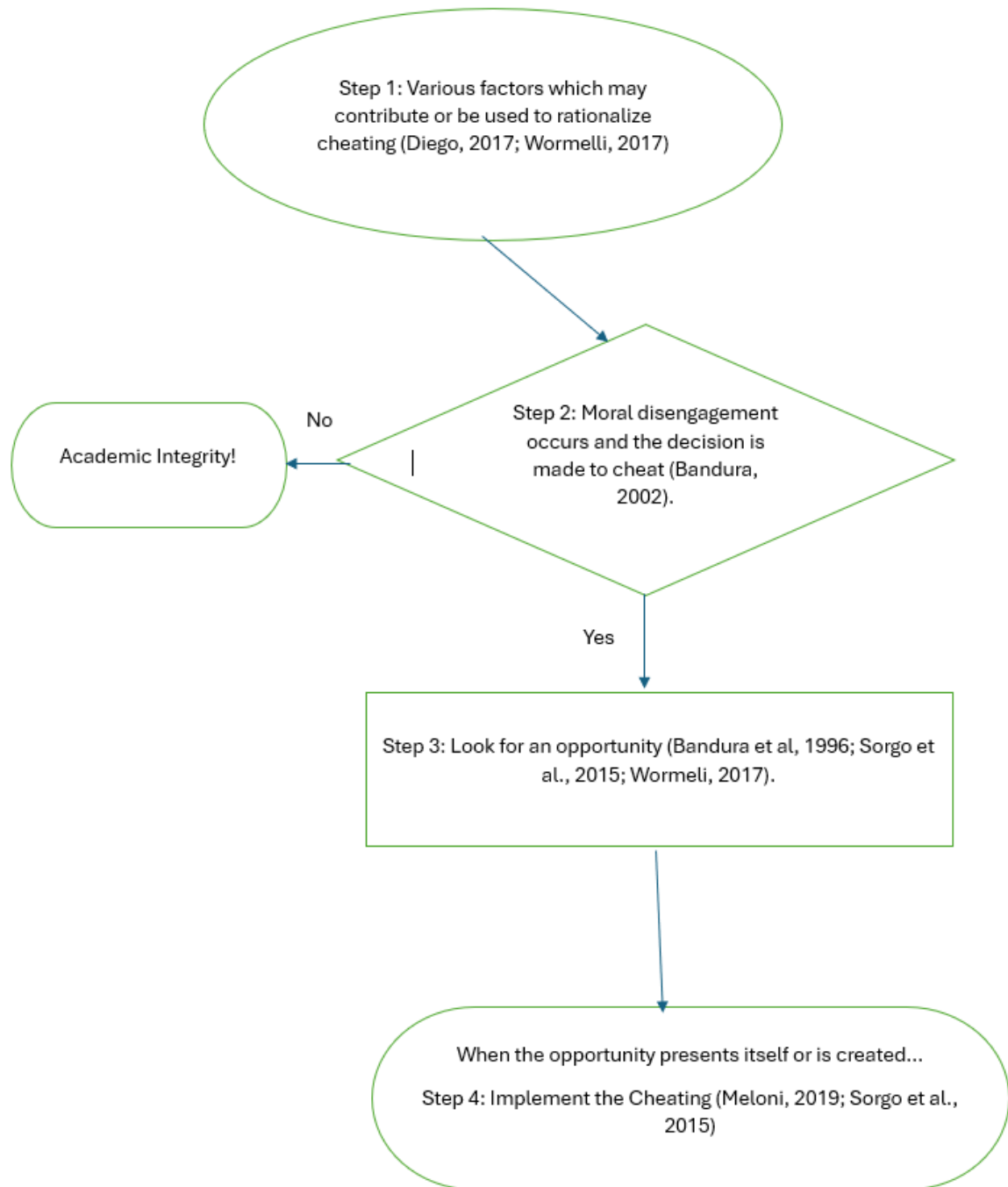
The student objective of academic misconduct whether intentional or unintentional is to provide a cognitive shortcut (Scott, 2016) to achieve their ultimate goals, usually, good grades (Strarovoytova & Arimi, 2017). Factors which would cause a young person to succumb to temptation and cheat are many and varied. Sometimes, schools and communities pressure the student that grades supersede everything else in importance, or as Neil deGrasse Tyson (2013) in his famous, April 14, 2013, tweet, has eloquently stated, “When Students cheat on exams it's because our school system values grades more than students value learning.” Sometimes it is because a student wants to participate in a sport or extracurricular activity and cannot do so without acceptable grades (Wormeli, 2017).

Causes of Cheating

The surrounding culture may encourage cheating where sharing is highly valued and if a learner does not share in the answers to make everyone successful, he or she could be labelled as an outcast (Diego, 2017). Anxious parents may over-assist students on homework or projects (Wormeli, 2017). Some students socialize around adults in the local or national culture that cheat in relationships, finances, their education to the point of making this type of dishonesty considered a normal part of life (Estep et al., 2011; Muth, 2015; Razek, 2014).

At times, students can become tired, exhausted, and deprived of sleep; they are not attentive to details or care about their work. They just want to complete tasks so they can rest (Wormeli, 2017). Given the high-stakes nature of assessment testing where jobs and careers are on the line, sometimes the teachers and administration can become involved in the cheating as was the case with the Atlanta Public Schools in 2015 (Royal & Dodo Seriki, 2018).

Figure 2-1. Steps toward Intentional Academic Misconduct



Prevalence of Academic Misconduct

The magnitude of academic dishonesty, plagiarism, and outright cheating is significant. Cheating is not just limited to the secondary level; these bad habits carry on to the post-secondary college and university levels as well. However, official statistics differ significantly, indicating that approximately 3-4% in both face-to-face and online courses at the college and university level have reported academic integrity violations (Tolman, 2017). The real number is probably less than the sensational seen in some of the papers quoted in this study, but greater than the 3-4% reported by Tolman (2017).

The Cheating Epidemic

Obviously, some plagiarism and cheating are submitted without the instructor catching or reporting it. Other students may be over-reporting plagiarism when they are doing what they believe to be insufficient paraphrasing of concepts by way of patchwriting through copying the original wording then changing it through deletion, addition, and substitution (Scott, 2016). However, the 3-4% estimate of cheating is only counting the percentage of plagiarism per course per semester (Tolman, 2017).

With college and university students normally enrolled in multiple courses for multiple semesters when part of a program, the total number of instances is compounding over time, and those students are not learning the subject matter and skills which they should be learning. In one study polling college students, 36% of college attending survey respondents admitted to having knowingly plagiarized material for written assignments (Scott, 2016). In an interesting correlation, Scott (2016) also points out that according to Arum & Roska's (2011) longitudinal study, 36% of students show no statistically significant improvement in writing or critical thinking skills over the four years they spend in college (Arum & Roska, 2011; Scott, 2016).

The Cheating Pandemic

The United States is not the only country to encounter cheating. As an extreme, in one study in Kenya, only 18% of the respondents indicated that they had never cheated (Starovoytova & Arimi, 2017). In the Philippines, sharing answers and other information is deeply rooted in a culture of *pakikisama*, or wanting to be liked (Diego, 2017). In Colombia, a survey at a private university in the City of Barranquilla found that almost 42% had participated in some form or another of academic dishonesty (Canchila et al., 2018). In Slovenia, cheating to game the system and school officials appears to be something akin to a good-natured competition with cheating being a “way of life” in Slovenian schools (Sorgo et al., 2015). Almost all high school students in Slovenia admit to having at least occasionally cheated with 99.1% having observed it. However, less than 5% report cheating on Matura exams which are the exams which really count (Sorgo et al., 2015). In a study at a private university in the City of Barranquilla in Colombia, the rate of students self-reporting exam fraud rates was lower than in the United States but reported sometimes intentionally plagiarizing others’ work or copying projects at 26%, and students admitted taking exams at times with unauthorized helps available such as a textbook or technology at 35% (Martinez et al., 2015). In China, the situation in the past decade was such that academic dishonesty was lowering the value of degrees earned in that country (“In China”, 2002). In short, academic dishonesty has been and remains a universal human pandemic.

Classification of Academic Misconduct

Unintentional

Academic misconduct can either be intentional or unintentional (Divan et al., 2015). Not every case of academic misconduct involves a moral disengagement (Bandura, 2002). Many causes of unintentional academic misconduct involve students with little to no training in

techniques of attribution, and as such are especially susceptible to plagiarism. For students in non-writing-intensive majors at the undergraduate level, education improves self-detection of potential plagiarism, significantly reducing the problem (Holt, 2012). However, the intention of an instance of academic dishonesty is not a consideration in most school policies and honor codes (Bolin, 2010). A zero-tolerance policy with mandatory consequences has the potential to lead to nightmarish results in the case of an unintentional infraction.

Intentional

Academic misconduct is often intentional. If misconduct, including academic dishonesty, is intentional, it must involve one or more of the mechanisms of moral disconnection, or moral disengagement (Martinez et al., 2015). Moral disengagement has been defined as a type of anti-social conduct where there is a partial or total deactivation of the internal regulatory control system of moral conduct (Canchila et al., 2018 & Bandura et al., 1996). Bandura describes eight mechanisms: moral justification, euphemistic labeling, advantageous comparison, displacement of responsibility, diffusion of responsibility, disregarding or misrepresenting injurious consequences, and dehumanization (Bandura et al., 1996 & Bandura, 2002). A study in the City of Barranquilla in Colombia showed that the moral disconnect was quite strong among students who cheated with several different mechanisms being expressed, especially the belief that academic dishonesty is an action without a victim (Martinez et al., 2015).

Methods of Academic Dishonesty

Regarding the method of cheating, students are inventive and creative opportunists. The methods vary from old-fashioned methods such as allowing classmates to copy homework, copying on tests, whispering answers during tests, passing notes, get an advance look at the test, cheat sheets to new ones like cut-and-paste from the internet to Googling answers on a mobile

phone (Sorgo et al., 2015; Starovoytova & Arimi, 2017) or arising more recently, using a chat artificial intelligence such as ChatGPT which use Large Language Models (LLMs) to generate coherent writing that can, so far, avoid detection by either machines or humans (Perkins, 2023). For some students, it is so uncomfortable to answer a question that searching to confirm an answer on a cell phone is a go-to resource even though there is the significant chance of getting caught and suffering consequences (A. Meloni, personal conversation, May 12, 2019).

Cheating and academic dishonesty can commence long before the student has entered the exam room by means of obtaining test questions before taking the exam. Ethical students study before taking an exam with the most effective way to study for an exam is to target study to the topics which will be included on the exam. Several ethically encouraged and acceptable methods to do this include attending class, taking notes during class, etc. However, a variety of unethical methods also exist including obtaining exams and actual questions before an exam. As an example, at the GAC Programme (Global Assessment Certificate Programme), a fully owned subsidiary of the ACT organization, offered special training at its locations in China at least until 2016. For around \$10,000 (USD), students would study in a one-year course preparing them for the administration of the ACT. The problem is that the practice questions being used were actual test questions from the ACT for which their American counterparts did not have access (Channel NewsAsia, 2016).

Once in the exam room, assuming the student is present and has not used a false reason for missing the test (Nelson et al., 2013), the student which has chosen to morally disengage is now looking for an opportunity to present itself (Sorgo et al., 2015). Techniques used to implement a plan of academic dishonesty are limited only by the nature of the opportunity provided. These would include allowing others to look at one's paper during a test, using cheat

sheets during a test (Jurdi et al., 2011), using signals to exchange answers (Nelson et al., 2013), storing lecture notes in the restroom for reference during the test (Starovoytova & Arimi, 2017), and high-tech methods such as exchanging answers on cellular devices or tablets and receiving answers by way of hidden earbuds (Reuters, 2017). It is even possible to substitute another person for the student to take the exam in his or her stead (Jurdi et al., 2011).

For academic dishonesty occurring on assignments outside of the exam room, the most common method would be plagiarism associated with written works (Martinez et al., 2015). The variations on how this can occur are endless with Jurdi et al. (2011) listing a number of them in their study of cheating in Canada. They include obvious malfeasance such as purchasing a paper to turn in as his or her own and writing a paper for another student. Some methods are more subtle such as those which utilize a lack of proper attribution such as using direct quotes without given proper references, using sources not included in the references, and submitting the same paper for more than one course. Some methods can be attributed to laziness such as doing less work than others in a group project and increasing the fonts or margin size in order to make a paper look longer (Jurdi et al., 2011). Some students skip any pretense of hiding their plagiarism and simply cut and paste an article from Wikipedia then follow up by claiming it as entirely their own work (A. Meloni, personal conversation, May 12, 2019).

In more recent years, students have begun using Large Language Models such as Chat GPT to write sentences, paragraphs, even whole essays which cannot be detected by any current means (Perkins, 2023). The online chat bots use a combination of automatic article generators (AAGs) and artificial intelligence which can reference large databases including academic journals, books, reports, webpages which are indexed by a search engine, then they compile an article in a requested style, sometimes replacing original content with synonyms. The result is

writing which is not original to the student but is different enough from the source material to not be directly plagiarized which if presented as the student's own work is an academic integrity violation due to misrepresentation (Abd-Elal et al., 2023).

Current Approaches to Academic Misconduct

Consensus on how to approach the issue of plagiarism and other academic misconduct at both the high school and college levels is to raise the ethical awareness of just exactly what constitutes the various types of academic misconduct and focus more on learning and collaborative experiences. For students whose background is homeschooling or from the Middle East who have a strong component of dialog with the teacher in their educational environment, written exams are not as important as demonstrating knowledge in a dynamic environment with the teacher. Cheating is not an issue when interacting spontaneously with the instructor. Education at the beginning of the experience appears to be effective to curtail academic misconduct by those who do so out of ignorance or unintentionally by way of compliance with a different ethical standard (Muth, 2015; Razek, 2014; Ramzan et al., 2012; Sorgo et al., 2015; Yukhymenko-Lescroart, 2014).

Regarding cheating mitigation measures which are effective for those who are intentionally practicing academic dishonesty, there are many methods, which although outside the scope of this particular paper, are of interest to the author, especially those which are peculiar to particular cultures. Research does indicate that each culture does have different techniques and methods of cheating that they favor (Diego, 2017; Gentina et al., 2017; "In China", 2002 Muth, 2015; Tolman, 2017; Topîrceanu, 2017; Wheeler, 2002).

Since opportunity makes the cheater, the most effective way to mitigate academic dishonesty is to cut down on the opportunities which make cheating possible (Sorgo et al., 2015).

Maintain an environment where exams are properly monitored in a quiet room without distractions which could be used as a screen and adequate space for each student (Wormeli, 2017). Besides using plagiarism detection websites and tools, careful knowledge of student writing styles can prevent borrowed essays and work purchased on contract from being effective. In Australia, experienced “markers” correcting papers were able to detect works purchased on contract 62% of the time, and they correctly identified real student work 96% of the time (Dawson, 2018). In short, the gut instinct of a teacher or assistant knowledgeable of students’ individual writing styles can be quite effective.

Theoretical Foundation

As described in Chapter 1, the theoretical foundation of this study is academic misconduct, as understood through Bolin’s four considerations, and moral agency, as described by Bandura.

Bolin’s Four Considerations

Academic misconduct is misbehavior, and just as with any event of misbehavior in a school situation, the school administration is seldom faced with a neat, clean, situation that is clearly right or clearly wrong (Razek, 2014). Awareness and implementation of a due process protocol when faced with academic misconduct is low (Divan et al., 2015; Oravec, 2022; Razek et al., 2012). Before taking disciplinary action, Bolin’s recommended four considerations (2010): conjecture, define, ascertain, and decide.

Conjecture asks, *is a situation of what appears to be misconduct a true case of misconduct?* As an example, two students of average academic aptitude both take a machine proctored online exam—afterward, a number of identical, but wrong, responses are discovered

(Duncan & Joyner, 2022). The teacher, Mr. Jones, automatically thinks they cheated, but did they?

Then define the action involved and determine whether it is truly academic dishonesty (Bolin, 2010). If the proctoring software in our hypothetical situation has a camera, privacy issues aside (Gribbins & Bonk, 2023), if a lot looking off-camera can be seen with both students, academic dishonesty has likely occurred. If everything looks okay, it is still possible the two friends studied together in a class where that is permissible, it could just be a symptom of both of them mislearning the material together.

Next, ascertain the intention of the student and the seriousness of the issue (Bolin, 2010): In our hypothetical situation, we need to learn more of the facts to determine if the students studied together. Were their notes wrong? Then, finally, decide what action should be taken (Bolin, 2010). The action taken will depend upon the situation.

However, one thing to keep in mind even if, as a school administrator, a mistake is made, and one makes the wrong decision, one instance of cheating is unlikely to make much difference in the overall scheme of things (Chapin et al., 2017; Drake, 1940). The value of catching and punishing the cheater is to persuade that student that his or her time is better spent by studying and learning the subject that it is by trying to game the system; the cheater in reality cheats himself or herself (Cox, 2016; Cozin, 1999; Drake 1940; Hale, 2018).

Bandura's Moral Agency

Once a student has depleted his or her reserves of self-regulatory resources, the only thing preventing that student from engaging in academic misconduct is a lack of opportunity or a strong moral imperative (Bandura et al., 1996; Kish-Gephart et al., 2014). Preventative barriers to cheating in the classroom such as proper spacing between desks, shuffling test questions, good

proctoring were not in the scope of this study, but that is the final layer of prevention (Arnold, 2016; Arnold, 2022; Conijin et al., 2022; Duncan & Joyner, 2022; Fendler et al., 2024; Gribbins & Bonk, 2023). Past that, the only thing necessary to implement the now-existing predisposition to cheat can be best described in one word, “opportunity” (Davis, 2017; Niven & Healy, 2016; Ramzan et al., 2012; Starovoytova & Arimi, 2017; Topiceanu, 2017; Yukhymenko-Lescroart, 2014).

Summary

In conclusion, academic misconduct is a worldwide epidemic facing all schools in all places. It affects all levels of education including the secondary, post-secondary, and graduate levels with the rationale for cheating varying by school, age group, gender, and culture; not all cheaters are created equal. No place is immune from cheating. The most effective solution for those who may be unintentionally violating codes of conduct is education. However, there are mitigation techniques for those who are intentionally cheating to reduce the scope and pervasiveness of academic misconduct.

Chapter 3 - Methodology

Introduction

Using data aggregation and ethnographic thematic content analysis techniques pioneered by Noblit and Hare (1988), Klaus Krippendorf (2019) and codified by Naeem et al., (2023), this study explored the causes for unintentional academic dishonesty in cases where moral disengagement has not occurred and, in cases where moral disengagement has occurred, attempted to identify the prevalence of the underlying motivations, which are pressuring students to cheat. Additionally, this research studied the factors which enable moral disengagement to occur. The results were disaggregated to compare several representative approaches toward the use of technology in facilitating academic dishonesty. Using thematic content analysis (Naeem et al., 2023) this study explored the following research questions: In existing studies,

1. At the secondary and post-secondary educational levels, what is the general prevalence of academic misconduct?
2. How frequent is unintentional academic dishonesty as compared to intentional academic misconduct?
3. What reasons do students give as their motivations which prompt them to morally disengage resulting in academic dishonesty and how frequent is the reported occurrence of each?
4. What do students report as the specific triggers which led to a decision that the reward of cheating outweighed the risk of getting caught in specific situations, and how do the frequencies of each cause compare to each other?
5. What do students report in these studies would cause them to not feel the need to cheat?

6. How do the answers to these questions differ throughout the old-school, retro-tech, high-tech, and A.I. technological eras?

Subjectivity and Positionality

This study was conducted from a pragmatic position centered on interactions within the secondary and post-secondary education system. From an American point of view, the variance through different eras of technology is for the most part a trip through chronological, historical eras. However, different countries proceeded through the different technological eras at different times, and some countries are now tracking through technological availability in their schools which the United States experienced in the early 2000s or the 1990s. This study looked at how different demographics approach academic integrity using their access to technology as the common denominator rather than geography or chronology.

Have attitudes varied throughout technological eras toward different types of cheating? Even though in order to understand the rationales, the study must be constructivist, attempting to understand the respective mindsets, and I have had extensive exposure to Asian cultures since elementary school in the 1970s then later to cultures from all continents, teaching in Asia and as a hybrid teacher and administrator since 1999 of a K-12 school with a large population of international students, the attitudes and definitions I am using are those found traditionally in the American educational system. As a white male from the United States, this is the system with which I am most familiar, and it is the system within which students who come to and have lived their entire lives in the United States must adapt to and operate in order to succeed in American colleges and universities such as Kansas State University.

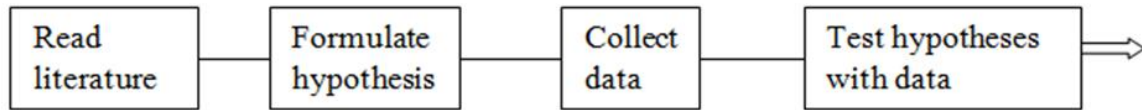
Methodological Framework

Foundationally, the theory invoked to explain academic integrity is that of moral agency as put forth by Albert Bandura in 1996 with the mechanism being moral disengagement of moral agency which enables academic dishonesty (Bandura, 2002). Moral disengagement and moral dissociation are the same thing as moral dissociation is translated directly as moral disengagement (Canchila et al., 2018). Studying academic dishonesty and differences between cultures, the method of ethnographic, thematic content analysis will be utilized.

However, there are elements of other interpretivist, grounded theory approaches present. The study is interpretivist in that the objective is to seek an explanation from a cultural point of view with a common denominator of technological accessibility for an event that is based upon the perspectives of the rationale of those being studied (Noblit & Hare, 1988; Schultz, 2012; Xu & Zammit, 2020). Then, the idea is to use the method of a modified grounded theory (Figure 3.2) based on Glaser and Strauss' (1967) work that attempts to make sense of the similarities and differences by putting them into an interpretive order (Naeem, 2023; Noblit & Hare, 1988). This differs from the normal positivist model in that the literature is being used to collect data and phrases as interpreted to develop themes coded by the author, which will then go through a preliminary analysis to develop hypotheses (Yu & Smith, 2021).

Figure 3-1. Differences between the traditional, positivist, deductive model and the interpretivist inductive approach

Traditional



Grounded theory



Traditionally, the protocol would be to review the literature of the subject, formulate a hypothesis, then test the hypothesis by collecting data. However, with Naeem et al.'s thematic analysis (2023), there is a preliminary literature review to set the framework, and the data collection is a literature review, construction of codes followed by analysis, conceptualizing through the interpretation of keywords, key phrases, codes and themes, in this study classifying with the use of terciles, then develop a conceptual model to create a representation of the data (Naeem et al., 2023; Schultz, 2012).

The theoretical concept of moral agency which must exist in order to have a moral dissociation or disengagement to occur (Bandura, 2002) necessitates constructivism due to investigating individual persons' values and beliefs, looking at their meaning-making processes and individual perceptions (Koro-Ljungbert et al., 2009). These are cognitive processes which may or may not reflect any sort of realism pertinent to their environment (Eybers, 2018). However, it is phenomenology because I am attempting to understand the essence of academic dishonesty or lack of academic integrity (Canchila et al., 2018) because even though they may not have a basis in reality, cognitive processes are nonetheless real phenomena.

For a moral disengagement to occur, the person disengaging moral agency must be a moral agent capable of discerning right from wrong and being held accountable for doing so. As such, the theory to explain maintaining academic integrity is that of moral agency put forth by Albert Bandura (Bandura et al., 1996; Bandura, 2002, 2016). It is theorized that self-control promoted by moral agency is a resource which can be spent and depleted by an initial act of self-control were more likely to disengage their moral agency and “impulsively cheat” than individuals who had not depleted the resource (Gino et al., 2011). Thus, the dark side of constant high performance goal setting is an increased tendency toward unethical behavior (Niven & Healy, 2016; Welsh & Ordóñez, 2014).

One objective is to delve deeper into the motivation of students who unintentionally commit acts of academic misconduct. Do they also have a moral disengagement? If any method is used for neutralization and explanation of the behavior, then moral disconnection or disengagement has occurred (Brent & Atkisson, 2011). Moral disengagement causes cognitive dissonance, so if the student can attribute the moral disconnection and externalize the responsibility, then it has nonetheless occurred; just because the student does not feel guilty does not mean the student is not guilty (Stephens, 2017).

Research Design: Thematic Content Analysis

This study follows a hybridized thematic content analysis approach incorporating the step-by-step process as put forth by Naeem et al. (2023), heavily influenced by the work of Noblit and Hare (1983, 1988). A step-by-step content analysis using key phrases and ethnographic themes was used when amalgamating data from qualitative and mixed-methods studies with true quantitative studies. When data was quantitative with similar definitions, such

as was used in the calculation of the prevalence of academic misconduct throughout the eras of technology, a purely quantitative approach was used.

An advantage to content analysis is that it can be used with quantitative, qualitative, or mixed methods research (Krippendorff, 2019; Schultz, 2012). This type of synthesis of methods has the advantage of not just answering the questions of “what” but can also address the questions of “why”, “what for”, and “how?” (Calik & Sozbilir, 2014). Content analysis by using word frequency and its modern graphical iteration of the “word cloud” has long been practiced to give insight the focus and level of interest (Holsti et al., 1965; Milosheva et al., 2024).

However, a long-term criticism of counting word frequencies is that human expression is a complex process, quantitative word counts do not necessarily give insight into themes and understanding a phenomenon (Krippendorff, 1974). As an example the “exam fraud” of copying answers from a neighbor’s paper during a test has all sorts of phrases with the same general theme such as these from the author’s notes as a school principal: Copying answers, peeking, peeping, copying, borrowing answers, glancing, peripheral vision, sneaking a look, cheating, spying, etc. In the literature, the euphemisms and synonyms for this activity are almost endless. All these keywords and phrases are communicating the same idea, So, for this project, simply counting word frequency would be almost useless.

However, statistical analyses of such similar keywords coded into a rigorous thematic approach by an experienced, trained researcher can provide useful insights highlighting similarities and differences across the data set (Braun & Clark, 2006; Schultz, 2012). Thematic content analysis can be used to identify patterns across qualitative data and can be utilized to transform qualitative data into quantitative structure so the themes can be analyzed using

statistical methods (Braun & Clark, 2006). For this project, these themes have then been quantitatively analyzed comparing the frequency of occurrence between technological eras.

Content analysis is also quite useful for when the entire corpus of literature for a topic is either not available, not accessible, there are restrictions on time or space (Holsti et al., 1965), or saturation has occurred (Naeem et al., 2024).

The model of saturation used in this paper was related to the degree to which new data repeated what was seen in the previous data (Daher, 2023). Saturation was occurring around the acquisition of 78 eligible papers with no new themes emerging (Naeem et al., 2024). However, I had a concern that due to the high citation rate, 22 of the first 30 papers checked, of authors, Dr. Albert Bandura and Dr. Donald McCabe, that observations were possibly being made in an “echo chamber”. So, an effort was made to review works that did not cite both of these authors who had recently passed. At around 90 papers, it had become apparent that saturation had been reached and no additional themes were emerging (Naeem et al., 2024). Ten additional articles were reviewed, this time picking some during the years both Bandura and McCabe were active in their careers but were not cited for the objective of bringing the number of eligible studies to an even 100 papers. Again, no new themes or change of proportion of themes were observable, thus indicating saturation had occurred (Glasser & Strauss, 1967; Naeem et al., 2024).

Step One: Transcription, Data Familiarization, and Selection of Quotations

The first phase which Naeem et al. (2023) identifies involves a deep dive into becoming familiar with the literature on the topic and selecting common themes in the literature which they refer to as “quotations”. Combined with techniques associated with Krippendorff’s Content Analysis (Krippendorff, 2019) and that content analysis can be approached quantitatively and qualitatively (Schultz, 2012), this enables this approach to be feasible in that the majority of the

literature reviewed for this work utilizes the statistical compilation of qualitative data or at least provides enough quantitative information to be able to place data into a reasonable tercile category. As such, common themes can be developed even though some papers studied were quantitative, some used experimental methods, and some were qualitative as well as ethnographic. Most studies researching academic dishonesty use surveys to compile self-reported demographic and behavioral data as well as interviews as their staple tools of investigation (Uny et al., 2017).

Many studies are approaching the same, similar, or overlapping questions or topics with the difference being the focus on a particular population of students or comparison of two populations (Magnus et al., 2002). As an example, Yukhymenko-Lescroart (2014) catalogs the responses of 270 Ukrainian and American students responding to questions regarding twenty-two different forms of academic dishonesty. Sorgo et al. (2015) catalogs responses of 322 Slovenian students to twenty-one different forms of academic dishonesty using different verbiage. The advantage of an ethnographic thematic content analysis approach is that it permits the integration of data from dissimilar situations while still facilitating comparison and ranking of the situations (Noblit & Hare, 1983; Schultz, 2012).

Study Selection: “Selection of Quotations”

Selection of quotations or what is to be studied is important to, “Bring the data to life,” and ensure diverse viewpoints in the area to be studied are represented (Naeem et al., 2023). For the purposes of this study, the eligibility criteria are summarized using the Cochrane PICO acronym standing for population or participants, intervention if there was one, comparison, and outcomes (Uman, 2011).

Study Eligibility for Inclusion

Studies eligible for inclusion included high school and college or university students in a traditional academic environment. The presence of elementary or other types of students such as trade school, military, or continuing education did not necessarily exclude a study if these populations if they constituted a minority of the subjects studied with the majority composed of the target population or if their statistics could be separated out of those supplied. Elementary and middle school students should be receiving training about academic integrity, but they were not included in the study due to the likelihood of unintentional academic misconduct caused by ignorance and inexperience as well as not fully comprehending the consequences which can accompany academic dishonesty later in their academic careers (Clark & Soutter, 2016). Students such as trade school, military, or continuing education students likely merit study, but are outside the focus of this project.

Primary Sources Only

Only studies which generated their own data and provide the number of participants were eligible for inclusion. Meta-analytical studies and literature surveys which did not generate their own data and only include data from other sources are excluded for the objective of not over-representing any one study. The exception was government reports publishing the results of individual studies commissioned by that agency or bureau as these may not otherwise be independently available.

This study uses subjective terciles in order to compare qualitative, mixed methods, and quantitative studies with each other. This study aims for accuracy, even if the precision of much of its base data is one-third of one significant digit. Adding an additional layer of interpretations of interpretations would have the potential to further reduce the usable precision of the study, so only primary data is used.

Intervention Types

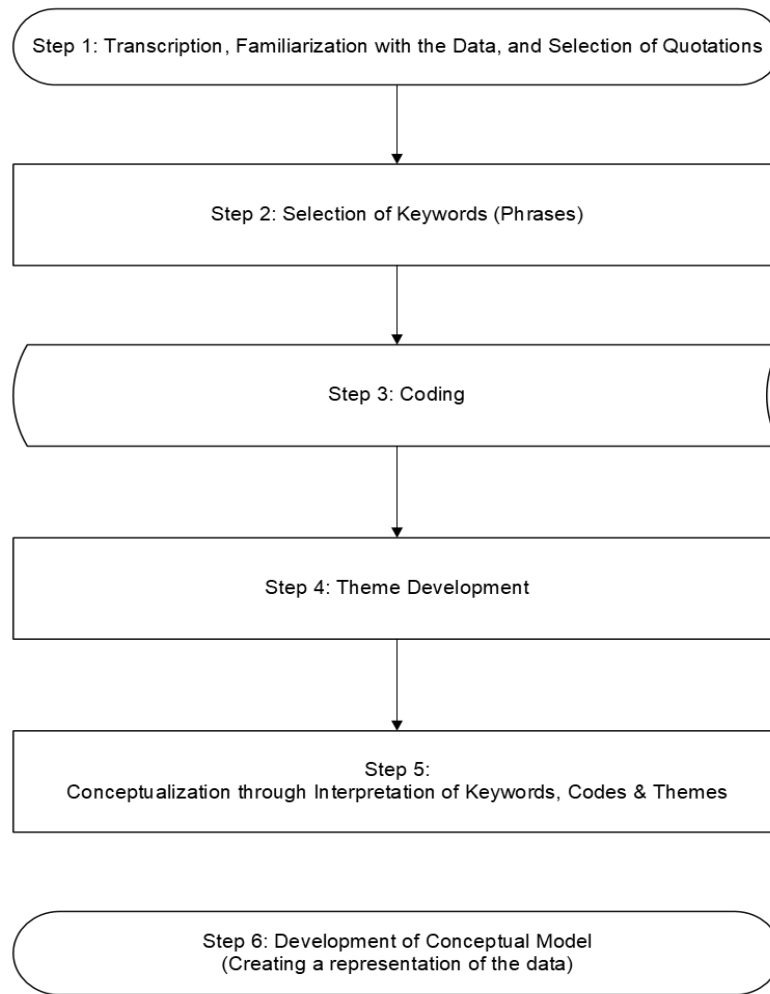
Studies eligible for inclusion in this work were evaluated based upon their relevance to the research questions guiding this study. The highest priority was placed on studies discussing the motivations underlying academic dishonesty and specific triggers which led to a decision that the reward of cheating outweighed the risk of getting caught.

Because this work is student focused, research studies concentrating solely upon prevention of cheating or catching plagiarism or other academic dishonesty after it occurs were not eligible for inclusion in this work. The exception was if a study collected data from the control group or “before” group which might have validity across a larger population.

Databases Sourced and Search Terms

Papers sourced for this study were from ProQuest and Ebsco Host with the option “All Databases”. The databases accessed were those subscribed to by the Forsyth Library at Fort Hays State University from 2017 to 2019, the L.W. Nixon Library at Butler Community College in 2018, and the Hale Library at Kansas State University from 2020 to 2025. Search terms included the following and their combinations: academic dishonesty, academic dishonesty online, academic integrity, academic integrity issues, academic misconduct AND international students, academic misconduct AND artificial intelligence, cheating, contract cheating, desconexión moral, moral disengagement, plagiarism, plagiarism AND artificial intelligence, plagiarism and ChatGPT, plagiarism detection, prevalence (combined with other terms on this list). These search terms and database combination returned a large number of articles which were and were not peer reviewed. However, for inclusion in the study, peer review of the study was confirmed manually by reading through the study and evaluating the source of the study.

Figure 3-2. Steps of Thematic Analysis (Naeem et al., 2023)



Step Two: Selection of Key Words and Phrases

The second step of Naeem et al.'s approach to thematic content analysis is to examine the data and identify recurring patterns and designate them as keywords, or for the sake of this study, “key phrases” (Naeem et al., 2023). Refining and selection of key phrases was ongoing throughout the study. Krippendorff (2019) and Schultz (2012) refer to this process as coding and recoding. Eligible studies were purposefully collected following the inclusion criteria found in Step 1, then the studies which Krippendorff (2019) and Schultz (2012) refer to generically as

“masses of text” were reduced into the more manageable format of key phrases summarized to codes to create frequency counts which were then aggregated for expansion in Step 3 (Krippendorff, 2004; Krippendorff, 2019; Noblit & Hare, 1988; Schultz, 2012).

Step Three: Coding and Data Collection

In a thematic content analysis such as that put forward by Naeem et al. (2023) coding and data collection are combined steps representing assigning a short phrase to represent a theme (Saldaña, 2021). Careful consideration of the “keywords” and adaptation of the key phrases summarized to codes studied occurred throughout the process, splitting and combining themes and key phrases as warranted, with complete recoding and review of the database on four different occasions through a process spanning a total of eight years from 2017 to 2025 as this project was alternately active and dormant during that time: The first complete recoding occurred after a change of focus from international students, demographics and cultures to technological eras. However, many of the codes, adopted from Yukhymenko-Lescroart (2014) during the first iteration of this research, focused on promoting the success of international students in the author’s high school, specifically those from the former Soviet republics, remained functional and applicable, so they were not changed during the following iterations. The second complete revision followed refinement of keywords and themes resulting from unexpected new themes emerging in the data to test the hypothesis of variation via technological era instead of by culture or year. The third complete recoding occurred as I was beginning to see saturation and was concerned that the waterfall approach to finding studies was putting the study at risk of an “echo chamber” effect tied to Dr. Albert Bandura and Dr. Donald McCabe, either or both of which were cited in a majority of the studies, so I specifically attempted to locate studies that did not cite these two giants in the field. The fourth complete recoding occurred as a wrap-up at the end

of the process, re-reading and reviewing studies to survey for the presences of themes which I missed previously on studies which had been collected years prior to iron out any inconsistencies which may have occurred during that span.

Data collection for the project consisted of a systematic review of literature available in the university library databases, the university library stacks, and by inter-library loan for critical studies not otherwise available. One hundred studies of around 350 surveyed were chosen for inclusion. While reading the studies, using Microsoft Excel, information and coding aligned with the research questions was cataloged for each article (see Appendix B-F; Table 3.1).

Table 3.1. Explanation of Data Fields Recorded

Information/Coding	Description
Year of Publication	Year the study was published (see Appendices B and H for details).
Intentional or Unintentional Academic Integrity	Whether the study looked primarily at intentional or unintentional academic integrity issues (see Appendix C for classification list).
Type of Study (Methods)	The type of the study cataloged indicating whether the study was one of the following: (a) Survey using a questionnaire to collect data without investigator manipulation of the environment or follow-up with the participants, (b) Study using a questionnaire or survey accompanied by observations or a follow-up of some sort, or (c) an experiment which, for purposes of this study, would indicate some sort of manipulation of the environment or establishment of controls in the environment of some sort. (see Appendix B for details)
Number of Participants	The number of participants in the study was recorded and used for understanding weights in analysis (see Appendix B for details for each paper).
Prevalence of Academic Dishonesty	The prevalence of academic dishonesty reported in each study was recorded. If a study published this number directly, this is the number the study uses. However, at times, subjectivity was exercised by the author. If not stated directly, the number was inferred from other statistics in the article or from qualitative descriptions. Any qualitative description that was more precise than a tercile, yielding one or more significant digit, was used and converted subjectively into an approximate percentage. Percentages from studies whose

	definition of academic integrity or academic dishonesty differ greatly from those of this study were not included. If a reasonable overall prevalence cannot be determined, then this field was left blank. (see details for each of these statistics in Appendix B.)
Described Rationale for Academic Dishonesty	Descriptive motivations or rationale given that prompted participants the internal pressure to take the cognitive shortcut to participate in acts of academic dishonesty was recorded (e.g. fear of losing scholarship, irrelevance of content, overwhelmed, etc.), as provided (see Appendix E for details).
Motivations for Moral Disengagement	Data were collected regarding the motivations that prompted moral disengagement (i.e., failure, lack of preparedness, requirement of excessive work, excessive pressure to succeed, and the feeling that other students are cheated; see Appendix D for details by article).
Specific Rationale for Moral Disengagement	Specific rationales and/or reasons for moral disengagement provided by students (e.g. ability to get by with it, too tired, cheating culture, etc.), as well as the final trigger (e.g. no proctoring, anxiety, no enforcement, etc.) (see Appendix E for details by article).
Types of Behavior During Collaboration	Data were collected when inappropriate behaviors were described during collaborative work (e.g., sharing tests from previous enrollment, cheat sheets, old exams, etc.) (see Appendix F for details by article.)

Step Four: Theme Development

Comparisons

Determining how data in various studies are related and finding themes, patterns within the data (Braun & Clark, 2006), is the fourth step of Naeem et al.'s step-by-step process of thematic analysis (Naeem et al., 2023). As such, a database in the form of a large Excel Spreadsheet of information relevant to the questions guiding this study where motivations are mentioned as well as correlations with types of academic dishonesty was maintained. Studies which do not contribute to that database or do so only in a speculative manner (i.e., a study which quotes an expert who does not support his or her opinion with data) were kept in the database but were not eligible or tagged for inclusion in this study.

Outcomes

By necessity, this work focuses on moral agency or attitudes toward moral disengagement (Bandura, 2002) which result in infractions of a school's honor code. Studies not relevant to the subject were not eligible for inclusion. As an example, a school releasing a statement to the effect of, "Our school experienced no incidents of honor code infractions last year," would not be included in the study upon the basis that it does not provide usable data, nor is that statement likely to be factual if there are more than a small number of students in the school (Estep et al., 2011 & Stephens; Wangaard, 2016).

Grouping of Similar Themes

Looking for common, salient themes was accomplished by analyzing the database looking separately at each study, to determine whether the concepts are similar, combining similar listings of items and frequencies within each study into categories which were then gathered into themes (Naeem et al., 2023). Then each individual study's list was cataloged for contradictory, or different aspects of the topic being studied which in this case is academic dishonesty (Anderson-Levit, 2018; Naeem et al., 2023; Noblit & Hare, 1988; Schultz, 2012).

Step Five: Conceptualization by Interpretation of Keywords, Codes, and Themes

Conceptualization is looking for concepts or emergent social patterns which can be discovered in the data (Naeem et al., 2023) then using dynamic interpretation to equvalate ideas to generate an explanation of a phenomenon (Uman, 2011). A short list of equivalent items was constructed and items from each database tallied in the master list. The objective at this stage was to collate the data together to create a grand, coded database of all studies reviewed which enabled the drilling down or amalgamating together as needed using filtering and rudimentary statistical functions in Excel.

Categories of Concern

One way to determine the importance of an area of concern is to count whether or not a concern is mentioned as an influence in a study. Content analysis especially lends itself to this type of investigation (Holsti et al., 1965). This data is a binary value indicating whether a concern is present in the study. To be included, the concern must be a part, limitation, or accounted for in the study, not just mentioned in passing as part of the literature review. The areas of concern were tallied as follows:

1. **Teacher Relationship:** Indicates that relationship with the instructor or practices of the instructor were mentioned in the study. If inferred or implied, this must be done in a manner that a reasonable reader would consider it a factor.
2. **Performance Goals:** These were mentioned or inferred. The goals could be by any party in the events such as the teacher, parents, system, internal to the student, etc.
3. **Cheating Culture:** Any mention of a potential cultural reference be it culture of cheating, tolerance, or direct encouragement in some cases, of cheating, etc. by students, teachers, parents, general culture, etc.
4. **Lax Punishment:** Any indication that punishment by those in charge is less than strict or severe.

Explanation of Tercile Categories

In order to be able to translate qualitative, mixed method, and quantitative studies (Noblitt & Hare, 1988) were collected and categorized by tercile. Terciles were used because many qualitative studies describe the importance of a factor in words rather than provide a numerical measurement. In a peer reviewed paper, it does not indicate these observations are any less valid than those with numbers. If a percentage or statistic was reported by the study, then the

magnitude of that statistic was utilized to determine the tercile range of assignment. If a qualitative description was used, then a subjective approximation was made, and that value was utilized. (See Table 3.2 for tercile descriptions.)

Table 3.2. Description of Terciles

Tercile	Description
Low-Tercile = 1	Indicates a factor is present and mentioned by the study more than just in passing but is of lesser concern and would be in the lowest 33% percentile.
Mid-Tercile = 2	Indicates a moderate concern or observation and would be in the middle 33%-67% percentile.
High-Tercile = 3	Indicates an important concern or observation which would have a value located in the highest 33%.

Factors of moral disengagement mentioned in the studies

The factors of moral disengagement, self-justifications, or excuses used to justify cheating will be collected from each study (see Table 3.3). If a study does not mention that factor, then that field will be left blank.

Table 3.3. Description of factors of moral disengagement

Factors	Description
Failure Fear	This is the fear of failing or not achieving an expected goal on an assignment or examination. The student believes that cheating is justified upon the basis of survival.
Not Prepared	Indicates that a student did not believe he or she was ready to take the examination or properly do the assignment, therefore the student believes it is okay to cheat upon the basis of necessity.
Excessive Work	Indicates the student believes that it is okay to cheat because the course or instructor is unreasonable, or the student is being pushed too hard.
Pressure	The student is receiving pressure from parents, peers, or economics in order to obtain a particular level of performance, therefore the student justifies academic dishonesty.

Others Cheat	In this position, the student believes cheating is necessary because his or her colleagues are cheating, and otherwise the student will not be able to compete because, “It’s part of the game.”
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Behaviors associated with academic dishonesty

Actions which are used to affect academic dishonesty are cataloged and categorized according to prevalence or importance in the study. Subjective tercile is again used to classify the severity of the behavior as presented in the study. If a study does not mention that factor, then that field will be left blank. The behaviors and labels categorized are described in Table 3.4.

Table 3.4. Actions coded within each article along with description of code

Actions	Description
Old Exams	This would include any unauthorized access to previous examinations, completed homework, or advance copies of new exams or questions.
Paper peeping	Includes somehow looking at the neighbor's test paper or computer screen during an examination. This could be with or without the permission or knowledge of the neighbor.
Cheat Sheets	Sometimes referred to as crib notes, etc. Includes any unauthorized access to previously prepared notes.
Work Together	Includes any unauthorized work of two or more students in a group on an exam or assignment or individual work was expected.
Lazy in Group	This occurs when a student does not contribute the effort that he or she is expected to put forward in group work but expects to reap the reward of the other students’ work.
Falsify Work	Including dry labs, fake bibliographies, or making things up, this occurs when a student claims results or work that are false or misrepresented.
Hacking SIS/Sheet	Unauthorized modification or creation of a student's grade in the SIS, School Information System, or on the teacher’s grade sheet or grade book.
Money or Expert	Involves any of the following: paying someone or making arrangements for someone to write a paper on the student's behalf, an expert to assist

	the student during an exam, or to replace the student by taking an exam on the student's behalf.
Plagiarize or Copy	This is traditional plagiarism or improper citation.
Extra Credit	Although not technically academic dishonesty, this would indicate an attempt by the student to use extra credit to bring up a less than desirable grade. It crosses the line if the grade assigned by the instructor does not accurately reflect the skills of the student.
Brown Nosing	Also known as being the “teacher’s pet” or showing extreme favor to the teacher in exchange for a grade. Again, this is not technically academic dishonesty unless it crosses the barrier where the grade designed by the instructor does not accurately reflect the skills of the student.
Influence	Often by the parents or student of a prominent family, this is improper use of typically political influence to obtain a grade.
Prep and Tutoring	This is not always technically an infraction of academic integrity unless advance copies of questions have been obtained (Channel News Asia, 2016), but rather using outside resources to prepare for a test such as an SAT ACT preparation course or tutoring outside class time to gain an advantage over classmates which do not have that training.
Notes and Device	Academic dishonesty by means of unauthorized communication between students using hand signals, notes, paper airplanes, cell phones, or social media platforms.

Step Six: Development of the Conceptual Model

Step six is the development of the conceptual model which is different than the theoretical model. This study uses elements of the interpretivist and grounded theoretical models which serve as the lens through which the investigation is being conducted, and conceptual models are developed (Naeem, 2023; Merriam, 1998). Correlations were brought to the surface by filtering and comparing the different rationales and populations combined with article concordances looking for key words and phrases. It is at this step that the overarching themes became apparent.

Ethical Considerations

As a thematic content analysis of published works, this study is research involving the survey of existing, publicly available studies and data which would be placed in the “exempt” category of IRB considerations. There are no known risks, and no data personally identifiable to any individual students. All data will be from peer-reviewed sources.

Limitations and Delimitations of the Research

Thematic content analysis is an involved but flexible methodology which lends itself to survey of a variety of studies based on varied research methods (Braun & Clarke, 2006; Naeem et al., 2023; Naeem et al., 2024; Schultz, 2012). To accomplish this, key words, phrases, ideas and/or themes of different studies can be collated together. Analogous parts of each of the studies are coded while maintaining the key phrases of each study in relation to key themes and their interactions within the study (Naeem et al., 2023). Two studies may have different primary topics, but if a thematic concept is covered in a manner that collects data, the secondary data can be used and compared as part of the thematic analysis (Krippendorff, 2019). This advantage grants the ability to compare studies based upon their concepts and themes, not necessarily the main topic that they are studying. However, this means that the researcher has to determine the codes and themes using his or her own subjectivity meaning that unlike in a quantitative content analysis, in an ethnographic content analysis such as this one, a “substantial” level of training is required to collect the data (Schultz, 2012).

Limitations

If studies are quite similar with similar definitions and protocols, then only a small number of studies need to be reviewed in order to obtain usable results. However, to analyze competing interpretations and compare them to one another, by necessity, there needs to be a

larger number of studies if the nature of the studies is different (Krippendorff, 2019, Noblit & Hare, 1988; Schultz, 2012). As such, the number of studies needed to come up with a statistically significant comparison greatly depends upon the variation in the themes being investigated.

Around 420 relevant articles were reviewed in detail, of which, one hundred being eligible for inclusion in the project, it would sound like this is a large number of data points. However, given the methodology of thematic content analysis, a somewhat waterfall method of sampling, and the precision of much of the data only being to the nearest tercile, frequently described in qualitative terms rather than quantitative, the data set is significant, but is only a sampling, having achieved saturation, of all the relevant literature which may exist (Naeem et al., 2024).

Interpretation of the keywords and themes are dependent upon the researcher in an ethnography in the same manner that coding in qualitative research is dependent upon the researcher (Saldaña, 2021; Schultz, 2012). The process of forming conceptual models from the relevant themes and keywords introduces a second layer of interpretation of the keywords and key phrases translated to coding, development of themes through the interpretation of these keywords, key phrases and themes, then development of a conceptual model to create a clear representation of the data are all stages dependent upon the disposition and training of the researcher (Merriam, 1998, Schultz 2012). These decisions and interpretations are made by the researcher through all of his or her filters and unconscious biases (Naeem et al., 2023; Noblit & Hare, 1988; Schultz, 2012).

Division into terciles for some variables was using subjective determinations and discretion on the part of the researcher. If a paper said, “the vast majority”, then that would be coded in the top tercile. If a paper were to say, “a few”, then that would be in the lower tercile,

etc. The advantage is that qualitative observations in large studies can now be compared in the same paper to qualitative observations, given that a criterion for study selection was stated exact number of participants. The total number of participants in the included studies is 79,821 with the average population of a study being 815 students. The issue is that precision is limited to the nearest tercile, so the number of data points necessary to obtain accuracy is large.

Another limitation is that the studies reviewed were conducted in a variety of different countries and at times, even different decades, varying from the oldest in 1936 to the newest ones in 2023. Each study was internally controlled, but not necessarily each having exactly the same controls in those studies. Some of these studies are experiments, some mixed methods, and many of the studies are surveys. However, the same variables are being researched even if not controlled in exactly the same manner. As such, it is the codes which are being translated into one another to develop themes which are then compared with each other rather than the exact variables such as in an experiment.

Delimitations Placed on the Study

Languages of literature reviewed

Literature being reviewed is being limited to that in the English language, my native language, Spanish, and papers in other languages as have been translated into English. Much of the current research in this area using Albert Bandura's concept of agency and moral disengagement, referred to as moral disconnection in Spanish, is currently occurring in the Spanish language and has not yet been brought into accessibility in the English language. It is a limitation that I am reading these studies in an acquired second language which is not my native tongue.

Technological eras covered

The topical breadth of technological eras studied was limited to nothing earlier than the “old school” to the present limiting the topical breadth of the study to the role and usage of various technologies in academic dishonesty in only these eras. The objective was to limit the eras studied to those in the common experience of educators who remain active in the teacher corps, graduating high school in the 1970s or later. Older studies such as Drake in 1941 and Smith et al. from 1971 were included due to their seminal nature and their representation of the United States during an era of technological access similar to that found in more recent times in third-world countries. They represent the early “old school” and showed that academic behaviors in those countries were mirrored in the United States, a first-world country, during their similar technological era.

Even during the active careers of experienced, current educators, there have been radical changes in technology. Computers during Drake’s era of the 1930s were large, mechanical devices, many analog, frequently only performing one function; the only one on campus might be controlling the telescope or projectors in the planetarium. In 1971 when the Smith Study was performed, a computer would occupy a full room with programs and data being loaded on cards. Then in the late 1980s and 1990s, a computer was a large, heavy box and monitor in the corner of the classroom. Nowadays, the computer has given way to a handheld cellphone with more memory and processing power than the Apollo 11 Lunar Lander that fits in a pocket and carried by everyone in the classroom. Just since research on this study was begun, we have seen the advent of widely available consumer smart watches and smart rings, and now we have “artificial intelligence.” The changes in information technology occurring during the life span of these current educators are tremendous.

Summary and Remarks

Even though changes in technology have occurred at an epic pace during the last three decades, our education system still approaches the prevention of academic dishonesty with the same basic strategies which were used at the turn of the century with a population of students whose demographics and native technology have changed significantly in the last two decades (Wright et al., 2018).

Academic dishonesty is an epidemic (Allyn, 2012). Even though data indicates the epidemic may be beginning to subside, it remains endemic. In order to fight an epidemic caused by a pathogen, it helps to know what the pathogen is and how it functions. It is hoped the manner in which this study illuminates that pathogen through the gathering and analysis of this data locating patterns of correlation and how academic misconduct has changed historically over time and technology, it will improve the understanding of how academic misconduct is changing and may change with the upcoming tectonic improvements in utilization of artificial intelligence.

Chapter 4 - Findings

The purpose of this study was to look at academic integrity issues, both unintentional and intentional in a longitudinal fashion through progressive eras of technology, attempting to locate changes and trends in attitudes, triggers, and behaviors. To accomplish this, a large Excel spreadsheet was created containing 40 columns for collection of codes and qualitative data as well as fields for quantitative data. Details regarding those fields as well as the notes they contained may be found in Appendices B through I.

Around 420 articles and studies were surveyed. However, the criteria for inclusion as a reference was strict in that only peer reviewed studies were considered as references with the exception of government reports on commissioned studies. The Associated Press and several other news articles were used for illustrative purposes. One hundred seventy-nine peer reviewed articles and studies were retained for reference purposes, and of these, one hundred which met the qualifications for inclusion into this thematic content analysis study were chosen.

Research Question 1: At the secondary and post-secondary educational levels, what is the general prevalence of academic misconduct?

To answer this question, each paper meeting the requirements for inclusion in this study was reviewed to locate an overall prevalence statistic for that particular study. If two equivalent statistics were quoted in the paper, the lower rate of academic misconduct of the statistics was used.

Because the papers included in this study covered a wide gambit of main topics, statistics often had to be interpreted by inference, logic, implication, or approximation. As an example of the interpretation required to obtain prevalence statistics from surveys for which this was not a primary focus, Sorgo (2015) reports that 322 of 323 students responding to the study in Slovenia

answered “yes” to the item, “I have allowed schoolmates to copy my homework.” Yet, in the same study, 27 of 323 students answered the item, “I have cheated in school,” as, “Never.” In the same paragraph it is stated, “...the question arose of whether if some forms of academic dishonesty are in reality even recognized as cheating by students.” Because of the nature of a survey lacking follow up with its participants, it is known that students permitted their schoolmates to copy their homework, but what is unknown is the usage of the copying student. Did the copying student write down the answers using them as his or her own? Did the copying student use the answers to double-check his or her own work in a similar fashion as a student would use the answers in the back of a mathematics book? If that is the case, then unless that activity is specifically prohibited, that might not be academic dishonesty. However, what is known is that if 8.4% of students claimed that they had never cheated (Sorgo, 2015), then in a survey lacking the statement, “I prefer not to say,” it follows by logic, 81.6% of the students have at some point cheated; in fact Sorgo (2015) states, “Cheating is a way of life and almost all students at least occasionally indulge in some academic misbehavior.” Since 81.6% is more conservative than “almost all”, that was the number entered into the spreadsheet.

The purpose of collating a large number of data points is to get a more accurate approximation of the prevalence of cheating as the measurements of the prevalence of academic dishonesty varies significantly from place to place and time to time as well as with technology. A large study in Australia with 7,839 students reported an overall prevalence rate of just 7% (Henderson et al., 2023) with the same percentage reported on the other side of the world by a study at Lethbridge University in the Province of Alberta in Canada (Awosoga et al., 2021). In Ethiopia, a recent study with 1,246 students reported cheating at the rate of 80% (Dejene & Hui, 2021), and at the University of Nebraska in Lincoln, out of 196 undergraduate business students,

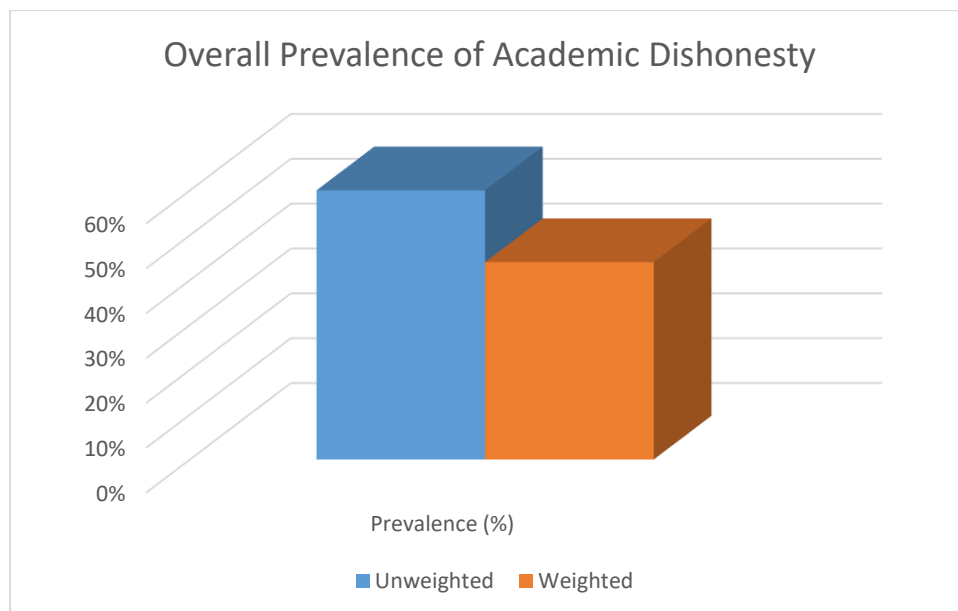
95% self-admitted to at least “one cheating instance” while enrolled in an online course (Gaskill, 2014).

Table 4.1. Overall Prevalence of Academic Dishonesty

	Prevalence
Unweighted	60%
Weighted	44%

Out of 100 studies meeting the criteria for inclusion, 35 of the studies had statistics available where an overall prevalence rate could be documented or logically inferred. Using each of the 35 studies as a separate but equal data point, the overall average prevalence through the time studied is 60%. Using a weighted average where each of the participants in every one of the studies becomes a data point, yielding 39,682 data points, the weighted average is 44%.

Figure 4-1. Overall Prevalence of Academic Dishonesty



Research Question 2: How frequent is unintentional academic misconduct as compared to intentional academic misconduct?

Compared to the overwhelming attention, 82% in the case of this sample, spent on addressing the issue of intentional academic misconduct, unintended academic misconduct gets a distant second place. Out of one hundred studies meeting the criteria for inclusion, only 18 were primarily focused on unintentional academic dishonesty—for the most not properly citing sources or outright plagiarism (Bretag et al., 2014; Divan et al., 2015; Holt, 2012). Frequently, unintentional plagiarism is corrected rather than punished, so often these issues do not show up in the statistics (Bretag et al., 2014). A study in South Africa shows that unintentional plagiarism may be much more common than it is reported (Mahomed et al., 2023).

Peer reviewed paper surveys indicate that especially susceptible to unintended plagiarism are persons for whom English is not their native language (Harrasi, 2023; Razek, 2014). For students from the Middle East and Saudi Arabia, attending an English-speaking university in the United States is an experience of being thrust into a completely foreign culture speaking a language which comes from a different language family into an educational system which operates on a different set of traditions and rules (Razek, 2014). An academic writing course in Oman instructed in English saw common errors in citation which included copying, patch writing, and errors in the technical aspects of citation (Harrasi, 2023). An extensive survey of 15,304 Australians, most native English speakers, showed an overwhelming willingness to comply with academic integrity and avoid plagiarism accompanied by a desire to learn proper academic writing, requesting, “Teach us how to do it properly!” (Bretag, 2014).

The author of this study constructed and taught an introductory college writing course composed of 18, college-prep, high school seniors taught on campus on behalf of a local

parochial college. All of the students, including those for whom English is a second language, had completed at least three years of core English classes. The students were given a 20-question true-false pretest to a two-week plagiarism unit where they were asked to recognize whether an example should be cited or not. Unbeknownst to the students, all of the examples were improperly cited. Other than the questions involving, “The following was cut and pasted from Wikipedia...”, most of the students missed most of the items. Only one student passed the pretest with a score of 70% or higher. It is quite possible that given the number of students entering post-secondary education without any training on proper citation or plagiarism, unintentional academic misconduct is likely much more common than documented (Divan, 2015; Holt, 2012).

Research Question 3: What reasons do students give as their motivations which prompt them to morally disengage resulting in academic dishonesty and how frequent is the reported occurrence of each?

In a summary of his seminal work on moral disengagement, Dr. Albert Bandura (1990, 2002) sets forth several categories of mechanisms for moral disengagement: *Moral Justification*, *Euphemistic Labeling*, *Advantageous Comparison*, and *Displaced Responsibility*. Using each of these categories for moral disengagement, counts of their representation across the 100 articles reviewed is reported.

Moral justification in which the “pernicious conduct” can be made to appear acceptable to oneself and society by portraying it as, “serving socially worthy or moral purposes,” (Bandura, 2002). This was the attitude of the eleven teachers and school administrators, highly educated, intelligent people, charged in court and countless others who were never charged that were cheating during standardized assessment testing on behalf of the students. Their purpose, in the climate of NCLB high-stakes testing, was to keep their jobs and schools open, protecting their

students from what they interpreted as a racist system with the rules stacked against them (Royal & Dodo Seriki, 2018). From the other side of the coin, relationship with the teacher was a major component of 28 of the 100 papers included in this study.

Euphemistic Labeling is using vocabulary to recharacterize an activity and make it sound more socially acceptable (Bandura, 2002). Obtaining an unauthorized copy of the exam can be called a “focused review” and taking a peep at the neighbor’s test while he or she is not looking can be referred to as “giraffing” (Amua-Seyki, 2016) or “peripheral vision” (Gino et al., 2011). In some places, active cheating during the exam can be labeled as *pakakisama* which is helping a friend in need resulting in *utang na loob* which is earning a debt of gratitude (Diego, 2017). Twenty-five of the papers in the study mention peeping at a neighbor’s paper under at least as many names.

Advantageous Comparison is viewing a behavior in comparison to someone else’s behavior which is perceived to be worse (Bandura, 2002). An example, “I did get a hold of last year’s exam, but I memorized everything honestly. I wasn’t copying off my neighbor’s paper like Suzy was!” Obtaining an unauthorized copy of a previous exam or exam questions was mentioned in seventeen of the studies. Both of these behaviors listed are academic misconduct—neither is good.

Displacement of Responsibility is exonerating oneself by blaming someone else (Bandura, 2002). These are detailed in two of the areas of concern in this study, teacher relationship and cheating culture, as well as several of the factors of moral disengagement such as blaming the instructor for not teaching well enough, excessive work, and how others are cheating even more egregiously. Factors of moral disengagement reported in the study

Five contributing factors contributing toward moral disengagement appeared frequently enough that they were cataloged and categorized into their severity as low, mid, or high tercile.

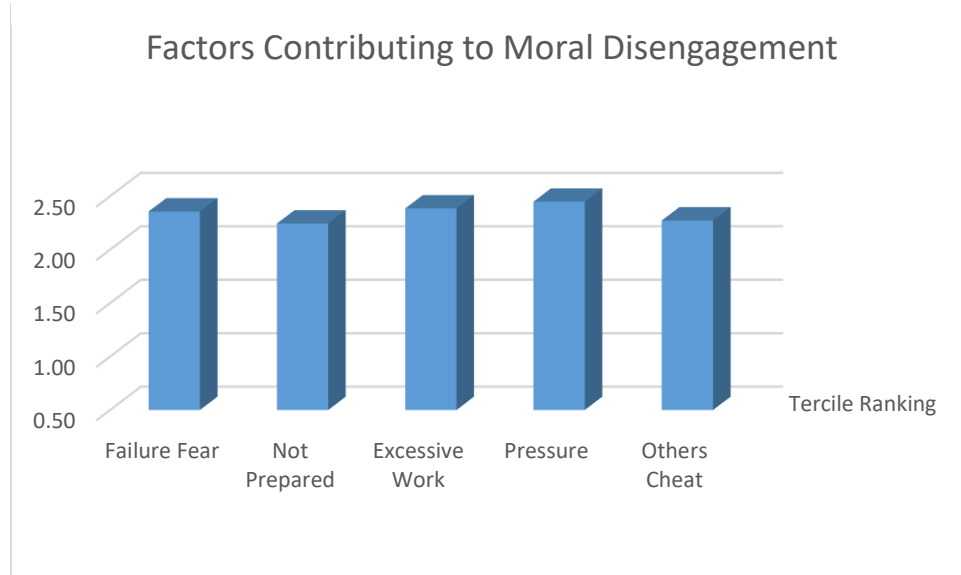
On a tercile scale where a score of “1” is the lowest and “3” is the highest, all of these factors are well above “medium” or “average” concern which would be a score of “2”. Pressure to meet the expectations of oneself and others was highest, followed by blaming excessive work, and fear of failure. The excuse that others are cheating was the lowest overall. But, considering the precision of the data is only to the nearest tercile, all of these are close together.

The most prevalent factor contributing to moral disengagement from the review is pressure to succeed from parents, peers, or economics (tercile ranking of 2.45). Excessive work (tercile ranking of 2.39) and failure to fail (tercile ranking of 2.36) were also largely prevalent indicating workload and fears of not achieving expected were key contributors to moral disengagement. Additionally, knowing that others were cheating (tercile ranking of 2.27) and not being prepared (tercile ranking of 2.24) were also identified as motivators for moral disengagement.

Table 4.2. Factors contributing to moral disengagement

Factor	Tercile Ranking
Failure Fear	2.36
Not Prepared	2.24
Excessive Work	2.39
Pressure	2.45
Others Cheat	2.27

Figure 4-2. Factors Contributing to Moral Disengagement



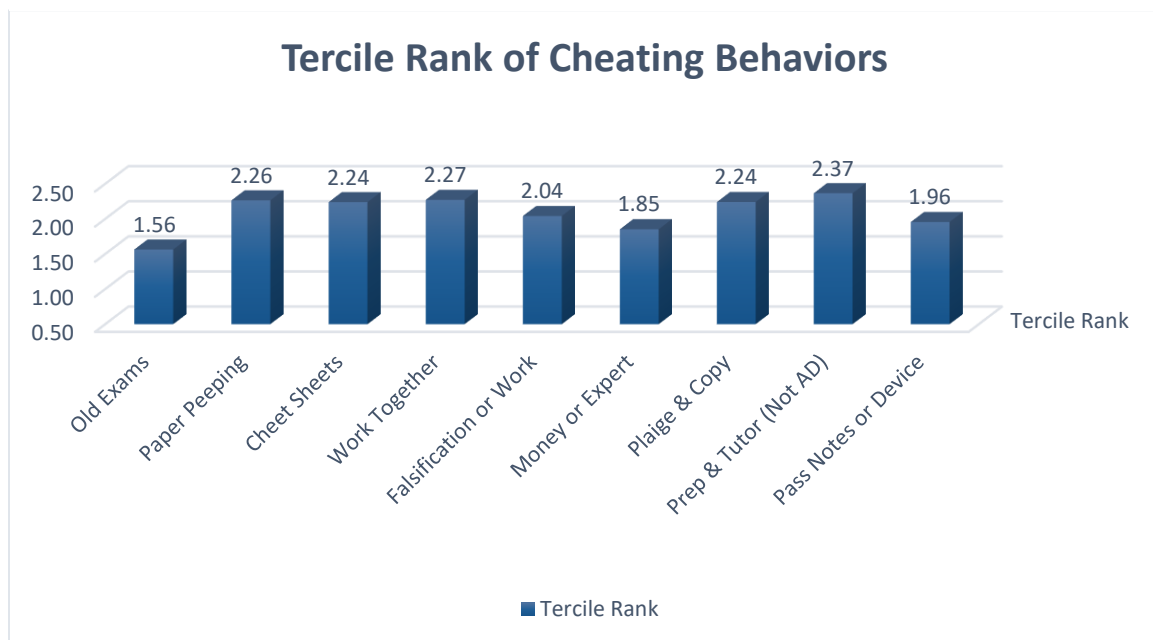
Research Question 4: What do students report as the specific triggers which led to a decision that the reward of cheating outweighed the risk of getting caught in specific situations, and how do the frequencies of each cause compare to each other?

The specific trigger that leads to the final decision to implement a cheating behavior and which cheating behavior will be implemented can be summed up in one word, “opportunity” (Davis, 2017; Niven & Healy, 2016; Ramzan et al., 2012; Starovoytova & Arimi, 2017; Topiceanu, 2017; Yukhymenko-Lescroart, 2014). The factors which provide the motivations for academic dishonesty set the stage to predisposition the student toward moral disengagement (Canchila et al., 2018; Gino et al., 2011; Martinez et al., 2015). The student who is now prone toward academic misconduct is now looking for or is presented with the opportunity to pursue that academic misconduct, even though their behavior may have initially had the energy to exert

self-control, has been pushed toward self-regulatory resource depletion, then takes that step toward unethical behavior (Gino et al., 2011).

In order to attempt to determine specific triggers and their frequency, cheating behaviors were examined. Looking at each study, the severity or level of concern of each of the one hundred studies meeting the criteria for inclusion was categorized subjectively by tercile, then recorded. Unlike prevalence, these results are not weighted because the decision to investigate or record a particular behavior was made only once per study with each set of researchers making the decision on a sample size to include in their study based upon the individual circumstances of each study.

Figure 4-3. Tercile Rank of Cheating Behaviors



In the following sections, the tercile rankings is explained for *Old Exams*, *Paper Peeping*, *Cheat Sheets*, *Inappropriately Working Together*, *Falsification of Work*, strategies in involving paying *Money or Expert* to assist either in writing a paper or take an exam, *Plagiarism and Copying*, inappropriate use of *Extra Credit*, *Brown Nosing*, using *Influence* to obtain a grade,

outside of class *Prep and Tutoring*, and passing *Notes or Device* facilitating unauthorized communication between students.

Referencing old exams would include any unauthorized access to previous examinations, completed homework, or advance copies of new exams or questions. This would not include authorized access of old exams which might be accomplished by reading exams an instructor has put on file in the Reference Section of the school's library. In order for this type of academic misconduct to occur, access to previous copies of the exam, completed homework, or potentially a new exam, must be available. Often the culture to facilitate this availability can be found in fraternities or sororities which provide the necessary access to people and resources such as previous years test files (McCabe & Trevino, 1997). The trigger for this behavior would be availability and opportunity. Reviewing from previous test files, homework or other unauthorized materials was a behavior examined by 17% of the papers in this study with an average tercile value of those examining it of 1.56 below the tercile mid-point, putting this behavior in the lower tercile of importance compared other cheating behaviors.

Paper Peeping would include somehow looking at or referencing the neighbor's or nearby student's test paper or computer screen during an examination. This could be with or without the permission or knowledge of the neighbor. In order to be able to view another student's exam or computer screen during an examination, these must be physically available. Even if efforts to prevent copying are taken, the ways to defeat it seem almost endless; as an example, even if there are multiple editions of the test, it is still possible in the test distribution process for the exchanging of test forms so neighbors have identical forms, delay of handing in the answer sheet, leave information in a restroom, etc. (Starovoytova & Arimi, 2017). Even though proctoring does not have an effect on the predisposition to cheat, it can prevent some

aspects of this trigger (Conijin et al., 2022) This behavior falls in the upper tercile of importance and was studied by a quarter of the papers reviewed with 25 data points.

Cheat Sheets, sometimes referred to as crib notes, etc., includes any unauthorized access to previously prepared notes or hidden quick reference cards. Like other triggers, this is triggered by opportunity opening up to a student that is already morally disengaged and spent time preparing the hidden reference card or device. Often, this is low on the risk and high on the reward scale, especially considering that in many locations, the only punishment for being caught with a cheat sheet is a verbal warning from the teacher (Dannhoferova et al., 2022). This behavior is studied by 27 of the papers in the study and falls into the upper tercile of importance with an average of 2.24.

Working together is in a different context than just students working with each other; educators encourage teamwork and cooperation amongst their students. In this context, it includes any *unauthorized* work of two or more students in a group on an exam or assignment or individual work was expected. Unexpected to the author, this was studied by 33 of the papers reviewed and again falls above the average in tercile score with 2.27.

Falsify work is the label to indicate all falsification of work including dry labs, fake bibliographies, or making things up, this occurs when a student claims results or work that are false or misrepresented. Complete falsification of work by turning in a “dry lab” report without actually doing the experiment or making up a fake bibliography for a paper are serious allegations (Maramark & Maline, 1993) and are investigated by 33 of the papers included in the study. However, the issue barely makes it into the top half of concerns with a tercile score of 2.04.

Money or Expert is an abbreviated label that involves any of the following: Paying someone or making arrangements for someone to write a paper on the student's behalf, sometimes referred to as contract cheating, an expert to assist the student during an exam, or take an exam on the student's behalf. Although investigated in 21 of the papers in this study, this trigger falls in the lower tercile of concern with a tercile average score of 1.85. In order for this trigger to have opportunity, there has to be the presence of an expert to write the paper or assist with the exam and the student needs to have the money necessary to make a payment.

Plaije & Copy is the label referring to traditional plagiarism, improper citation, or just copying work from someone else claiming the work is the student's own composition. By far, this is the most popular topic in the papers reviewed as it is addressed by 54 of the 100 papers. It definitely falls in the upper half of concern with the tercile score of 2.24.

Extra Credit is not referring to the proper use of earning a few extra points on the test or in the grade by doing additional work or earning a bonus. This refers to the inappropriate use of extra credit to change a grade that was not earned and is not deserved. Although not technically academic dishonesty, this would indicate an attempt by the student to use extra credit to bring up a less than desirable grade. It crosses the line if the grade assigned by the instructor does not accurately reflect the skills of the student. Contrary to the personal experience of the author where the students surrounding us at the school seem willing to do almost anything for extra credit to bring up a grade, this was only mentioned by several authors. Only one paper had any significant statistics, and that concern was only if the extra credit would bring up a student's grade to a level the student did not deserve or earn (Yukhymenko-Lescroart, 2014)

Brown Nosing is a pejorative label, also known as being the "teacher's pet" or showing extreme favoritism to the student ingratiating himself or herself to the teacher in exchange for a

grade. Like extra credit, this is not technically academic dishonesty unless it crosses the barrier where the grade designed by the instructor does not accurately reflect the skills of the student. Although mentioned by several studies and a popular subject for television entertainment, only one study kept any significant data, and in that study, this issue did not seem to have a statistically significant effect on grades (Yukhymenko-Lescroart, 2014).

Influence is the label for influence peddling, a type of academic misconduct that does not fall under the category of academic dishonesty. Often undue influence is leveraged by the parents or student of a prominent family. This is typically improper use of political or other influence to obtain a grade or more playing time on an athletic team, in other words, “corruption”. This is an academic entitlement caused by corruption in the culture in the community in which the school exists. Four studies looked at the phenomenon. Obviously, influence peddling by students or families decreases engagement in and out of the classroom (Knepp & Knepp, 2022), and what enables that influence is different from community to community, but influence exerted obtained via corruption is a topic more difficult to obtain more data than the academic misconduct itself (Contreras-Pacheco et al., 2024).

The label, *Prep & Tutoring* is not an infraction of academic integrity, but rather using outside resources gain an advantage over other students, often in preparation for a test such as an SAT/ACT preparation course or tutoring outside class time. Investigated by nine of the papers in this study, the reason for its inclusion was the feeling by some that this is an unfair advantage of the wealthy elites because it requires the input of money from the family or is somehow racist (“In China”, 2002; Knepp & Knepp, 2022; Royal & Dodo Seriki, 2018). As a phenomenon, it is definitely in the upper tercile with importance with an average of 2.37; but, academic misconduct, it is not.

The *Notes & Device* label refers to the “old school activity” of passing paper notes in a variety of folded forms from one student to another throughout the classroom or any academic dishonesty by means of unauthorized communication between students using hand signals, notes, paper airplanes, or the more “high-tech” means of cell phones, or social media platforms. In the early stages of reviewing studies, these were separate categories. However, as research and recoding progressed, it became obvious that both of these technologies performed the same function, and thus should be part of the same theme. Notes and devices, also was recoded to incorporate communication in the same theme such as hand signals, strategic coughing, anything done in class to pass information as well as looking up the answer on Wikipedia (Starovoytova & Arimi, 2017) and consulting the AI chatbot. Studied by 27 of the papers, this behavior came in right at an average importance of 1.96 on the tercile rank.

Research Question 5: What do students report in these studies would cause them to not feel the need to cheat?

When students were asked what educators and schools could do that would make them less likely to feel they have to cheat, four major categories of actions were commonly mentioned: Fix the culture of cheating, better teaching, stiffer penalties for those caught cheating, and reasonable performance goals and objectives.

Students want educators to fix the culture of cheating. Besides proctoring strategies which are beyond the scope of this study, the area investigated by the most papers in this study is to fix the culture of cheating. Students would like to see cheating not to be seen as a fun thing to do (Mensah et al., 2018). For many, cheating is seen as something that has to be done because everybody else does it, and to not cheat puts the student behind in the competition (Crittenden et

al., 2009; Dejene & Hui, 2021). In short, students want a fair environment. This was mentioned in 48 out of 100 studies.

Students would like better teaching. Students report that if the teacher taught better and the relationship with the teacher were better, they would not cheat. Even though shifting responsibility and blaming the professor are common; to mention boring, uncaring instructors with irrelevant lessons, and are not typically considered by school authorities as justification for cheating, frequent mention of this theme is an indication there may be some truth to the statements (Nelson et al., 2013). This area of concern is mentioned in 27 of the studies chosen for inclusion as well as many meta-analyses reviewed which were not eligible for inclusion in this study.

Students would like to see stiffer penalties for those caught cheating. Many students would like the penalties for cheating to be strengthened with appropriate due process so as to address the first issue of feeling like they have to cheat in order to keep up and compete with their classmates. This cheating culture comes into account when rational students begin to apply game theory to their choices—if the punishment for cheating is little or nothing, then the payoff is high, but the risk is low (Magnus et al., 2002). The effect of not punishing cheaters is to punish those who follow the rules (Balbuena et al., 2015; Behera et al., 2023). Lax punishment was mentioned as a concern in 27 of the studies.

Students would like to see reasonable performance goals. Not having to meet unreasonable performance goals is another statement from students. Some variation of this was mentioned in almost every article, paper, or research study reviewed whether that paper met the criteria for inclusion or not. The reason for mentioning this last is that in most cases, the goal or objective itself is a “non-negotiable”—if one wants to graduate from a high school or college,

one needs to enroll in those courses. What causes unnecessary academic misconduct are consecutive high-performance goals such as those for schools in NCLB which depleted the reserve preventing moral disengagement, and all parties involved, students, parents, and teachers can succumb to the temptation to commit academic misconduct (Associated Press, 2015; Royal & Dodo Seriki, 2018; Welsh & Ordonez, 2014).

Research Question 6: How do the answers to these questions differ throughout the old-school, retro-tech, high-tech, and A.I. technological eras?

As one looks across the eras, some introduction is necessary to explain how the various eras are defined as they are characterized by the dominant technology in the school or group of schools in which each study was conducted, not by chronological years even though in many western countries there is a direct correlation between the eras and the corresponding chronological years. In other parts of the world and even in various schools in the developed world, schools do remain that are operating with far less availability to educational technology than other schools in the same country or state. On the other hand, other schools prioritize technology and have the resources to provide their students with the most advanced, up-to-date technological experiences. These eras will be categorized as the “old-school”, “retro-tech”, “high-tech”, and “Artificial Intelligence” and generally correspond in the United States to conditions experienced in the mid-20th Century to today.

Categories of Technology

In order to determine how attitudes and behaviors have changed over the past three decades, all of the papers reviewed and meeting the inclusion criteria were classified into one of four categories based on the availability and usage of technology to the participants in the study. Some papers written in the developing world may be classified in a previous era due to a slower

adoption of technology. As an example, Rahman et al. (2023) is classified as an “old school” for the purposes of this study due to the technology used in that school. Categories used for this study include the following: old school, retro tech, high-tech, and artificial intelligence (Table 4.3)

Table 4.3. Categories and descriptions of technological eras.

Category of Technological Era	Description
Old School	These are the traditional classroom tools from before the advent of widespread use of the personal computer. - These include pencil, paper, cheat-sheets and crib notes, typewriters, mimeograph sheets, photocopies, passing notes, paper airplanes. - A computer lab was a set of terminals connected to a mainframe or a separate room in the school. - In the school or university library, the primary reference materials were the card catalog and Readers Guide to Periodical Literature. - Catching plagiarism depended upon the savvy of the instructor or grading assistant to recognize material or variations on writing style.
Retro Tech	This is the era of computer use when a computer was a box in the corner of the room plugged into a monitor. - internet was now used for reference, and the era of cut-and-paste had begun. All of the technology of the previous era still existed. - A computer lab was now a set of personal computers connected together via network. When classrooms were equipped with computers, this would be typified by one to three desktop computers in a separate area of the classroom for the shared use of the students. - In the school or university library, the card catalog was now computerized. One could log on to other university libraries to facilitate inter-library loan requests. - Catching plagiarism was in its “Wild West” phase in that the internet was available, but good tools for catching plagiarism did not exist. Catching plagiarism depended upon the savvy of the instructor or grading assistance to recognize a variation in writing style, then locate the source on the internet.

High Tech	This begins with the era of the cellular telephone and really takes off with the advent of the smart phone. Laptops and other portable computers begin to appear that can connect with internet access. - Passing notes during exams transitioned over to texting on smartphones. Many students could do so by feel without ever removing their phones from their pockets. Cheat sheets and technology of the previous era still existed but were utilized less as the era progressed. - The computer laboratory still exists, but is now focused on project computers for students, CAD-CAM, large screens, and other resources to supplement the use of personal computers or laptops. - The school or university library's card catalog and other resources were now available online. - Tools became available to screen for plagiarism such as Copygator, Turnitin, etc. Ultimately, catching plagiarism still depends upon the skills of the instructor or teaching assistant.
Artificial Intelligence	Although artificial intelligence has been around for a few years, this era begins in earnest with the publication of ChatGPT and other chat bots. This era is unfolding before our eyes, and its full influence has yet to be felt.

Categories of Concern over Varying Technologies

The raw number and percentage of eligible studies in that technological era expressing concern with that topic can be found in Table 4.4 with each of these four concerns in its own chart in this section.

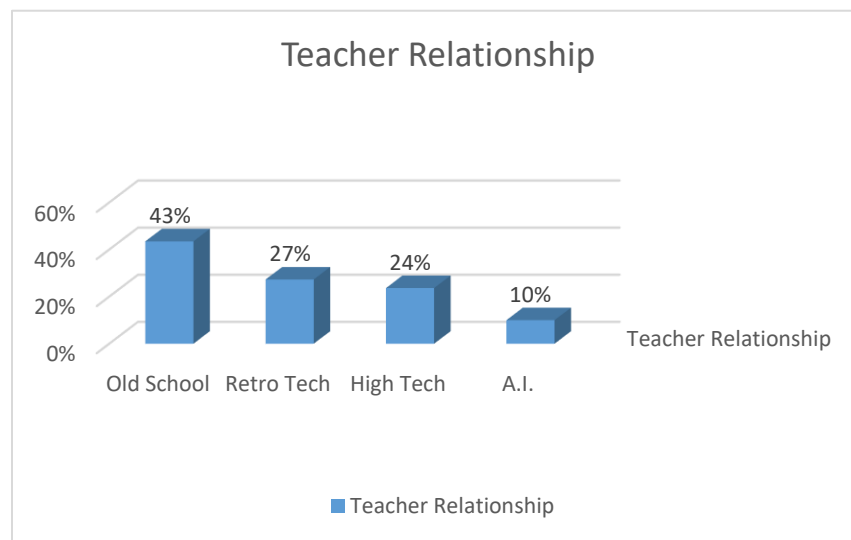
Table 4.4. Categories of Concern over Varying Technologies

Concern Cited	Old School (n=23)		Retro Tech (n=11)		High Tech (n=55)		A.I. (n=10)	
	<i>with concern</i>	<i>Percent</i>	<i>with concern</i>	<i>Percent</i>	<i>with concern</i>	<i>Percent</i>	<i>with concern</i>	<i>Percent</i>
<i>Teacher Relationship</i>	10	43%	3	27%	13	24%	1	10%
<i>Performance Goals</i>	8	35%	8	73%	15	27%	5	50%
<i>Cheating Culture</i>	12	52%	5	45%	27	49%	4	40%
<i>Lax Punishment</i>	8	35%	1	9%	17	31%	1	10%

Concern with Poor Relationship between Teacher and Students.

Regarding academic integrity issues, the number of studies as a percentage of each era

Figure 4-4. Concern with Teacher Relationship & Tech Era



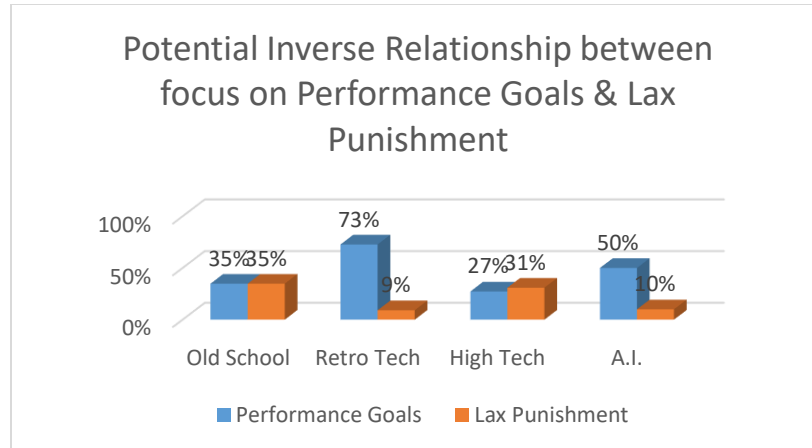
which were surveyed have spent less time investigating the effect of the relationship between the teachers and their students. Although some studies indicate no direct effects of teacher-student interaction (Tsui & Ngo, 2016), the majority of studies are in agreement that better communication between teachers and students facilitates better academic performance (Balbuena & Lamela, 2015; Bolin, 2010; Dejene & Hui, 2021; Hale, 2018). Each one of the technological eras has further developed tools teachers could use to communicate with students and students could use to communicate with teachers.

Concern with Performance Goals & Lax Punishment

A strange relationship in the papers selected for this study seems to exist between the investigation of performance goals and the punishment of academic misconduct. As new technologies appeared such as the internet, there was more attention spent on performance goals, then as that technology matured and became the focus lessened, the focus shifted back to more to

punishment. Then, with the introduction of AI, the focus for academic integrity has shifted back to looking at performance goals.

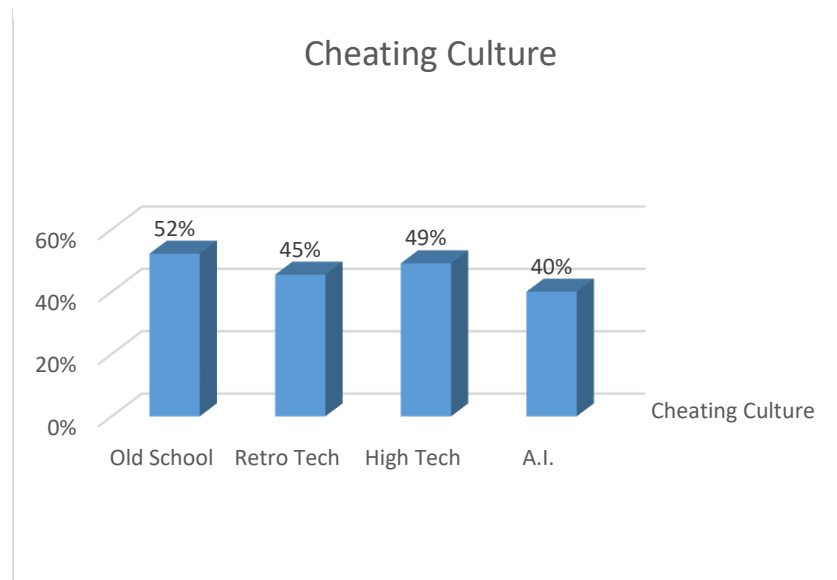
Figure 4-5. Relationship between concern with Performance Goals & Lax Punishment



Concern with Cheating Culture

Regarding attention focused on the culture of cheating in schools, this has remained about the same and is ever-present. Given the small number of data points these changes reflected are not significant. Culture is an important concern that has remained in focus throughout all of the eras.

Figure 4-6. Concern with Cheating Culture



Factors of Moral Disengagement over Varying Technologies

For the relationship of the factors of moral disengagement over the technological eras, statistics for the era of AI were combined with those of the high-tech era because the majority of articles from this era focus on the technical aspects of plagiarism and how AI is being used rather than the factors of why a student would be using AI for academic misconduct. As such, there were data points, but the number for each factor was small compared to the total number of articles.

Interesting in the trends over progressing technologies which is roughly equivalent to generational eras in many schools in western countries, all of the factors, with the exception of concern with excessive pressure leading to academic dishonesty, have seen a decrease in the high technology era subsequent to the introduction of widespread access to the internet on a portable basis. Given that the high-tech and AI eras have combined statistics, there are between thirteen

and twenty-two studies upon which to base these statistics; several of these are large surveys in this category with thousands of participants each.

The fear of failure has seen a precipitous decrease as technology has advanced, going from a top-tercile concern to close to average. This is also true with the concern of blaming academic moral disengagement on excessive work which has gone from a top tercile concern to close to the midpoint as average. Lack of preparedness has, over time, hovered in the same area around the border between the mid and top terciles.

The only significant high tercile factor that remains high tercile is the excessive pressure to succeed. These correlate with perceived performance goals which also remain high as well as the cheating behavior of falsifying academic work which is increasing.

For the factors of moral disengagement, statistics for the era of AI were combined with those of the high-tech era because the majority of articles from this era focus on the technical aspects of plagiarism and how AI is being used rather than the factors of why a student would be using AI for academic misconduct. As such, there were data points, but the number for each factor was small compared to the total number of articles.

Interesting in the trends over technologies, also effectively time as well in western countries, all of the factors, with the exception of concern with excessive pressure leading to academic dishonesty, have seen a decrease in the high technology era subsequent to the introduction of widespread access to the internet on a portable basis. Given that the high-tech and AI eras have combined statistics, there are between thirteen and twenty-two studies upon which to base these statistics; several of these are large surveys in this category with thousands of participants each.

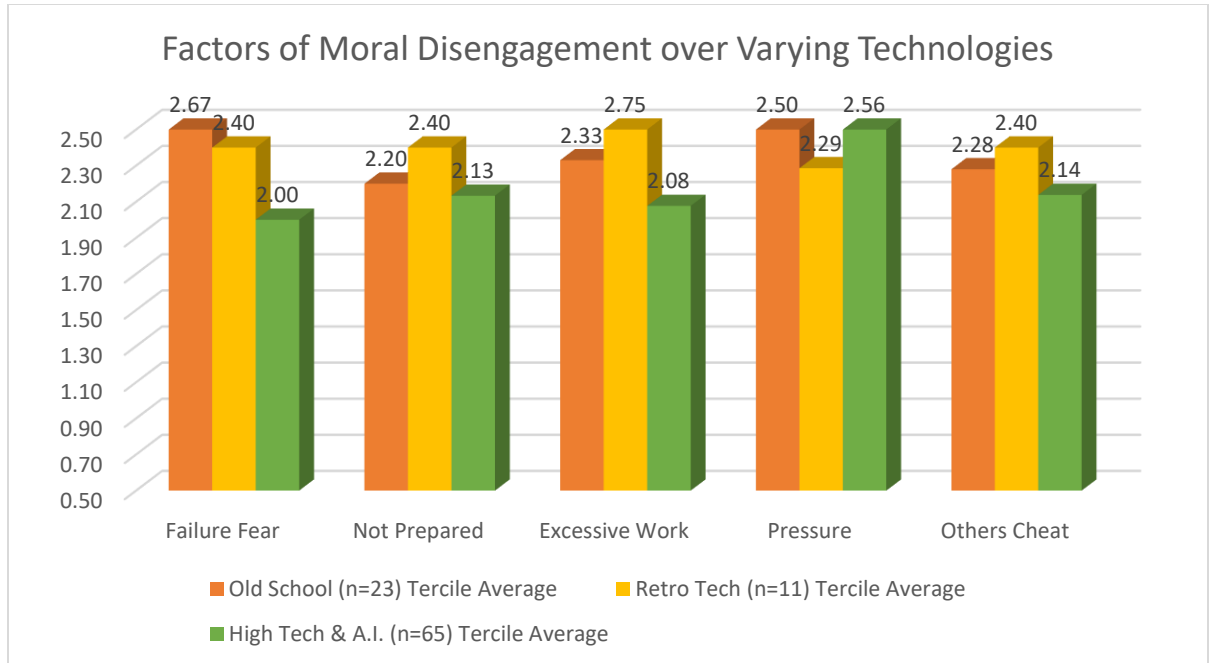
The fear of failure has seen a precipitous decrease as technology has advanced, going from a top-tercile concern to approaching average. This is also true with the concern of blaming academic moral disengagement on excessive work which has gone from a top tercile concern to the midpoint as average. Lack of preparedness has, over time, hovered in the same area around the border between the mid and top terciles.

The only significant high tercile factor that remains high tercile is the excessive pressure to succeed. These correlate with perceived performance goals which also remain high as well as the cheating behavior of falsifying academic work which is increasing.

Table 4.5 Level of Concern Expressed with Factors of Moral Disengagement as Varying through Technological Progress

<i>Contributing Factors</i>	<i>Old School (n=23)</i>		<i>Retro Tech (n=11)</i>		<i>High Tech & A.I. (n=65)</i>	
	<i>No. Data Points</i>	<i>Tercile Average</i>	<i>No. Data Points</i>	<i>Tercile Average</i>	<i>No. Data Points</i>	<i>Tercile Average</i>
<i>Failure Fear</i>	3	2.67	5	2.40	18	2.00
<i>Not Prepared</i>	5	2.20	5	2.40	15	2.13
<i>Excessive Work</i>	6	2.33	4	2.75	13	2.08
<i>Pressure</i>	12	2.50	7	2.29	25	2.56
<i>Others Cheat</i>	11	2.28	5	2.40	22	2.14

Figure 4-7. Level of Concern Expressed with Factors of Moral Disengagement as Varying over Technologies



Categories of Cheating Behaviors over Varying Technologies

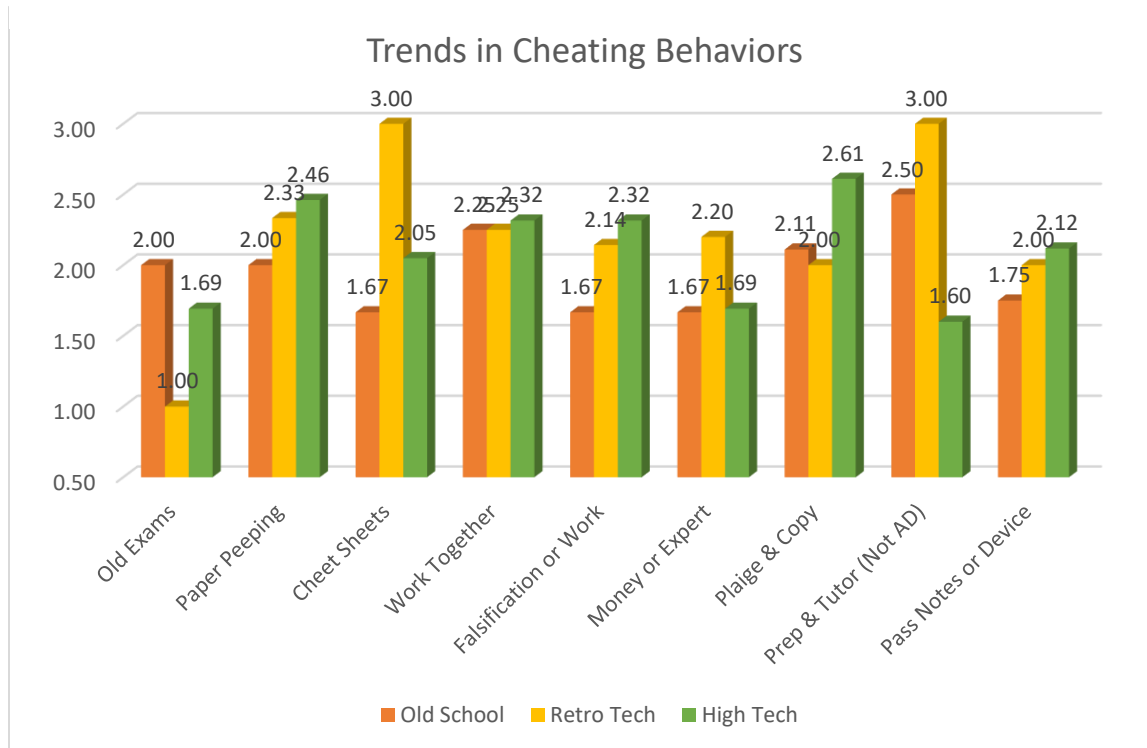
Especially notable are some cheating behaviors which are prominently featured in literature reviews but seem to completely disappear from the statistics. Not holding up one's end of the workload in group work featured prominently in the literature and the author's experience as a school administrator. However, this phenomenon is mentioned in only two of 100 papers meeting the criteria for inclusion in this study. Hacking the grade sheet, tampering with the carbon paper report card, altering the transcript in the file cabinet, and breaking into the mainframe computer system in the office, were apparently tactics during the era of the old school; it would appear these tactics have become obsolete in the high-tech and AI eras. Modern computers have much better security and mainframe computers are now reserved for complex computational tasks. Getting excessive extra credit, brown nosing, and influence peddling, at

least in Western countries, all of which involve somehow personally persuading the teacher or administrator to issue a grade which has not been fully earned, appear to have also mostly faded into the past.

Table 4.6 Trends with Focus on Cheating Behaviors over Varying Technologies

<i>Cheating Behavior</i>	Old School (n=23)		Retro Tech (n=11)		High Tech & A.I. (n=65)	
	No. Data Points	Tercile Average	No. Data Points	Tercile Average	No. Data Points	Tercile Average
<i>Old Exams</i>	1	2.00	2	1.00	13	1.69
<i>Paper Peeping</i>	8	2.00	3	2.33	13	2.46
<i>Cheat Sheets</i>	3	1.67	3	3.00	20	2.05
<i>Work Together</i>	8	2.25	4	2.25	19	2.32
<i>Lazy Group Work</i>	2	1.00	0		1	2.00
<i>Falsification or Work</i>	3	1.67	7	2.14	19	2.32
<i>Hack the Grade Sheet</i>	1	1.00	0		0	
<i>Money or Expert</i>	3	1.67	5	2.20	13	1.69
<i>Plaiage & Copy</i>	9	2.11	6	2.00	36	2.61
<i>Excessive Extra Credit</i>	1	2.00	0		0	
<i>Brown Nosing</i>	1	2.00	0		0	
<i>Influence Peddling</i>	3	1.67	0		2	2.50
<i>Prep & Tutor (Not AD)</i>	2	2.50	2	3.00	5	1.60
<i>Pass Notes or Device</i>	4	1.75	3	2.00	17	2.12

Figure 4-8. Trends in Cheating Behaviors as Varying through Technological Eras



Summary

This study attempted to answer the research questions with a large survey of the literature using a step-by-step method of content analysis (Naeem et al., 2023) to interpret qualitative, mixed-methods, and quantitative studies at the same time to look for trends in academic misconduct over time as technology has changed and developed. Some academic misconduct is unintentional in the form of improper citations and plagiarism while much academic dishonesty is intentional, attempting to game the system and get a better grade. Possibly due to the structure of the inclusion criteria for this study including a quantitative component of knowing how many participants are in each one of those papers, approximately four-fifths of the studies primarily deal with intentional academic misconduct while only around one-fifth focus primarily on unintended academic misconduct.

As motivations, four areas of concern were studied in a binary fashion of either the area of concern is present in the study or not, and five factors contributing to moral disengagement we're investigated as motivations contributing to the predisposition to do academic misconduct. Overall, the area of concern that received the most attention from the papers meeting the criteria for inclusion in this study was the presence of a culture that promoted cheating. The factor cited most frequently and with the most focus in research that contributed to moral disengagement was excessive pressure to perform followed closely by excessive work and a fear of failure. Piggybacking on the previous area of concern of a culture of cheating, was a factor contributing to moral disengagement indicating that others are cheating, so there is a need to cheat in order to remain competitive.

The trigger to make the final decision to do academic misconduct can be summed up in one word, "opportunity". If copies of old exams happen to be floating around, then there is the temptation to reference to old exam questions. If the classroom is too crowded and the neighbors are too close, there is a temptation to take a peep at the neighbor's test sheet to see what their answers might be. If the teacher does not proctor the room well, then bringing in a little cheat sheet or crib notes are a tempting option. If there are a group of buddies, all of the gang, can get together and share answers, unauthorized of course; if most of one's peer group are participating, it is hard to jump off the bandwagon. No time to actually do the lab, it is tempting to do a "dry lab" and completely make it up. Does a student have enough money to hire someone else to do it? Then contract cheating is available for those who have more money than common sense or reserve left of moral fortitude. No money, the one predisposed to shortcutting can always just reword it from Wikipedia and plagiarize the thing. Sort of like the television show from a few years back, the always phone-a-friend or pass a few notes in class are ever-present. In some

places with lackadaisical punishment and a cheating culture, all of these activities are commonplace (Dejene & Huy, 2021). Unfortunately for those predisposed to these type of activities, if the culture in the school is one of integrity rather than a lack thereof, all of these triggered cheating behaviors could result in severe punishment up to and including expulsion (Kansas State University, 2020).

Chapter 5 - Discussion

Like a small propeller driven aircraft with a camera flying at 1,000 feet, the purpose of this study was to look at academic integrity issues, both unintentional and intentional in a longitudinal fashion through progressive eras of technology, attempting to locate changes and trends in attitudes, triggers, and behaviors. Just as the career of the author spans all three eras and is quickly entering the fourth, our study flies high enough to see where the road has come from and the direction the road is going as it stretches toward the future. We are not in a jet airliner traveling 400 mph at 30,000 where our journey is just a small blur on the flight of history, but nor is this study a crop duster landing in a field, clearing the weeds out of the tires. We are looking at trends without getting bogged down in the details.

The modern jet airliner is a marvel of engineering benefiting from over a century of engineering innovation and the biplane crop duster which from the outside looks like it has barely changed from its predecessors from a hundred years ago, they have a lot in common: They are both aircraft using the lift over their wings to stay in the air and they are both flown by human pilots. In the same manner, technology available to the students in our schools has gone from chalk sticks and handheld slates in the 18th Century to fountain pens and paper in the 19th Century to ball-point pens and typewriters in the 20th Century, and desktop computers in a computer lab to handheld tablets with a stylus in the 21st Century—just so far. But what do all of these have in common? Students. Technology may have changed in all of this time, but human nature has not. Academic misconduct has existed for the entire span of education, but the purpose of intentional academic misconduct has not changed: Somehow by some manner, shortcut the learning process and get a better grade (Amua-Seyki, 2016; McCabe et al.,

2001;Scott, 2016, Sorgo et al., 2015) in order to gain an unfair advantage (Canchila et al., 2018; Koscielniak et al., 2024).

Summary of Key Findings

Some things have remained the same from the era of the “old school” all the way to today as we come upon the cusp of artificial intelligence. The culture of a school toward academic integrity is an issue of top-tercile importance throughout the 20th Century and remains an important issue today (Clark & Soutter, 2016; Contreras-Pacheco, 2024; Crittenden et al., 2009; Diego, 2017; Harris et al., 2020; Magnus et al., 2002; McCarthy, 2019; Mensah et al., 2018; Tolman, 2017). Unauthorized group work whether in-person, via the telephone, or via a communications app has been an issue simmering just under the surface since before the days of the organized fraternities in the 1940s (Drake, 1941) with the issue still percolating in the modern eras (Amua-Seyki, 2016; Balbuena & Lamela, 2015; Chapin et al., 2017; Diego, 2017; Kapoor et al., 2022; Mensah et al., 2018; Razek, 2014; Tsui & Ngo, 2016; Yukhymenko-Lescroart, 2014). Influence peddling by wealthy parents in a private school, prominent families in the community, or on the behalf of star athletes is a phenomenon that rumbles beneath the surface with anonymous anecdotes but does not have much quantitative documentation (Contreras-Pacheco et al., 2024; “In China”, 2002; Knepp & Knepp, 2022; Mensah et al., 2018; Yukhymenko-Lescroart, 2014).

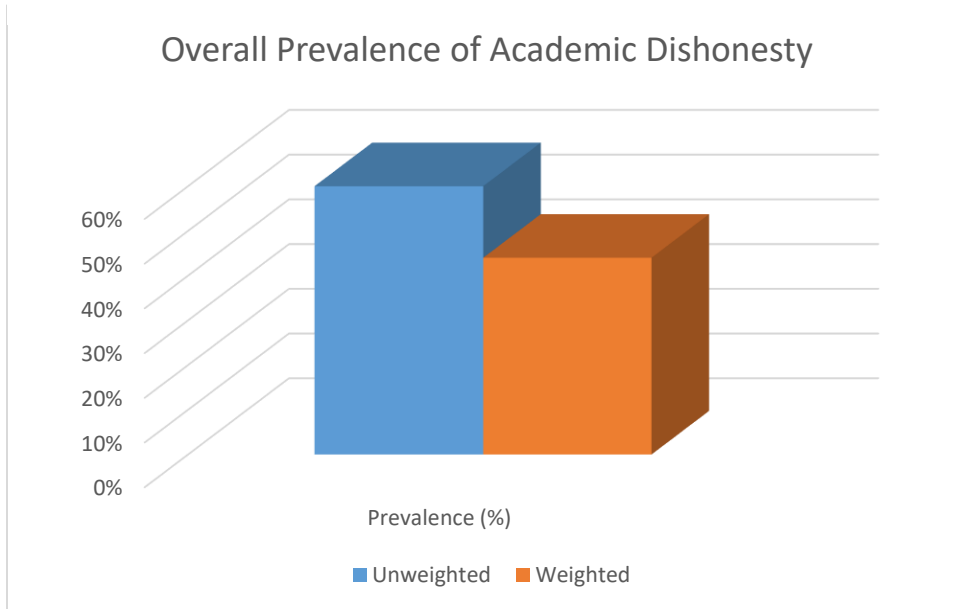
Then, there are phenomena that were present during the old school era that seem to have completely disappeared out of concern. Earning excessive extra credit in order to pass a difficult class is an activity I can remember my classmates doing when I was in high school and has been documented in Eastern Europe in just the past decade (Yukhymenko-Lescroart, 2014). However, much of this activity is not academic misconduct when the student is doing work to learn in

order to earn a better grade. Hacking the school computer system or sneaking into the office to make changes on the registrar's paper grade sheets (Yukhymenko-Lescroart, 2014) is an activity that has almost completely disappeared. Nowadays, grades are kept on central servers that are physically and digitally secure, and the school office is likely guarded by a security camera.

Research Question 1: Prevalence of Academic Misconduct

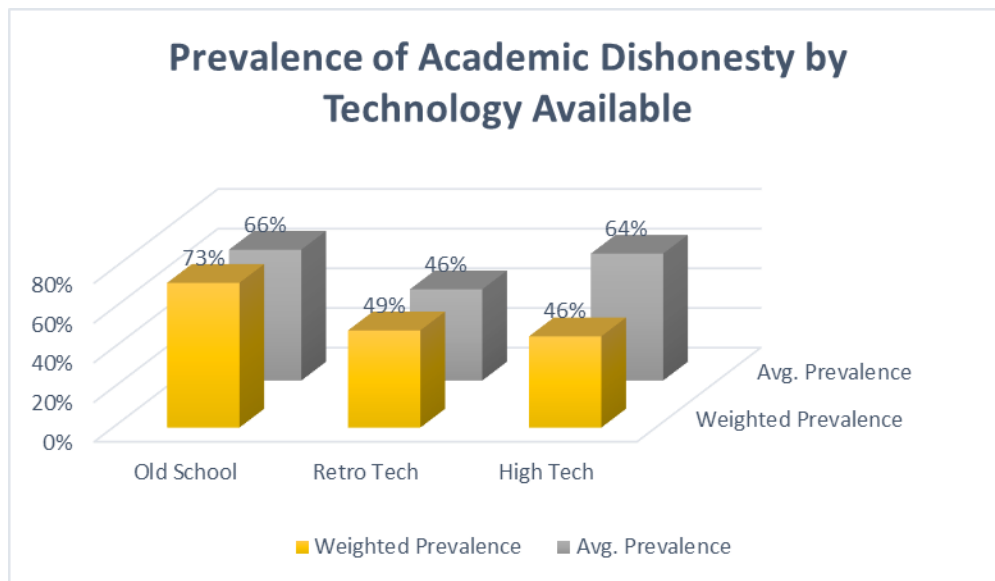
Reports of the prevalence of academic misconduct in raw numbers are all over the board depending upon the purpose and design of the study, geography, culture, and technological era. Reports vary from 7-13% in Canada and Australia (Awosoga et al., 2021; Henderson et al., 2023), 13-82% in the United States (Brandes, 1986; Drake, 1940, McCabe & Trevino, 1997; Thorne-Figuera, 2010) to as high as 95-97% in some places (Rahman et al., 2023; Wangaard & Stephens, 2011; Yukhymenko-Lescroart, 2014). As such, prevalence statistics are all over the place, varying from 7% to 97% in the studies in different places at different times. However, just because using any particular study to determine a precise prevalence of academic misconduct would be neither accurate for any particular location nor helpful, the overall prevalence can demonstrate the significance of the issue changing. Keeping the above margin-of-error in mind, the overall prevalence statistic can be seen in Figure 5.1 below. Unweighted statistics show the reported rate of academic misconduct of all studies taken equally with the weighted statistics being adjusted proportionally based upon the number of participants in each study.

Figure 5-1. Overall Prevalence of Academic Dishonesty



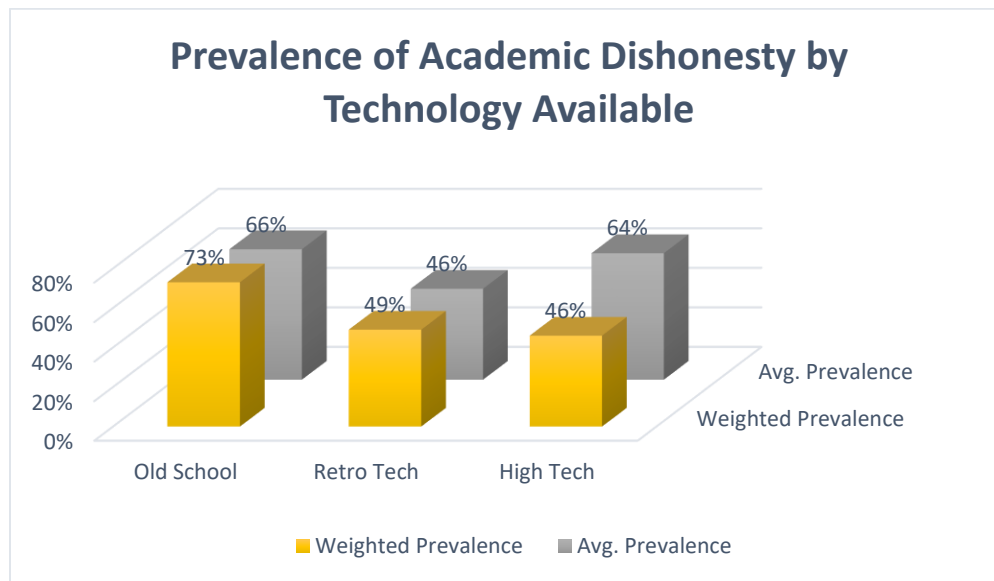
The range of the overall statistics provided in Figure 5.1 is a bit unsatisfying, and it does not answer the question, “How has the academic technology varied by the technology available to the instructors and students?” So, the data were divided into which technological era, irrespective of the year conducted, and then the statistics were weighted by the number of students in each study (raw data can be found in Appendix H). Which yielded the following in Figure 5-2.

Figure 5-2. Prevalence of Academic Dishonesty by Technology Available



Looking at the levels of technology, especially, the “old school” era, these numbers now begin to demonstrate a pattern. The data show that the levels of academic misconduct, plagiarism being most affected, tend to vary by technology, not the year, the place, or even the culture. The reported prevalence of academic misconduct under old school conditions in Ethiopia (Dejene & Hui, 2021), The Philippines (Diego, 2017), Indigenous homeland in South Africa (Mahomed et al., 2023), and the United States in 1993 (McCabe & Trevino, 1997) are all at 80% prevalence or above.

Figure 5-3. Prevalence of Academic Dishonesty by Technology Available



The author’s career as an educator began in what is coined in this paper as the “old school era” in the late 1980s. Unless your school or district purchased a spirit duplicator test bank with multiple versions of the test that could be cranked through the purple ink of the spirit duplicator (Smith, 1971), examinations during this era were a matter of putting them together by hand or using a typewriter. The photocopier became dominant over the offset press, mimeograph machine, and spirit duplicator by the 1990s. In both Montana and Kansas, I was the first person in the late 1980s and early 1990s in both buildings to have a daisy-wheel, carbon-ribbon, letter-quality printing word processor, and I used my own money to purchase it. Yes, the Scantron machine did exist, but it required specially manufactured test blanks and your school to have a Scantron machine that was maintained and functional. Producing multiple editions of an examination was expensive in both time and materials, so at a smaller secondary school, it would seldom happen.

If a student were to catch a glimpse of the neighbor’s exam in the old school era, that student would be looking at the same test, so peeping at the neighbor’s paper would be effective.

However, during the retro tech era, the teachers would have access to a desktop computer and printer. Even without a special program encoded with the test banks, making multiple versions of an exam was just a matter of moving lines around and renumbering. The hypothesis is that peeping at the neighbor's test was less effective during the retro tech and high-tech eras, therefore the prevalence of traditional cheating on exams declined (Clark & Soutter, 2016).

Research Question 2: Unintentional Compared to Intentional Academic Misconduct

Close to four-fifths of the studies meeting the criteria for inclusion were predominantly on the topic of intentional academic dishonesty; only around one-fifth covered the topic of unintentional academic misconduct that was not intentional academic dishonesty. The prevalence statistics for unintentional numbers are even more amorphous than general prevalence of intentional academic misconduct with only two of sixteen studies even attempting to calculate a prevalence rate which were 82% in a tribal homeland in South Africa (Mahomed et al., 2023) and Razek (2014) at 74% of Saudi students studying in the United States.

Unintentional academic misconduct is mainly a lack of proper citation and plagiarism (Bretag et al., 2014; Divan et al., 2015). The three main ways to approach plagiarism are punitive, disciplinary, and proactive:

Punitive Approach

A punitive-only approach to addressing plagiarism, punishing it in the same manner as other rules in the code of conduct with the assumption students already know everything academic attribution entails, is sort of like playing the card game, *King Mao*, where the players learn the rules to that round of the game by either breaking a rule and facing the penalty or carefully observing consequences suffered by others as they break a previously unknown rule.

This experience is akin to being in a thunderstorm and waiting for lightning to strike (Al Harrasi, 2023; Divan et al., 2015).

The problem is that a student who is in this situation without foreknowledge is akin to an out-of-state driver approaching a small town on a county road where the reduced speed-limit sign is behind thick bushes. In both cases, ignorance is no excuse to not follow the rules. For the driver, the speed limit sign may not be clearly visible from the road, but this information is clearly posted in the county courthouse or on the county's Geographic Information Server, GIS. The driver ideally should have done his or her research first, visiting the public map during business hours to carefully note the speed limits on the roads to be traveled. For the student, the student is expected to familiarize himself or herself with the honor code and standards of academic conduct as contained in the student handbook with clear explanations about proper student academic integrity, duly contained in Appendix F (Kansas State University, 2020).

The problem with the punitive only approach in both examples is not with incurring legal maleficence; it is that without proper notice and instruction, these would both be examples of poor institutional ethics which could easily be remedied by providing proper notice and education (Divan et al., 2015). At Kansas State University and almost all other institutions in the western world, this issue is addressed with a requirement that a clear delineation, much like a maximum speed sign posted on the road, usually in course syllabi, of departmental and the individual instructor's expectations and policies surrounding student collaboration, be clearly communicated to students (Johnson, 2023; Kansas State University, 2020; McCabe et al., 2021; Stephens et al., 2023; Wolverton, 2016).

Disciplinary Approach

Characteristic of the disciplinary approach is a recognition that the issue is unintentional, but something needs to be done to satisfy the honor code. So, the typical response here would be to reduce the value of the paper by a few points and give the student a chance to redo the paper properly. According to Al Harrasi (2023), this is the most common approach, frequently handled without any formal acknowledgment that an event has even occurred.

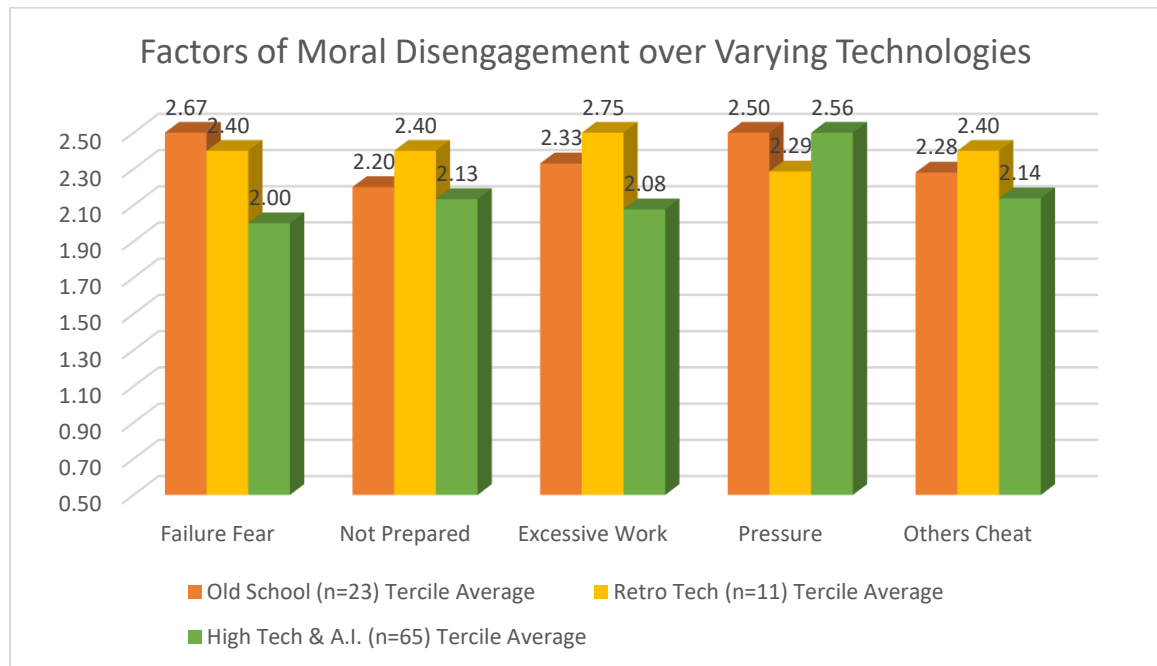
Proactive Approach

A proactive approach involves teaching the students attribution and giving them an opportunity to practice citation proper to the avoidance of plagiarism. There is broad agreement that proactive education is the most fair and effective way to handle unintentional plagiarism (Al Harrasi, 2023; Bretag et al., 2014; Divan et al., 2015; Hale, 2018; Mahomed, 2023; Razek, 2014; Skendaj, 2024)

Research Question 3: Reasons given by students as justification for moral disengagement as they differ throughout recent technological eras

Figure 5.4 shows the tercile level of concern for some of the various factors of moral disengagement that studies which addressed these issues expressed. The reason for combining the “High Tech” and “AI” is that, at the time of this work, all eligible papers addressing artificial intelligence were looking forward to its potential usage and influence on these factors rather than reflecting upon an actual influence that has occurred; their expressed concern with these factors were extrapolating into the future given data from the “high tech” era usage.

Figure 5-4. Concern for Factors of Moral Disengagement as Varying through Different Technological Eras



Fear of Failure Decreases

According to the data, the fear of failure has seen a decrease in its usage as a justification for moral disengagement as technology has progressed. Data shows it has gone from an upper tercile concern in studies during the old school era to an average concern in the high tech era. It is probable that technology has enabled students to be more efficient with their study and complete homework, and that is especially true with the advent of computerized word processors. In addition, tests have become less difficult. As an example, the Scholastic Aptitude Test which is published by the College Board has been renormalized several times to decrease the level of proficiency required in order to obtain any particular score due to a decrease in average performance. In other words, the test has gotten easier as its participants have become democratized (Lowry, 2014). To further decrease the fear of failure, there is an impression abroad that grade inflation and weighting are common in U.S. schools, so those students fear the standardized college admissions tests, not their grades (Muth, 2015).

Excuses of Feeling Unprepared and Excessive Work Decrease Slightly

The data show that concern with usage of the excuse of unpreparedness for moral disengagement by students has decreased ever so slightly from the era of retro tech to high tech. The lack of a more significant decrease can be explained by the combination of the high tech and AI eras into the same data pool for this study. This was due to an inadequate number of data points on AI outside of the plagiarism category. There were only two data points about unpreparedness in the AI era, and both of them were in tercile “3”. Regarding the excuse of excessive work, there are only two data points in the AI era, and both of these are in tercile “1” as a factor, but of lower concern. My hypothesis is that technology is making student learning more efficient. In the high tech era articles which are not focused on AI, there is the mention in the lit review of a decreasing concern regarding workload and preparedness with the potential explanation that technology has allowed students to make more efficient use of their time (Gentina et al., 2017).

The Pressure to Succeed is Always There

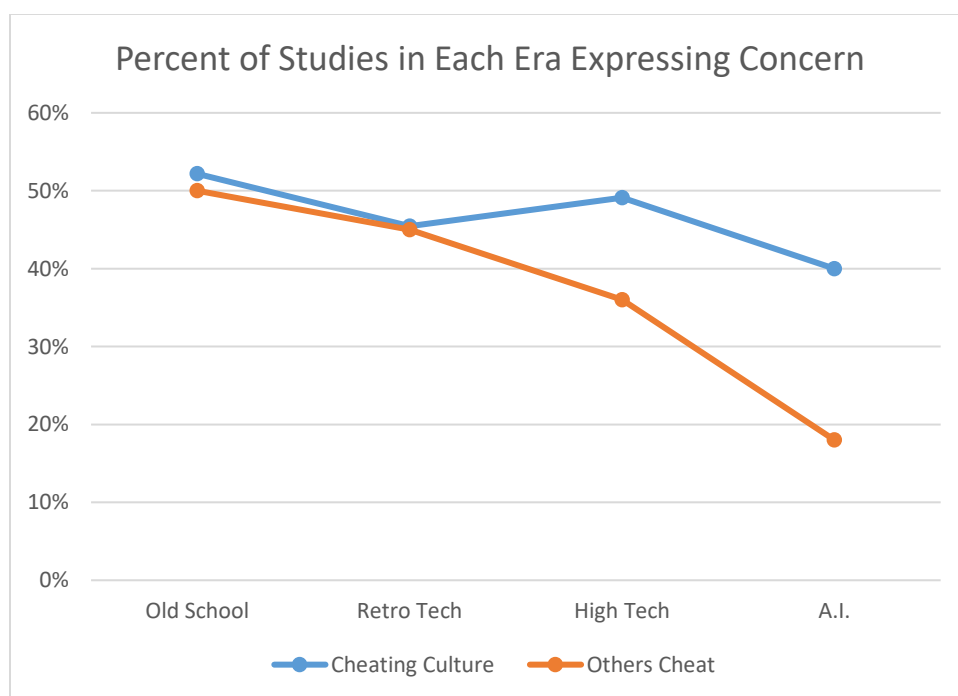
Compared to other factors, this factor has a lot of study with 46 data points out of 100 papers reviewed meeting the criteria for inclusion. The pressure to succeed is combined with the ever-present performance goals in 27 papers. Even with the AI era separated out, the pressure to succeed combined with ever increasing performance goals is a top percentile concern in every era. The combination of the two factors is toxic and, out of desperation, can predispose students to academic misconduct (Brent & Atkisson, 2011; Diego, 2017; Fass-Holmes, 2017; Gino et al., 2011; Juan et al., 2022; Niven & Healy, 2016; Razek, 2013; Tsui & Ngo, 2016; Welsh & Ordonez, 2014).

Addressing the Cheating Culture: Others Cheat

Cheating may be an epidemic, but all epidemics reach a peak and then begin a process of slowly fading away. The following graph in Figure 5.5 shows the percentage of studies out of 100 which met the criteria for inclusion express either the cheating culture or others cheat as concerns which were mentioned and studied. It seems that as technology is improving, the general perception is the culture of acceptability to cheat is steadily declining.

The disruptive effects of AI chatbots notwithstanding, the tools and skills to catch online exam cheating and plagiarism have been improving rapidly which is having the effect of beginning to close that door of opportunity away from students who are predisposed to cheat (Levine & Pazdernik, 2018; Scott, 2016; Sevnarayan & Maphoto, 2024)

Figure 5-5. Rationalization that Others Cheat in a Culture of Cheating



Research Question 4: The Final Trigger, “Opportunity”

The final trigger can be summed up in one word, “opportunity” (Davis, 2017; Niven & Healy, 2016; Ramzan et al., 2012; Starovoytova & Arimi, 2017; Topiceanu, 2017; Yukhymenko-Lescroart, 2014). Do they think they can get by with it? Over the march of technological progress, the methods used for academic misconduct may have changed, but human nature remains fundamentally the same (Bandura et al., 1996; Etter et al., 2006; Royal & Dodo Seriki, 2018).

Specific behaviors of academic misconduct have changed, but the fundamental objectives have not changed; it is a shortcut to achieve a goal (Scott, 2016; Starovoytova & Arimi, 2017). In looking at the cheating behaviors cataloged in Figure 4.3, one can readily observe that multiple methods can be used to cheat in the same basic manner. Whether an old exam is obtained by means of a paper copy, pdf file, or a photograph, it is the same fundamental behavior. Working together to do an individual assignment is the same activity whether it is accomplished at someone’s residence, a library conference room, or by videoconferencing via Zoom or Webex. Exchanging answers in an exam room is the same behavior whether it is via a note being passed from one student to another, a text message to a telephone, tapping Morse Code, or a strategically timed cough. Students will avoid behaviors with a high risk of punishment and will utilize whatever opportunity presents itself as feasible to achieve the objective.

So, just as how we interact with technology has changed the way we study and produce academic work, the way we interact with technology has also changed the way those of us wanting to find shortcuts to doing academic work are accomplishing academic misconduct.

Technology has changed all aspects of academic misconduct, and the implication is that it will continue to do so.

Changes in Plagiarism as an Example

Using plagiarism and its smaller sibling, contract cheating, as an example, in the “old-school” days, the way to plagiarize a journal article was to locate an interesting topic in the *Reader’s Guide to Periodical Literature*, go down into the musty stacks of periodicals in the basement of the university library, locate the box containing the periodical with the article of interest, find the article in the issue, then hand-copy the words one wanted to plagiarize. Often, during the process of transcribing the notes by hand and then typing, a considerable amount of paraphrasing occurred, which if properly cited, would have resulted in an honest paper.

Detecting this type of academic misconduct was completely up to the savvy of the instructor. If he or she was well-read in the stacks both old and new, recognized the content, and was willing to spend the time locating it, there was a chance of proving the plagiarism. Unless there was the use of a photocopier, both the plagiarism and detection would take a considerable amount of time and effort. It was a stalemate of effort: A lazy cheater would be relatively easy to detect due to writing style differences from their normal parlance. An ambitious plagiarizer would be difficult to catch but would probably have learned a lot from all of the experience hand-copying. In this era of old-school plagiarism, technology had upped the game from the early 20th Century, but the standoff continued.

The “retro-tech” era saw the explosion of the internet and the ready availability of online resources making the cut-and-paste plagiarism easier than ever. However, this era also saw the rise of resources such as Yahoo, Altavista, and Google, so detection of such academic misconduct also became easier. In the secondary classroom, due to the shared nature of a small

number of computers, typically along the wall with monitors facing the classroom, cutting and pasting during class time while under the watchful eye of the instructor and classmates was not a common activity—so that would be done elsewhere. Detection of plagiarism in this era remained the domain of the savvy of the instructor, detecting when the writing style of the student did not match submission, and manually using the search engines to locate the source. The effort required to plagiarize was at an all-time low on the part of the student, but the effort required to detect the plagiarizer was also at an all-time low. This is reflected by a slight, likely statistically insignificant reduction in concern on the tercile scale. The arms-race continued but maintained at a stalemate.

The “retro-tech” era saw an explosion of contract cheating, a type of plagiarism where one pays to copy a custom-written paper written specifically for them and their classroom assignment, unlike anything previously observed. Paying money to have someone write a paper for you had always been present. But, during the “old-school” era, this was a black-market activity requiring personal interaction and, of course, money. However, during the early days of “retro-tech” era characterized by dial-in bulletin boards which developed into the early days of the world wide web, the transaction no longer had to be in-person or through the mail, it could move information to be copied vast distances at the speed of electrons. Detection remained the same, still at the savvy of the instructor or person evaluating the paper.

Changes in contract cheating made possible by technology during the “high-tech” era saw an escalated concern by studies in all types of academic dishonesty involving plagiarism all the way from the cut and paste variety to contract cheating. Resources such as Wikipedia were lowering the bar to entry for this type of cheating from combing through musty stacks in the basement of the library, to sitting upright at a desktop computer running the danger someone

might discover the illicit activity, to the privacy of a portable laptop or mobile phone device. Contract cheating became less expensive as it could be outsourced to human writers willing to write for less money or in third world countries. Computing had transformed and so had this type of academic misconduct.

However, in the arms race between plagiarism and detection, the detection side was not without great improvements during this technological era as well. Academics of the secondary and post-secondary classroom had made their way to such learning management systems as Google Classroom, Claroline, Blackboard, and Canvas. The paperless classroom that we had heard about for years was beginning to become a reality. Students, instead of typing their papers on a computer just to print it out were now able to submit the files electronically to their instructors. As such, the great corpus of student writing now became available to the crawlers of such entities such as SafeAssign, Turnitin, CopyGator, and other tools which could now scan all work submitted to them. Work submitted by students could now be compared with other work turned in by students and the body of published books, articles, and the web. Papers written by contract could only effectively be used once.

Just as in a real-world arms race, in the arms race between plagiarizers, contract cheaters, and those trying to weed out this type of academic misbehavior, no one side seems to stay ahead of the game on a permanent basis. As the sun begins to fully rise on the era of artificial intelligence, the ways in which it will impact how plagiarism, contract cheating, and other types of academic misconduct as well as their detection have yet to be seen. At this point, most studies on artificial intelligence are speculative, looking at the past and attempting to predict the future. So far, all that is known for sure is that just as artificial intelligence is evolving rapidly, so is its use.

Research Question #5: What can be done to help students feel the need not to cheat?

The students themselves have told researchers what educators can do to reduce the feeling of the need to cheat. Even though the reasons and excuses provided by students to feel like they “need” to cheat are expressions of Bandura’s mechanisms for moral disengagement, the reality is that for every stereo-typed excuse, there is some kernel of truth even if it is not a justification (Bandura, 2002). The factors contributing to moral disengagement are real. Although educators cannot address many of the pressures on students which may contribute to moral disengagement, some of these are within the realm of educators to at least address partially.

Address the cheating culture

Even though the situation of students having the impression those around them are cheating is improving, Figure 5.5 clearly demonstrates the concern with the prevalence of a cheating culture remains quite high. The implication for educators is that students who would not otherwise cheat could adopt the attitude that “this is how the game is played”, and we need to do more to assuage the fears of students that other students are cheating, therefore they need to cheat in order to stay competitive (Crittenden et al., 2009; Mensah et al., 2018; Magnus et al., 2002). When students no longer think that cheating “is just part of the game”, many of them prefer to be honest and will no longer cheat (Magnus, 2002; Oravec, 2022).

Address Performance Goals

Performance goals and standards are just a part of modern life. The implication is that educators and their leadership should always be examining these goals. When those goals and standards are established too far out of alignment with what is reasonable or possible, we begin to witness the educators and even the parents as well as the community itself assist academic

misconduct in acts of desperation (Associated Press, 2015; Dannhoferova et al., 2022; Dejene & Hui, 2021; Royal & Dodo Seriki, 2018). In the case of the cheating scandal in the Atlanta public schools, the authors of the article point out what they believe to be purposeful systemic racism and are unrepentant about their facilitation of cheating (Royal & Dodo Seriki, 2018). In India, the entire community publicly worked together to enable their students to cheat on the college entrance exams with students, school staff, parents scaling the walls of the school, and the emergency services standing by outside to make sure no one climbing the wall was injured in the event they fell (Associated Press, 2015). When this many different groups in a community act together to mutiny against unreasonable performance goals and standards, these educators and their governing boards need to examine and restructure their goals to begin the process of regaining respect from their community. Even though these are individual events on different continents, they serve as warnings as to what can happen when the cross-section of an entire community comes to the conclusion that performance goals and standards they are subjected to have become unfair, unreasonable, and impossible.

Address Better Pedagogy: Keeping up the improvement

Students over all of the technological eras have been telling us they would like to see better teaching, relevant examinations, and better understanding between students and teachers (Dannhoferova et al., 2022; Gaskill, 2014). Research shows there is less cheating where there are better teaching practices and pedagogy (Scott, 2016). Figure 4.5 shows this is an area where there has been noticeable improvement as technology has been progressing. Every era has given teachers new tools to practice their art and hone their skills. As educators, we should continue leveraging the technology as it is being made available to us.

Implications

Educators should continue doing what works

When the author first started looking at this topic in early 2017, academic integrity issues were some of the most pressing issues of the school in which the author was employed. Looking back, due to the school operating dormitories combined with an international program, numerically in the top ten of SEVP's largest programs, with just over half of the school population living in the dormitories, some of the issues we encountered may be more commonly seen at the post-secondary level rather than typical middle or high schools where the majority of the students live at home with one or more of their parents. In the school office, the Dean of Students and I were seeing upwards of one major incidence or more of academic misconduct each week.

Much of the research was in agreement with a dismal outlook similar to what we were encountering. Many of the papers included in this study, including this study itself, start off with something to the effect of, "Cheating is an epidemic," or use the word "endemic" with the basic idea that the academic world is headed to the place of perdition in a handbasket. To the author's surprise, the data does not agree with this mindset. As such, a major implication of the general reduction or stabilization of the overall prevalence of academic dishonesty throughout the progression of technology which is essentially the progression of time in the individual schools is that educators are doing some things which are effective—and these things should not be stopped.

Continue to address unintentional academic misconduct with education

With much academic misconduct being a lack of understanding citation conventions and plagiarizing in much the same manner (Bretag et al., 2014; Divan et al., 2015), educators should

continue to take a proactive approach and teach students what the conventions are for citing works and what constitutes plagiarism. One example is contract cheating where an essay or assignment is written, starting from scratch, to meet the instructions for a student's specific assignment in a class (Dawson & Smith, 2018). The implication for education practitioners and administrators is that unless it is made clear at orientation, some students from non-English speaking countries may not even be aware this is an integrity issue (Mona et al., 2024).

For students coming from other, non-English speaking countries, education needs to be conducted quickly, even at the initial orientation. Rahimi et al. (2024), in a study following five international students coming to the U.K. to enroll in a trade school found that all five of their subjects had been contacted once or multiple times by people associated with their agencies for marketing purposes to be made aware of the availability of their contract, ghost-writing services before arriving at the destination school in addition to after arrival. As such, administration at post-secondary institutions should assume their incoming students have been contacted or soon will be contacted by these companies offering ghost-writing, plagiarism services and should address the subject of what is plagiarism with these students and the expectations as soon as possible upon arrival (Dremoval et al., 2023; Mona et al., 2024; Rahimi et al., 2024).

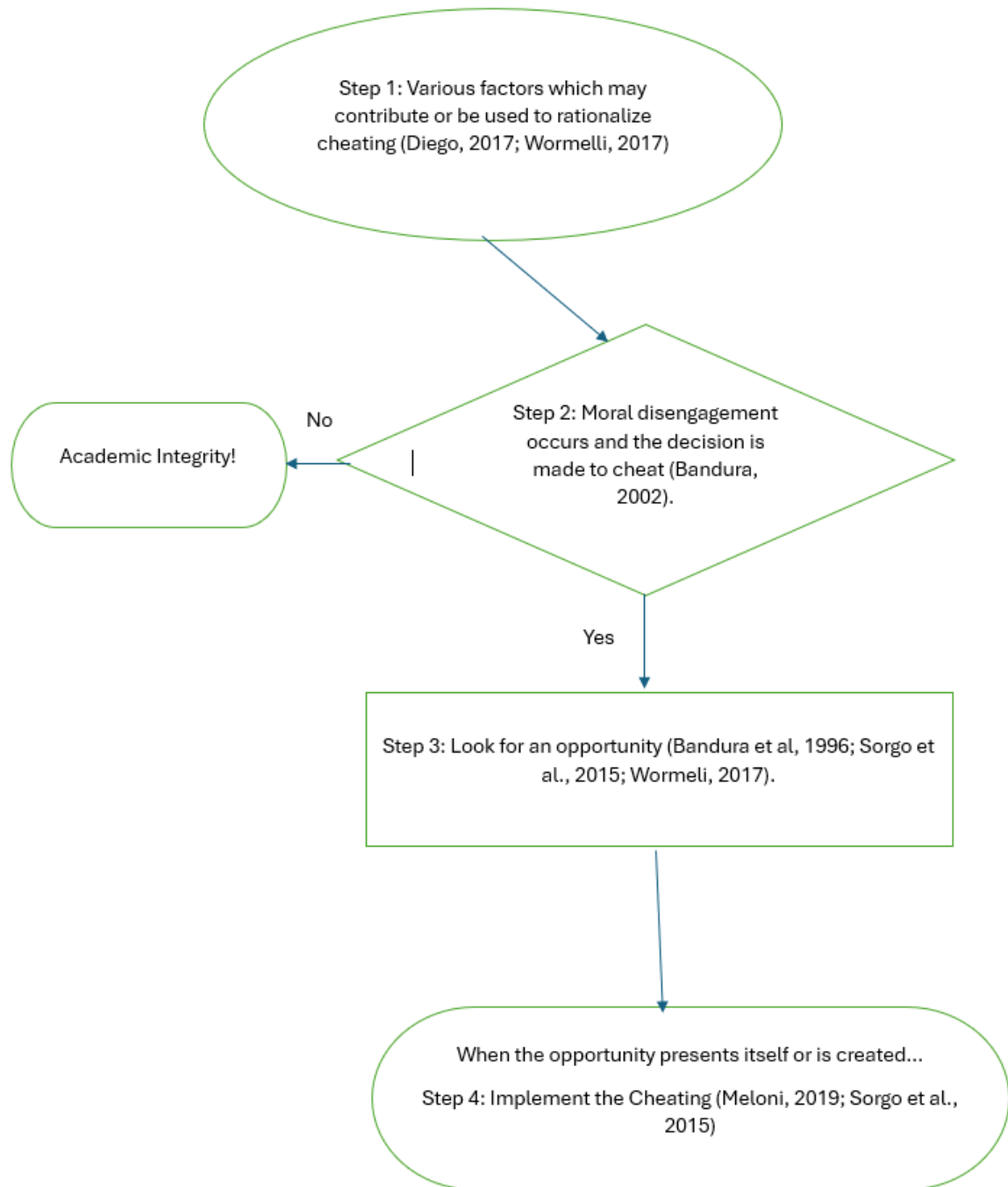
Even in schools secondary and post-secondary schools where the mode of instruction is English, the majority of students do not understand plagiarism (Levine & Padzernick, 2018; Stephens & Wangaard, 2016). The implication for practitioners, administrators, and those who develop curriculum is that the teaching methods of proper attribution and the need for citation should start early with an emphasis beginning in middle school and continuing during high school (Clark & Soutter, 2016; Honz et al., 2010; Wormeli, 2017). Refreshers of that training

need to continue into post-secondary and graduate education where proper citation and attribution become even more high stakes (Levine & Pazdernik, 2018).

What to do: Short-circuit the steps toward intentional academic misconduct

Successful programs to mitigate academic misconduct work from multiple approaches at the same time (Levine & Pazdernick, 2018). Figure 5.6 below shows a flowchart of each stage of a student's progress toward the decision to execute intentional academic misconduct. If any one of the stages is successfully dealt with or addressed, the academic misconduct has been short-circuited and will not occur.

Figure 5-6. Steps toward intentional academic misconduct



Step 1: Mitigate the factors which may contribute or be used to justify cheating

Continue to work on making students feel less like they need to cheat (Diego, 2017; Wormeli, 2017). Data from this study shows that the steps being taken by schools and educators to address the internal feeling of a need to cheat in order to succeed are working. But, as is shown in Figure 5.5, student and scholarly concern with a prevalence of a perceived culture of cheating remains high. Data from this study supports that efforts expended on improvement in teaching and pedagogy are working. The relationship and respect between teachers and their students is improving, and student perception of teaching is improving. However, technology is marching forward, and educators should continue to follow these technologies and see how they can be used to further the learning of our students.

Educators, their administrators, and their governing bodies need to continue to examine and evaluate the performance goals with which our educators and students must comply. Although the acts of community mutiny and mass academic misconduct are currently rare and isolated, they are troubling (Associated Press, 2015; Dannhoferova et al., 2022; Dejene & Hui, 2021; Royal & Dodo Seriki, 2018). It is quite possible these reactionary events are just that, or it is possible they are the canary in the coal mine warning us of a toxin that could spread.

Step 2: Work on strengthening the moral agency of the students

Moral agency is that innate, internal compass that lets us know the difference between right and wrong, and gives us the strength to do what is right (Palmer, 2008). For moral disengagement to occur, the temptations to cheat including whatever factors and rationales are working their way into the psyche of the student must overcome that student's internal regulatory control center composing his or her sense of right and wrong (Bandura et al., 1996). For moral agency and integrity to be internalized and become part of the moral character of the student and

increase the amount of moral agency which can be expended requires more than solely education (Gino et al., 2011). The key to short-cutting the academic misconduct at this step is to discredit any neutralization or explanation of the behavior (Brent & Atkisson, 2011) or to point out the cognitive dissonance of the position inevitably adopted by moral disconnection. However, it should be kept in mind that polygraph testing is not admissible in many courts for the reason that just because someone does not feel guilty does not mean that they are not guilty; unfortunately, the same is true for academic misconduct (Stephens, 2017).

Step 3: Close the opportunity for intentional academic misconduct

Once a student has morally disengaged and has decided at the fork in the road to take the path of academic misconduct or cheating, their next step is to look for an opportunity (Bandura et al., 1996, Sorgo et al., 2015; Wormeli, 2017). Research confirms that academic misconduct is a phenomenon where the final decision is almost always facilitated by opportunity (Bretag et al., 2014; Davis, 2017, Duncan & Joyner, 2022; Eshet et al., 2019; Holt, 2012; Johnson et al., 2024; Kish-Gephart et al., 2014; Maloshonok & Shmeleva, 2019; Peterson, 2019; Ramos et al., 2020; Ramzan et al., 2012; Royal & Dodo Seriki, 2018; Slade et al., 2022; Sorgo et al., 2015; Topiceanu, 2017). For those developing curriculum developing larger test banks and multiple editions of the exams that are not identical would help, and for educational practitioners the implication is that we should continue vigilance in our proctoring and invigilation to lessen the opportunities for cheating behaviors (Arnold, 2016; Duncan & Joyner, 2022; Gribbins & Bonk, 2023; Maloshonok & Shmeleva, 2019; Mensah et al., 2018; Starovoytova & Arimi, 2017; Starovoytova & Namango, 2016).

Inside the school

For in-person testing in an traditional classroom or exam hall, educators should continue to follow the time-tested methods of proctoring, known as invigilation in some parts of the world. To keep students from looking at, or peeping at, the neighbor's paper, maintain proper separation between their desks (Dejene & Hui, 2021; Diego, 2017). To prevent cheat sheets, the passing of notes, or illicit use of devices, there is really no substitute for the use of proper vigilance on behalf of the proctor or proctors; walk around the room, look at the cameras after the fact if there are any (Brandes, 1986; Dannhoferova et al., 2022; Dejene & Hui, 2021; Fass-Holmes, 2017; Henderson et al., 2023).

Outside the school

Regarding what happens outside of the controlled environment, more ingenuity is needed. Unless a project is begun and finished in a controlled environment, preventing students, even in the “old school” era, from consulting with each other was impossible; telephones were ubiquitous in almost all homes. In the “high-tech” era and going forward, telephones became even more common.

For the referencing of old exams or memorized questions from those exams which is making a comeback according to the data in this study, the prevention of opportunity could look like modifying the new exam so it is substantially different from the previous one or making the old exam available for reference so all of the students are on a level playing field. Even the Educational Testing Service which administrates the Graduate Record Exam in a highly controlled environment has found it impossible to control the escape of exam questions when large organizations are willing to facilitate the exchange of memorized exam questions (Wheeler, 2002).

Plagiarism, contract cheating, and content generated by artificial intelligence are the areas where academic misconduct is entering a new era which is akin to the American “Wild West”. Right now, it is an arms race between the cheaters and those tasked with detecting that cheating. During the “high tech” era this conflict was at a stalemate given modern search engines and anti-plagiarism tools. However, with the introduction and rapid advance and availability of AI tools, the status-quo is changing so rapidly that the major implication is that the information on AI in this paper will be obsolete by the time the reader sees it (Abd-Elaal et al., 2022; Bin-Nashwan et al., 2023; Mona et al., 2024; Oravec, 2022; Ogurlu & Mossholder, 2023; Perkins, 2023; Playfoot et al., 2024). Educators will need to prioritize remaining up-to-date with their specific field in deterring the opportunity to plagiarize successfully and detecting this type of misconduct after it has occurred.

Step 4: Catch and provide consequences for academic misconduct after it has occurred.

This step for the student is to discover and seize upon the opportunity whatever it may be and execute the academic misconduct (A. Meloni, personal conversation, May 12, 2019; Songo et al., 2015). Although for this step to have occurred is an indication that approaches to discourage the occurrence of academic dishonesty have failed, it does not mean that mitigation remains impossible. Via forensic analysis of anti-plagiarism software, common wrong answers on exams, patterns, work that does not match the answer, etc., the impropriety may be caught and followed up with consequences, punishment, or both. Any sort of consequence or punishment would be an improvement over examples cited in 30 of the 100 eligible studies citing lax punishment as a factor promoting academic dishonesty. It shows that even though the

system may be imperfect, cheating is ideally not tolerated (Dejene & Hui, 2021; Magnus et al., 2002; Sorgo et al., 2015).

More research on the relationship between technology and academic misconduct is needed to set a baseline to evaluate the need and effectiveness of future technologies and software services.

This study shows that a correlation between the technological eras and various types of misconduct does exist. However, as we enter into an era characterized by artificial intelligence, a more granular understanding of that correlation than exists in this study is needed so the magnitude of academic misconduct can be truly understood in context.

Companies and products have existed for several years to assist instructors in detecting plagiarism (Abd-Elaal et al., 2022, Rahimi et al., 2024). With the advent of artificial intelligence, these companies will need to spend resources to develop their products and will naturally want to market them. As such, the financial incentive will be to prove the problem of plagiarism and copying the bots is serious and that their solution is the right one to be paid for and adopted by schools. A more accurate and precise understanding of the prevalence of academic misconduct over past technologies can help to determine in the future whether these companies are providing a solution to a problem needing to be solved. Or is it more of a case that they will be marketing a solution in search of a problem needing solved?

Limitations

Thematic Content Analysis

Thematic content analysis, unlike meta-analysis or even a traditional content analysis (Holsti, 1965), seeks to bring qualitative, quantitative, mixed methods, and studies with even different objectives together to use their data to make comparisons which would not be possible

with traditional meta-analysis (Holsti, 1965; Naeem et al., 2023; Schultz, 2012) The advantage is that it makes available a wider pool of data with one of the disadvantages of incorporating qualitative studies as well, seen in this work, being the cost of close numerical precision (Booker, 2008) accurate to each observation only to the nearest tercile. However, especially in education the terminology in different places and eras varies widely, so there is more challenge in comparing the observations of the various studies with each other (Schultz, 2012; Uny et al., 2017). In the case of this study, protocols, as explained in Chapter 3, were set up to ensure consistency in this author's coding and development of themes of the various papers meeting the criteria for inclusion in this study.

Sample Size

The advantage of the strict criteria for inclusion was that the prevalence data over the technological eras could be compared using thematic content analysis (Braun & Clarke 2006;Naeem et al., 2023; Schultz, 2024). In retrospect, even though overall saturation had been reached, this left some sub-categories with only a dozen or so studies which show developing themes needing additional study which may or may not be valid when generalized to the population. The development of themes in this study for sub-categories which are not part of the primary focus, having only a handful of data points, would be an indication that further investigation has the potential to be productive.

The potential for an “echo chamber” exists even though the author continued sampling to the extent that almost two dozen articles were added after saturation had occurred without with no significant changes and no new themes emerging; however unlikely, that potential exists. Sampling saturation was observably reached when around 370 articles had surveyed with 78 eligible for inclusion that met the criteria. Even though the population sizes of most of these

studies number in the hundreds to multiple thousands, until the 2020s, many of these studies were constructed, having either or both Dr. Albert Bandura or Dr. Donald McCabe as part of the “bricks in the foundation” upon which their studies were designed and through which to examine a large set of phenomena. In the opinion of the author, the foundation of these two venerable researchers is solid, but the dominance of these researchers means that over half of the eligible studies are looking through the positionality of the lenses provided by their work.

More primary studies are needed, and as the era of artificial intelligence brings radical changes more significant than just new tools to do the same things, and popular attention pivots to artificial intelligence, the author anticipates these studies will be coming online rapidly.

Too Early in the AI Era for Practical Predictability

This work is useful for setting a baseline at the end of the “high-tech” era. However, it is coming too early in the era of artificial intelligence to be of practical use to determine where this technology is going. As late as 2020, the most advanced GPT-3, only available to researchers at the time, was able to earn “C” grades using prompts supplied by knowledgeable humans on technical reports using volunteer professors grading the AI mixed in with three human undergraduate students, and it was completely incapable of passing narrative assignments (Education Reference Desk, 2020). In 2023, Chat GPT-4 had improved, but was still significantly underperforming humans (Barret & Pack, 2023; Perkins, 2023). By 2024, the AI had improved, but was still accurately detected by human graders (Acosta-Enriquez et al., 2024; Liu et al., 2024; Playfoot et al., 2024). In one study in 2024, trying to predict who was likely to use AI tools was ineffective, and so were the AI tools (Playfoot et al., 2024). So, with AI study sample sizes being typically a handful, their general statistics were included as part of the high-tech era because AI had not been knowingly or effectively utilized for academic misconduct in

any of the studies. So, there was little internal validity for this era and effectively even less external validity can be promised even several months into the future.

Conclusion

Contrary to the sensational alarmism which can be found in much of the informal magazine-type literature and teachers conferences which would indicate that academic misconduct is proliferating in all manners with 95% of American students cheating as a matter of course (Clark & Soutter, 2016) and proclamations such as, “I’m not guarding the dungeon!” (Mona et al., 2024), many people are sure, “The Sky is falling!”. However, every morning, the sun still rises in the east, and even the instructor declaring that she isn’t “guarding the dungeon” used the term in the context of wanting her students to succeed rather than spend her time “policing academic honesty” (Mona et al., 2024). The overall prevalence of academic misconduct, the statistic in this study that was generated using the mathematical mean both weighted and unweighted with a total population of participants of 79,821 in studies with 815 students shows an actual decrease from the era of the “old school” to now when weighted by population. The sky is not falling!

Even though there are significant limitations using thematic content analysis and statistics gathered in terciles, none of these show that academic integrity, even internationally, is falling off a cliff as a result of the progress of technology. If anything, the statistics indicate guarded improvement with the clearest improvement being seen in the pedagogy and relationship between teachers and their students. AI has yet to be a significant influence positively or negatively in the area of academic integrity or academic dishonesty. None of the studies surveyed were able to produce an essay with artificial intelligence without knowledgeable intervention which could not be detected by a proficient grader.

However, the future is uncertain. Amazon and Chat-GPT are building new power plants to provide electricity for their AI data centers, and Microsoft has entered an agreement to restart Three Mile Island Unit 1 for their use, the unit right next to the reactor that famously melted down in 1979 (Bellan, 2024). Microsoft indicates the reactor which is rated at 837 Megawatts will be able to provide, “part of its goal” to provide electricity for its data centers in Pennsylvania (Campioli, 2024). That is a lot of electricity which is slated to power computers which have a primary function of developing AI.

This author’s prediction is AI technology will see rapid development and changes given this kind of effort and investment. It will present an incredible opportunity to be used in academics. Academic conduct and misconduct are both phenomena of opportunity, and opportunity is on its way.

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Appendix A - List of Papers Eligible and Utilized in this Study

Acosta-Enriquez, B. G., Arbulú Ballesteros, M. A., Arbulu Perez Vargas, C. G., Orellana Ulloa, M. N., Gutiérrez Ulloa, C. R., Pizarro Romero, J. M., Gutiérrez Jaramillo, N. D., Cuenca Orellana, H. U., Ayala Anzoátegui, D. X., & López Roca, C. (2024). Knowledge, attitudes, and perceived Ethics regarding the use of ChatGPT among generation Z university students. *International Journal for Educational Integrity*, 20(1), 1–23. <https://doi.org/10.1007/s40979-024-00157-4>

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Appendix B - Listing of Included Studies by Type, Number of Participants, and Prevalence of Academic Misconduct

Legend:

- Study: Citation indicating which paper referred to, detailed reference listing in Appedix A
- Type: This is the method used in the paper reviewed.
 - Experiment: Indicates a controlled experiment. Participants would have known they were participating in an academic study, but not necessarily the exact objective of the experiment.
 - Lawsuit: Indicates this data was extracted by the researchers from court documents and exhibits.
 - Qualitative: This indicates the data was from a qualitative research project. Eligibility criteria required the number of participants were disclosed.
 - Study: Indicates an examination of existing data using any combination of methods. No meta-analyses were used in this paper.
 - Survey: Indicates a survey administered to students, teachers or both. Each teacher or student completing a survey would count as one participant.
- #: Number of Participants in the Study for which an individual data point was collected
- %: If a clear prevalence of academic dishonesty or academic misconduct was reported by the paper, it is reported here. If a range of possible values was reported, the recorded number is that for which the authors of that particular study expressed the most confidence.

Study	Type	#	%
Acosta-Enriquez et al., 2024	survey	201	
Al-Harrasi, 2023	study	16	

Amua-Seyki, 2016	survey	942	76%
Arnold, 2016	study	572	
Arnold, 2022	study	1,849	
Awosaga et al., 2021	survey	1,142	7%
Baker-Corez & Kocaman, 2024	study	223	
Balbuena & Lamela, 2015	survey	30	80%
Bandura et al., 1996	experiment	675	
Barrett & Pack, 2023	survey	226	
Bin-Nashwan et al., 2023	survey	702	
Brent & Atkisson, 2011	survey	401	67%
Bretag et al., 2014	survey	15,304	
Canchila et al., 2018	survey	32	
Chapin & Hayes, 2017	experiment	16	
Conijn et al., 2022	survey	1,759	
Contreras-Pacheco et al., 2024	study	109	
Cozin, 1999	survey	298	39%
Crittenden et al., 2009	sample	200	
Dannhoferová et al., 2022	survey	660	70%
Davis, 2017	experiment	40	
Davis, 2011	case study	1	
Dawson & Sutherland-Smith, 2018	experiment	20	
Dejene & Hui, 2021	survey	1,246	80%

Diego, 2017	survey	16	50%
Divan et al., 2015	survey	90	
Drake, 1941	study	126	24%
Duncan & Joyner, 2022	survey	523	
Education Reference Desk, 2020	experiment	3	
Erguvan, 2022	survey	404	
Eshet et al., 2019	survey	2,357	
Etter et al., 2006	study	2,726	
Fall-Holmes, 2017	study	541	
Fendler et al., 2024	study	741	
Gaskill, 2014	survey	196	95%
Gentina et al., 2017	survey	913	
Gentina et al., 2018	survey	472	
Gino et al., 2011	experiment	101	42%
Gribbins & Bonk, 2023	survey	158	
Gul, 2024	survey	105	
Hale, 2018	study	120	
Hamamy & Chang, 2021	survey	1,400	51%
Harris et al., 2020	survey	1,500	42%
Henderson et al., 2023	survey	7,839	7%
Holt, 2012	experiment	142	
Honz et al., 2010	survey	100	

In China, 2002	qualitative	82	
Johnston et al., 2024	survey	2,555	
Juan et al., 2022	study	525	
Jurdi et al., 2011	survey	321	53%
Kapoor et al., 2022	survey	101	
Kish-Gephart et al., 2014	experiment	275	
Knepp & Knepp, 2022	survey	182	
Kocaman Karoglu, 2022	survey	558	
Koscielniak et al., 2024	survey	462	
Laeque & Saeed, 2023	survey	710	
Lavine & Pazdernik, 2018	survey	129	
Liu et al., 2024	experiment	10	
Magnus et al., 2002	survey	885	
Mah et al., 2024	survey	28	
Mahomed et al., 2023	survey	98	82%
Maloshonok & Shmeleva, 2019	survey	800	69%
Martinez et al., 2015	study	88	
McCabe & Trevino, 1997	survey	1,793	82%
McNabb et al., 2023	study	12	60%
Mensah et al., 2023	survey	344	71%
Mona et al., 2024	qualitative	8	
Nelson et al., 2013	survey	514	39%

Niven & Healy, 2016	experiment	106	
Ogurlu & Mossholder, 2023	survey	85	
Oravec, 2022	anecdotes	6	
Playfoot et al., 2024	study	161	
Putra et al., 2023	survey	431	
Rahimi et al., 2024	study	5	
Rahman et al., 2023	survey	250	96%
Ramzan et al., 2012	survey	350	24%
Razek, 2014	survey	673	74%
Razek, 2013	survey	673	
Roig & Caso, 2005	survey	575	42%
Royal & Dodo Seriki, 2018	lawsuit	35	
Skendaj, 2024	Study	253	
Slade et al., 2022	survey	70	
Smith & Others, 1971	survey	18	70%
Smith et al., 2017	survey	912	53%
Sorgo et al., 2015	survey	323	82%
Söylemez, 2023	survey	29	
Starovoytova & Arimi, 2017	survey	95	82%
Starovoytova & Namango, 2016	survey	95	70%
Stephens et al., 2024	survey	4,493	65%
Stephens & Wangaard, 2016	experiment	14	

Stuber-McEwen et al., 2009	survey	225	
Thorne-Figueroa, 2010	study	112	13%
Tindell & Bohlander, 2012	survey	269	
Topîrceanu, 2017	experiment	586	
Tsui & Ngo, 2016	survey	1,369	
Wangaard & Stephens, 2011	survey	3,600	95%
Welsh & Ordóñez, 2014	experiment	159	
Yukhymenko-Lescroart et al., 2022	survey	8,240	38%
Yukhymenko-Lescroart, 2014	survey	174	97%
Zhang, 2024	survey	2,293	

Appendix C - Listing of Papers Included Studying Intentional, Unintentional Academic Misconduct or Both

Studies listed in the “Intentional” column focused on students who knowingly committed academic misconduct on-purpose. Studies in the “Unintentional” column focused on students who committed academic misconduct but were not aware their actions constituted academic misconduct. Studies in the “Both” column included those who knowingly and unknowingly committed academic misconduct.

<i>Intentional</i>	<i>Both</i>	<i>Unintentional</i>
Amua-Seyki, 2016	Nelson et al., 2013	Acosta-Enriquez et al., 2024
Arnold, 2016	Stuber-McEwen et al., 2009	Al-Harrasi, 2023
Arnold, 2022	Yukhymenko-Lescroart, 2014	Barrett & Pack, 2023
Awosaga et al., 2021		Bretag et al., 2014
Baker-Corez & Kocaman, 2024		Divan et al., 2015
Balbuena & Lamela, 2015		Education Reference Desk, 2020
Bandura et al., 1996		Fall-Holmes, 2017
Bin-Nashwan et al., 2023		Hale, 2018
Brent & Atkisson, 2011		Holt, 2012
Canchila et al., 2018		Mahomed et al., 2023
Chapin & Hayes, 2017		Ogurlu & Mossholder, 2023
Conijn et al., 2022		Oravec, 2022
Contreras-Pacheco et al., 2024		Rahimi et al., 2024
Cozin, 1999		Razek, 2014
Crittenden et al., 2009		Skendaj, 2024
Dannhoferová et al., 2022		Slade et al., 2022

Davis, 2017		Tindell & Bohlander, 2012
Davis, 2011		
Dawson & Sutherland-Smith, 2018		
Dejene & Hui, 2021		
Diego, 2017		
Drake, 1941		
Duncan & Joyner, 2022		
Erguvan, 2022		
Eshet et al., 2019		
Etter et al., 2006		
Fendler et al., 2024		
Gaskill, 2014		
Gentina et al., 2017		
Gentina et al., 2018		
Gino et al., 2011		
Gribbins & Bonk, 2023		
Gul, 2024		
Hamamy & Chang, 2021		
Harris et al., 2020		
Henderson et al., 2023		
Honz et al., 2010		
In China, 2002		
Johnston et al., 2024		
Juan et al., 2022		
Jurdi et al., 2011		
Kapoor et al., 2022		
Kish-Gephart et al., 2014		
Knepp & Knepp, 2022		
Kocaman Karoglu, 2022		

Koscielniak et al., 2024		
Laeque & Saeed, 2023		
Lavine & Pazdernik, 2018		
Liu et al., 2024		
Magnus et al., 2002		
Mah et al., 2024		
Maloshonok & Shmeleva, 2019		
Martinez et al., 2015		
McCabe & Trevino, 1997		
McNabb et al., 2023		
Mensah et al., 2023		
Mona et al., 2024		
Niven & Healy, 2016		
Playfoot et al., 2024		
Putra et al., 2023		
Rahman et al., 2023		
Ramzan et al., 2012		
Razek, 2013		
Roig & Caso, 2005		
Royal & Dodo Seriki, 2018		
Smith & Others, 1971		
Smith et al., 2017		
Sorgo et al., 2015		
Söylemez, 2023		
Starovoytova & Arimi, 2017		
Starovoytova & Namango, 2016		
Stephens et al., 2024		
Stephens & Wangaard, 2016		
Thorne-Figueroa, 2010		
Topîrceanu, 2017		

Tsui & Ngo, 2016		
Wangaard & Stephens, 2011		
Welsh & Ordóñez, 2014		
Yukhymenko-Lescroart et al., 2022		
Zhang, 2024		

Appendix D - Motivations Prompting Moral Disengagement

These are the motivations prompting moral disengagement as expressed by the level of concern expressed in the studies reviews. The terciles are as follows:

- 3 = High-Tercile: Indicates an important concern or observation which would have a value located in the highest 33%.
- 2 = Mid-Tercile: Indicates a moderate concern or observation and would be in the middle 33%-67% percentile
- 1 = Low-Tercile: Indicates a factor is present and mentioned by the study more than just in passing but is of lesser concern and would be in the lowest 33% percentile.
- 0 = Expressed as an issue of little or no concern
- Blank = The study did not touch on that topic.

Study	Failure Fear	Not Prepared	Excessive Work	Pressure	Others Cheat
Al-Harrasi, 2023		2	2		
Amua-Seyki, 2016	3	3	3	2	2
Arnold, 2016	3				
Arnold, 2022					3
Baker-Corez & Kocaman, 2024				1	
Balbuena & Lamela, 2015	3	1		2	
Bin-Nashwan et al., 2023	1	3	1	3	3
Brent & Atkisson, 2011	3	3	3	3	
Canchila et al., 2018				3	2
Chapin & Hayes, 2017					3
Conijn et al., 2022	3	1	3	3	1
Cozin, 1999		2	2	2	1
Crittenden et al., 2009					3
Davis, 2011					3

Dejene & Hui, 2021		1		2	3
Diego, 2017	3	3		2	2
Divan et al., 2015		1		1	
Drake, 1941				3	1
Etter et al., 2006					3
Fall-Holmes, 2017				3	
Fendler et al., 2024					2
Gaskill, 2014	3	3	3	2	1
Gentina et al., 2017					3
Gentina et al., 2018					1
Gino et al., 2011			3	3	
Gribbins & Bonk, 2023		2		3	
Gul, 2024					1
Hale, 2018			1		
Hamamy & Chang, 2021	2		3	3	
Harris et al., 2020					3
Henderson et al., 2023	3	2	1	2	2
Honz et al., 2010	1	2		3	
Johnston et al., 2024			1	1	
Juan et al., 2022	3			3	3
Jurdi et al., 2011	1		3	3	2
Kapoor et al., 2022	1	3	3	3	3
Kish-Gephart et al., 2014			3	3	
Knepp & Knepp, 2022			1		3
Laeque & Saeed, 2023	2				
Liu et al., 2024		3		3	
Magnus et al., 2002		1		1	3
Mahomed et al., 2023	1			3	
Maloshonok & Shmeleva, 2019					3

McCabe & Trevino, 1997					3
McNabb et al., 2023				3	3
Mensah et al., 2023	2	2	2	2	3
Nelson et al., 2013	3	2		3	3
Niven & Healy, 2016				3	
Ogurlu & Mossholder, 2023	2				
Oravec, 2022					3
Rahimi et al., 2024	1				
Rahman et al., 2023				2	3
Ramzan et al., 2012				3	
Razek, 2013	2	1	3	1	
Roig & Caso, 2005	1	3	2	1	
Royal & Dodo Seriki, 2018	3	3	3	3	1
Smith & Others, 1971	3	3		2	
Smith et al., 2017				3	
Sorgo et al., 2015	2	3	1	3	1
Starovoytova & Arimi, 2017				3	
Starovoytova & Namango, 2016	1	2	2	3	3
Stephens & Wangaard, 2016					0
Tsui & Ngo, 2016				3	3
Welsh & Ordóñez, 2014			3	3	
Yukhymenko-Lescroart, 2014				3	
Zhang, 2024					1

Appendix E - Specific Rationales Given for Moral Disengagement and Triggers for Academic Misconduct

These are the author's notes on specific rationales cited by eligible, included studies, given as reasons for moral disengagement by students as well as the final trigger which initiated the misconduct.

Study	Reason for moral disengagement	Trigger
Acosta-Enriquez et al., 2024	none present, survey was solely about attitudes	
Arnold, 2016	staying in school and not receiving a BSA (Binding Study Agreement) which kicks them out of their program	lack of proctoring on some exams
Arnold, 2022	ability to cheat and not get caught during the Covid-19 cohorts	lack of proctoring on some exams
Bandura et al., 1996	Aggressive behaviors correlate with moral disengagement whereas prosocial behavior is inversely related	harboring hostilities and anger
Barrett & Pack, 2023	none present, experiment	

Brent & Atkisson, 2011	legitimacy of cheating followed by excuses such as Denial of responsibility: too hard, appeal to accidents, too much to do with too little time; justifications: condemn the condemners, incompetent instructor, justifications, and self-fulfillment, pp. 650-651	depends...
Canchila et al., 2018	study measured those provided by Bandura; major mechanism was transference of responsibility	perceived unfairness
Chapin & Hayes, 2017	None	Permitted to "cheat" by the instructor as part of an experiment
Contreras-Pacheco et al., 2024	corruption and a culture of cheating	
Davis, 2017		opportunity, everyone has the same order of questions
Dawson & Sutherland-Smith, 2018	test, none present	
Dejene & Hui, 2021	under pressure, wanted to help a friend, teacher encouraged it, assessment too difficult, teacher had not taught me, hadn't heard of another student being penalized, victimless crime	Lots of triggers, no punishments, 44% of the time, the teacher encourages the cheating
Diego, 2017	Pakakisama at utang na loob, to fit in with the crowd	not understanding material

Divan et al., 2015	none: ignorance, unintentional plagiarism	did not realize certain actions were not permitted
Drake, 1941	pressure from fraternities	
Duncan & Joyner, 2022		opportunity
Education Reference Desk, 2020	none, purpose was to test how good the AI is	
Erguvan, 2022		struggle with language, not matched with continuing education
Eshet et al., 2019		perceived opportunity
Etter et al., 2006	opportunism, at the time not likely to get caught, novelty of using internet technology, can you get by with it, thrill and adventure seeking	Increased cheating occurs when opportunities are enhanced, surveillance can be avoided, chance for success improved, and the risk of punishment is lowered.
Fendler et al., 2024	student were given proctored and unproctored exams	lack of supervision
Gentina et al., 2017	peer pressure and acceptance by classmates, provides popularity for French girls, acceptance for unpopular Chinese boys seeking meaningful relationships	•Authority figures such as family and school officials not seeing as important •Authorities not stressing moral values •Insufficient punishments •Lack of other ways to obtain peer approval for these students
Gino et al., 2011	self-control depletion	exhaustion
Gul, 2024		unaligned objectives and life goals

Hale, 2018		Prevented: The storyboard and class presentation require a degree of difficulty to fake.
Hamamy & Chang, 2021	high pressure trying to get everything done, too much work, not enough time	pandemic
Henderson et al., 2023	Onset of the Covid-19 epidemic caused a rapid pivot to online examinations.	
Holt, 2012	None	instructed: purpose was To see if identifying plagiarism can help prevent plagiarism.
In China, 2002	everybody doing it, widespread, cannot compete honestly, salaries are determined by the status of the university and the degree earned.	availability, lack of enforcement at the time
Johnston et al., 2024	save time	opportunity
Kapoor et al., 2022	Mainly excess pressure to get the assignment done--one participant referred to an 81 page assignment due over the weekend--advised that everyone was asking for more time.	Some perceive their classroom behaviors to avoid work as original, clever, deceptive, and unethical.
Kish-Gephart et al., 2014	exhausted, unreasonable task goal, time pressure	opportunity

Knepp & Knepp, 2022	achieve academic success without having to work for it, feeling like one should succeed without having to put in the full effort	feelings, attitudes
Kocaman Karoglu, 2022		anxiety
Koscielniak et al., 2024	gain an unfair advantage in an academic context	
Laeque & Saeed, 2023	teacher injustice, bad teacher relations	unfavorable conditions in the classroom, lack of support from teacher or peers
Liu et al., 2024	Save time, although this was an experiment	instructions for experiment
Magnus et al., 2002	•Cheating culture, referred to in this article as the coordination effect. •Game theory--payoff is high, risk is low •Negative relationship between students and teachers in that country due to the general attitude toward law and officials--judicial system was seen as an instrument of the party, officials viewed as enemies and so were teachers.	cultural
Mahomed et al., 2023	none, ignorance	
Martinez et al., 2015	teacher relationship	

Mensah et al., 2023	fear of failure, inadequate preparation, too much workload, courses difficult to understand, pressure to do well, poor study habits, poor time management, poor attendance,	cheating culture, fun of cheating
Mona et al., 2024	Students are seeking to complete the assignments to pass and use less effort	
Nelson et al., 2013	Irrelevance of content for individual needs, fear of losing scholarship funding, desire to maintain a high grade point average, or it's the professor's fault	
Niven & Healy, 2016	need to meet goals, opportunism	opportunity combined with no perceived oversight
Playfoot et al., 2024	apathy	
Putra et al., 2023	Study only measured intentions, not actual dishonesty; poor lecture administration, poor interaction with instructors, unsatisfied with the learning process	distance learning
Rahimi et al., 2024	.All students in the study ended up being immigrants with what they considered poor English skills.	Apparently this is a common practice in the immigrant community in that country and students are doing it to keep up with others

Ramzan et al., 2012	•Low level of awareness about plagiarism and university plagiarism policies (this study) •Many people think that internet information in the public domain, since it is not copyrighted, can be used and presented as their own work •Students with performance goals most likely to plagiarize rather than those who want mastery in a subject •Society and family pressures to get higher grades as it is important in getting employment and status [in that country, this study]	Opportunity and pressure to get good grades and get work done on time
Razek, 2014	•Not familiar with the values of the system, overwhelmed with the amount of work expected, survival, "grades are more important than learning and the precedence of obtaining the degree over acquiring the knowledge and skills matching their respective degrees." •felt necessary for survival, <i>"...all [that country's] participants reported</i>	•Willingness of others to participate, often seen as helping •Did not start as doing something wrong, but continued for the sake of just passing the classes, sometimes working as a group can be pegged as cheating when that is the cultural way to work

	<i>incidents of academic dishonest as an accepted norm for survival in their American college endeavor."</i>	
Razek, 2013	Overwhelmed by the amount of work	
Roig & Caso, 2005	Need more time	Using a fraudulent excuse to get more time, usually as a result of procrastination, imminent deadline
Royal & Dodo Seriki, 2018	Increase test scores of their schools to avoid penalties associated with NCLB, keep their jobs and schools open, interpretation of the rules and system as racist	desperation, opportunity
Skendaj, 2024	None, this is unintentional plagiarism	ignorance
Slade et al., 2022	none, inexperience and ignorance of how to do citations, opportunity,	misunderstanding

	inexperience of the teachers in their classes	
Smith & Others, 1971	achievement motivation and test anxiety	
Sorgo et al., 2015	lax supervision, need good grades	opportunity
Stephens & Wangaard, 2016	none, study educating, attempting to prevent moral disengagement; The study was evaluated on implementation and quality of delivery, but the study itself is ongoing for effectiveness; the website for the study is dead.	lack of moral awareness, moral judgment, moral commitment, moral action
Topîrceanu, 2017	helping friends	opportunity prevented through strategic seating arrangement with friends apart from each other.
Tsui & Ngo, 2016	Unapproachable, aloof teachers: poor relationships between students and teachers. Studied were the: (1) approachability of the teacher, (2) relationship goal of the student, (3) perception of cheating norms.	There are signs the students are dissatisfied and describe their relationships as "cat and mouse" and "authoritarian and followers"
Welsh & Ordóñez, 2014	meeting goals	opportunism, no perceived oversight combined with mental depletion

Yukhymenko-Lescroart et al., 2022	non-alignment with life purpose	
Yukhymenko-Lescroart, 2014	<i>The majority of [that country's] students do not think that unilateral and collaborative cheating for or during a test is wrong. For example, they believe that it is okay to communicate answers to a friend, peep at someone else's answers, use unauthorized notes and programmed in a calculator.</i>	opportunity
Zhang, 2024	Not considered, only preplanning	pre-planning

Appendix F - Tercile Rank of Cheating Behaviors Given by Specific Studies

Terciles of Concern Involving Working in Groups

Definitions used are the same as found earlier in this work as well as the terciles. Categories Summarized:

- Old Exams: Unauthorized access in any manner to previous exams, completed homework, or advance copies of new exams or questions or questions from an upcoming examination
- Paper Peeping: Somehow looking at or referencing the neighbor's or nearby student's test paper or computer screen during an examination
- Cheat Sheets: Includes any unauthorized access to previously prepared notes or hidden quick reference cards
- Work Together: Includes any unauthorized work of two or more students in a group on an exam or assignment or individual work was expected
- Lazy in Group: Putting forth much less effort than other members during group work

Study	Old Exams	Paper Peeping	Cheat Sheets	Work Together	Lazy in Group
Amua-Seyki, 2016		2	2	3	
Balbuena & Lamela, 2015	1	3	1	3	
Chapin & Hayes, 2017				3	1

Cozin, 1999		1	1	1	
Dannhoferová et al., 2022	1		3		
Davis, 2017		3			
Dejene & Hui, 2021		3	3	3	
Diego, 2017		2	3	3	
Duncan & Joyner, 2022		1	3	3	
Fall-Holmes, 2017		3	3	2	
Gaskill, 2014	1		1	1	
Gentina et al., 2017		1		2	
Gentina et al., 2018	1		1		
Gribbins & Bonk, 2023			2		
Hamamy & Chang, 2021			2	3	
Harris et al., 2020	1		1	2	
Henderson et al., 2023			3	2	
Honz et al., 2010	2	3	2	3	2
Jurdi et al., 2011		2	2		
Kapoor et al., 2022				3	
Knepp & Knepp, 2022	3		1		
Kocaman Karoglu, 2022	1			1	
Koscielniak et al., 2024			1	1	
Maloshonok & Shmeleva, 2019		2			
Martinez et al., 2015				2	

McNabb et al., 2023	3	3		1	
Mensah et al., 2023		2	3	3	
Nelson et al., 2013	1	3	3	2	
Razek, 2014	1			3	
Razek, 2013		2	3		
Royal & Dodo Seriki, 2018				1	
Slade et al., 2022				3	
Sorgo et al., 2015	1	3	3	3	
Söylemez, 2023		2			
Starovoytova & Arimi, 2017	2	3	3		
Starovoytova & Namango, 2016	3	3	2	1	
Stephens et al., 2024	2	1	2	3	
Stuber-McEwen et al., 2009				3	
Topîrceanu, 2017		3		1	
Tsui & Ngo, 2016		2		3	
Yukhymenko-Lescroart, 2014	2	2	1	3	1

Terciles of Concern Involving Falsification, Hacking, Experts, and Plaiging

Definitions used are the same as found earlier in this work as well as the terciles as defined earlier in this paper and in Appendix D. Categories Summarized:

- **Falsify Work:** Includes all falsification of work including dry labs, fake bibliographies, or making things up
- **Hacking SIS/Grade Sheet:** Includes breaking into the computer system, teacher's desk, or office to modify a recorded grade in the computer system or paper grade sheet of a teacher
- **Money or Expert:** Includes paying someone or making arrangements for someone to write a paper on the student's behalf, sometimes referred to as contract cheating, an expert to assist the student during an exam, or take an exam on the student's behalf
- **Plaige & Copy:** Includes classic plagiarism, improper citation, or just copying work from someone else claiming the work is the student's own composition

<i>Citation</i>	<i>Falsify Work</i>	<i>Hacking SIS/Sheet</i>	<i>Money Expert</i>	<i>Plaige & Copy</i>
Acosta-Enriquez et al., 2024	3			3
Al-Harrasi, 2023				3
Amua-Seyki, 2016	1			1
Awosaga et al., 2021	1		1	2
Balbuena & Lamela, 2015			1	2
Barrett & Pack, 2023	3			3

Bin-Nashwan et al., 2023	3			3
Bretag et al., 2014				3
Cozin, 1999	1			2
Dannhoferová et al., 2022				3
Davis, 2011				3
Dawson & Sutherland-Smith, 2018	3		3	
Divan et al., 2015				3
Duncan & Joyner, 2022			2	
Education Reference Desk, 2020	3			3
Erguvan, 2022			3	3
Etter et al., 2006	2		1	1
Fall-Holmes, 2017	1			2
Gaskill, 2014	2			3
Gentina et al., 2017				1
Gentina et al., 2018				2
Gino et al., 2011	2			
Hale, 2018				1
Hamamy & Chang, 2021	2			3
Harris et al., 2020	1		1	2
Henderson et al., 2023			1	
Holt, 2012				3
Honz et al., 2010				3

Johnston et al., 2024	3			3
Jurdi et al., 2011	3			3
Kish-Gephart et al., 2014	2		3	
Knepp & Knepp, 2022			1	
Kocaman Karoglu, 2022	2			3
Koscielniak et al., 2024	2			3
Lavine & Pazdernik, 2018				3
Liu et al., 2024	3			3
Magnus et al., 2002				1
Mah et al., 2024				2
Mahomed et al., 2023			3	3
Maloshonok & Shmeleva, 2019			2	3
Martinez et al., 2015	2			3
McNabb et al., 2023			1	2
Mensah et al., 2023				2
Mona et al., 2024			3	3
Nelson et al., 2013	1		1	2
Ogurlu & Mossholder, 2023	3			3
Playfoot et al., 2024	3			3
Putra et al., 2023				1
Rahimi et al., 2024			3	
Ramzan et al., 2012				3
Razek, 2014	1			2

Razek, 2013	3		3	3
Royal & Dodo Seriki, 2018	3			1
Skendaj, 2024				3
Slade et al., 2022				1
Sorgo et al., 2015	3			3
Starovoytova & Arimi, 2017			1	
Stephens et al., 2024	2		1	2
Tsui & Ngo, 2016			2	3
Yukhymenko-Lescroart, 2014		1	1	

Terciles with Other Concerns

Definitions used are the same as found earlier in this work as well as the terciles as defined earlier in this paper and in Appendix D. Categories Summarized:

- Extra Credit: Refers to the inappropriate use of extra credit to change a grade that was not earned and is not deserved.
- Brown Nosing: Refers to showing extreme favor by the student ingratiating himself or herself to the teacher in exchange for a grade
- Influence: influence peddling, often by the parents or student of a prominent family, this is improper use of typically political influence to obtain a grade or more playing time on an athletic team, etc.
- Prep & Tutor: includes utilization of outside resources to prepare for a test such as an SAT ACT preparation course or tutoring outside class time, resources not provided by the school
- Notes & Device: Refers to the “old school activity” of passing paper notes in a variety of folded forms from one student to another throughout the classroom or any Academic dishonesty by means of unauthorized communication between students using hand signals, notes, paper airplanes, or the more “high-tech” means of cell phones, or social media platforms

Citation	Extra Credit	Brown Nosing	Influence	Prep & Tutor	Notes Device
Amua-Seyki, 2016					3

Arnold, 2022				1	
Balbuena & Lamela, 2015					1
Barrett & Pack, 2023				2	
Contreras-Pacheco et al., 2024			3		
Dejene & Hui, 2021					2
Diego, 2017					2
Duncan & Joyner, 2022					1
Etter et al., 2006					1
Fendler et al., 2024					3
Gaskill, 2014				1	3
Gentina et al., 2018					3
Hamamy & Chang, 2021					3
Harris et al., 2020					1
Honz et al., 2010					1
In China, 2002			3	2	
Kapoor et al., 2022					3
Knepp & Knepp, 2022			2	1	
Mensah et al., 2023			1		2
Oravec, 2022					1
Rahimi et al., 2024				3	
Rahman et al., 2023					2
Ramzan et al., 2012					3

Razek, 2013				3	
Royal & Dodo Seriki, 2018				3	
Sorgo et al., 2015					3
Starovoytova & Arimi, 2017					3
Starovoytova & Namango, 2016					3
Stephens et al., 2024					1
Tindell & Bohlander, 2012					1
Topîrceanu, 2017					1
Yukhymenko-Lescroart, 2014	2	2	1	3	2

Appendix G - Areas Students Say Could be Improved

Categories Summarized, studies with a focus on each of these areas, students self-report they would feel less necessity to cheat if these were addressed.:

- **Teacher Relationship:** Students report that if the teacher taught better and the relationship with the teacher were better, they would not cheat.
- **Performance Goals:** Studies indicating students and teachers would like to see an examination of goals and objectives to make them more reasonable.
- **Cheating Culture:** Students would like educators to fix the culture of cheating.
- **Lax Punishment:** Students would like the penalties for cheating to be strengthened with appropriate due process so as to address the first issue of feeling like they have to cheat in order to keep up and compete with their classmates.

<i>Citation</i>	<i>Teacher Relationship</i>	<i>Performance Goals</i>	<i>Cheating Culture</i>	<i>Lax Punishment</i>
Acosta-Enriquez et al., 2024			X	
Amua-Seyki, 2016		X	X	X
Arnold, 2016		X		
Arnold, 2022				X
Balbuena & Lamela, 2015	X	X	X	X
Bandura et al., 1996	X			
Barrett & Pack, 2023	X	X		
Bin-Nashwan et al., 2023		X	X	
Brent & Atkisson, 2011	X	X		
Bretag et al., 2014			X	
Canchila et al., 2018	X		X	X
Chapin & Hayes, 2017	X	X	X	X
Conijn et al., 2022			X	
Contreras-Pacheco et al., 2024			X	X

Cozin, 1999				X
Crittenden et al., 2009			X	
Dannhoferová et al., 2022			X	X
Davis, 2017			X	
Davis, 2011	X			
Dejene & Hui, 2021	X		X	X
Diego, 2017		X	X	
Divan et al., 2015		X		
Erguvan, 2022			X	X
Fall-Holmes, 2017		X		
Fendler et al., 2024			X	X
Gaskill, 2014	X			X
Gentina et al., 2017	X		X	
Gino et al., 2011		X		
Gribbins & Bonk, 2023	X		X	
Gul, 2024			X	
Hale, 2018	X			
Hamamy & Chang, 2021		X		X
Honz et al., 2010	X		X	X
In China, 2002	X	X	X	X
Johnston et al., 2024		X	X	
Juan et al., 2022		X		
Jurdi et al., 2011				X
Kapoor et al., 2022	X	X	X	
Kish-Gephart et al., 2014		X		
Knepp & Knepp, 2022			X	
Kocaman Karoglu, 2022		X		
Koscielniak et al., 2024		X		
Laeque & Saeed, 2023	X			
Magnus et al., 2002			X	X

Mahomed et al., 2023		X		X
Maloshonok & Shmeleva, 2019			X	X
Martinez et al., 2015	X			
McCabe & Trevino, 1997			X	X
McNabb et al., 2023			X	
Mensah et al., 2023		X	X	
Mona et al., 2024	X		X	X
Nelson et al., 2013	X	X	X	X
Niven & Healy, 2016		X		
Oravec, 2022		X	X	
Playfoot et al., 2024				X
Putra et al., 2023	X		X	
Rahimi et al., 2024			X	
Rahman et al., 2023	X		X	X
Ramzan et al., 2012		X		
Razek, 2014	X	X	X	
Razek, 2013		X		
Roig & Caso, 2005	X	X		
Royal & Dodo Seriki, 2018		X	X	
Slade et al., 2022	X			X
Smith & Others, 1971		X		
Sorgo et al., 2015		X	X	X
Söylemez, 2023	X		X	
Starovoytova & Arimi, 2017		X	X	X
Starovoytova & Namango, 2016	X		X	
Stephens et al., 2024			X	
Stephens & Wangaard, 2016			X	
Thorne-Figueroa, 2010			X	

Topîrceanu, 2017			X	
Tsui & Ngo, 2016	X	X	X	
Wangaard & Stephens, 2011			X	
Welsh & Ordóñez, 2014		X		
Yukhymenko-Lescroart et al., 2022		X		
Zhang, 2024			X	

Appendix H - Studies Ordered by Year and Technologies

Tech Used is categorized by descriptions within each study, not by the year each study was published.

Citation	Year	Tech Used
Drake, 1941	1941	old school
Smith & Others, 1971	1971	old school
Bandura et al., 1996	1996	old school
McCabe & Trevino, 1997	1997	old school
Cozin, 1999	1999	old school
In China, 2002	2002	old school
Magnus et al., 2002	2002	old school
Roig & Caso, 2005	2005	retro tech
Etter et al., 2006	2006	retro tech
Crittenden et al., 2009	2009	retro tech
Stuber-McEwen et al., 2009	2009	high tech
Honz et al., 2010	2010	high tech
Thorne-Figueroa, 2010	2010	high tech
Brent & Atkisson, 2011	2011	old school
Davis, 2011	2011	high tech
Gino et al., 2011	2011	old school
Jurdi et al., 2011	2011	high tech
Wangaard & Stephens, 2011	2011	high tech
Holt, 2012	2012	old school
Ramzan et al., 2012	2012	retro tech
Tindell & Bohlander, 2012	2012	high tech
Nelson et al., 2013	2013	retro tech
Razek, 2013	2013	retro tech

Bretag et al., 2014	2014	high tech
Gaskill, 2014	2014	high tech
Kish-Gephart et al., 2014	2014	retro tech
Razek, 2014	2014	retro tech
Welsh & Ordóñez, 2014	2014	old school
Yukhymenko-Lescroart, 2014	2014	old school
Balbuena & Lamela, 2015	2015	high tech
Divan et al., 2015	2015	high tech
Sorgo et al., 2015	2015	high tech
Amua-Seyki, 2016	2016	high tech
Arnold, 2016	2016	high tech
Martinez et al., 2015	2016	old school
Niven & Healy, 2016	2016	high tech
Starovoytova & Namango, 2016	2016	high tech
Stephens & Wangaard, 2016	2016	high tech
Tsui & Ngo, 2016	2016	old school
Chapin & Hayes, 2017	2017	old school
Davis, 2017	2017	old school
Diego, 2017	2017	retro tech
Fall-Holmes, 2017	2017	high tech
Gentina et al., 2017	2017	old school
Smith et al., 2017	2017	high tech
Starovoytova & Arimi, 2017	2017	high tech
Topîrceanu, 2017	2017	old school
Canchila et al., 2018	2018	old school
Dawson & Sutherland-Smith, 2018	2018	retro tech
Gentina et al., 2018	2018	high tech
Hale, 2018	2018	old school
Lavine & Pazdernik, 2018	2018	high tech

Mensah et al., 2023	2018	old school
Royal & Dodo Seriki, 2018	2018	retro tech
Eshet et al., 2019	2019	high tech
Maloshonok & Shmeleva, 2019	2019	old school
Education Reference Desk, 2020	2020	Artificial Intelligence
Harris et al., 2020	2020	high tech
Awosaga et al., 2021	2021	high tech
Dejene & Hui, 2021	2021	high tech
Hamamy & Chang, 2021	2021	high tech
Arnold, 2022	2022	high tech
Conijn et al., 2022	2022	high tech
Dannhoferová et al., 2022	2022	high tech
Duncan & Joyner, 2022	2022	high tech
Erguvan, 2022	2022	high tech
Juan et al., 2022	2022	high tech
Kapoor et al., 2022	2022	high tech
Knepp & Knepp, 2022	2022	high tech
Kocaman Karoglu, 2022	2022	high tech
Oravec, 2022	2022	Artificial Intelligence
Slade et al., 2022	2022	high tech
Yukhymenko-Lescroart et al., 2022	2022	high tech
Al-Harrasi, 2023	2023	high tech
Barrett & Pack, 2023	2023	Artificial Intelligence
Bin-Nashwan et al., 2023	2023	Artificial Intelligence
Gribbins & Bonk, 2023	2023	high tech
Henderson et al., 2023	2023	high tech
Laeque & Saeed, 2023	2023	high tech
Mahomed et al., 2023	2023	high tech
McNabb et al., 2023	2023	high tech

Ogurlu & Mossholder, 2023	2023	Artificial Intelligence
Putra et al., 2023	2023	high tech
Rahman et al., 2023	2023	old school
Söylemez, 2023	2023	old school
Acosta-Enriquez et al., 2024	2024	Artificial Intelligence
Baker-Corez & Kocaman, 2024	2024	high tech
Contreras-Pacheco et al., 2024	2024	high tech
Fendler et al., 2024	2024	high tech
Gul, 2024	2024	high tech
Johnston et al., 2024	2024	Artificial Intelligence
Koscielniak et al., 2024	2024	high tech
Liu et al., 2024	2024	Artificial Intelligence
Mah et al., 2024	2024	Artificial Intelligence
Mona et al., 2024	2024	high tech
Playfoot et al., 2024	2024	Artificial Intelligence
Rahimi et al., 2024	2024	high tech
Skendaj, 2024	2024	high tech
Stephens et al., 2024	2024	high tech
Zhang, 2024	2024	high tech

Appendix I - Miscellaneous Author's Notes on Various Included Studies

Citation	Notes
Acosta-Enriquez et al., 2024	Only two of their six hypotheses were confirmed: perceived ethics and student concerns.
Amua-Seyki, 2016	All of the participants in this study were teacher trainees.
Arnold, 2016	<i>"While cheating in online formative tests may happen, it does not seem to pay off."</i> <i>"As a caveat, we should point out that our statistical analysis offers no proof of cheating by individual students."</i>
Awosaga et al., 2021	I am impressed with how little cheating is occurring at Lethbridge University. However, given the size of the town and the nature of the people there, it is quite possible.
Baker-Corez & Kocaman, 2024	<i>"The study's results revealed a low level of e-dishonesty among the participants, and a significant and negative, low-level relationship between e-dishonesty and self-esteem. The master's students were found to be more likely to engage in e-dishonesty than those studying for a PhD, as were postgraduate students with 1-3 years of computer use experience compared to other groups. The e-dishonesty levels of the postgraduate students were not found to change according to their gender, daily computer or Internet use habits, or their Internet use experience."</i>
Balbuena & Lamela, 2015	Study at Memorial Ag-Tech at Cabitan, Masbate
Bandura et al., 1996	This is a study in 1996 testing the ideas from Bandura's 1990 Mechanisms of moral disengagement.
Barrett & Pack, 2023	Students and teachers generally agreed the use of AI was okay if the person already knows how to do the task, uses

	AI to generate ideas, or discloses AI was used in the process.
Bin-Nashwan et al., 2023	Looks at motivations for using ChatGPT
Brent & Atkisson, 2011	Reasons for cheating, Five categories of neutralization techniques
Bretag et al., 2014	The purpose of this survey was to give the opportunity to share their understandings of academic integrity. There was a lot of discussion about the academic breach process by students who had gotten called out.
Canchila et al., 2018	Measures the mechanisms of moral disconnection
Chapin & Hayes, 2017	Permitted cheating didn't seem to make much difference
Conijn et al., 2022	This study assigned values to: text anxiety, temptation to cheat, cheating by others, persistence, environment, time, internet literacy, reliable technology, lack of study space, financial issues
Contreras-Pacheco et al., 2024	Looks at the effects of corruption on academic dishonesty
Cozin, 1999	<i>"The survey data suggests that students at that college are as likely to cheat and plagiarize, if not more so, as students at four-year colleges. The copy cuts off the numbers, so I have reported the number in the text for helping a colleague to cheat--trading test questions after an exam is cheating, but was not counted in many of the other studies."</i>
Crittenden et al., 2009	Sample of a larger survey
Dannhoferová et al., 2022	This study looked at the self-reported data AND the institutional data to determine what percentage of cases were actually caught and reported by the faculty. Unsurprisingly, only a small percentage of the cases were reported by the faculty to their administration.
Davis, 2017	Shuffle question order in testing is effective.

Dawson & Sutherland-Smith, 2018	Seven experienced markers individually blind marked the same bundle of 20 second-year psychology assignments, which included 6 that were purchased from contract cheating websites. Sensitivity analyses showed markers detected contract cheating 62% of the time. Specificity analyses showed markers correctly identified real student work 96% of the time
Diego, 2017	The behavior about cheating during examination is deeply rooted in the culture of pakikisama (social acceptance/liking) and utang ng loob (debt of gratitude). If a learner does not share his or her answers, he or she will be labeled as walang pakisama (no concern).
Divan et al., 2015	Not all academic dishonesty involves moral disengagement.
Drake, 1941	24% in 1940
Eshet et al., 2019	"Surveyed students in online courses tend to engage less in academic misconduct than their counterparts in face to face courses."
Etter et al., 2006	Cheating using IT resources was a major problem even in 2006. The technology was new enough the researchers had to develop a list of questionable activities then a second list to validate the feasibility of those activities. <i>Between 2001-2005 there was a 1040% increase in the number of students using unattributed text excerpts from online websites.</i>
Gentina et al., 2017	For French teens, peer involvement encourages and moral values undermine cheating; for Chinese adolescents, all four social bonds contribute to cheating, similar to the whole sample. <i>Considering popularity, who are likely to cheat? Our answers provide an interesting paradox: Popularity matters, yet popular French girls and unpopular Chinese boys are likely to cheat.</i>

Gentina et al., 2018	Researchers admit the model is complex. However, having been in a position to need students to release their phones for misuse, this age of girl almost has physical pain to do so--I concur with their observations.
Gino et al., 2011	Individuals who were depleted of their self-regulatory resources by an initial act of self-control were more likely to "impulsively cheat" than individuals whose self-regulatory resources were intact. Moral identity moderated the relationship between self-regulatory resource depletion and dishonesty such that the relationship was weaker for participants with high moral identity.
Gul, 2024	This was a survey of instructors, not students, so these were what they reported they thought were motivations and their direct concerns with online assessment
Hale, 2018	The four most prominent features of the "cheat-free" learning environment are: (1) mastery, (2) low-stakes assignments, (3) intrinsic motivations for learning, (4) high expectation of success
Hamamy & Chang, 2021	Approximately 50% of those who committed academic dishonesty did so for the first time during the virtual learning semesters. At Yale
Harris et al., 2020	Replication study of McCabe (2005)
Henderson et al., 2023	Large study in Australia
In China, 2002	Corruption is a serious problem.
Johnston et al., 2024	Students were generally supportive of using AI for markup, but not for actual essay writing.
Jurdi et al., 2011	Table 4 on p. 17 contains comprehensive list of cheating behaviors

Kapoor et al., 2022	Poor time management was mainly to blame for these students not completing their work properly. Although some did have outside issues.
Kish-Gephart et al., 2014	Harm to others a significant prevention of moral disengagement
Knepp & Knepp, 2022	AE is the, "...tendency to possess an expectation of academic success without taking personal responsibility for achieving that success" Note: The number of participants in the abstract does not match with the body of the study. I am using the number in the body of the study because the calculation appear to match that.
Koscielniak et al., 2024	Our findings suggest that students' intentions toward individual dishonesty are largely habitual and significantly related to prior experiences of academic misconduct.
Lavine & Pazdernik, 2018	Used ideas from them for lit review
Liu et al., 2024	Testing machine detectors and human reviewers to see if ChatGPT generated, rephrased ChatGPT, and human authored articles were tested to see which could detect better. Both detected quite well. However there is the potential for false positives.
Magnus et al., 2002	Seminal study: tolerance of cheating index vs. corruption index
Mah et al., 2024	See section on responsible use of technology in schools; number includes both teachers and students 12 students & 26 teachers
Mahomed et al., 2023	"Unintentional plagiarism may be more common than expected."
Maloshonok & Shmeleva, 2019	<i>The major findings of this study were: (1) subjective norms appeared to dominate as the strongest predictor of academic dishonesty across [This Country's] universities; (2) perceived behavioural control, appeared to be positively</i>

	<i>related to the dishonest behaviour. In the majority of universities, this factor was found to be insignificant.</i>
Martinez et al., 2015	moral disconnection (moral disengagement) quite common
McCabe & Trevino, 1997	For the most part, results agreed with the 1993 study with smaller colleges--with the exception that stiffer penalties was positively correlated, but that can be explained by the fact that those punished knew the honor codes more thoroughly than those who were not punished.
Mensah et al., 2023	Graduates were more likely than enrolled students to self-report higher examination cheating behaviours. Enrolled students were less likely than graduates to perceive higher levels of peer cheating.
Nelson et al., 2013	Survey listing 17 activities observed done at the college level, numbers admitted almost 25% for several activities combined with observed of over 38%; 64% would not report observed cheating by a someone they did not know well, 78% would not report cheating by a friend
Niven & Healy, 2016	Not everyone is equally susceptible to the dark side of goal setting. <i>"Our findings therefore suggest that the effect of specific goals on misrepresentation of performance is only apparent among the subset of individuals who are high in dispositional moral justification. For individuals low in moral justification, being set a specific performance goal was not enough to disengage the psychological barriers of moral self-perceptions and self-regulation that typically constrain unethical behavior."</i>
Ogurlu & Mossholder, 2023	Results of a survey analysis from 2023 showed 32.9% of teachers in a sample of American educators ranging from

	elementary through higher education showed that 32.9% knew nothing about ChatGPT, 38.8% a little for a combined percentage of 71.8% knowing little or nothing about ChatGPT
Oravec, 2022	Contains a series of anecdotes raising concerns about using AI to catch cheater--subjects of the anecdotes were named.
Playfoot et al., 2024	"Neither personality (conscientiousness, agreeableness, Machiavellianism, narcissism), academic performance, nor study skills self-efficacy could predict future use of AI tools. A novel Degree Apathy Scale was the only significant predictor. Willingness to use AI tools was greater when the risk of getting caught was low, and punishment was light, particularly for those high in degree apathy."
Rahimi et al., 2024	This is a qualitative study for which numerical data was obtained.
Ramzan et al., 2012	Findings revealed that there was a low level of awareness about plagiarism and university plagiarism policies and processes amongst the students. Findings also revealed that many respondents did not understand what plagiarism is
Razek, 2013	Cheating among the ethnicity of students being studied, categorized severity of different types of cheating, attributes to cultural shift from idealism to materialism
Razek, 2014	The current study showed that academic dishonesty behaviors are more prevalent among that country's students when compared to national U.S. reported rates and also when compared to other students from their region on their colleges and universities. The study suggested some strategies to reduce the frequency of academic dishonesty among that country's students including: Raising ethical awareness, focusing more on the developmental objective of learning, employing more collaborative learning

	experiences, and utilizing periodic evaluations against well-articulated objectives especially when coupled with an academic awareness of their case.
Roig & Caso, 2005	Looks into fraudulent excuses; compares fraudulent excuses with legitimate excuses.
Royal & Dodo Seriki, 2018	In duping the high stakes standardized testing system, these Atlanta educators were merely reflecting the ethos of the state. Claims investigation of APS cheating was due to "anti-blackness". "Given the intense and inflamed nature of high stakes testing culture in schools with low test scores that struggle to rise, high poverty, and in the context of anti-Blackness, did these educators have a reasonable fear that their livelihoods were in danger?" The answer is likely yes, their livelihoods were in danger, but their way of addressing it cost them their freedom.
Slade et al., 2022	increase of oral examinations
Sorgo et al., 2015	"I have allowed schoolmates to copy my homework." was answered positively by 322 of 323 students in this study from this country. List of cheating methods on p. 74
Starovoytova & Arimi, 2017	The results of the survey revealed that only 18% of the respondents admitted that they have never cheated; however, they have witnessed an array of cheating techniques used by their classmates, which illustrates, that students are exceedingly inventive and opportunistic, in nature, and they are ready to use any method, to achieve their ultimate goals (mainly, good grades).
Starovoytova & Namango, 2016	70% admit to using Google during exams--see highlighted text in articles for really surprising data from Kenya.

Stephens & Wangaard, 2016	Study associated the <i>Achieving with Integrity</i> seminar directly targets Bandura's moral disengagement as set out in the FCM model of moral functioning.
Stephens et al., 2024	About two-thirds of students in the RAINZ universities reported engaging in at least one form of academic misconduct in the 2022 School Year.
Stuber-McEwen et al., 2009	<i>"Results indicated that students enrolled in online classes were less likely to cheat than those enrolled in traditional, on ground courses. Aiding and abetting was self-reported as the most frequently used method among students in both online and traditional classroom settings."</i>
Thorne-Figueroa, 2010	No significant correlation was found between personality types A & B and academic dishonesty. It would have been good to have the raw data as that would have provided data points for this study specifically. A prevalence rate was never calculated by the authors because that was not the purpose of their study
Tindell & Bohlander, 2012	<i>Of the 269 respondents, 265 (99%) indicated they had a cell phone that could be used for text messaging, and almost all respondents (97%) said they had sent standard text messages. The vast majority (95%) said they always bring their phone to class, and all students indicated that while in class their phones were either set to vibrate (91%) or turned off (9%)</i>
Topîrceanu, 2017	Analyzing students' social networks to prevent cheating in a European country; there was some effectiveness in preventing cheating, which was most effective in the smaller classes
Tsui & Ngo, 2016	A relationship exists between level of college cheating and a country's corruption index (Magnus, Polterovich, Danilov, & Savvateev, 2002). According to their research

	paper published in 2016, Tsui and Ngo found that 84% of business students reported one or more incidents of serious cheating in the past year, with 72% of engineering students and 66% of all participating students. They concluded that business students cheat more than non-business students.
Wangaard & Stephens, 2011	[Note: still looking for the full article, information has been taken from quotes by the authors of their article.]
Welsh & Ordóñez, 2014	Recent research has introduced a dark side of goal setting by linking high performance goals to unethical behavior (e.g., Schweitzer, Ordóñez, & Douma, 2004)
Yukhymenko-Lescroart et al., 2022	Huge study in a Latin-American country
Yukhymenko-Lescroart, 2014	Results indicated that, in general, this country's students are less likely to believe that academic misconduct is wrong compared to their U.S. counterparts, as well as seem to have different beliefs on what is and isn't academic misconduct. Recommendations are proposed to help students change their beliefs and to reduce academic dishonesty.
Zhang, 2024	Would not normally be considered, except that it includes the element of pre-planning as a part of the outcomes. Data collection was from teacher compilation and submission of data.