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Academic Dishonesty at Boise State University

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ABSTRACT

The main purpose of this study was to establish how many students at Boise State University cheat, their motivations for cheating and their familiarity with the Academic Dishonesty Policy. The study also investigated the relationship between various variables and academic dishonesty. The results of the study could be of assistance to professors in better understanding those students who are most likely to cheat, their motives, and preventative actions that could be taken to eliminate or at least reduce this problem in the academic setting. The study was a joint effort between the office of Institutional Assessment and students enrolled in Psychological Measurement in Spring of 2003. Of the 1500 undergraduates randomly selected to receive the survey, 43% completed it.

When asked if they had cheated in college, only 14% indicated that they had cheated compared to 46% in high school. However, the percentage who indicated they had cheated increased to 18% when students were asked about the number of times they had cheated following a series of questions on actual and hypothetical cheating behaviors. It jumped to 65% when students were counted as cheaters if they responded "yes" to one or more questions that asked if they had engaged in a variety of behaviors considered to be dishonest by most people.

Whether Boise State students cheated less than or about the same amount as students at other institutions depended on the study and how the prevalence of cheating was measured. Boise State students engaged in decidedly less cheating than students elsewhere if responses to a single item that asked if they cheated in college were used. In this case, only 14% of Boise State students said they cheated in college compared to reports of 42%-76% in other studies. However, when students were counted as "cheaters" if they indicated they had engaged in one or more behaviors thought to be dishonest, the Boise State figure of 65% was close to findings from other studies.

In this study, 60% of respondents indicated that they had witnessed cheating in college. Estimates on the percentage of students who cheat varied widely, with the largest group of students estimating that 21-40% of students cheated. Not surprisingly, students who thought more students cheated were also more likely to cheat themselves. In addition, students who had witnessed other students cheating also cheated more themselves.

Students had an almost unanimous opinion about what cheating is. Ninety-six percent agreed that plagiarism was a form of cheating, 97% thought that copying off of a neighbor's paper should be considered cheating, and 90% felt that getting answers prior to a test was a type of cheating. However, almost half of the participants in this study felt cheating had not occurred if a friend took a test before them and then helped them study for the same test.

When asked what the consequences of cheating should be, the majority of students agreed that a person who cheats should get an "F" for the assignment (61%) or fail the course (57%). Consequences that were toward the lenient end of the spectrum (i.e., redoing the assignment) or the harsh end (expulsion from the university) were selected as consequences by slightly more than 20% of students. Students who cheated more thought that redoing the assignment was an appropriate consequence, while students who did not cheat thought that expulsion was an appropriate consequence.

Students strongly felt that personal morality was the most powerful factor in deterring participation in cheating. Students who reported that their personal morality would deter cheating also reported less actual cheating. However, students who indicated that the possibility of getting caught would deter their cheating reported more cheating incidents.

More than half of the students (55%) reported they were most prone to cheat when they felt desperate. Almost half of the participants (44%) responded that they would cheat if they lacked time to prepare. Other relatively significant motivators for cheating were confusion (27%), and improving one's GPA (22%). Students who indicated that a lack of preparation time was a motivator were predicted to cheat more extensively.

Male students reported cheating significantly more than female students. Being a major in the College of Business and Economics was also one of the variables selected to best predict extent of cheating behavior. Interestingly, being a major in the College of Social Sciences and Public Affairs was related to more negative attitudes toward cheating, but not to differences in extent of cheating behavior.

Most students (72%) reported being familiar with the Academic Dishonesty Policy. This variable was a significant predictor of the extent of cheating, with students who were familiar with the policy reporting less cheating.

The regression equation used to select the best set of variables to predict the extent of cheating provides some guidance in reducing the amount of cheating that occurs. Making sure students are familiar with the academic code of conduct is a good beginning. It is also important that students not witness others cheating and that they believe that little cheating is occurring. When cheating does occur, minor consequences such as redoing the assignment should be rejected in

favor of consequences that have a greater effect on the student's academic career. In addition, greater emphasis should be placed on the higher stage of personal morality rather than simply stressing the likelihood of being caught. Since students indicated that lack of preparation time would make cheating more likely, helping students to develop time management skills could be helpful. Finally, students may value their education more when they know they are paying for it and thus see cheating on their assignments as simply cheating on themselves.

ACADEMIC DISHONESTY AT BOISE STATE UNIVERSITY

Academic dishonesty has become an increasing concern among many colleges and universities across the United States. Evidence has been found by researchers spanning the fields of experimental psychology, educational psychology, university faculty and administration, and those interested in studying the motivations behind academic dishonesty, that support the claim that academic dishonesty has become increasingly prevalent in our colleges and universities (e.g., McCabe, Trevino, and Butterfield, 2001). This article will examine certain factors that may contribute to individuals' motivation to cheat, the types of cheating that may be occurring, certain demographics that may predict cheating behavior, and factors that may deter a student from cheating.

Prevalence

Academic dishonesty is widespread among college students. Studies have found that anywhere from 50% to 89% of students report cheating in some form at least once (Franklyn-Stokes & Newstead, 1995; Graham, Monday, O'Brien, & Steffen, 1994). McCabe, Trevino, and Butterfield (2001) cite a study done by Bill Bowers in 1964 where more than 5000 students were surveyed from a sample of 99 U.S. colleges and universities. It was found that three-fourths of the respondents reported being involved in one or more incidents of academic dishonesty. McCabe et al. (2001) then replicated the study thirty years later. Nine of the schools that had originally participated in Bowers' study were included. Results confirmed a modest increase in overall cheating. The largest increase was found among women in collaborative cheating, which is defined as banned collaboration among students on written assignments.

Forms of Academic Dishonesty

The forms academic dishonesty can take are many, some predictable and timeless and some more recently emerged with the development of modern technology. Despite technological advances, however, the most common forms of cheating often are the simplest. Graham et al. (1994) found the most common form of cheating was allowing someone to copy their homework, which 63% of participants admitted to participating in.

Dishonest behaviors in exam situations can include copying from other students' exams without their knowledge to extensive cooperative efforts among peers to provide answers for each other. Concealed test answers have been smuggled in on audiotape and played through headphones, written on body appendages, in notes portrayed as paper flowers pinned to a lapel or on "cheat sheets" tucked into a mouth in a baggie. Elaborate hand and feet signal systems have been worked out ahead of time. One set of students had assigned multiple-choice answers (A, B, C, D) to each desk corner and would gesture to the correct answer (Davis et al., 1992). Students open books in "closed-book" tests, intentionally distract proctors, and point out instructor "errors" after changing answers on returned tests (Blackburn, 1999).

Exam settings are places where academic dishonesty abounds; plagiarizing on term papers and assignments is another. With the increased availability of sources of information online, copying

ideas from someone else's written work has become very convenient. Students are able to cut and paste sections of other authors' publications and download them directly into their own papers. Entire manuscripts may be purchased on the Internet to be submitted as original work in academia. Incorrectly cited sources and listed sources that were not used at all, as well as fictitious sources have been discovered in student coursework (Stearns, 2001).

Group projects in courses are a source of dishonest behavior in the form of "not contributing one's fair share in a group project for which all the members will be given the same grade" (Lim & See, 2001). This also includes turning in work as an individual assignment that had previously been completed in a group format (Lim & See, 2001).

Other cases of dishonesty include falsifying data to support conclusions in papers, bartering favors for preferential treatment (Lim & See, 2001), and signing attendance sheets for absent peers (Koljatic & Silva, 2002). The age-old fictitious medical excuse for missed deadlines and exceptions to course requirements also is still in practice at universities (Koljatic & Silva, 2002).

Motivation and Deterrence

So, what is the nature of academic dishonesty? What motivates students to cheat, especially considering the grave consequences set up by universities across the country?

In a study conducted by Jordan (2001), cheaters were compared with non-cheaters in the areas of perceived social norms (e.g., how often do others cheat), knowledge of institutional policy on cheating, attitudes about cheating, and types of motivation. The types of motivation which were described were mastery (e.g., did they feel it was vital to master the material) and extrinsic (e.g., cheating to maintain their GPA). The results of the survey found that in classes where cheaters reported cheating, they were heavily motivated by the extrinsic rather than the mastery motivation. In classes where they reported not cheating, they were more heavily influenced by the mastery motivation. Overall, cheaters were more concerned with extrinsic motivation than were non-cheaters, while non-cheaters were more concerned with mastery motivation than were the cheaters. Participants who reported cheating also reported knowing less about the institutional policy regarding academic dishonesty. In terms of attitudes regarding cheating, cheaters perceived that other students were cheating more than did the non-cheaters. The cheaters also tended to provide more justifications for their actions.

So, why do cheaters cheat? It appears that they are provided with less knowledge of institutional policy, they think that everyone else is cheating, they think that cheating is justifiable in many cases, and they have more interest in getting a good grade than in retaining any knowledge from their courses. Also, students frequently referenced "external factors/pressures" (e.g., need for better grades) as reasons for cheating (Davis & Ludvigson, 1995).

In a study conducted by Blackburn (1999), cheaters were compared to non-cheaters in terms of their motivation. Blackburn designed her study to examine the relationship between intrinsic motivation and optimal challenge (the degree to which the student's abilities and the class material were matched). When studying the cheaters and non-cheaters, Blackburn found a

curvilinear relationship between the student's abilities and the likelihood that they would cheat. The research suggests that if students perceived the material as being too difficult to master, they were more likely to cheat. The curvilinear relationship also suggested that students who felt that the material did not challenge them enough were also likely to cheat. The last portion of the relationship indicated that if students feel that they are not being challenged enough, they will be less likely to adopt learning goals, and more likely to cheat. The results of this research suggest that if students feel either buried or unchallenged, they will be less likely to put forth any effort into their classes and will be more likely to cheat. This research stresses the importance of appropriately matching a student's skill level with the level of difficulty in their classes.

Situational factors definitely either promote or deter academic dishonesty. Covey, Saladin, & Killen (2001) found that students are much less likely to cheat when there is a risk of being observed. A common student belief is that the instructor and the institution should have a set of clear definitions and guidelines concerning academic dishonesty. Students in Davis et al.'s (1992) study reported that the best deterrents to academic dishonesty for instructors to use included using separate versions of the tests, discussing academic dishonesty, arranging seating so that empty desks are in between students during exams, and constant supervision while taking the test. This study also noted the importance of dealing with academic dishonesty in a way as to not send mixed messages to students by having policies deferred to individual faculty members (Davis et al., 1992). Instead, students believed that this should be the institution's responsibility.

Demographics

Many studies have been conducted in regard to gender and academic dishonesty. Findings have been mixed, yet most concur that men report cheating more than women (Calabrese & Cochran, 1990; Whitley, Bichlmeier, Nelson, & Jones, 1999; Zimmerman, 1999). The prevalence of women cheating, however, has been found to be on the rise (McCabe & Trevino, 1996). It appears that women cheat more to help others, while men cheat for their own personal gain (Calabrese & Cochran, 1990). It has also been found that men have a more positive attitude towards cheating (Whitley et al., 1999). However, even though men report having a more positive attitude towards cheating, Whitley (2001) found that both men and women cheat at the same rate. Contrary to most studies, Graham et al. (1994) found that women reported cheating more than men did.

Students who have been found most likely to cheat are those who have lower GPAs and who live in college housing (Graham et al., 1994). One study found that business students are more likely to cheat compared to those enrolled in other majors, whereas liberal arts students cheat the least (Zimmerman, 1999).

Calabrese & Cochran (1990) concluded that Caucasian students self-reported cheating more than both Asian and Hispanic students. Asian students were the least likely to report having cheated. However, it was found that if the academic dishonesty involved an activity which benefited another student, then the frequency of Asian students' cheating was the same. Lupton & Chapman (2002) conducted a study comparing tendencies, beliefs, and attitudes of American and Russian students towards academic dishonesty. It was found that Russian students reported

much higher rates of academic dishonesty, and they were more likely to feel as though they had not done anything wrong.

Graham et al. (1996) and Zimmerman (1999) have found that younger students are more likely to admit to cheating. A study conducted in the United Kingdom by Franklyn-Stokes and Newstead (1995) found that students thought of as mature (ages 21-24), perceived cheating as more serious and less frequent than students who were younger (ages 18-20). However, results showed that both age groups reported actually cheating at the same frequency.

It has been found that students coming from wealthy families are more likely to cheat on an exam. Furthermore, students reported cheating more if they graduated from an affluent private school rather than a public school (Calabrese & Cochran, 1990). Students whose parents pay for their education are also more likely to report cheating (Graham et al., 1994). Another study found that it was not relevant if the student stated that he or she came from a “broken home.” It was found, however, that a lack of religion and one’s arrest status (students that reported being taken into custody) were factors that increased academic dishonesty (Calabrese & Cochran). Contrary to those findings, Graham et al. (1994) found that one’s religiousness was not a factor.

Questions Addressed in the Study

This study seeks to provide an overview of students’ behaviors and attitudes towards cheating at Boise State University with comparisons to findings at other universities where available. Specifically, the descriptive questions addressed in the study include:

- How prevalent is cheating at Boise State? How does it compare to the results of other studies?
- What acts do students consider to be cheating? Do they understand the concept of plagiarism and see it as an act of cheating?
- Are students aware of Boise State’s Academic Dishonesty Policy and its consequences?
- What do students think should be the consequences of cheating?
- Who is most likely to cheat? Are there differences in attitudes toward cheating?
- Why do students cheat? What do students think would deter them from cheating?

In addition, previous studies have indicated that a variety of demographic variables are related to attitudes toward and extent of cheating. This study will check for differences in cheating behavior based on age, gender, children in the household, religiosity, ethnic background, marital status, year in school, plans for graduate school, college and high school grade point average (GPA), major, country of origin, income, on- or off-campus residence, method of paying for education, and hours worked per week.

While statistical tests for each of these variables will show if the individual variables are statistically significant, the study includes a large number of variables. Therefore, regression analysis will be used to select the best combination of variables for predicting both the number of instances of cheating behavior and a measure of academic honesty.

METHOD

Participants

Participants were undergraduate students enrolled with six credits or more at Boise State University in the spring of 2003. Fifteen hundred students were randomly selected; of that group 713 or 47.5% went to the website to view the survey and 645 or 43% actually participated in taking the survey.

Survey respondents were generally typical of the undergraduate population. Of the participants, 39% were males and 58% were females. Respondents were evenly divided among freshmen, sophomore, junior, and senior. About 84% reported a college GPA above 2.0 and 56% reported a GPA above 3.0. Forty-three percent of participants planned on attending a graduate program, while 41.6% were undecided, and 15% did not plan on attending. Of those surveyed, 8% said they live on campus and the other 92% stated they live off campus. Over 83% of the participants were Caucasian, and 96% were raised in the United States. The average age of the participants was 25.6 years. Sixty percent of those surveyed reported an annual income under \$20,000.

Only 23% of students reported that they did not work, while slightly over half worked more than 20 hours per week. Of the participants, 30% had children. The largest percentage of students (47%) reported that they were single, while 30% were married. Slightly over half (57%) considered themselves to be religious.

Materials

Students in the Psychological Measurement class created a final survey of 54 questions. The first 32 questions dealt with academic dishonesty, while the remainder were demographic questions. Questions were designed to measure the students' knowledge of academic dishonesty as well as its prevalence at Boise State. These questions were pilot tested by 140 students and then revised to improve the quality of the questions.

At the beginning of the survey, respondents were asked if they had cheated in school and in college. The survey then continued by asking about specific ways to cheat including using the internet, plagiarism, and copying others' homework. These 12 items were scored "0" for "no" and "1" for "yes" and summed to get a score on the extent of admitted cheating. This will be referred to as the "extent of cheating" score in the analysis. Higher numbers indicated more cheating. Scores were standardized to have a mean of "0" and a standard deviation of "1."

Another 11 items were hypothetical in nature and asked questions such as "Is getting the answers prior to a test cheating" and "Do you think cheating has a negative effect on you." Again, the responses to these items were coded "0" or "1" and summed to obtain what could be termed an "attitude toward cheating" score, where higher scores indicated a weaker belief that cheating had negative effects, that fewer situations were academically dishonest, and that they had more willingness to hypothetically engage in dishonest behaviors. These scores also were standardized to have a mean of "0" and a standard deviation of "1."

Using Cronbach's alpha, the reliability of the 23 items was found to be .78. The reliability was .71 for the 12 items included in the engagement in cheating scale and .67 for the 11 items that comprised the hypothetical cheating scale. The correlation between actual cheating and hypothetical cheating scores was .46.

Procedure

The survey was distributed to student e-mails over the internet. A postcard was sent five days after the original e-mail to remind participants to take the survey as well as to contact those students who did not regularly check their Boise State e-mail account.

The survey, which contained both multiple-choice and open-ended questions, took between five and ten minutes to complete. Upon finishing the survey, students were given the option to enter into a drawing for a variety of prizes that had been donated by different vendors in the community and collected by a member of the Psychological Measurement class. To maintain total anonymity, students who wished to be entered for a prize drawing were directed to another site completely divorced from the survey where they entered their personal information.

Analysis

Testing for differences on the demographic variables was conducted using SPSS with either t-tests or analysis of variance as the statistical tool to assess differences. The dependent variables were (1) scores on the number of reported forms of academic dishonesty the student had engaged in and (2) the attitude toward cheating score. Differences were considered to be statistically significant if the probability of obtaining the result by chance was less than .05. Post hoc mean differences for the ANOVA were conducted using the Student Neuman-Keul's procedure.

To select the best set of variables for predicting the actual and hypothetical cheating scores, stepwise regression was employed. The final set of variables were each significant at the $p < .05$ level.

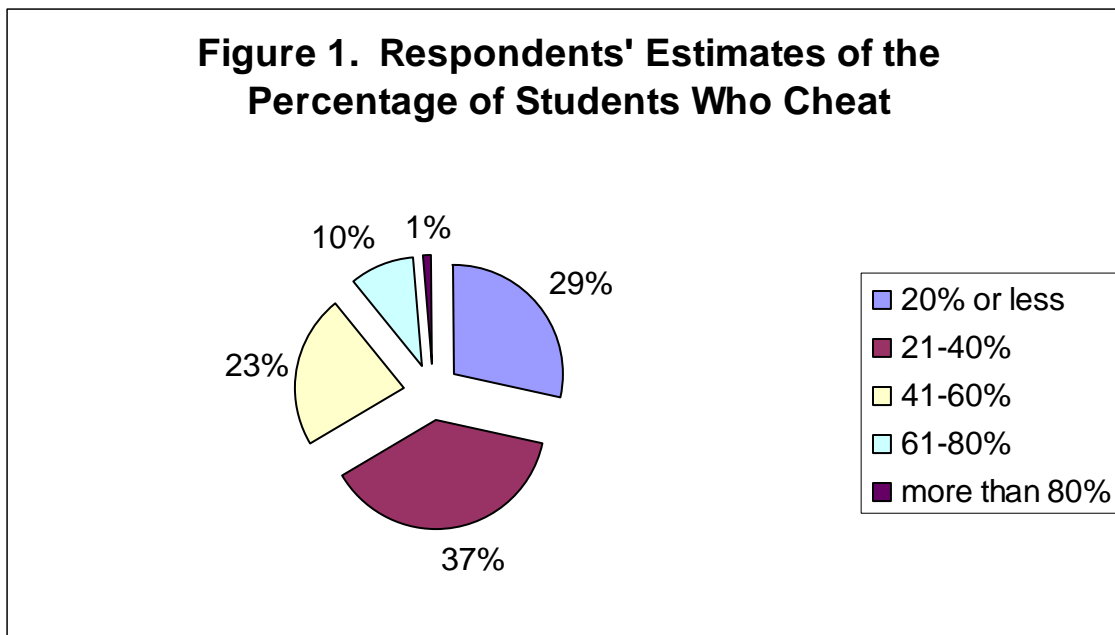
RESULTS

Extent of Cheating

Table 1 provides the results for each item on cheating. When asked directly if they had cheated, 48% said they cheated in school, while only 14% said they had cheated in college. When asked later on the survey about the *number* of times they had cheated while in college, 18% indicated that they had cheated one or more times. Finally, the summary score on extent of cheating indicated that 65% had cheated in one or more ways. Only 4% indicated that they had been caught cheating in an academic environment.

The most common form of cheating was copying someone else's homework, which 42% of the respondents said they had done. The next most common forms of cheating were citing references knowing they did not use them (21%), delaying taking a test with false excuses (16%), and plagiarism (13%).

Sixty percent reported having witnessed another student cheating in college. As shown by Figure 1 below, students were divided on how much cheating was occurring among other students, with 21-40% being the most frequent guess.



What was Considered Cheating

In most cases, there was strong agreement about what was considered cheating. Over 95% thought that plagiarism was cheating and that copying of their neighbor's paper was cheating. Ninety percent thought that getting the answers prior to a test was cheating. However, less than half thought that if a friend took a test before them then helped them study for the same test, that cheating had occurred. See Table 1 for details.

Students seemed quite familiar with the concept of plagiarism (see Table 2). Over 95% agreed that downloading a paper from the Internet and using it as their own, quoting a direct passage from a book without giving credit to the author, and using another student's paper as their own were acts of plagiarism. In addition, three-fourths thought using a graph or illustration from an original work and treating it as common knowledge was plagiarism, and two-thirds thought paraphrasing an original paragraph or work in their own words but borrowing some original terms from the author without giving credit were acts of plagiarism. Less than half, however, thought that referencing an author but not providing the punctuation that shows the part of the work being used or that quoting a passage from an original work while giving credit to the author but not indicating what part was the author's was plagiarism. Only slightly more than 20% thought that writing the same paper for two courses was plagiarism.

Motivations for and Deterrents to Cheating

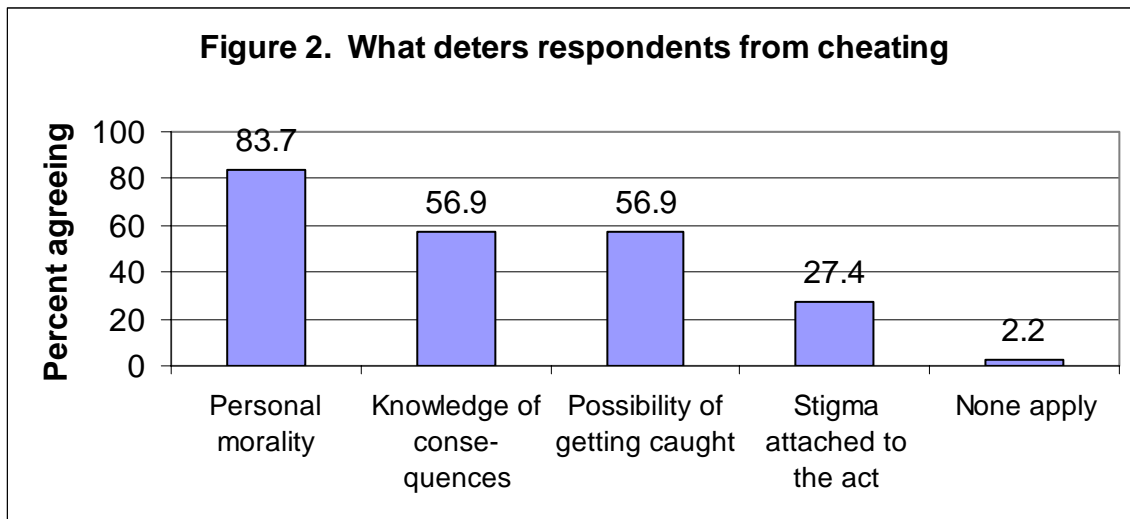
One major method that colleges and universities use to deter cheating is an academic code of conduct. At Boise State, 72% indicated that they were familiar with the code of conduct. Of the

group that was familiar with the code, 89% knew that failure of the course was a possible consequence for cheating. In addition, 84% understood that expulsion was a consequence. However, only 70% knew that removal from class and 60% knew that suspension from the university were possible consequences. See Table 3 for details.

Students also were asked what they thought *should* be the consequences for a person caught cheating (see Table 4). Slightly more than 60% thought the student should fail the assignment and slightly less than 60% thought they should fail the course. Only about 20% thought the student should be expelled from the university or should re-do the assignment.

The major motivation to cheat was feelings of desperation (55%) followed by lack of preparation time (42%). A substantial minority indicated that confusion (27%) or desire to improve their GPA (22%) would cause them to cheat. A number of students (17%) selected “other” as a response to this question. Most of these responses indicated that either nothing would motivate them to cheat or that an unfair instructor would be a motivator for cheating.

The main deterrent to cheating was an internal sense of right and wrong. However, external factors such as a possibility of getting caught also played a role for a majority of respondents. See Figure 2 for details.



Demographics and Extent of Cheating

A number of statistical differences were found between various demographic groups and reported extent of cheating. Those who said they were familiar with the academic code also had lower reports of cheating behavior. In addition, less cheating was reported by students who earned more than \$20,000 per year, were female, had children, lived off-campus, paid for their education using loans, did not receive financial help from their parents, and who reported they did not lie on the survey.

Significant differences were also found for the extent of cheating behavior and estimates of the percentage of students who cheated. In particular, those who estimated that 20% or less of

students cheated had significantly lower cheating scores than students who estimated the percentage of cheaters at 40% or more.

Age and marital status were also significant factors. Students under the age of 21 reported the most cheating, while students aged 21-26 had significantly less cheating than the younger group but more than students older than 26. Those who were divorced or widowed had lower rates of cheating than any other group. Married students had lower reports of cheating than did those who were single or in a committed relationship.

Students' major also showed some differences in extent of cheating. In particular, those enrolled in Applied Technology programs had less cheating than students majoring in Business or who were undecided about their major.

A number of variables also showed no differences between groups. These included ethnicity, religiosity, country of origin, and whether or not students' education was paid for by scholarships, themselves, military or employment benefits, or other means. In addition, no differences were found for year in school, whether the student planned on attending graduate school, and high school or college GPA.

Demographics and Perceptions of Cheating

Recall that higher scores on the attitudes toward cheating variable indicated a greater willingness to hypothetically engage in cheating behavior and a belief that cheating was not harmful to themselves or others. Again, familiarity with Boise State's Academic Code of Conduct was significantly related to hypothetical cheating scores. Students who were familiar with the code had a less favorable view of cheating compared to those who were not familiar with the code.

Many of the other variables previously found to be significant for extent of cheating were also significant for attitudes toward cheating. Students with annual incomes above \$20,000 had lower scores than did those with incomes of \$20,000 and below. Women also had significantly lower scores than men as did those who had children. Students who paid for their education using loans had lower scores compared to those who did not while those whose parents paid for their educations had significantly higher scores. Ethnicity was also a significant demographic variable with Caucasians having lower scores than minority group members. Students who considered themselves religious also had lower scores as did those who lived off-campus and who were raised in the United States.

Perceptions of the percentage of students who cheat was also related to attitudes toward cheating scores. Post hoc analysis indicated that only students with extreme estimates differed from one another, i.e., those who estimated that 20% or less of students cheated had lower scores than students who estimated that more than 80% cheated. In addition, students who were married or divorced had lower scores than did single students. Major was also significant with undecided majors having higher scores than any other group. Age also played a role, again with the youngest students (22 and under) showing the highest scores and those 29 and over reporting the lowest scores.

Again, many variables failed to reach significance in this study. They included year in college, plans to attend graduate school, college or high school GPA, and whether or not students' education was paid for by scholarships, themselves, employer or military benefits, or other means of payment.

Selecting a set of variables to predict actual and hypothetical cheating

Eleven variables were selected using stepwise regression to predict the extent of actual cheating. This combination of variables accounted for 32% of the variance in cheating scores. Table 5 contains the full regression model. Estimates of the percentage of students who cheat was most predictive of cheating behavior, with lower estimates being associated with less cheating. In addition, less cheating was associated with having a personal morality as a deterrent to cheating, being female, believing that a person caught cheating should be expelled from the university, having familiarity with the academic code of conduct, and being married. Students who had cheated more were also more likely to have witnessed other students cheating, to indicate that lack of time would motivate them to cheat, to report that the possibility of getting caught would deter their cheating and, if caught, that the consequence should be re-doing the assignment.

Ten variables were selected to form the best prediction of attitudes toward cheating. The combination accounted for 33% of the variability in attitude scores. The full regression model can be found in Table 6.

The variable that was most predictive of attitudes toward cheating was whether or not students thought that a person caught cheating should redo the assignment; those taking a stronger moral stance on cheating (i.e., lower attitude toward cheating scores) were less likely to believe the person should simply redo the assignment. Those with lower attitude toward cheating scores also thought that those caught cheating should fail the course and be expelled from the university. Married students, females, and students with children also had lower scores. Students who indicated that nothing would deter their cheating had a higher hypothetical cheating scores. Again, those who thought more students cheated also were more hypothetically inclined to cheat themselves. Finally, students who had a major in the College of Social Science and Public Affairs (SSPA) or who were raised in the United States had lower attitude toward cheating scores.

DISCUSSION

The main purpose of this study was to establish how many students actually cheat, their motivation for cheating and their familiarity with the Academic Dishonesty Policy at Boise State. The study also attempted to investigate the relationship between various variables and academic dishonesty. The results of the study could be of assistance to professors in better understanding those students who are most likely to cheat, their motives, and preventative actions that could be taken to eliminate or at least reduce this problem in the academic setting.

When asked if they had cheated in college, only 14% indicated that they had cheated. By comparison, 46% answered that they had cheated in high school. There are several possible explanations of this finding. First, many high school students do not take school assignments as

seriously as college students do. Second, some high school students are not in school because they really want to be there; they are there because they have to be there. On the other side, most college students make a conscious decision when they decide to attend college because they want to further their education. Third, college students in general are more mature and therefore, perhaps more responsible. Certainly a “maturity factor” seemed to be related to a number of the demographic differences found in this study.

In addition, other measures of the extent of cheating indicate more cheating occurs than when students respond to a simple question that asks if they have cheated. The percentage who indicate they have cheated one or more times increases to 18% when students are asked about the number of times they have cheated following a series of questions on actual and hypothetical cheating behaviors. It jumps to 65% when a summed score is obtained from a series of questions that ask if the student has engaged in a variety of behaviors considered to be dishonest by most people. Perhaps students remember more instances of cheating following the questions which ask about the dishonest behaviors. Perhaps students simply do not consider acts such as copying another student’s homework to be cheating.

Determining whether Boise State students cheat less than or about the same amount as students at other institutions does not have a simple answer. Instead, the answer depends on the study and how the prevalence of cheating was measured. Boise State students engage in decidedly less cheating if we look at responses to a single item that asked if they cheated in college. While only 14% of Boise State students said they’d cheated, estimates from a single item on other studies ranged from 42% to 64% (Davis & Ludvigsm, 1995) to 76% (Davis et al., 1992). However, when students are counted as “cheaters” if they indicated they had engaged in one or more behaviors thought to be dishonest, the Boise State figure of 65% is close to findings from other studies (e.g., Blackburn, 1999; Graham et al., 1994; Jordan, 2001; McCabe & Trevino, 1996).

Another way to assess the extent of cheating that is occurring is (a) to ask students if they have witnessed cheating in college and (b) to estimate the percentage of students they believe cheat. In this study, 60% of respondents indicated that they had witnessed cheating in college. Estimates on the percentage of students who cheat varied widely, with the largest group of students estimating that 21-40% of students cheated. Both of these variables were selected as part of the final set to predict extent of cheating. In fact, the percentage of students estimated to cheat was the strongest predictor in the set of extent of cheating. Not surprisingly, students who thought more students cheated were also more likely to cheat themselves. In addition, students who had witnessed other students cheating were also predicted to cheat more themselves. Estimates of the percentage of students who cheat was also a variable included in predicting attitudes toward cheating, with higher estimates associated with more lax attitudes—a finding previously reported by Jordan (2001) among others.

According to this study, students had an almost unanimous opinion about what cheating is. Ninety-six percent agreed that plagiarism was a form of cheating, 97% thought that copying off of a neighbor’s paper should be considered cheating, and 90% felt that getting answers prior to a test was a type of cheating. These results imply that the majority of students are familiar with nearly all aspects of cheating. However, almost half of the participants in this study felt cheating had not occurred if a friend took a test before them and then helped them study for the same test.

This suggests that students may be more comfortable cheating if somebody else is also involved in the process.

Students at Boise State University seem to be familiar with the concept of plagiarism. Ninety-five percent of participants in this study agreed that the following actions fall under the concept of plagiarism: quoting a direct passage without giving credit, using another's paper as your own, and downloading a paper off the internet and using it as one's own. These are the most common forms of plagiarism and therefore it is not surprising that almost all students felt similarly. Some less obvious forms of plagiarism, such as referencing an author without providing appropriate punctuation or giving credit to the author without indicating what part was author's were identified by only 47% of participants as a form of plagiarism. Only 21% thought that writing the same paper for two courses is a form of plagiarism. All these variations suggest that many students are not familiar with all forms of plagiarism and that the university as an institution should invest more effort in educating students about various forms of plagiarism.

Most students (72%) reported being familiar with the Academic Dishonesty Policy. This variable also turned out to be a significant predictor of the extent of reported cheating, with students who were familiar with the policy reporting less cheating. When asked what the consequences of cheating were according to the Code, the majority of students answered that removal from class (70%), failure of the course (89%), and expulsion (83%) are the consequences. Some 60% thought that suspension from the university was one of the consequences of cheating. In reality, all above-mentioned alternatives are possible consequences of cheating. One possible reason for the confusion regarding familiarity with the code of conduct is that in spite of the existence of a universal policy, not all professors feel obligated to handle all situations according to this policy. Many professors reserve a right to solve an incident of cheating with a student on one-on-one basis, without reporting it to the university.

When asked what the consequences of cheating *should* be, the majority of students agreed that a person who cheats should get an "F" for the assignment (61%) or fail the course (57%). Consequences that were toward the lenient end of the spectrum (i.e., redoing the assignment) or the harsh end (expulsion from the university) were selected as consequences by slightly more than 20% of students. Notably, both of these consequences were among the group of variables selected to predict extent of cheating and attitudes toward cheating. Not surprisingly, students who cheated more thought that redoing the assignment was an appropriate consequence, while students who did not cheat thought that expulsion was an appropriate consequence. A similar relationship was found for attitudes toward cheating with those who had less tolerant attitudes being more inclined to expel students caught cheating while those with more tolerant attitudes were more inclined to have students re-do the assignment.

Students strongly felt that personal morality was the most powerful factor in deterring participation in cheating and, indeed, students who reported that their personal morality would deter cheating also reported lower instances of cheating behavior. Students reported that two other factors, knowledge of consequences and possibility of getting caught, were also significant in deterrence of cheating. Loss of face was not important to most Boise State students, with only 27% concerned about the stigma attached to the act of cheating. Thus, it appears that people are more concerned with their moral values and the penalty they could face if they are caught

cheating than about what their peers or professors would say if they knew that they were cheating.

Personal morality and the possibility of getting caught as deterrents to cheating were both selected as variables for predicting extent of cheating. Students who reported that their personal morality would deter cheating also reported less actual cheating. However, students who indicated that the possibility of getting caught would deter their cheating reported more cheating incidents, highlighting the distinction between internal and external referents. Students who reported that none of the deterrents listed would deter cheating for them had higher scores on the attitude-toward-cheating variables.

More than half of the students (55%) reported they were most prone to cheat when they felt desperate. Almost half of the participants (44%) responded that they would cheat if they lacked time to prepare. Other relatively significant motivators for cheating were confusion (27%), and improving one's GPA (22%). These responses suggest that cheating occurs mostly out of despair, not out of laziness or lack of motivation. However, lack of preparation time as a motivator for cheating was one of the final list of variables selected to predict extent of cheating. Students who indicated that a lack of preparation was a motivator were predicted to cheat more extensively.

Significant findings for a cluster of variables related to cheating seem to lead to the conclusion that students who are more mature with more responsibilities were less likely to cheat or to have positive attitudes toward cheating. These variables include age, marital status, having children, and income. However, only marital status was included in the final list of variables to predict extent of cheating. Being married and having children were both variables that were included in the final set to predict attitudes toward cheating.

In addition, one of the findings of this study was that students whose parents pay for their education both cheat more and are more likely to hypothetically cheat than those who take out loans. Perhaps students who do not pay for their education themselves are less likely to think seriously about possible consequences of cheating, such as expulsion or suspension, because they often do not feel like they could be losing anything (money). Again, this finding also supports the general finding of maturity being related to less cheating. However, having loans or having parents pay for students' education were not included in the final set of variables to predict extent of cheating or attitudes toward cheating, perhaps because of correlations among all the "maturity" measures.

In regard to gender, this study found that male students reported cheating significantly more than female students. Indeed, gender was one of the final variables selected to predict extent of cheating. This finding supports results of prior studies (e.g., McCabe, et. al., 1996; Whitley, et. al., 1999). It was also found that female students had a more negative attitude toward cheating than males did, both when studied separately and as a part of the final equation for predicting attitudes toward cheating.

The results of this study indicate that students who major in business or who were undecided about their major reported cheating the most, while students in applied technology programs

reported cheating the least. Being a major in the College of Business and Economics was also one of the variables selected to best predict extent of cheating behavior. At least one other study also found that business majors were most likely to engage in cheating (Zimmerman, 1999). It is unclear why business majors may be particularly prone to cheat—perhaps the pragmatism that is part of the make-up of students who wish to pursue business careers could be a partial explanation. Undecided students may be less mature, and fit with previous findings in this area. Interestingly, being a major in the College of Social Sciences and Public Affairs was related to more negative attitudes toward cheating, but not to differences in extent of cheating behavior.

The regression equation used to select the best set of variables to predict the extent of cheating provides some guidance to those interested in reducing the amount of cheating that occurs. Making sure students are familiar with the academic code of conduct is a good beginning. It is also important that students not witness others cheating and that they believe that little cheating is occurring. When cheating does occur, minor consequences such as redoing the assignment should be rejected in favor of consequences that have a greater effect on the student's academic career. In addition, greater emphasis should be placed on the higher stage of personal morality rather than simply stressing the likelihood of being caught. Since students indicated that lack of preparation time would make cheating more likely, helping students to develop time management skills could be helpful. Finally, students may value their education more when they know they are paying for it (instead of their parents) and thus see cheating on their assignments as simply cheating on themselves.

References

- Blackburn, M.A. (1999). Cheating and motivation: An examination of the relationships among cheating behaviors, motivational goals, cognitive engagement, and perceptions of classroom goal structures (Doctoral dissertation, University of Oklahoma, 1999). *Dissertation Abstracts International*, 59, 4051.
- Calabrese, R.L., & Cochran, J.T. (1990). The relationship of alienation to cheating among a sample of American adolescents. *Journal of Research and Development in Education*, 23, 65-72.
- Covey, M. K., Saladin, S., & Killen, P.J., (2001). Self-monitoring, surveillance, and incentive effects on cheating. *The Journal of Social Psychology*, 129(5), 673-679.
- Davis, S.F., Grover, C.A., Becker, A. H., & McGregor, L. N., (1992). Academic dishonesty: prevalence, determinants, techniques, and punishments. *Teaching of Psychology*, 19(1), 16-20.
- Davis, S. F., & Ludvigson H. W., (1995). Additional data on academic dishonesty and a proposal for remediation. *Teaching of Psychology*, 22(2), 119-121.
- Franklyn-Stokes, A., & Newstead, S.E. (1995). Undergraduate cheating: Who does what and why? *Studies in Higher Education*, 20, 159-172.
- Goldstone, R.L., & Chen, C. (1993). Dishonesty in self-report of copies made: Moral relativity and the copy machine. *Basic and Applied Social Psychology*, 14 (1), 19-32.
- Graham, M.A, Monday, J.O, O'Brien, K., & Steffen, S. (1994). Cheating at small colleges: An examination of student and faculty attitudes and behaviors. *Journal of College Student Development*, 35, 255-260.
- Jordan, A.E. (2001). College student cheating: The role of motivation, perceived norms, attitudes, and knowledge of institutional policy. *Ethics & Behavior*, 11(3), 233-247.
- Koljatic, M., & Silva, M. (2002). Comparison of students' and faculty's perceptions of occurrence of dishonest academic behaviors. *Psychological Reports*, 90, 883-888.
- Lim, V. K. G., & See, S. K. B., (2001). Attitudes Toward, and Intentions to Report, Academic Cheating Among Students in Singapore. *Ethics & Behavior*, 11(3), 261-274.
- Lupton, R.A., & Chapman, K.J. (2002). Russian and American college students' attitudes, perceptions and tendencies towards cheating. *Educational Research*, 44, 17-27.
- McCabe, D.L., & Trevino, L.K. (1996). What we know about cheating in college: Longitudinal trends and recent developments. *Change*, January/February, 29-33.

McCabe, D.L.; Trevino, L.K.; Butterfield, K.D. (2001). Cheating in academic institutions: a decade of research. *Ethics & Behavior*, 11, 219-232.

Stearns, S. A. (2001). The student-instructor relationship's effect on academic integrity. *Ethics & Behavior*, 3, 275-285.

Whitley, B.E. Jr. (2001). Gender Differences in affective responses to having cheated: The mediating role of attitudes. *Ethics and Behavior*, 11(3), 249-259.

Whitley, B.E. Jr., Bichlmeier Nelson, A. & Jones, C.J. (1999). Gender differences in cheating behavior: A meta-analysis. *Sex Roles*, 41, 657-680.

Zimmerman, J. (1999) Academic Dishonesty attitudes and self-reported behaviors in a university population (Doctoral dissertation, University of New Orleans, 1999). *Dissertation Abstracts International*, 59, (11-A).

Table 1

Means and Standard Deviations for Items and Scales on Extent of Cheating

Item:	Count	Mean	Std Deviation
Have you cheated in school?	643	.48	.50
Have you cheated in college?	643	.14	.34
Have you ever been caught cheating in an academic environment?	643	.04	.19
Have you ever witnessed another student cheating in college?	643	.60	.49
Have you used the internet to cheat?	643	.05	.22
Have you ever plagiarized?	643	.13	.34
Have you ever used an unauthorized cheat sheet during a test?	643	.07	.25
Have you ever obtained answers to a test through the use of "signals"?	643	.02	.15
Is plagiarism cheating?	643	.96	.20
Is copying off your neighbor's paper cheating?	643	.97	.16
If a friend took a test before you, then helped you study for the same test, is that cheating?	643	.45	.50
Is getting the answers prior to the test cheating?	643	.90	.30
If you were given a lower grade than you feel you deserved, would you cheat to compensate for the undeserved grade?	643	.07	.25
Would you let someone cheat off you?	643	.15	.36
Do you think cheating has a negative effect on others?	643	.87	.34
Do you think cheating has a negative effect on you?	643	.88	.33
Would you help a fellow student cheat on a paper?	643	.09	.28
Would you help a fellow student cheat on a test?	643	.04	.19
Do you consider yourself an honest person?	643	.97	.17

Table 2
Definitions of Plagiarism

Item:	Count	Mean	SD
Quoting a direct passage from a book without giving credit to the author	643	.95	.22
Paraphrasing an original paragraph or work in your own words, but borrowing some original terms from the author without giving credit	643	.67	.47
Referencing an author but not providing the punctuation that shows the part of the work being used	643	.47	.50
Using a graph or illustration from an original work while treating it as common knowledge	643	.73	.44
Quoting a passage from an original work while giving credit to the author but not indicating what part was the author's	643	.47	.50
Downloading a paper or passage from the internet and using it as your own	643	.96	.20
Using another student's paper as your own	643	.95	.22
Writing the same paper for two courses	643	.21	.41

Table 3
Perceived consequences of cheating in the Academic Code of Conduct

Consequence:	Count	Mean	SD
Removal from class is a consequence of cheating	643	.70	.46
Failure of the course is a consequence of cheating	643	.89	.31
Expulsion is a consequence of cheating	643	.83	.37
Suspension is a consequence of cheating	643	.60	.49
No consequence is given for cheating	643	.02	.15
Other consequence given	643	.04	.20

Table 4

What consequences of cheating should be

	Count	Mean	SD
Person caught cheating should be expelled from the university	643	.22	.41
Person caught cheating should fail the course	643	.57	.50
Person caught cheating should redo the assignment	643	.21	.41
Person caught cheating should fail the assignment	643	.61	.49
There should be no consequence for a person caught cheating	643	.00	.04
Other consequence given for being caught cheating	643	.10	.30

Table 5. Best combination of variables¹ to predict actual cheating score²

Variables:	Unstan- dardized B	Std. Error	Standardized Coefficients	t	Sig
Constant	.359	.206	.000	1.741	.082
Percentage of students you think cheat	.241	.045	.232	5.393	.000
Personal morality would deter cheating (no=0, yes=1)	-.438	.116	-.158	-3.776	.000
Person caught cheating should be expelled from the university (no=0, yes=1)	-.311	.104	-.128	-2.978	.003
Gender (1=male, 2=female)	-.369	.085	-.179	-4.314	.000
College of Business & Economics major (no=0, yes=1)	.365	.105	.142	3.466	.001
Married (no=0, yes=1)	-.283	.092	-.126	-3.065	.002
Person caught cheating should redo the assignment (no=0, yes=1)	.253	.104	.102	2.446	.015
Familiar with Boise State Code of Conduct (no=0, yes=1)	-.281	.093	-.128	-3.039	.003
Lack of preparation time would motivate me to cheat (no=0, yes=1)	.182	.092	.087	1.975	.049
Have you ever witnessed another student cheating in college (no=0, yes=1)	.222	.088	.107	2.526	.012
Possibility of getting caught would deter cheating (no=0, yes=1)	.186	.088	.091	2.122	.034

¹ Based on stepwise regression, $R^2=.317$

² Higher scores indicate more cheating behavior

Table 6. Best combination of variables³ to predict hypothetical cheating score⁴

Variables:	Unstan- dardized B	Std. Error	Standardized Coefficients	t	Sig
Constant	1.390	.264	.000	5.256	.000
Person caught cheating should redo the assignment (no=0, yes=1)	.526	.105	.210	5.004	.000
Person caught cheating should fail the course (no=0, yes=1)	-.413	.091	-.199	-4.524	.000
Do you have any children (no=0, yes=1)	-.216	.110	-.095	-1.995	.051
None of the reasons given would deter cheating (no=0, yes=1)	1.279	.358	.148	3.578	.000
Raised in the USA (no=0, yes=1)	-.692	.207	-.137	-3.337	.001
Gender (1=male, 2=female)	-.337	.085	-.162	-3.940	.000
Married (no=0, yes=1)	-.357	.107	-.159	-3.323	.001
Percentage of students you think cheat	.110	.044	.105	2.529	.012
Major in College of Social Sciences and Public Affairs (no=0, yes=1)	-.296	.106	-.114	-2.800	.005
Person caught cheating should be expelled from the university (no=0, yes=1)	-.277	.106	-.113	-2.613	.009

³ Based on stepwise regression, $R^2=.330$

⁴ Higher scores indicate more relaxed, amoral attitudes toward cheating