

# **Cheating Among Business Students: Determining the Influence of Religion, Perceptions of Cheating, and the Campus Environment**

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## **ABSTRACT**

This study addresses the factors that contribute to dishonest behavior of business majors. It also looks at how today's students and business professors define academic dishonesty. Special emphasis is given to whether enrollment in religion and ethics classes and attendance at religious activities influence a student's definitions of and participation in dishonest behavior. In the spring of 2006, the authors surveyed students enrolled in business courses at three institutions: a Catholic-affiliated college in the northeast, a Baptist-affiliated university in the south, and a non-religious affiliated university in the south. All three are private institutions with a student population of 2,500 or less. The same survey was repeated in the spring of 2007. Business faculty at all three institutions were given a similar, shorter survey to determine their perceptions of what defined cheating. In addition to the survey data, the authors looked at each institution's academic integrity statements. The college in the northeast has no formal academic integrity statement; the Baptist-affiliated university has an academic integrity statement, but is inconsistently enforced. The non-religious affiliated university has an academic integrity statement that is strongly enforced with actionable ramifications. Preliminary results show that students at the religious-affiliated institutions cheat as frequently as students at large, public universities. Males are more likely to cheat than females, and upperclassmen more likely than younger students to cheat. Students for whom religion is personally important are less likely to cheat.

## **INTRODUCTION**

It is unusual to listen to the daily news without hearing about a criminal investigation into the behavior of a corporate executive, political leader or star athlete. Faculty members often question the influence of current events on the ethics of today's students. There is a vast literature regarding cheating by college students, and research has found a definite link between cheating in college and cheating in the workforce.

While the literature addresses many questions regarding the prevalence and patterns of academic dishonesty, this study works to more fully answer others. Do the factors that influence

unethical behavior by students at large universities also influence students at small institutions? Does religious affiliation affect student behavior? Can a university improve its students' behavior by requiring students to take a course in religion or ethics? Does an enforceable academic integrity policy influence students behavior when it comes to cheating?

One issue clouding the discussion of academic dishonesty is defining what behaviors are indeed dishonest. How do today's students define honesty? What are the implications of the behavior of these students when they enter the workforce? Another is the faculty's perception of cheating. A separate survey was administered to faculty to determine their definition of cheating.

## Literature Review

Research shows that a person who cheats in one environment is likely to cheat in another. Sierles, Hendricks and Circle (1980) showed that cheating in college, cheating in medical school and cheating in internships are linked. Baldwin and Daugherty (1996) found that students who cheated in either high school or college were more likely to cheat in medical school. Fass (1990) found that dishonest students were more likely to cheat in areas including athletics, income tax payments and politics. Nonis and Swift (2001) found a strong correlation between dishonesty at school and at work for both undergraduate and graduate business students. Cheating among college students is a warning about the future frequency of unethical behavior in all aspects of business.

Estimates are that 20 percent to 70 percent of students engage in dishonest acts (Crown and Spiller, 1998). Cheating is more common among students with a low GPA, among business majors and among students who feel alienated or in need of approval. There are mixed results on whether gender, age and religion determine whether a student will cheat. Students at schools with strong honor codes are less likely to cheat (see McCabe and Trevino, 2002; also see McCabe, Trevino and Butterfield, 2002). While much of the literature on academic dishonesty uses survey data, experimental data supports the prevalence of cheating among business majors (Nowell and Laufer, 1997). Rettinger and Jordan (2005) found that among students enrolled in a dual religious/college curriculum, more religiosity is associated with lower cheating behavior.

There is evidence to support that cheating has become more frequent over time. This increase may be due to dishonest behavior on out-of-class projects and due to convergence of cheating behavior by men and women. Between 1963 and 1993, the incidence of cheating among female students increased significantly. The cheating behaviors that most increased were copying test answers from another student (26% to 52%) and collaborating on assignments requiring individual work (11% to 49%) (McCabe and Trevino, 1996). Swift and Nonis (1998) found that cheating on exams and quizzes was positively correlated with cheating on projects. These results have implications for business professors who require students to work both independently and in teams on papers and projects.

Smith, Ervin and Davy (2003) found that students are more likely to cheat when alienated and when they engage in neutralization. Students who have lower academic performance and who feel alienated are more likely to engage in neutralization, again raising the likelihood of future cheating. The study also found that students who have engaged in prior cheating are more likely to cheat in the future, in part because prior cheating encourages neutralization. Instructors

can reduce the amount of cheating through in-class deterrents; the deterrents do not reduce neutralization but do make cheating more difficult and potentially more costly to the student.<sup>1</sup>

Students may define dishonesty in ways that professors do not expect. Ameen, Guffey and McMillan (1996) surveyed accounting students' perceptions. Nearly 20 percent of students said that asking questions of someone who has already taken an exam is not cheating. Around 30 percent of students said that failing to report grading errors and visiting a professor after an exam with the sole intention of influencing one's grade were not cheating. A student's propensity to cheat was influenced by a student's tolerance of cheating, whether a student had a cynical outlook, whether a student had a low GPA, whether a student had witnessed others cheat and whether a student expected punishment for cheating.

Studies have concluded that institutions with honor or integrity codes experience less cheating among students than those who do not have a formal code of honor. According to McCabe and Pavela (2000), "... schools with traditional academic honor codes have lower rates of academic dishonesty than schools without such codes." The Center for Academic Integrity survey showed that "only 23 percent of students at colleges with traditional honor codes reported one or more incidents of serious test or exam cheating in the past year, contrasted with 45 percent of students at colleges with no honor code." (McCabe and Pavela, 2005).

There are two conventional types of honor codes, traditional and modified. Both include a strong student role in the judicial system (McCabe & Pavela, 2000). While both typically require students to sign and submit a pledge that attests to their personal integrity, a pledge is not always mandated at institutions that use the modified method (McCabe & Pavela, 2000; Konheim-Kalkstein, 2006). These codes typically have the students pledge not to cheat on exams or quizzes, to plagiarize another's work, or to neither give nor receive unauthorized aid of any kind on tests, writing and other assignments. What differentiates the traditional vs. the modified methods are, (1) how the instructor chooses to monitor exams and (2) whether or not the students are expected to report cheating observed among their peers (McCabe & Pavela, 2005).

At institutions where the traditional method has been implemented, students are expected to report any cheating that they might observe, whereby that is not the case for institutions using the modified method. With that said, "...modified codes do call for significant student involvement in promoting academic integrity and in adjudicating allegations of academic dishonesty" (McCabe & Pavela, 2005). In addition, students pledging to use a traditional honor code are accustomed to taking unproctored exams. According to Konheim-Kalkstein (2006), "The modified honor code system typically includes student participation, but unproctored exams or use of a pledge can be used at the instructor's option."

While no honor code completely eliminates cheating, evidence shows that they do indeed make a difference. Konheim-Kalkstein (2006) asserts that the modified method has been "moderately successful" and is associated with "lower levels of cheating (although not as low as a campus with a traditional honor code)." According to McCabe, Trevino, & Butterfield (2002), "...there is less cheating in schools with traditional honor codes than in schools with modified honor codes. In turn, cheating appears to occur with less frequency in schools with a modified honor code than in those with no honor code" (as cited Roig & Marks, 2006, p. 164).

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<sup>1</sup> Deterrents include assigning seats to students, walking up and down the aisles during an exam, making sure there is an empty seat between each student, and announcing the penalties for cheating.

## Methods of Cheating

During a final exam, one of the authors asked a student to move to another seat in order to provide more space between exam takers. The student refused to move which then compelled the professor to suggest an alternative to the student, to either switch seats or fail the exam. The author suspects that she altered the student's cheating "environment" by asking him to change seats, thereby angering the student. (The student ended up being asked to leave the exam resulting in a failing grade).

No document on cheating in higher education is complete without describing methods of cheating and, where available, solutions to these various methods. Certainly, there are the traditional, age-old methods of cheating; however, with the ubiquitous nature of today's technology, students have become even more creative.

In addition to traditional methods of cheating on exams, quizzes, and papers, access to resources on the Internet has grown. One of the best kept lists of Internet paper mills can be found on Coastal Carolina University's website, <http://www.coastal.edu/library/presentations/mills2.html>. When the site, *Cheating 101: Internet Paper Mills*, was created by CCU in March of 1999, it had just 35 references to paper mill websites listed. In November 2006, there were over 250 general sites recorded (Bates & Fain, 2006). The university also provides a listing of 71 additional links to paper mill sites that are subject specific, <http://www.coastal.edu/library/presentations/mills5.html>. Some of these sites provide papers from \$1 - \$10 per page and others provide papers free of charge.

Online academic conference proceedings and journals have become more popular and, therefore, more accessible to students. In addition, many academics have their own websites where they may post their published work or works in process. According to Bates & Fain (2006), students also have access to technical White Papers posted to corporate or government sites.

Cheating on exams is nothing new; however, the way in which students are able to cheat has become more sophisticated with the use of technology. Before access to personal computers, students would painstakingly write crib sheets with the smallest notes they were able to write in their own hand. Today, students can shrink the font to the smallest visible size and output it to any printer.

The following list of cheating methods was gleaned from a variety of sources, including academic papers and websites and student websites and blogs. Some of the more "creative" methods were garnered from the student sites.

### **The "old fashioned" method: Looking on another student's test**

According to the Tallahassee Community College's website on cheating, this method is still alive and well according to the literature. Using this age-old method, one has a friend or group of friends sit close to them during an exam so that he/she may see the answers on another's exam paper. The student may lean back and stretch while stealing a peek or the student may hold up (and hide behind) her/his paper while checking out the friend's paper. Conversely, the friend may hold up his paper to allow the cheating friend to copy. Sometimes students may stretch and yawn, then rest their head behind their arm; the head is placed to one side, strategically pointed at the friend's paper. With one's head turned to one side, the eye nearest to

the instructor is closed (Anthony, n.d.). Sometimes answers are viewed with or without the knowledge and assistance of the student's classmate (Bramucci, 2003). Some students may use a small mirror to steal a glance at their neighbor's paper. According to Aditya (2007), one of the simplest ways of cheating is to ask a friend to help you by whispering the answers to you during the exam.

## **The Written Word**

Crib notes or "cheat sheets" come in a variety of styles. Traditional crib sheets and their variants are described below.

***Traditional crib notes.*** Students put notes on small pieces of paper and conceal them either on their body, in their clothing, in writing instruments, clear bottles, food, or in and about their testing environment. In the tiniest readable font, the crib notes may include formulas, and/or answers from previous exams or tests. These notes may have been assembled from a test or exam given earlier in the day or from one given during a prior semester. (Bramucci, 2003; Clabaugh & Rozycki, 2006; Tallahassee Community College, n.d.; Anthony, n.d.; The Blur & Insanity Cheating Tricks, n.d.)

***Skin/body writing methods.*** This is a relatively traditional method of cheating. Students write notes on their forearms, palms of their hands, on the inside of thighs, in between fingers, etc. Notes written on the inside of one's forearm seems to be a favorite. The shirtsleeve can be unrolled and the student can inconspicuously glance on the inside of his/her forearm while writing. The sleeve can be quickly rolled down when necessary. Some students write the crib notes on the inside of their thighs. They arrive to the exam wearing either a short skirt or baggy shorts that enable them to unobtrusively glance down at the notes. A variation of this is ankle writing where notes can be easily hidden under socks (Bramucci, 2003; Cheat on an Exam, n.d.; Cheating on Tests, 2007; Clabaugh & Rozycki, 2006; Konheim-Kalkstein, 2006; Tallahassee Community College, n.d.).

***Write on fingernail method.*** Using a well-sharpened or mechanical pencil, the student writes information such as equations or vocabulary words on the fingernails of her/his non-dominant hand. It is very difficult to get caught cheating using this method. The evidence can be quickly destroyed by simply wiping the fingernails with another finger. In addition, not only is the pencil lead not too noticeable on the fingers, but the student can hide their hand under the desk or curl their fingers when not "in use". If they feel the instructor is on to them, a quick wipe of the nails under the desk will do it. Authorities on this method caution the student to be careful not to rub the notes off of the nails before the exam (Cheat on an Exam, n.d.). Females sporting acrylic nails can write notes on the underside of the nails before attaching them (Bramucci, 2003).

***Crib notes in writing instrument method.*** Using this method, students can conceal crib notes on a pullout retractable scroll that can be accessed during a test. A variation method is to use a clear, round barrel of a mechanical pen or pencil and "store formulas or other frequently needed items." The method is to take a 6" x 1" sheet of paper with your notes on it, and then "slide it into the mechanical pencil (with the writing on the outside)". During the exam, the student pretends to advance the lead in your pencil, and inconspicuously looks down at writing instrument. (Bramucci, 2003; Cheat on an Exam, n.d.; Cheating on Tests, 2007; Clabaugh & Rozycki, 2006; Tallahassee Community College, n.d.).

***Pencil etching method.*** This method involves writing notes down the side of a wooden octagon pencil with a nail or something sharp. When the student holds the pencil he/she can read the notes while writing. This can be done by turning the pencil from side to side in one's hand. This method makes it very difficult to catch the student in the act because the instructor would have to stare at the pencil and be in the right light at the right time (Bramucci, 2003; Cheating on Tests, 2007; Tallahassee Community College, n.d.)

***Clear bottle method.*** Students carefully remove the label from a clear container which could include a water bottle or other popular drinks such as Vitamin Water or Snapple. They put their notes on the back of the label, then paste it back in place, notes to the inside of the bottle, using transparent glue. During the exam the student takes slow "thoughtful" swigs out of the bottle. Some sites suggest *not* using a clear or light colored bottle (Aditya, 2007; Bramucci, 2003; Cheating on Tests, 2007; Clabaugh & Rozycki, 2006; Konheim-Kalkstein, 2006; Tallahassee Community College, n.d.).

***Gum or food wrapper method.*** Using a pack of gum, the student opens up a piece, writes cheat notes inside the wrapper either by hand or printer, and refolds the gum wrapper. During test, the student opens the gum wrapper under the guise of enjoying a piece of chewing gum. He/she then casually looks inside of the wrapper. (Aditya, 2007) (Cheating on Tests, 2007) (Improved Ways of Cheating, n.d.) A variation of the gum wrapper method is to place notes in the wrapper of any snack including chips or cookies. Another technique is to use tracing paper in the gum wrapper and chew it with the gum once the notes have been successfully read (Bramucci, 2003).

***Eraser method.*** This method has the student writing on the smooth surface of his/her testing desk with an eraser before the exam begins. Given the right angle of the light, the student is able to discreetly read the notes. This method works only with desks with polished surfaces (Aditya, 2007). Another variation of the eraser method is to actually write answers on the bottom of one of those big erasers. This can be used for "community cheating" since most professors wouldn't think twice about letting students share erasers during an exam (Bramucci, 2003).

### **Crib Notes in Clothing Methods**

***Crib notes under baseball hat bills.*** Baseball caps are used to both store cheat sheets and to hide wandering eyes from the instructor (Clabaugh & Rozycki, 2006). A student can write notes directly onto the underside of the bill of the cap in pencil. They can read the notes with their head down during the exam. The student's eyes are hidden. "The pencil then erases or rubs off rather easily so that you can wear it on non-test days, too, to throw off suspicion" (Bramucci, 2003). The cap can also be used to store small crib sheets in the underside of the bill as well (Aditya, 2007). Finally baseball caps can also be used to "prevent instructors from seeing the student's face while the students eyes are looking at a neighbor's test form" (Tallahassee Community College, n.d.).

***Long sleeved shirt method.*** Before the exam, students write answers on an index card. They attach the card to a rubber band that runs up their shirt sleeve. When the instructor gets suspicious, the student lets go and "the crib sheet slides up your sleeve and out of sight." According to the cheating experts, this "provides an almost infallible way not to get caught" (Cheating on Tests, 2007). The long sleeved shirt method also conceals body-writing and notes taped to clothing (Aditya, 2007; Anthony, n.d.; Bramucci, 2003).

***Concealed by Band-aid method.*** Small crib sheets can be concealed in bandages or under band-aid strips. Students take quick glances under them when the instructor is not looking in their direction (Aditya, 2007; Bramucci, 2003; Konheim-Kalkstein, 2006).

***Masking tape method.*** Information is written on masking tape and applied to the underside of one's shirt near the bottom. While sitting, the student can discreetly turn the bottom of his or her shirt up and read the notes off of the tape (Cheat on an Exam, n.d.). According to Bramucci (2003), it's better to write crib notes on masking tape than to do any type of body writing, because if the instructor suspects cheating and finds it on the student's person, there is little opportunity for the student to get rid of the evidence. However, with the making tape method, a student has a chance to roll the tape up into a ball, rendering it impossible for the instructor to pull it apart.

### **Environmental cheating methods: Using classroom props**

***Desk writing method.*** The student visits the classroom when no one is around either late in the evening or early in the morning before the exam and writes crib notes on the desktop. Obviously the student must ensure that he/she arrives early enough to the exam to get that seat! According to the experts, this method is most effective if the desks in the room already have graffiti written on them (Aditya, 2007; Anthony, n.d.; Bramucci, 2003; Cheat on an Exam, n.d.; Cheating on Tests, 2007; Clabaugh & Rozycki, 2006). A variation of desk writing is...

***Chair writing.*** As with the desk writing routine, a student enters into the classroom either late at night or early morning and makes notes on the chair in front of the desk where he/she plans to sit for the exam. A variation of this is to take a baseball card sized piece of paper with notes written on it, and tape it to the back of the seat of the person that sits in front of you. (Improved Ways of Cheating, n.d.)

***Wall art.*** A student hangs a poster-sized cheat sheet on a wall in the examination room. Obviously this works best when a group of cheaters are in collusion with each other *and* in a room with plenty of wall art (Anthony, n.d.). A variation of this method is to write coded information on existing posters, on the blackboard, on the podium, or in dust on cabinets, etc. (Bramucci, 2003).

### **Beyond the classroom crib sheet**

***Communicating in codes or signaling.*** A variety of secret signals can be used by students to share answers and hoodwink the instructor. The signals are worked out in advance to distinguish between choices on multiple choice exams. Students use hand or foot tapping, pen clicks, colored candy (e.g. red=A, blue=B, yellow=C). Taps can also include answers to quantitative problems (Bramucci, 2003; Clabaugh & Rozycki, 2006; Konheim-Kalkstein, 2006).

***Traveling to the answers: Leaving the Classroom.*** Students pre-write on walls of the lavatory (or other empty room) or they may stash crib notes in the bathroom stalls, trash cans, inside toilet paper rolls, etc. Sometimes a student might use a cell phone in a lavatory stall to call an accomplice (Bramucci, 2003; Clabaugh & Rozycki, 2006)

### **Technology techniques**

**Blackboard or WebCT.** Some faculty like to provide immediate electronic feedback to the student after giving an exam on Blackboard or WebCT, often for the sake of saving precious class time for exam review. A student then copies and pastes the full graded exam into Word. At that point, they can share the exam with other sections electronically (Anthony, n.d.).

**Cell phones and text messaging.** Students text exam questions to their friends outside the testing room and receive answers back from them (Anthony, n.d.; Clabaugh & Rozycki, 2006; Tallahassee Community College, n.d.). With the new ringtone that only teens and young adults can hear, and adults cannot, they can easily notify each other without the instructor hearing a thing. This ringtone is called the “Teen Buzz” or the “Mosquito” due to the high pitched frequency (Vitello, 2006). If students are technology savvy, they might activate something called C-Guard, which blocks cell phone signals within a 262 foot radius. (Block, 2006; Cheating on Tests, 2007)

**Search Engine Translation.** For this method, the student instructs the search engine (e.g. Google) to find items on their topic in another language (e.g. Spanish). The search engine translates the essay into English. “Since the paper didn't originally appear in English, locating this plagiarized copy will be much more difficult. Such translated essays are likely to have grammar and syntax errors unless the student takes the time to clean it up.” (Tallahassee Community College).

**Pager.** Most students no longer use pagers, but that doesn't mean they are obsolete. Students can set pagers to store messages that they can access when the instructor is not looking. “In one variant, a high-tech student used a tiny wireless video camera in a hat to transmit images of the test to an accomplice, who sent pager messages (the pager set on vibrate) to indicate answers!” (Bramucci, 2003).

**Wireless Monitor.** Wireless monitor devices are commonly used by musicians. They are made up of a “body pack transmitter concealed under clothing that is combined with a small flesh-colored earpiece. The wire is hidden under hair and clothing. A cell phone plus a small earpiece can be used for the same purpose.” A friend off site can speak answers back to the exam in the student's ear (Bramucci, 2003).

**PDA/electronic organizer.** A PDA, such as a Blackberry device, can easily fit into the palm of the student's hand and can store a semester's worth notes. (Bramucci, 2003; Clabaugh & Rozycki, 2006; Tallahassee Community College)

**iPods, MP3 players or tape-recorders.** iPods are not just for listening to music anymore. Students may ask if they can listen to music during the test because it helps them to relax or concentrate. They are so small, that they are easily hidden. MP3 players or mini tape recorders can be fitted with a tiny earphone that can be hidden by combing hair over the ear.

iPod-ready crib notes are currently being published by SparkNotes and iPod dictionaries are being published and sold by a company called iPREPpress. Audible.com now sells e-books for iPods. Students can record lectures and notes to audio, and then save it on their iPods to listen to

during an exam (Bramucci, 2003; Cheating on Tests, 2007; Clabaugh & Rozycki, 2006; Konheim-Kalkstein, 2006).

***Crib notes on programmable calculators.*** Students can use programmable calculators to store answers, notes, and formulas. Because calculators are often permitted during tests, this is a difficult problem to control (Bramucci, 2003; Cheat on an Exam, n.d.; Clabaugh & Rozycki, 2006).

***Scanner pens, earpieces and hidden cameras.*** Student can install hidden cameras on their glasses; transmit video of questions to an outside source, who provides answers to the student via the hidden earpieces hidden in the student's ears. A scanner pen can both scan and transmit whatever it touches on paper. In some cultures, the outside source receiving questions and broadcasting answers back is a professional test taker who is handsomely paid (Hirsch, 2007).

***Cameras:*** Students can transmit exam questions via a tiny wireless camera and receive answers via a wireless monitor from a friend located elsewhere. And a watch that incorporates a digital still camera is being sold in Japan (Bramucci, 2003).

***Alteration of records.*** These methods include hacking into a professor's computer, changing their grade book, stealing their grade book, and stealing the exams before grades are entered.

### **Obtaining an advance copy prior to the exam date: Illegal Access**

***Exam smuggling.*** There are a variety of creative ways that students can gain illegal access to an exam in advance. For example, "a student who has postponed a test or who takes it in a later section enlists a confederate to smuggle an extra copy of the exam out of the test room. The recipient looks up the answers at his or her leisure." Afterward, the student both smuggles the completed test into his or her class section and turns it in at the end of the test, or they rely on memorization of the test to do better (Clabaugh & Rozycki, 2006).

***Old Exam files.*** Students rely on instructors to re-use exams either from section to section or semester to semester. They may smuggle a copy of the test from the examination room at the end of the test, or if the instructor returns the exam upon review, put it in a file. It is well known that files of exams are kept in sorority and fraternity houses, etc. (Bramucci, 2003)(Clabaugh & Rozycki, 2006)

### **Theatrical methods**

***Feigned illness or injury.*** Student fakes injury, illness, personal emergency or death in the family to postpone tests for which they are unprepared (Clabaugh & Rozycki, 2006).

***"Misunderstandings"***. Students sometimes try to avoid test or assignment deadlines by simply not showing up to the exam or by turning things in late. "They then show up late, feign surprise and claim that they misunderstood when the test was to be given or the assignment handed in" (Clabaugh & Rozycki, 2006).

***Make-up exam maneuvering.*** On the day of an exam or major assignment due date, a student may call the professor and say they are sick or in the middle of a relationship

breakup. In these scenarios, students tend to put on their best theatrical performance. Many professors tend to be more lenient if a student calls them in advance. Some will even fake a doctor's note or talk their doctor into writing one. The student then consults with their friends to find out what was on the exam. The student counts on the busy professor who has no time to write a special make-up exam (Bramucci, 2003).

### **Clandestine methods**

***Aisle roaming.*** To cheat off other people, a student can get a friend to occupy the professor. He/she may ask a question by either going to the instructor's desk or having the instructor go to the student. While the professor is occupied, the friend is able to cheat. Friends may take turns doing this for each other. Students may signal to their friend when he/she needs the instructor to be distracted by coughing or clearing their throat. (Improved Ways of Cheating, n.d.)

While most students are still taking the exam, a student may wait until the first person turns in his/her exam. The student will walk up the aisle as if he/she is going to turn in their exam and glances at other student's tests as they go up and down the aisles looking for answers that you need. Right before the student gets back to her/his desk, they may pretend to have forgotten something, and return to their seat to write the answers. (Improved Ways of Cheating, n.d.)

***Blue book.*** This method only works when students are required to bring their own blue books to an exam. This is another variation of the crib sheet; a page or two is inserted into a blue book to copy from during the exam. With reduced font, a lot of information can be squeezed into a small page (Tallahassee Community College). One cheating expert suggests that the student write all the information they need in an outline format. If an instructor asks about the outline the student only need explain that he/she created the outline (at the beginning of the exam) to help organize his/her thoughts for the essays or problems. The cheating experts insist that this method works well and is very hard to catch (Bramucci, 2003). Two variations of this method is the "invisible ink" and "fluorescent pen" techniques. For the first, the student uses a pen that has run out of ink and writes "invisible" notes on a sheet of paper prior to the exam. The paper becomes the student's "scratch sheet" for the test; the information on this sheet can be viewed by looking at the paper from the suitable angle (Bramucci, 2003). The other, using a fluorescent pen, the student "writes on 'blank' blue book or scratch paper with invisible ink --- visible only when ultraviolet light is shined on it." According to Bramucci (2003), thousands of inexpensive ultraviolet light pens are sold annually.

***"Lost" exams.*** Problem: the student sits for the exam, pretends to be taking the test, but completes nothing. Then they turn in the blank exam. The perpetrator hopes the instructor will not be suspicious when he or she finds the blank exam. They might think, for example, that they inadvertently handed out an extra copy. When the tests are graded and the villain gets a zero because they didn't take the test, he or she complains bitterly (or sadly) that their test has been lost. The cheater hopes to be awarded a passing grade or to at least gain time to learn more about the test and/or study before retaking the test (Clabaugh & Rozycki, 2006).

**Changing answers on a graded exam.** The instructor hands back graded exams to the students and a student to be re-graded, claiming their answers were correct and the grading was wrong (Tallahassee Community College, n.d.). A variation of this is for students to agree in advance to change grades on an exam or quiz if the professor uses the “switch exam” technique for in-class grading.

**Impersonation: Send in the “ringers”.** This technique is most effective in large classes. While class rosters now have pictures, hair styles can change, photos are less than perfectly clear, hats can distort the image. (Tallahassee Community College). The student convinces someone else to take the test for them. If IDs are known to be checked, the student may either pay for a fake ID for the “ringer” or may choose a person who resembles them to take the test. A variation is to have the “ringer” sit next to the cheating student in order to copy off them. At the end of the exam, the two switch papers and the ringer's test is turned in. This also provides an opportunity for a student to steal a test for a test file.

**Distracting the professor.** This technique involves a student distracting a professor to enable a co-conspirator to steal another person's test or answer sheet. The student then takes it back to his or her desk, copies answers, and turns both in to the professor (Bramucci, 2003). Another variation is to use attractive female students to distract a male professor so that her friends can cheat (Bramucci, 2003).

**Collusion.** Many techniques depend on collusion between students. According to Bramucci (2003), some examples include:

- Crib sheets inserted into heavily hair sprayed hair of the female classmate for another student. The student pulls her hair to the side for a glimpse of the crib notes when necessary.
- A better prepared person creates a cheat sheet for a lesser-prepared person during the exam, and then finds a way to deliver it to them.
- One student takes two answer sheets and places them together, then writes hard enough on the first to leave impressions on the second rendering an invisible carbon copy. They share the invisible answers with their friend.
- Student A, the better student, fills in two answer sheets, one with his/her name and the other with the name of his/her friend, Student B. During the time when many people are leaving the class at once, Student A turns in both while Student B leaves without turning in his or her sheet. If the test requires names to be written, Student B's is left blank. Student B either returns immediately because they've "forgotten" to write their name on the answer sheet, or they just wait; most professors will automatically assign an unnamed paper to the person missing the exam score.

### **Post-test maneuvers**

**Test alteration.** When tests are returned students either alter their answers from wrong to right or fill in answers they deliberately left blank. Then they complain to the professor that their test was marked incorrectly (Clabaugh & Rozycki, 2006).

***Exam withholding.*** The student does not turn in the exam on test day, to only later act upset accusing the professor of losing the exam.

***Badgering the Professor.*** The student goes to the professor's office to try to convince them to change the student's grade. The student knows "what works" for the individual professor. According to the experts, some professors succumb to flirtatious or sexy student behavior, for others it's being nice and/or respectful; for others, a crying student makes them break. Finally, for others, if a student continues to be a pain in the neck without leaving, a professor may just give in to get rid of them (Bramucci, 2003).

## Methods

### *Sample*

We use the characteristics of three universities as a type of natural experiment, comparing the university's students to what is known from the previous literature, as well as comparing between the three universities. As described in the following sections, the universities differ based on size of the universities, class size, use of Honor Codes, requirements to take a religion course, and the religious affiliation of the university.

Students enrolled in business courses were surveyed. Students were guaranteed confidentiality and anonymity. The surveys generated 613 useable responses. Of the total, 69% of the respondents were female, the student's average age was 21.4 years (including MBA students) and the average GPA was 3.20.

### *Survey Instrument*

The instrument was adapted from questionnaires by Smith, Ervin and Davy (2003), Nonis and Swift (2001), Swift and Nonis (1998), and Ameen, Guffy and McMillan (1996). In addition, there are questions on the importance of religion in a student's life, the frequency of participation in religious activities and whether a student has completed the Institution's required religion courses, where applicable.

#### Key Variables the Survey Instrument Addresses

- The influence of religion in a student's personal life
- The influence of religion and ethics courses
- The influence of being a business major
- Definitions of cheating
- Justification for cheating (Neutralizing attitudes)
- The percentage of students who engage in and expect to engage in dishonest behavior

### *Academic Integrity Policies*

The authors looked at the academic integrity statements of the three institutions in this study. For purposes of this study, we will refer to the institutions as University A, B, and C. All three are private institutions with a population of less than 2,500 students; each has a graduation requirement of at least one religion class. According to McCabe & Pavela (2000), the traditional

academic honor code method is typically found at private schools with small to moderate enrollments. Modified honor codes are gaining popularity in larger universities, but are still used at small and medium-sized institutions.

University A is a non-religious affiliated university located in the south which has a traditional academic integrity policy that is strongly enforced with actionable ramifications. Although there is no religious affiliation, University A endorses a formal Commitment to Values. University B, a Baptist-affiliated university in the south, employs a modified academic integrity policy, but is inconsistently enforced. University C, a Catholic-affiliated college in the northeast, has no formal academic integrity statement or policy at this time.

### University A

University A refers to their formal statement and process as an *Honor System*. They dedicate several pages of their university website to the system. The initial page gives a brief explanation of the history of the initiative beginning with the statement, “Academic integrity matters.” Throughout the first page there are links to a listing of the honor board committee, the honor pledge, FAQs for students and faculty, procedures to report a violation and a link to a page where a student may find information if she/he has been accused of a violation.

All students are expected to subscribe to the Honor Pledge upon entrance to the university. They are asked to reaffirm the Pledge on a regular basis, by writing the word “Pledged” in front of their signature when they submit exams and papers. The Pledge reads,

*As a member of [University A], I agree to uphold the highest standards of integrity in my academic work. I promise that I will neither give nor receive unauthorized aid of any kind on my tests, papers, and assignments. When using the ideas, thoughts, or words of another in my work, I will always provide clear acknowledgement of the individuals and sources on which I am relying. I will avoid using fraudulent, falsified, or fabricated evidence and/or material. I will refrain from resubmitting without authorization work for one class that was obtained from work previously submitted for academic credit in another class. I will not destroy, steal, or make inaccessible any academic resource material. By my actions and my example, I will strive to promote the ideals of honesty, responsibility, trust, fairness, and respect that are at the heart of [University A]’s Honor System.*

Although students are encouraged to report a violation by a fellow student, they are not required to do so. Faculty are expected to use the Honor System when dealing with apparent breaches of academic integrity in their classes. While some prefer to handle minor matters internally, the university prefers that they report all violations to the Honor System Council. The Council serves as a central data repository to track repeat offenders enabling the Council to make a more informed judgment when passing down sanctions against the violating student.

If a student is found in violation of the Honor Pledge, an investigator is appointed to gather relevant facts; he/she starts by contacting both the student and course professor. A hearing is called, which is attended by the members of the Council, the investigator, the student found in violation and the Professor. A faculty member, who serves as the Council advisor, attends the

hearing as an observer. It should be noted that all of the Council members are students. After the hearing, the investigator recuses him/herself and the Council deliberates. If the council finds that the student was in violation of the Honor System, it recommends academic and/or non-academic sanctions. The faculty still retains control over grading; however, many comply with the Council's recommendations.

For example, if a professor chooses to give the student a failing grade for the violation of the integrity policy, it may never be reported to the Honor Council. Although they are not required to use the system, faculty members are strongly encouraged to use it in order to create a documented record of individual student violations that are available throughout the student's tenure at the University.

### University B

A search on "honor code" on University B's website returned a Student Government page with a brief explanation of the Honor Council, the Honor Code and a Code of Community Standards. The Honor Council's role is to uphold the Honor Code and the Code of Community Standards, the foundation of which is based on overall ethical behavior. The Honor Council is comprised of three students and two faculty or staff members. Honor Council hearings are meant to educate students in matters of honorable behavior and to render a fair outcome. Students are asked to sign the following pledge on all tests and work,

*I pledge on my honor I have neither given nor received unauthorized aid on this work, and I am unaware of any violation of the Honor Code by others.*

An 8x10 copy of the Honor Code is hung in each classroom. The rest of the Honor Code resides within the Student Handbook. From the Student Government Web page, the handbook can be accessed by a link in the Student Affairs menu. The Handbook houses a more extensive explanation of University B's Honor Code. Access to the Honor Code wasn't as evident on University B's website as it was on University A's website.

The University dedicates seven pages of its catalog, about mid-way through, to its academic honor code and university-wide community standards. These pages include clear guidelines regarding the following: a full explanation of the honor code and statement of integrity, student's rights and responsibilities, procedures for violation of the honor code, sanctions and authority. In addition, the student handbook gives five examples of Honor Code violations. They include but are not limited to: cheating, plagiarism, providing false information, misuse of electronic information, and failure to report a probable academic violation. Each is clearly defined with examples given in order to avoid ambiguity.

In addition to their Honor Code, University B also has a Statement of Academic Integrity:

*... students do not lie or cheat, nor do they tolerate in their company the presence of one who does. [University B] is an academic community where men and women pursue a life of scholarly inquiry and intellectual growth. The foundation of this community is a spirit of personal honesty and mutual trust. In order to maintain trust between members of the university community, faculty and students must adhere to certain basic ethical principles in regard to academic dishonesty.*

*Academic dishonesty in any form is a fundamental offense against the integrity of the entire academic community and is always a threat to the standards of the university and to the standing of every student. In taking tests and examinations, doing homework, laboratory work and writing papers, students are expected to perform with honor. Honesty within our academic community is not simply a matter of rules and procedures; it is an opportunity to put personal responsibility and integrity into action. When students accept the implicit bonds of trust within an academic community, they liberate themselves to pursue their academic goals in an atmosphere of mutual confidence and respect.*

In their Procedures for Academic Violations of the Honor Code, University B spells out several scenarios of code violations and their associated actions. In brief, students would typically report a violation to either a professor or to the Director of Special Academic Programs. Professors are encouraged to first confront the student with allegations and evidence before taking it to the Director's office. If the student admits to a violation, it is the professor's prerogative to impose a penalty. If they do not, the Director investigates the case and, if appropriate, asks the Associate Dean of Student Affairs to initiate formal charges for an Honor Council proceeding. After a thorough investigation, the Director may approve the penalty proposed by the professor, increase or decrease it; whatever it turns out to be, the Director's imposed penalty is final.

Sometimes, given the severity of the violation, the Director of Special Academic Programs must forward the case to the Office of Academic Affairs. In cases of students accused of Honor Code violations involving the alteration of university records, an attempt to secure an unauthorized copy of a test or examination or lying or otherwise providing false, misleading information to a university official, or misusing computing facilities or equipment, the Vice President for Academic Affairs imposes the penalty. Sanctions may include a failing grade for the course, suspension, or expulsion. The student has 48 hours to appeal if found in violation of the charge.

### University C

University C is the only one of the three that does not have a formal academic integrity or honor code. A search of the University's website using the term *honor code* rendered no relevant results. Another search on the term *integrity code* rendered some relevant results including a link to the University's library web page. The page consisted of links mainly to plagiarism detection tools; however, a menu at the top of the page provided links to other academic sites that defined academic integrity and plagiarism. In addition, the library provided citation tools and references and links to articles on plagiarism.

While there is no formal honor or integrity code at the University, there is a small area of the catalog that speaks to it. This text is embedded in the catalog, which is either in hard copy or .pdf format available on the University's website. Similar to University B's Honor Code, a student would have to know where to find it or simply happen upon it.

*Academic misconduct includes all forms of cheating, lying and plagiarism; it includes the providing or receiving of assistance in a manner not authorized by the professor in material to be submitted for academic evaluation, or presenting*

*as one's own the words or ideas of another person or persons for academic evaluation without proper acknowledgement.*

*The sanctions imposed for academic misconduct are determined and applied by the instructor and/or other members of the academic community. These sanctions include those that fall within the instructor's responsibility; the instructor may take no action, may give a failing grade for the assignment in question, determine that no credit will be received for the course, or give a failing grade for the course affected. Any action taken should be reported to the respective Dean. Furthermore, in cases of severe academic misconduct, the instructor, after discussion with the department chair and the Dean, may recommend to the Provost and Dean of the College that the student be suspended or dismissed from the college.*

Few students ever see this documentation. Unlike University B, University C does not post their academic integrity statement in the classroom or anywhere on campus. If it is not explicitly written on the instructor's syllabus, few know it exists. While no formal codes of honor or integrity are in place, this provides a documented, albeit informal, process. It is up to the professor to impose sanctions as he/she sees fit. It should be noted that Universities A and B refer to their codes with positive words such as *integrity* and *honor*; however, University C refers to the actions as academic *misconduct*.

### **Data Analysis**

Students were asked to classify whether certain behaviors were cheating and, if so, to what degree. Table 1 indicates the mean severity rating by students from all three universities, by graduate students at University A, and the overall mean from those four groups. Students were asked to classify whether certain behaviors were cheating and, if so, to what degree. The ratings scale varies from 0 (Not Cheating) to 5 (Most Severe).

Faculty at Universities B and C were asked to classify whether certain behaviors were cheating and, if so, to what degree. Table 2 indicates the mean severity rating by faculty from both institutions, and the overall mean from those two groups. The mean values show that faculty indicate that all ten cheating behaviors are fairly severe forms of cheating. Although there is a significant difference in cheating severity between the two universities for the following four questions:

- Copying homework from another student
- Sharing your homework with another student
- Using words from a journal, book, web site, etc., without naming your source
- Borrowing another person's speech, report or project and turning it in as your own

Table 3 compares the mean faculty ratings with the mean student ratings. There is a positive significant difference for nine out of the ten questions, indicating that faculty find these descriptions of cheating more severe than the students. For the one question that has a negative relationship, both students and faculty rate this cheating behavior as a severe form of cheating.

Does this disparity indicate a need for more student education on the gravity of plagiarism? Does it indicate an inadequacy in the ethical values of today's undergraduate students?

The Josephson Institute of Ethics' 2006 report on the ethics of American youth indicated that "young people are almost unanimous in saying that ethics and character are important" in every aspect of their lives, from person to professional, but "they express very cynical attitudes about whether a person can be ethical and succeed." This cynicism "reflects itself in a rationalization process that nullifies ethical judgment and condones conduct that is contrary to stated moral convictions." The study found that while young people often assert the importance of ethical values and behavior in their lives, they frequently lie and cheat "without much guilt or hesitation" (Josephson Institute, 2006).

Table 4 compares the rank order by survey question of the mean faculty ratings with the mean student ratings. The mean severity rating was put into rank order from 1-10 for each group and the difference was calculated. The largest disparity was found in the following questions:

- Borrowing another person's speech, report or project and turning it in as your own
- Obtaining a copy of an exam before taking it in class
- Lying to a professor about illness, etc. when an exam or assignment is due
- Sharing your homework with another student

Students were asked if they participated in various cheating behaviors has described in Table 5. In the survey, students were asked to rank their participation in these behaviors from 1 (Never) to 5 (Very Often). In this table, frequency indicates the percentage of students that responded with a 4 or 5 (Often or Very Often). The most frequent cheating behaviors were:

- Asking someone who has already taken an exam for the questions
- Copying homework from another student
- Sharing your homework with another student
- Asking for help from another student or professor when instructed to work alone

The mean values for All Students confirm that these four cheating behaviors were the most severe. When the results are segmented by university, the results are similar, but it's interesting that there is a significant difference in responses between the three universities for all but two questions. Notice that all but three of the questions show a significant difference between universities. In general University A has the lower cheating values and University B with the higher cheating values. University C is generally in the middle. Universities A and B have honor codes and Universities B and C have religious affiliations.

Students were asked to classify whether certain behaviors were cheating and, if so, to what degree. Table 6 presents the mean severity rating by students from all three universities, and the overall mean from those three groups. The ratings scale varies from 0 (Not Cheating) to 5 (Most Severe). The results in Table 6 relates with those in Table 5. Frequency (those that respond with a 4 or 5) is very high for all questions except those noted above in cheating behaviors.

- Asking someone who has already taken an exam for the questions

- Copying homework from another student
- Sharing your homework with another student
- Asking for help from another student or professor when instructed to work alone

Therefore, students that admit to certain types of cheating behaviors tend to categorize those behaviors as not cheating. The overall mean and individual university means generally agree with the frequencies. There was a significant difference between the responses at the three universities for all questions except three.

Students were asked about specific reasons that might justify cheating. Table 7 presents the results of the responses for all students and for each university separately. The scale varies from 1 (Strongly disagree that cheating is justified) to 5 (Strongly agree that cheating is justified). Frequency tabulates those that responded 4 or 5 to the question. Frequencies are much lower for justifications as compared to the actual behaviors. The three two most predominant justifications are:

- A student needs a good grade to maintain a scholarship.
- A student needs a good grade to maintain athletic eligibility..
- The student needs the course to graduate.

While the relative values between each of the three universities are similar, the F-statistic shows that there is a significant difference in the response between the three universities.

**Table 8** presents the variables use in the multivariate regressions. The variables are as follows: ImportRel measures the students response to the question about the importance of religion in their personal life from “Not at all” (1) to “Very Important” (5). Age and GPA are self-reported by the student respondents. Gender is a dummy variable with the values of 0 (Male) and 1 (Female). Partic\_cheating\_SC uses the questions in Table 5, Self-Reported Cheating Behaviors, totals the rating values and divides by the number of questions plus the number of respondents. Cheat\_studentsDef utilize the same questions and method as Partic\_cheating\_SC, but deletes the four questions that the students indicate are not as severe forms of cheating (Table 6). Intent\_SC uses the same questions and methods again, but asks the students “would you participate in the following activities.” Definition\_SC uses the responses tabulated in Table 6 and performs the same scaling method as the previously described variables. Justification\_SC uses the five justification of cheating questions presented in Table 7 and scaled in a similar manner. Religiosity is a variable computed from the question “How many times during a typical week do you attend each of the following? (off-campus chapel, off-campus church, bible study, other religious activities).” The responses to this question are total and scaled. Notice that there is a significant difference between all variables among the universities. University A tends to have lower values for the cheating variables and University B tends to have higher values, with University C being in the middle. Universities A and B have honor codes and Universities B and C have religious affiliations.

**Table 9** presents the results of the multivariate regressions Regression A was estimated to investigate the relationship between Participation in Cheating (dependent variable) with cheating related variables (intent, definition, justification) and religiosity. There is a significant positive

relationship between Intent to Cheat and Participation in Cheating, whereas there is a significant negative relationship between the student's Definition of Cheating and his/her Participation in Cheating. There is a significant negative relationship between the student's Religiosity and his/her Participation in Cheating. Those students that cheat less participate more in religious activities.

Regression B was estimated to review the relationship between Age, Gender, and GPA with Participation in Cheating. The regression results show a significant negative relationship between each of these variables and Participation in Cheating. Therefore, older students tend to cheat less, female students tend to cheat less, and higher GPA students tend to cheat less.

Regression C was estimated to review the importance of undergraduate/graduate level, undergraduate class level, and major. There is a significant negative relationship between graduate students and participation in cheating (i.e., graduate students cheat less). There is a significant positive relationship between each of the majors presented, indicating these majors tend to cheat more.

## **Conclusions**

We use the characteristics of three universities as a type of natural experiment, comparing the university's students to what is known from the previous literature, as well as comparing between the three universities. As described in the following sections, the universities differ based on size of the universities, class size, use of Honor Codes, requirements to take a religion course, and the religious affiliation of the university.

Students enrolled in business courses were surveyed. Students were guaranteed confidentiality and anonymity. The surveys generated 613 useable responses. Of the total, 69% of the respondents were female, the student's average age was 21.4 years (including MBA students) and the average GPA was 3.20. Universities A and B have honor codes and Universities B and C have religious affiliations.

We find that students self-report high levels of cheating behavior for four of the ten cheating categories:

- Asking someone who has already taken an exam for the questions
- Copying homework from another student
- Sharing your homework with another student
- Asking for help from another student or professor when instructed to work alone

When we survey students on behaviors they consider to be cheating, we find they rank 6 categories as cheating and four at lower levels of cheating. The four that are ranked lower are the same as those listed above as high levels of cheating behaviors. Faculty rate all ten cheating behaviors as severe forms of cheating and faculty rate nine out of ten questions as more severe forms of cheating than the students rating.

When asked to rank justifications for cheating, the three most predominant justifications are:

- A student needs a good grade to maintain a scholarship.
- A student needs a good grade to maintain athletic eligibility..
- The student needs the course to graduate.

The regressions provide interesting results. Students that cheat less participate more in religious activities. Older students tend to cheat less, female students tend to cheat less, and higher GPA students tend to cheat less. Graduate students cheat less. The business majors of finance, management, business, and MIS tend to cheat more. This is on going research. Next steps include logit analysis and network analysis.

## Bibliography

- Aditya. (2007, January 31). *Methods of Cheating in Examinations*. Retrieved August 15, 2007, from Quazen: <http://www.quazen.com/Kids-and-Teens/School-Time/Methods-of-Cheating-in-Examinations.14816>
- Ameen, E. C., Guffey, D. M., & McMillan, J. J. (1996). Accounting Students' Perceptions of Questionable Academic Practices and Factors Affecting their Propensity to Cheat. *Accounting Education* , 5 (3), 191-205.
- Anthony, J. (n.d.). *How to Cheat in Exams*. Retrieved August 15, 2007, from Web Wombat: [http://www.webwombat.com.au/careers\\_ed/education/how-to-cheat-exams.htm](http://www.webwombat.com.au/careers_ed/education/how-to-cheat-exams.htm)
- Baldwin, D., & Daugherty, S. (1996). Cheating in Medical School: A Survey of Second-Year Students. *Academic Medicine* , 71, 267-273.
- Bates, P., & Fain, M. (2006, November). *Cheating 101: Internet Paper Mills*. Retrieved August 7, 2007, from Coastal Carolina University: <http://www.coastal.edu/library/presentations/mills2.html>
- Block, M. (2006, May 26). *Teens Turn 'Repeller' into Adult-Proof Ringtone*. Retrieved August 15, 2007, from National Public Radio: <http://www.npr.org/templates/story/story.php?storyId=5434687>
- Bramucci, R. S. (2003). *How to Cheat: Techniques used by Cheaters*. Retrieved August 15, 2007, from Teachopolis: [http://teachopolis.org/justice/cheating/cheating\\_how\\_to.htm](http://teachopolis.org/justice/cheating/cheating_how_to.htm)
- Burrus, R. T., McGoldrick, K., & Schuhmann, P. W. (2007). Self-Reports of Student Cheating: Does a Definition of Cheating Matter? *Journal of Economic Education* , 38 (1), 3-16.
- Carnevale, D. (2007, July 10). *Blackboard Takes on Plagiarism*. Retrieved August 15, 2007, from The Chronicle of Higher Education: <http://chronicle.com/wiredcampus/article/2213/blackboard-takes-on-plagiarism>
- Cheat on an Exam*. (n.d.). Retrieved August 15, 2007, from Wanna Wiki: [http://www.wannawiki.com/index.php?title=Cheat\\_on\\_an\\_Exam](http://www.wannawiki.com/index.php?title=Cheat_on_an_Exam)
- Cheating on Tests*. (2007, March 9). Retrieved August 15, 2007, from Mike Like Whoa: <http://www.mikelikewhoa.com/wordpress/2007/03/09/cheating-on-tests/>
- Clabaugh, G. K., & Rozycki, E. G. (2006, February 2). *Cheating Methods and Countermeasures*. Retrieved August 15, 2007, from NewFoundations: <http://www.newfoundations.com/PREVPLAGWEB/Cheating%20Methods%20and%20Coun.htm>
- Fass, R. (1990). *Cheating and Plagiarism in W.W.* (May, Ed.) New York: Macmillan.
- Hirsch, M. (2007, March 20). This Ain't No Hearing Aid. *Taipei Times* , p. 2.
- Improved Ways of Cheating*. (n.d.). Retrieved September 22, 2007, from <http://www.textfiles.com/anarchy/SCAMS/cheating.txt>
- Josephson Institute of Ethics. (2006). *2006 Josephson Institute Report Card on Ethics of American Youth: Part One - Integrity*. Los Angeles: Josephson Institute of Ethics.

- Kempfert, T. (2002, January 16). *Beating eCheating: Strategies for Discouraging Internet Plagiarism*. Retrieved August 15, 2007, from Teaching With Technology Today: <http://www.uwsa.edu/ttt/articles/plag.htm>
- Konheim-Kalkstein, Y. L. (2006). Use of a Classroom Honor Code in Higher Education. *The Journal of Credibility Assessment and Witness Psychology* , 7 (3), 169-179.
- Mangan, K. (2006, September 19). *Survey Finds Widespread Cheating in M.B.A. Programs*. Retrieved August 15, 2007, from The Chronicle of Higher Education: <http://chronicle.com/daily/2006/09/2006091902n.htm>
- McCabe, D. L., & Pavela, G. (2005, March 11). *New Honor Codes for a New Generations*. Retrieved August 15, 2007, from Inside Higher Ed: <http://insidehighered.com/views/2005/03/14/pavela1>
- McCabe, D., & Pavela, G. (2000). Some Good News About Academic Integrity. *Change* , 33 (5), 32-38.
- McCabe, D., & Trevino, L. K. (2002). Honesty and Honor Codes. *Academe* , 88 (1), 37-41.
- McCabe, D., Trevino, L. K., & Butterfield, K. D. (2002). Honor Codes and Other Contextual Influences on Academic Integrity: A Replication and Extension to Modified Honor Code Settings. *Research in Higher Education* , 43 (3), 357-378.
- Menager-Beeley, R., & Paulos, L. (2006). *Understanding Plagiarism: A Student Guide to Writing Your Own Work*. Boston: Houghton Mifflin.
- New research on academic integrity: The success of "modified" honor codes*. (2000, May 20). (Synfax Weekly Report) Retrieved August 15, 2007, from College Administraton Publications: <http://www.collegepubs.com/ref/SFX000515.shtml>
- Nonis, S., & Smith, C. O. (2001, November/December). An Examination of the Relationship between Academic Dishonesty and Workplace Dishonesty: A Multicampus Investigation. *Journal of Education for Business* , 69-77.
- Nowell, C., & Laufer, D. (1997, Winter). Undergraduate Student Cheating in the Fields of Business and Economics. *Research in Economic Education* , 3-12.
- Rettinger, D., & Jordan, A. (2005). The Relations Among Religion, Motivation and College Cheating: A Natural Experiment. *Ethics & Behavior* , 15 (2), 107-129.
- Roig, M., & Marks, A. (2006). Attitudes Toward Cheating Before and After Implementation of a Modified Honor Code: A Case Study. *Ethics & Behavior* , 16 (2), 163-171.
- Sierles, F., Hendricks, I., & Circle, S. (1980). Cheating in Medical School. *Journal of Medical Education* , 55, 124-125.
- Smith, K. J., Ervin, D., & Davy, J. A. (2003, Summer). An Examination of the Antecedents of Cheating Among Finance Students. *Journal of Financial Education* , 13-33.
- Swift, C. O., & Nonis, S. (1998). When No One is Watching: Cheating Behavior on Projects and Assignments. *Marketing Education Review* , 8 (1), 27-36.
- Tallahassee Community College. (n.d.). *Cheating Prevention in College Classrooms*. Retrieved August 15, 2007, from Tallahassee Community College Faculty Library Resources:

[http://www.tcc.cc.fl.us/about\\_tcc/academic\\_affairs/division\\_of\\_library\\_services/faculty\\_library\\_resources/cheating\\_prevention\\_in\\_college\\_classrooms](http://www.tcc.cc.fl.us/about_tcc/academic_affairs/division_of_library_services/faculty_library_resources/cheating_prevention_in_college_classrooms)

*The Blur & Insanity Cheating Tricks*. (n.d.). Retrieved August 15, 2007, from <http://blurofinsanity.com/cheatingpage.html>

Tomsho, R. (2006, August 15). Student Plagiarism Stirs Controversy at Ohio University. *The Wall Street Journal*, p. A1.

Vitello, P. (2006, June 12). *A Ring Tone Meant to Fall on Deaf Ears*. Retrieved August 15, 2007, from The New York Times: <http://www.nytimes.com/2006/06/12/technology/12ring.html>

## Appendix of Tables

**Table 1: Students opinion on severity of cheating**

	All Students	University A	University B	University C	Graduate
Asking someone who has already taken an exam for the questions	1.77	2.07	1.35	1.57	2.18
Obtaining a copy of an exam before taking it in class	3.95	4.03	3.33	4.18	3.98
Looking at another student's paper during an exam	3.97	4.27	4.05	3.86	4.26
Using unauthorized 'crib' notes during an exam	4.04	4.18	3.98	4.01	4.09
Lying to a professor about illness, etc., when an exam or assignment is due	2.50	2.76	2.33	2.49	2.89
Copying homework from another student	2.24	2.58	1.99	2.27	2.65
Sharing your homework with another student	1.80	2.03	1.60	1.85	2.00
Using words from a journal, book, web site, without naming your source	3.52	3.55	3.09	3.73	3.40
Borrowing another person's speech, report, etc.; turning it in as your own	4.49	4.47	4.47	4.47	4.39
Asking for help from another student or prof when instructed to work alone	1.98	2.53	1.73	1.69	2.40

**Table 2: Faculty opinion on severity of cheating**

	All Faculty	Univ. B	Univ. C	Difference	p value	
Asking someone who has already taken an exam for the questions	3.59	3.27	3.68	0.41	0.37	
Obtaining a copy of an exam before taking it in class	4.78	4.64	4.75	0.12	0.23	
Looking at another student's paper during an exam	4.47	4.36	4.41	0.05	0.58	
Using unauthorized 'crib' notes during an exam	4.66	4.73	4.53	-0.20	0.60	
Lying to a professor about illness, etc., when an exam or assignment is due	3.59	3.73	3.53	-0.19	0.63	
Copying homework from another student	3.81	3.18	4.04	0.86	0.03	*
Sharing your homework with another student	4.03	3.27	4.43	1.15	0.00	*
Using words from a journal, book, web site, etc., without naming your source	4.63	4.00	4.85	0.85	0.00	*
Borrowing another person's speech, report or project and turning it in as your own	4.22	4.82	3.89	-0.93	0.02	*
Asking for help from another student or professor when instructed to work alone	3.81	3.73	3.80	0.07	0.74	
* significant at .05 level						



**Table 3: Faculty vs. Student opinion on severity of cheating**

	<b>Students</b>	<b>Faculty</b>	<b>Difference</b>	<b>p value</b>	
Asking someone who has already taken an exam for the questions	1.77	3.59	1.82	0.00	*
Obtaining a copy of an exam before taking it in class	3.95	4.78	0.83	0.00	*
Looking at another student's paper during an exam	3.97	4.47	0.50	0.02	*
Using unauthorized 'crib' notes during an exam	4.04	4.66	0.61	0.00	*
Lying to a professor about illness, etc., when an exam or assignment is due	2.50	3.59	1.10	0.00	*
Copying homework from another student	2.24	3.81	1.58	0.00	*
Sharing your homework with another student	1.80	4.03	2.23	0.00	*
Using words from a journal, book, web site, etc., without naming your source	3.52	4.63	1.10	0.00	*
Borrowing another person's speech, report or project and turning it in as your own	4.49	4.22	-0.27	0.12	
Asking for help from another student or professor when instructed to work alone	1.98	3.81	1.83	0.00	*
* significant at .05 level					

**Table 4: Rank order by question: Faculty vs. Student opinion on severity of cheating**

	<b>Students</b>	<b>Faculty</b>	<b>Difference</b>	
Asking someone who has already taken an exam for the questions	10	9	-1	*
Obtaining a copy of an exam before taking it in class	4	1	-3	
Looking at another student's paper during an exam	3	4	1	
Using unauthorized 'crib' notes during an exam	2	2	0	
Lying to a professor about illness, etc., when an exam or assignment is due	6	9	3	*
Copying homework from another student	7	7	0	*
Sharing your homework with another student	9	6	-3	
Using words from a journal, book, web site, etc., without naming your source	5	3	-2	
Borrowing another person's speech, report or project and turning it in as your own	1	5	4	
Asking for help from another student or professor when instructed to work alone	8	7	-1	*
* tie)				

Table 5  
 Student Frequency of Cheating - Self-Reported Cheating Behaviors

Question	Frequency	Mean All Students	Std Dev	Mean University A	Mean University B	Mean University C	F	Sig.
Asking someone who has already taken an exam for the questions	87%	2.814	1.127	2.454	2.891	2.907	7.7282	0.0005
Obtaining a copy of an exam before taking it in class	21%	1.289	0.642	1.235	1.524	1.162	20.2523	0.0000
Looking at another student's paper during an exam	28%	1.333	0.589	1.244	1.375	1.342	1.8977	0.1508
Using unauthorized 'crib' notes during an exam	15%	1.200	0.524	1.101	1.258	1.202	3.3145	0.0370
Lying to a professor about illness, etc., when an exam or assignment is due	28%	1.366	0.645	1.319	1.411	1.355	0.8285	0.4372
Copying homework from another student	65%	1.958	0.858	1.756	2.083	1.957	5.4092	0.0047
Sharing your homework with another student	82%	2.361	0.887	2.420	2.511	2.243	5.7432	0.0034
Using words from a journal, book, web site, without naming your source	42%	1.569	0.769	1.597	1.677	1.490	3.5905	0.0282
Borrowing another person's speech, report, etc.; turning it in as your own	6%	1.083	0.493	1.168	1.089	1.046	2.6315	0.0728
Asking for help from another student or prof when instructed to work alone	69%	2.018	0.870	1.933	2.010	2.056	0.8712	0.4190

Table 6  
Student Opinion on Severity of Cheating

	Frequency	Mean All Students	Std Dev	Mean University A	Mean University B	Mean University C	F	Sig.
Asking someone who has already taken an exam for the questions	54%	1.775	1.405	2.0593	1.4167	1.9000	10.0667	0.0001
Obtaining a copy of an exam before taking it in class	93%	3.959	1.441	4.0940	3.3802	4.3000	25.8557	0.0000
Looking at another student's paper during an exam	96%	3.971	1.181	4.1525	3.9895	3.8826	2.2133	0.1103
Using unauthorized 'crib' notes during an exam	97%	4.047	1.102	4.2288	3.9740	4.0214	2.1112	0.1220
Lying to a professor about illness, etc., when an exam or assignment is due	78%	2.485	1.484	2.6154	2.1510	2.6584	7.3862	0.0007
Copying homework from another student	64%	2.226	1.345	2.3898	1.9688	2.3333	5.3575	0.0049
Sharing your homework with another student	53%	1.803	1.289	1.7034	1.5417	2.0252	8.6494	0.0002
Using words from a journal, book, web site, without naming your source	91%	3.519	1.413	3.3983	3.2083	3.7829	10.2906	0.0000
Borrowing another person's speech, report, etc.; turning it in as your own	98%	4.492	0.936	4.5000	4.4346	4.5286	0.5768	0.5620
Asking for help from another student or prof when instructed to work alone	59%	1.969	1.398	2.2288	1.7316	2.0214	5.0422	0.0067

Table 7  
Student Justification of Cheating

	Frequency	Mean All Students	Std Dev	Mean University A	Mean University B	Mean University C	F	Sig.
A student needs a good grade to maintain a scholarship	16%	2.274	1.142	2.000	2.411	2.295	4.8649	0.0080
A student needs a good grade to keep athletic eligibility	15%	2.068	1.147	1.746	2.422	1.961	15.7792	0.0000
A student needs a good grade to be initiated into a soririty or fraternity	6%	1.736	0.944	1.521	1.958	1.673	9.2296	0.0001
The student's cheating is not hurting anyone	9%	2.019	1.013	1.735	2.156	2.043	6.5558	0.0015
The course is not in the student's major	9%	2.058	1.016	1.788	2.229	2.054	7.0292	0.0010
The student needs the course to graduate	22%	2.438	1.233	2.127	2.583	2.469	5.2513	0.0055

Table 8  
Regression Variables – General Statistics

Regression Variable	Mean	Std. Deviation	Mean University A	Mean University B	Mean University C	F	Sig.
ImportRel	3.585	1.090	3.504	3.958	3.368	18.112	0.000
Age	21.392	3.745	25.798	20.188	20.398	148.696	0.000
GPA	3.198	0.475	3.387	3.144	3.159	11.082	0.000
Gender	0.687	0.674	0.360	0.432	1.000	70.156	0.000
Partic_cheating_SC	1.699	0.436	1.623	1.783	1.676	5.900	0.003
Cheat_studentsDef	0.817	0.387	0.798	0.854	0.801	1.274	0.280
Intent_SC	1.660	0.509	1.499	1.772	1.651	10.914	0.000
Definition_SC	3.025	0.769	3.137	2.778	3.147	15.336	0.000
Justification_SC	2.096	0.882	1.819	2.293	2.078	11.065	0.000
Religiosity	4.239	2.188	3.987	5.266	3.712	32.982	0.000

Table 9  
Multivariate Regressions

<b>Regression A</b>	<b>Coefficient</b>	<b>Std. Error</b>	<b>T-Statistic</b>	<b>Significance</b>
(Constant)	10.7010	0.6490	16.4886	0.0000
Intent	0.5387	0.0215	25.0878	0.0000
Definition	-0.0997	0.0130	-7.6554	0.0000
Justification	0.0265	0.0224	1.1870	0.2357
Religiosity	-0.1300	0.0564	-2.3040	0.0216
REL100	0.3822	0.1633	2.3404	0.0196
REL400	0.2045	0.1286	1.5908	0.1122
<b>Dependent Variable: Partic_cheating</b>				
<b>Regression B</b>	<b>Coefficient</b>	<b>Std. Error</b>	<b>T-Statistic</b>	<b>Significance</b>
(Constant)	22.8621	1.5569	14.6846	0.0000
Age	-0.1345	0.0509	-2.6411	0.0085
Gender	-0.6661	0.2764	-2.4102	0.0163
GPA	-0.7612	0.3925	-1.9391	0.0530
<b>Dependent Variable: Partic_cheating</b>				
<b>Regression C</b>	<b>Coefficient</b>	<b>Std. Error</b>	<b>T-Statistic</b>	<b>Significance</b>
(Constant)	15.1329	2.7678	5.4675	0.0000
UnderGrad_Grad	-4.8511	2.5084	-1.9340	0.0537
Age	-0.1332	0.0436	-3.0586	0.0023
Class1	-7.4150	2.4954	-2.9715	0.0031
Class2	-6.6011	2.4862	-2.6550	0.0082
Class3	-5.8993	2.4842	-2.3748	0.0179
Class4	-5.3971	2.4858	-2.1712	0.0304
M_Fin	0.7572	0.3115	2.4307	0.0154
M_Mgt	0.8527	0.3850	2.2151	0.0272
M_Bus	0.6073	0.2819	2.1541	0.0317
M_SPM	1.4813	0.4663	3.1765	0.0016
Intent	0.6412	0.0232	27.5919	0.0000
Definition	-0.0298	0.0165	-1.8010	0.0723
Justification	0.0542	0.0221	2.4555	0.0144