# CHEATING: STUDENTS AND FACULTY'S PERCEPTION ON POTENTIAL CHEATING ACTIVITY 

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#### Abstract

Cheating has permeated many facets of our daily life. Reports on cheating are found in business (Enron, Tyco ...), in sports (baseball, athletics...), and in the classroom, which make this topic relevant for scrutiny. The paper examines academic dishonesty among college students to ascertain whether faculty has a different perception on what constitutes cheating than students. A survey presenting 16 different scenarios was submitted to students and faculty alike asking them whether the action of the imaginary students in the scenario constituted cheating or not. The analysis of the results showed that there were some significant differences between faculty and students in their perception on whether or not their actions established cheating.


## INTRODUCTION

In the academic world, a cancer exists. That cancer has a name and is called cheating, Pullen, Ortloff, Casey, and Payne (2000) refers to it as "the bane of higher education" (p.616), and Moffatt advance that "the university at the undergraduate level sounds like a place where cheating comes almost as naturally as breathing, where it's an academic skill almost as important as reading, writing, and math" (in Whitley, 1998, p.2). However, how many students cheat is hard to precisely figure since most data come through self reporting and it is likely that students do not want to advertise their cheating, making measurement difficult.

Nevertheless, several studies tried to establish a baseline on how many students engage in deceitful activities. One of the first studies (Baird, 1980) found that $75.5 \%$ of undergraduates from several majors had cheated while in college. In 1992, Meade reported a rate of cheating of $87 \%$ in various majors in top universities. McCabe and Trevino (1997) reported a range of $13 \%$ to $95 \%$ of student whom at one point had cheated. In his research, Park (2003) advanced that a minimum of $50 \%$ of students are cheating, others studies put that percentage at $63 \%$ (Nonis and Swift, 1998) or even up to $75 \%$ (Kidwell, Wozniak, and Laurel, 2003; Chapman, Davis, Toy, and Wright, 2004). Moreover, Whitley (1998) reviewed 46 studies conducted from 1970 to 1996, the range of the numbers of students engaging in academic dishonesty was from $9 \%$ to $95 \%$ across the different samples. The mean across the samples was $70.4 \%$.

Also, there is a developing body of evidence that academic dishonesty is increasing; with the increase in tuition, the advance in technology, and the increase in online class offerings, new
ways to engage in academic dishonesty are available for potential cheaters (Born, 2003; Park, 2003; Scanlon, 2004; Eastman, Iyer, and Eastman, 2006; Brown, McInerney, 2008). Indeed, Brown and McInerney found significant increases in 7 of 16 cheating practices between a 1999 and a 2006 sample using the same questionnaire, with an average usage increase of these 7 practices of $19.2 \%$. Finally, one of the latest studies confirms this trend, Jones (2011) found that $92 \%$ of her students surveyed indicated that they had or they knew someone that cheated.

The only conclusion that one can have is, therefore, that cheating does take place in higher education and that the number of participants is significantly high. This is a very important issue as Nonis and Swift (2001), based on the study of 1,051 business students, reported that the frequency of cheating in college was highly correlated with cheating at work. Also, Lawson (2004) found that business school students who cheat are more likely to be accepting of unethical workplace behavior and there is a growing body of evidence that a positive correlation between cheating while in college and behaving unethically while at work exists (Brown \& Choong, 2005; Nonis \& Swift, 2001; Sims, 1993; Hilbert, 1985).

In addition, academic dishonesty has several impacts on students that do not engage in cheating. First of all, many firms that engage in on-campus recruiting require a minimum grade point average for students who sign up for interviews. Thus, students who engage in academic dishonesty may gain an unfair advantage that goes well beyond the higher grade earned through cheating. GPA is also typically considered an important selection criterion for hiring purposes. Finally, another way in which peers of the cheaters may be harmed is the potential backlash and scrutiny that may be implemented once a cheater has been caught, as well as the potential for distrust and poorer interpersonal relationship between students and faculty.

## LITERATURE REVIEW

Most studies on academic dishonesty focused on situational and individual factors that may contribute to cheating behavior (McCabe and Trevino, 1993, 1997; Straw, 2002; Eastman, Iyer, Eastman, 2006. More specifically, McCabe and Trevino (1997) found that cheating was influenced by age, gender, grade point average, peers, and Greek membership.

The literature found that younger, immature students cheat more than older, more mature students (Choong and Brown, 2007); upper division classes encounter less cheating than lower division classes and unmarried students cheat more than married ones (Whitley, 1998; McCabe and Trevino 1997; Park, 2003; Straw, 2002).

Crown and Spiller (1998) looked at 16 previous studies on the relationship between gender and academic dishonesty, and found mixed statistical results. Klein, Levenburg, McKendall, and Mothersell (2006) established the same inconsistency regarding gender and cheating. They reported that about half the studies analyzing gender and academic dishonesty showed that males cheat more often than females, while the other half found no relationship. However, McCabe and Trevino (1997) found men to be more involved than woman in academic dishonesty. The same tendency was found by Buckley, Wiese, and Harvey (1998) and Chapman and Lupton (2004), who also reported a higher probability of males engaging in academic dishonesty than females. On the other hand, Leming (1980) reported that under a low risk
condition, woman cheated more than men, but that a higher risk of punishment reduced the risk of cheating only for women. More recently, Anitsal, Anitsal, and Elmore (2009) found that both genders are engaged in cheating behaviors, but that their approaches to cheating were different.

Regarding grade point average, Crown and Spiller (1998) analyzed 14 studies focusing on grade and academic dishonesty. They established that the majority of the studies found that students with lower GPAs cheat more than students with higher GPAs. Straw (2002), also reported that students with a lower GPA are more likely to cheat as they have more to gain and less to lose than students with a higher GPA. Finally, Choong and Brown (2007) reported that GPA is inversely related to flagrant cheating, but found no significant difference in other type of cheating among brighter students and their counterparts.

On the subject of peers, McCabe and Trevino (1997) found that "the most powerful influential factors were peer-related contextual factors... Academic dishonesty was lower when respondents perceived that their peers disapproved of such misconduct, was higher among fraternity/sorority members, and was higher when students perceived higher levels of cheating among their peers" (page 391). In a similar manner, results from student samples suggested that they cheat less when they feel that they are more likely to get caught (Corcoran and Rotter, 1989) and when their college has a known honor code (May and Lyod, 1993; McCabe and Trevino, 1993).

Regarding Greek membership, several studies advance that students involved in Greek life are more likely to cheat (McCabe and Trevino, 1997; Straw, 2002; Park, 2003). One of the main reasons for such behavior is grounded in the fact that fraternities are environments where norms, values, and skills associated with cheating can easily be shared as they provide access to resources (e.g. old test files) that facilitate academic dishonesty (McCabe and Trevino, 1997, page 383).

However, what constitutes cheating? As with many ethical issues, it is somewhat hard to ascertain for sure, what constitutes cheating. For instance, Lambert, Nicky, and Louise (2003) defined academic dishonesty as behavior that breaches "the submission of work for assessment that has been produced legitimately by the student who will be awarded the grade, and which demonstrates the student's knowledge and understanding of the context or processes being asserted" (page 98). Others define academic dishonesty by the action that the students engage in; where the most common forms of cheating are plagiarism, "literary theft, stealing (by copying) the words or ideas of someone else and passing them off as one's own without crediting the source" (Park, 2003, p. 472), working on individual assignment with others, having someone check over a paper before submitting it (if it is not permitted by the instructor), and getting questions/answers on a test from someone else (Brown 1996; Kidwell et al. 2003).

Our study is looking at academic dishonesty from a different angle. Each one of us has a personal definition of "where the line is" as far as cheating is concerned, and what is acceptable or not. Could it be that students, in general, have a different point of view than faculty? In the same manner, do faculty members all agree on what constitutes cheating? One can easily see that if faculty members are not aligned that it may create confusion for students about what is acceptable or not, indeed, Kessler (2003, p.60) writes that some students find that "...it's
sometimes hard to tell if the teacher specifically wants you to not work with other people," and that they were often "afraid to ask."

For instance, if we refer to the Lambert et al (2003) definition above, what "behavior" is acceptable for a student? Is getting someone else's notes to review for a test cheating? One could say that this behavior would enhance the grade of the borrowing student based on an effort from someone else, which would then be a violation of the Lambert et al's definition and thus make the borrower a cheater. However, someone else's perception could be that the borrower learned from his or her friend's notes and that the borrower's grade is the true reflection of the borrower's knowledge and understanding of the context or processes being asserted. In one case we have academic dishonesty, in the other one we do not.

Therefore, in order to analyze the issue raised in the previous paragraph, we propose to survey students and faculty alike, and ask them for their own perception on several scenarios based on the four major axes of academic dishonesty set by Brown (1996) described above. Each scenario will portray a hypothetical situation in which one or more students engage in an activity that might be construed as academically dishonest. In order to not bias the respondent, each scenario is intentionally made vague.

## METHODOLOGY

A total of 16 scenarios were created for the study (see Appendix A for the full questionnaire). An example scenarios are: "Jane is taking a test in a learning center by herself. She is stumped by one question and texts her friend Maria for help. Maria responds with an incorrect answer." and "John is taking a test in class, while professor Absent Minded is not looking, John looks at his friend Jane's test and see that she answered "C" for question \#5." Each respondent was then asked if Jane, John, or both were cheating.

The surveys were distributed to students and faculty members in several institutions located in South Dakota, Louisiana, and Utah. The institution in South Dakota is a small faith based liberal art college, while the one in Louisiana is a regional extension of a large statefunded university, and the institution in Utah is a large state university.

In order to select our respondents for the survey, a convenient sampling methodology was used; surveys were administered during class time and were collected a few minutes after being handed out, usually as students exited the class. As anonymity was guaranteed, it wasn't possible to tract who had responded or not to the survey; therefore, a response rate cannot be calculated. As a result, 256 students and 52 faculty members responded to the survey and were used for analysis.

## RESULTS

## Prominence of academic dishonesty

In our sample, 91 students self-reported that they had previously cheated in college. That number put our number of students cheating in the low range compared to other studies. Indeed,
only 35.54 percent of the respondent indicated that they have cheated. In comparison, 18 professors declared that they had cheated during their academic studies, which represent 34.61 percent of the sample.

Further analysis per classification of student showed that freshmen and sophomores seem to cheat less than their juniors and seniors counterpart. Table 1 shows the number of students that reported cheating per student classification. Percentage wise, students in higher classifications are more likely to have engaged in academic dishonesty than students in lower classifications. In our sample, juniors were the most likely to have cheated at least once in their college education ( $51.47 \%$ ). An ANOVA analysis showed no statistical significance between the four groups of students, therefore, no classification of students is more likely to cheat than any other classification.

| Table 1: Number of cheaters per classification |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Freshman | Sophomore | Junior | Senior | Faculty |  |
| N | 75 | 51 | 68 | 51 | 52 |  |
| Cheater | 22 | 16 | 35 | 18 | 18 |  |
| $\%$ | 29.33 | 31.37 | 51.47 | 35.29 | 34.61 |  |

## Perception of academic dishonesty between faculty and students

The goal of our research was to study whether there were any differences in opinion on what constituted cheating between students and faculty members. Table 2 presents the result of a T-Test analysis based on the responses given by our sample of students and faculty members to the 16 scenarios used in the survey.

| Table 2: T-Test Students compared to Faculty |  |  |  |
| :---: | :---: | :---: | :---: |
|  | Df | t | Sig |
| 1 a | 308 | 1.228 | .220 |
| 1 b | 300 | 1.238 | .217 |
| 2 | 308 | 1.036 | .301 |
| 3 | 303 | 5.307 | $.000^{* * *}$ |
| 4 a | 300 | -3.228 | $.001^{* * *}$ |
| 4 b | 301 | -2.787 | $.006^{* * *}$ |
| 5 | 305 | 1.952 | $.052^{*}$ |
| 6 | 308 | 1.034 | .302 |
| 7 a | 304 | 4.017 | $.000^{* * *}$ |
| 7 b | 304 | 3.320 | $.001^{* * *}$ |
| 8 | 306 | 1.649 | .100 |
| 9 | 305 | 2.525 | $.012^{* *}$ |
| 10 | 308 | .627 | .531 |
| 11 a | 299 | 2.698 | $.007^{* * *}$ |
| 11 b | 297 | 2.648 | $.009^{* * *}$ |
| 12 a | 307 | .353 | .725 |
| 12 b | 302 | -.512 | .609 |
| 13 a | 304 | 4.644 | $.000^{* * *}$ |
| 13 b | 302 | 4.828 | $.000^{* * *}$ |


| 14 | 306 | 1.026 | .306 |
| :---: | :---: | :---: | :---: |
| 15 a | 303 | -1.529 | .127 |
| 15 b | 303 | -1.781 | $.076^{*}$ |
| 16 | 303 | 3.802 | $.000^{* * *}$ |

*Significant at the .1 level, ** Significant at the .05 level, *** Significant at the .01 level

As one can see in table 2 , several scenarios (3, 4a, 4b, 5, 7a, 7b, 9, 11a, 11b, 13a, 13b, 15b, and 16, see Appendix A) indicate significant differences in the average belief between the students and faculty. Similarly, a more detailed analysis was done by comparing the four different classes of students, freshmen to seniors, with faculty members' perception of cheating. The result of that analysis can be found in table 3 through 7. A few variations were found between the classifications of students, indeed scenarios 5, 9, 11a, 11b, and 15 b exhibit some classifications as non-significant while the whole student group was significant. Also, some more scenarios became significant for a specific classification: scenario 1a for freshmen ( p -value of .088 ), 1 b for sophomores ( p -value of .088 ), and 8 for juniors ( p -value of .089 ). However, as all their significances are marginal, we will focus our analysis on the significant student vs. faculty scenarios and then discuss any particular differences within the classification of students in the next section.

| Table 3: T-Test Freshmen compared to Faculty |  |  |  |
| :---: | :---: | :---: | :---: |
|  | Df | t | Sig |
| 1a | 128 | 1.719 | $.088^{*}$ |
| 1 b | 124 | 1.580 | .117 |
| 2 | 128 | .290 | .773 |
| 3 | 126 | 5.835 | $.000^{* * *}$ |
| 4 a | 126 | -2.712 | $.008^{* * *}$ |
| 4 b | 126 | -2.391 | $.018^{* *}$ |
| 5 | 127 | 2.347 | $.020^{* *}$ |
| 6 | 128 | .842 | .401 |
| 7 a | 125 | 4.503 | $.000^{* * *}$ |
| 7 b | 125 | 3.102 | $.002^{* * *}$ |
| 8 | 128 | 1.648 | .102 |
| 9 | 127 | 2.590 | $.011^{* *}$ |
| 10 | 128 | .290 | .773 |
| 11 a | 121 | 2.873 | $.005^{* * *}$ |
| 11 b | 121 | 2.873 | $.005^{* * *}$ |
| 12 a | 127 | -.256 | .798 |
| 12 b | 124 | -.319 | .750 |
| 13 a | 127 | 5.674 | $.000^{* * *}$ |
| 13 b | 126 | 5.590 | $.000^{* * *}$ |
| 14 | 129 | a | a |
| 15 a | 126 | -1.588 | .115 |
| 15 b | 126 | -1.783 | $.077^{*}$ |
| 16 |  | 125 | 3.574 |

[^0]| Table 4: T-Test Sophomores compared to Faculty |  |  |  |
| :---: | :---: | :---: | :---: |
|  | Df | t | Sig |
| 1 a | 104 | 1.456 | .148 |
| 1 b | 101 | 1.722 | $.088^{*}$ |
| 2 | 104 | 1.418 | .159 |
| 3 | 101 | 3.636 | $.000^{* * *}$ |
| 4 a | 100 | -3.424 | $.001^{* * *}$ |
| 4 b | 100 | -2.981 | $.004^{* * *}$ |
| 5 | 104 | 1.557 | .123 |
| 6 | 104 | 1.456 | .148 |
| 7 a | 100 | 2.638 | $.010^{* * *}$ |
| 7 b | 101 | 2.778 | $.007^{* * *}$ |
| 8 | 102 | 1.590 | .115 |
| 9 | 103 | 2.372 | $.020^{* *}$ |
| 10 | 104 | 1.054 | .294 |
| 11 a | 97 | 1.449 | .151 |
| 11 b | 97 | 1.449 | .151 |
| 12 a | 103 | .013 | .989 |
| 12 b | 100 | -.538 | .592 |
| 13 a | 102 | 4.022 | $.000^{* * *}$ |
| 13 b | 101 | 3.998 | $.000^{* * *}$ |
| 14 | 103 | 1.010 | .315 |
| 15 a | 100 | -2.087 | $.039^{* *}$ |
| 15 b | 101 | -1.785 | $.077^{*}$ |
| 16 |  | 101 | 1.717 |

*Significant at the .1 level, ** Significant at the .05 level, *** Significant at the .01 level

| Table 5: T-Test Juniors compared to Faculty |  |  |  |
| :---: | :---: | :---: | :---: |
|  | Df | F | Sig |
| 1 a | 127 | a | a |
| 1 b | 120 | .428 | .669 |
| 2 | 125 | 1.557 | .122 |
| 3 | 123 | 3.763 | $.000^{* * *}$ |
| 4 a | 120 | -2.533 | $.013^{* *}$ |
| 4 b | 121 | -2.154 | $.033^{* *}$ |
| 5 | 123 | 1.377 | .171 |
| 6 | 127 | a | a |
| 7 a | 122 | 2.834 | $.005^{* * *}$ |
| 7 b | 121 | 2.950 | $.004^{* * *}$ |
| 8 | 125 | 1.715 | $.089^{* *}$ |
| 9 | 125 | 2.988 | $.003^{* * *}$ |
| 10 | 125 | .323 | .747 |
| 11 a | 118 | 2.194 | $.030^{* *}$ |
| 11 b | 116 | 2.035 | $.044^{* *}$ |
| 12 a | 124 | .308 | .759 |
| 12 b | 119 | -.667 | .506 |
| 13 a | 123 | 4.423 | $.000^{* * *}$ |


| 13 b | 121 | 3.902 | $.000^{* * *}$ |
| :---: | :---: | :---: | :---: |
| 14 | 123 | 1.506 | .135 |
| 15 a | 123 | -.715 | .476 |
| 15 b | 122 | -1.000 | .319 |
| 16 | 122 | 3.877 | $.000^{* * *}$ |

* Significant at the .1 level, ** Significant at the .05 level, *** Significant at the .01 level a: exact same mean between the two groups

Table 6: T-Test Seniors compared to Faculty

| Table 6: T-Test Seniors compared to Faculty |  |  |  |
| :---: | :---: | :---: | :---: |
|  | Df | t | Sig |
| 1 a | 107 | .991 | .324 |
| 1 b | 102 | .411 | .682 |
| 2 | 107 | -.013 | .990 |
| 3 | 103 | 3.587 | $.001^{* * *}$ |
| 4 a | 104 | -3.243 | $.002^{* * *}$ |
| 4 b | 104 | -2.611 | $.010^{* * *}$ |
| 5 | 107 | 1.443 | .152 |
| 6 | 107 | 1.414 | .160 |
| 7 a | 104 | 2.776 | $.007^{* * *}$ |
| 7 b | 104 | 2.093 | $.039^{* *}$ |
| 8 | 107 | .812 | .419 |
| 9 | 106 | .835 | .406 |
| 10 | 107 | .565 | .573 |
| 11 a | 98 | 2.332 | $.022^{* *}$ |
| 11 b | 98 | 2.332 | $.022^{* *}$ |
| 12 a | 106 | .977 | .331 |
| 12 b | 103 | -.150 | .881 |
| 13 a | 105 | 1.878 | $.063^{*}$ |
| 13 b | 104 | 2.860 | $.005^{* * *}$ |
| 14 | 106 | .981 | .329 |
| 15 a | 104 | -1.118 | .266 |
| 15 b | 104 | -1.948 | $.054^{*}$ |
| 16 | 102 | 2.236 | $.028^{* *}$ |

* Significant at the .1 level, ** Significant at the .05 level, *** Significant at the .01 level a: exact same mean between the two groups

| Table 7: Summary of findings |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: |
|  | Students | Freshmen | Sophomores | Juniors | Seniors |
| 1 a |  | $*$ |  |  |  |
| 1 b |  |  | $*$ |  |  |
| 2 |  |  |  |  |  |
| 3 | $* * *$ | $* * *$ | $* * *$ | $* * *$ | $* *$ |
| 4 a | $* * *$ | $* * *$ | $* * *$ | $* *$ | $* * *$ |
| 4 b | $* * *$ | $* *$ | $* * *$ | $* * *$ |  |
| 5 | $*$ | $* *$ |  |  |  |
| 6 |  |  | $* * *$ |  | $* * *$ |
| 7 a | $* * *$ | $* * *$ | $* *$ | $* *$ | $* *$ |
| 7 b |  |  |  | $* *$ | $* *$ |
| 8 |  |  |  |  |  |


| 9 | ** | ** | ** | *** |  |
| :---: | :---: | :---: | :---: | :---: | :---: |
| 10 |  |  |  |  |  |
| 11a | *** | *** |  | ** | ** |
| 11b | *** | *** |  | ** | ** |
| 12a |  |  |  |  |  |
| 12b |  |  |  |  |  |
| 13 a | *** | *** | *** | *** | * |
| 13b | *** | *** | *** | *** | *** |
| 14 |  |  |  |  |  |
| 15a |  |  | ** |  |  |
| 15b | * | * | * |  | * |
| 16 | *** | *** | * | *** | ** |

*Significant at the .1 level, ** Significant at the .05 level, ${ }^{* * *}$ Significant at the .01 level

## Scenario analysis

Scenario 3: "While working on a take home test, John asks his friend William to double-check his math for a problem that is in the test. William doesn't find any errors."

The results for that scenario show a very different perception between the groups: a strong majority ( $72 \%$ ) of the students believed that John was not cheating while most of the faculty members ( $65.39 \%$ ) thought that John's action constituted academic dishonesty. That difference was found to be strongly significant with a p-value of 0.000 . Furthermore, that significant difference was established throughout the four classifications of students, each had a p-value of 0.000 except for the seniors who had a p-value of 0.001 . As far as percentage is concerned, freshmen were at $80.26 \%$, sophomore at $68.63 \%$, juniors at $67.12 \%$, and seniors at $67.92 \%$. The higher percentage from the freshmen compared to the three other groups may also indicate a possible difference between the freshmen and the higher classification. It may also be that being fresh out of high school, that they have a different attitude regarding collaborative work or that they exhibit some lack of confidence in their own ability and think that it is ok for them to have their work checked out while the other classifications have higher expectations.

Scenario 4:"Jane's calculator comes preloaded with mathematical formulas. John's calculator doesn't have some formulas in it. Both calculators are in an approved list by their professor. Before the test, John enters the missing formulas in his calculator. They both use some of the formulas during the test." (4a John, 4b Jane)

In this case, $78.8 \%$ of the students considered that John was not cheating, while an overwhelming majority of faculty members ( $96.4 \%$ ) believed that John was not cheating. As far as Jane is concerned, $17.1 \%$ of the students surveyed thought that Jane was cheating, and only 1 out of $52(2 \%)$ of the faculty said that she wasn't cheating. Once again, the difference in perception between the students and faculty was found to be strongly significant; for John (4a), the p-value was .001, and Jane's (4b) was .006. As far as the different classifications are concerned, the results showed some slight variations
between the groups. For John, freshmen, sophomores, and seniors had a strong significant difference with faculty as their respective p-value was $.008, .001$, and .002 . However, juniors had only a moderate significant difference (p-value of .013). For Jane, the classifications were split into two groups, freshmen and juniors were found to be moderately significant (p-value of .018 and .033 respectively) while sophomores and seniors were found to be strongly significant ( p -value of .004 and .010 ).

Scenario 4 a and 4 b also exhibit a particularity in their results: they are the only instances where students are tougher on themselves than faculty members. All other significant scenarios, students are less likely to believe that their actions constitute academic dishonesty than what faculty members think.

Scenario 5: "Jane is taking a test in a learning center by herself. She is stumped by one question and texts her friend Maria for help. Maria doesn't respond."

Our survey showed that $92.59 \%$ of the faculty members surveyed said that Jane was cheating, but only $81.81 \%$ of the students agreed that she was cheating. Even so both groups, in an overwhelming majority, agree that Jane is cheating; the variation between the two groups is slightly significant with a p-value of .052 . However, the analysis of the different classifications show a much different picture than the previous result may indicate. Indeed, only the freshmen exhibit a moderate significant difference with the faculty (p-value of .020), all other classifications are not significantly different. Specifically, 17 out of 75 ( $22.67 \%$ ) freshmen who responded to that question said that Jane's action was not cheating. In comparison, only 4 out of 54 ( $7.41 \%$ ) faculty members thought the same. Sophomores, juniors, and seniors are all very similar to one another and stand between the faculty and the freshmen percentage with respectively 9 out of 52 $(17.31 \%), 11$ out of $71(15.49 \%)$, and 9 out of $55(16.36 \%)$. Even if their numbers are much higher than the one from the faculty, their individual differences are not significant. However, as a group, it is not surprising to see that students have a slightly different, more lenient, perception about attempting to cheat compared to faculty.

Scenario 7: "While working on her take home test, Jane asks John if he found the same response for a given question. He didn't, she checks her math and finds an error, she corrects it and now her answer matches John's." (John 7a, Jane 7b)

In this case, $32.16 \%$ of the students believed than John had cheated and $45.10 \%$ said that Jane did too. As far as faculty members are concerned, $60.78 \%$ considered that John engaged in academic dishonesty, and $70.59 \%$ believed that Jane cheated. Scenario 7, like scenario 1, clearly shows a wide disagreement between the groups. Students believe that, in this particular situation, their peers do not engage in academic dishonesty while faculty members thought that John and Jane were cheating. The difference in perception is strongly significant for both John and Jane with a p-value of .000 and .001 . As far as John is concerned, the analysis of the student groups also revealed a strong significant difference for each group compared to faculty with a p-value of .000 for the freshmen, .010 for the sophomores, .005 for the juniors, and .007 for the seniors. Like in
scenario 1, freshmen had a higher percentage of respondents believing that John's action was not cheating ( $76.32 \%$ ). At the same time, sophomores had $64.70 \%$, juniors had $64.38 \%$, seniors had $65.45 \%$, and faculty had only $39.21 \%$ of their members thinking the same.

For Jane, the finer analysis showed the same strong significant difference for the freshmen, sophomores, and juniors with p-value of .002 , .007, and .004. However, seniors exhibited only a moderate significant difference ( p -value of .039). In this case, the three lower classifications had quite the same percentage of their rank believing that Jane did not cheat $(56.58 \%, 55.77 \%$, and $55.55 \%$ respectively) while seniors had a lower percentage ( $49.1 \%$ ) but still not as low as faculty ( $29.41 \%$ ).

Once again, we have a strong difference in perception of what is acceptable while taking a take-home exam between students and faculty. Like for scenario 1 , the points of view are opposed with one group thinking that the action (checking answer) is permissible while the other group believe the opposite.

Scenario 9: "While writing a paper for Dr. Shake Spears, Jane goes to the library and downloads a few papers to support her writing. After reading them, she cuts and pastes in her text some sections of what she has read and she cites only a few of her sources."

This plagiarism related question provided some interesting results. As a whole, the student body showed a moderate significant difference compared to faculty ( p -value of .012). As with scenario 5, both group showed a strong percentage believing that Jane cheated, $83 \%$ for the students and $96.3 \%$ for faculty, still that gap was found to be moderately significant. The sub-group analysis exposed some more differences between the classifications: freshmen and sophomores were found to be moderately significant (pvalue of .012 and .011 ), juniors were found to be strongly significant (p-value of .003 ), while seniors were not significantly different than faculty. Percentage wise, we found that $81.33 \%$ of the freshmen, $82.35 \%$ of the sophomores, $78.08 \%$ of the juniors, and $92.59 \%$ of the seniors agreed that Jane cheated. All student classifications are still lower than the $96.3 \%$ of the faculty but the result seems to indicate that the concept of plagiarism is finally comprehended by the seniors.

Scenario 11: "John and Jane are in the same class, Professor Absent Minded gives a take home exam for the class. John and Jane work together on the exam." (John 11a, Jane 11b)

That third scenario focusing on a take home exam yielded a strong significant finding for both John and Jane with p-value of .007 and .009 . Overall, $53.14 \%$ of the students though that John was not cheating when he decided to collaborate with Jane. However, $68.08 \%$ of the faculty indicated that they believed that John did engage in academic dishonesty. Regarding Jane, the numbers were very similar to the one John's case received: $53.17 \%$ of the students said that Jane was not cheating, and the same $68.08 \%$ of faculty disagreed with that statement. When we analyzed the results from the
different classifications, the exact same pattern of result emerged. Freshmen were found to have a strong significant difference with a p-value of .005 for both 11 a and 11 b , they also had the same $57.89 \%$ of respondents thinking that John and Jane were not cheating when they worked together on the take home exam. Surprisingly, sophomores were found to be statistically not significant in both cases. Finally, juniors and seniors were found to be moderately significant (John's p-value were . 030 and .022 , Jane's .044 and .022 ). For John, $52.05 \%$ of juniors and $54.72 \%$ of seniors thought that he didn't cheat. For Jane, $50.70 \%$ of juniors and $54.72 \%$ of seniors thought the same.

Scenario 13: "John couldn't be here for a test and asked his professor if he could take it at a later time. Before taking his test, John discusses with Jane about what he really needs to review for the test." (John 13a, Jane 13b)

For that scenario, students and faculty alike found that John cheated; however, around half of the students ( $52.96 \%$ ) thought that he engaged in cheating behavior while a clear majority of the faculty members thought so ( $81.13 \%$ ). As far as Jane is concerned, the gap between the two groups was even wider, with this time the majority of students believing that Jane was not engaging in academic dishonesty. Indeed, students did not believe that she cheated ( $44.84 \%$ ) whereas faculty thought she did (80.77\%). In both cases, the difference between the two groups was found to be strongly significant (pvalue of .000). The analysis of the different student classifications showed one distinctive deviation between the groups. In John's case (13a), freshmen, sophomores, and juniors were found to have a strong statistical difference with each a p-value of .000 . However, seniors exhibited only a marginal statistical difference with a p-value of .063 . Overall, we had $57.89 \%$ of freshmen, $47.06 \%$ of sophomores, $52.11 \%$ of juniors, and $27.78 \%$ of seniors thinking that John didn't cheat; in comparison, only $18.87 \%$ of faculty would agree to that account. As far as Jane is concerned, all classifications were found to be strongly significant with p-value of $.000, .000, .000$, and .005 . In her case, $64.47 \%$ of freshmen, $54.90 \%$ of sophomores, $52.11 \%$ of juniors, and $44.44 \%$ of seniors believed that Jane did not cheat while merely $19.23 \%$ of faculty thought the same.

Scenario 15: "Professor Absent Minded likes to use listing questions in his test (i.e. list the Marketing four Ps). John knows that and writes possible questions and answers on paper to help in his review. Jane asks John if she can use his review notes." (John 15a, Jane 15b)

This scenario yielded some interesting finding. Both students and faculty agree that in this case no cheating occurred, $88.93 \%$ of the students and $96.15 \%$ of faculty thought that John did not engaged in academic dishonesty. Furthermore, that dissimilarity between the groups was not found to be significant, except for the sophomores who had a moderate significant difference ( $84 \%$ vs. $96.15 \%$ ). As far as Jane is concerned, the verdict is slightly different. In her case, the disagreement between the groups was found to be marginally significant (p-value of .076). $88.14 \%$ of students and $96.15 \%$ of faculty believed that Jane did nothing wrong, but that slight difference compare to John made it
significant. Additionally, freshmen, sophomores and seniors were found to be marginally significant (p-value of $.077, .077$, and .054 respectively), but juniors were not significant. Percentage wise, we found that $86.84 \%$ of freshmen, $86.27 \%$ of sophomores, $91.67 \%$ of juniors, and $85.18 \%$ of seniors indicated that Jane did not cheat.

Scenario 16: "Jane's calculator, which is approved by her mathematics professor, comes preloaded with mathematical formulas. Before a test, Jane entered more formulas in her calculator. Jane didn't use any of the extra formulas during the test."

In this final scenario, students strongly felt that Jane was not cheating ( $79.92 \%$ ). However, faculty members' point of view was very different: $45.10 \%$ of them considered that Jane's action would constitute academic dishonesty. Overall, the difference in opinion between the two groups is strongly significant (p-value of .000 ). As far as the different classifications of students are concerned, we found a wide variation between them. Freshmen and juniors were found to be strongly significant (p-value of .001 and .000 ) and had $82.89 \%$ and $84.93 \%$ of their rank thinking that Jane did not cheat. Sophomores were marginally significant (p-value of .089) and had $71.15 \%$ believing that Jane's action was proper. Finally, seniors were moderately significant (p-value of .028) and had $75.47 \%$ of their member agreeing to the same line of thought.

## DISCUSSION

As the scenario analysis above revealed, several differences in opinion were found between faculty and students. These differences of opinion can be clustered in four categories: Take home, attempt to cheat, getting help, and plagiarism. Moreover, some conclusions can be developed about faculty and freshmen.

First, the outcome of scenario 3, 7, and 11 clearly indicate that students and faculty have very different ideas about what actions are proper while taking a take-home exam. Indeed, faculty members seem to think that take-home exams are to be done individually, while students believe that it is perfectly fine to ask someone for some help to verify their own work, check with their classmates that they found the same results, or even collaborate with a fellow student on the test. One could wonder if students in that instance are trying to cheat or if it simply shows a lack of self-confidence? Nevertheless, the results strongly suggest that it would be a good idea for faculty members to be especially clear about what is acceptable for their students to do when giving them a take-home exam.

The second finding relates to the attempt to cheat. It seems that students believe that trying to cheat, but not succeeding, is not engaging in academic dishonesty. As scenario 5 and 16 showed, a student that tried to cheat but either didn't received the help he or she wanted or did not used the unauthorized material he or she brought to the test is not considered by his or her peers to be cheating, whereas faculty would consider such action academic dishonesty. As a result, we would strongly recommend that faculty members need to specifically mention to their students that the academic dishonesty line is crossed at the attempting stage, not at the realization stage; that an attempt to cheat is sufficient to classify a student as a cheater.

The third conclusion can be drawn from the analysis of scenario 4, 13, and 15. In each case, a student was trying to get a little bit of help, either to gain an edge to enhance their results or to level the playing field. That kind of attitude seems to be frowned upon, especially if the information sought is directly related to test material (scenario 13). However, if it is helping to learn that is sought for, then as far as faculty is concerned, it is not an issue, even if students seems to think that it is an unfair advantage.

The fourth finding relates to plagiarism. The results show that even if plagiarism is an important part of how students engage in academic dishonesty it seems that the issue is getting less and less of a problem as students advance in rank. This leads us to believe that this kind of cheating may not be as intentional as most research implies; and that if faculty explain what constitutes plagiarism, then the number of plagiarism instances might decrease very rapidly.

An additional finding from our research is in the agreement level, or lack thereof, that faculty members exhibited in our sample. Out of the 9 significant scenarios, only 5 showed a high consistency in the faculty ranks. Scenario $4,5,9,13$, and 15 all had faculty agreeing over $80 \%$ that the action referred to was unacceptable. All other scenarios had faculty relatively split $50 / 50$ on whether or not the action described was cheating or not. If faculty members do not agree among themselves, what can be expected from their students? It has to create some confusion for students when one professor deems an action acceptable, while another professor would treat that same action as unacceptable.

Another conclusion that can be reached is about freshmen. Most of the scenarios analysis showed that freshmen had usually a larger disagreement with faculty on what constitute cheating than the rest of their peers. Based on that result, we believe that there is a need to educate our incoming first year students in regards to what is academically permissible.

Finally, we also discovered that we may need to update our definition of academic dishonesty. We used Lambert's et al. (2003), which states that academic dishonesty is breached by any kind of unauthorized action that would result in a higher/undeserved grade for the student. However, in two cases, faculty expressed that a student helping a classmate would be considered to be engaging in academic dishonesty, even if that student would not gain any grade advantage (scenario 7 and 13). As a consequence, we would put forward the following definition: "A student engages in academic dishonesty when that student tries to enhance his or her grade by any unauthorized mean or helps another student in doing so".

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APPENDIX A

## Questionnaire

John and Jane are two imaginary college students. Here are 16 different situations, please tell us if you think that any of these constitutes cheating. Once completed, return the questionnaire to the envelop provided, the last respondent will seal the envelop. To ensure anonymity, please do not write your name on the questionnaire. Participation is
voluntary, if you do not want to participate or have done so in another class, return your questionnaire blank.

1) John is taking a test in class, while professor Absent Minded is not looking; John asks his friend Jane if "C" is the correct answer for question \#2. Jane nods.
a) John is cheating
Yes $\square$ No $\square$
b) Jane is cheating
Yes $\square$
No $\square$
2) While writing a paper for Dr. Shake Spears, Jane goes to the library and downloads a few papers to support her writing. After reading them, she cuts and pastes in her text some sections of what she has read and she doesn't cite her sources.
Jane is cheating $\quad$ Yes $\square \quad$ No $\square$
3) While working on a take home test, John asks his friend William to double-check his math for a problem that is in the test. William doesn't find any error. John is cheating $\quad$ Yes $\square \quad$ No $\square$
4) Jane's calculator comes preloaded with mathematical formulas. John's calculator doesn't have some formulas in it. Both calculators are in an approved list by their professor. Before the test, John enters the missing formulas in his calculator. They both use some of the formulas during the test.
a) John is cheating
Yes $\square$ No $\square$
No $\square$
5) Jane is taking a test in a learning center by herself. She is stumped by one question and texts her friend Maria for help. Maria doesn't respond.
Jane is cheating $\quad$ Yes $\square \quad$ No $\square$
6) John is taking a test in class, while professor Absent Minded is not looking; John looks at his notes in his cell phone and finds that the answer for question 3 is " $D$ ".
John is cheating $\quad$ Yes $\square \quad$ No $\square$
7) While working on her take home test, Jane asks John if he found the same response for a given question. He didn't, she checks her math and finds an error, she corrects it and now her answer matches John's.
a) John is cheating
b) Jane is cheating

No $\square$
8) John is taking a test in class, while professor Absent Minded is not looking; John looks at his notes in his cell phone, but does not find the answer he was looking for. John is cheating $\square$ No $\square$
9) While writing a paper for Dr. Shake Spears, Jane goes to the library and downloads a few papers to support her writing. After reading them, she cuts and pastes in her text some sections of what she has read and she cites only a few of her sources.
Jane is cheating
Yes $\square$
No $\square$
10) Jane is taking a test in a learning center by herself. She is stumped by one question and texts her friend Maria for help. Maria responds with an incorrect answer.
Jane is cheating
Yes $\square$
No $\square$
11) John and Jane are in the same class, Professor Absent Minded gives a take home exam for the class. John and Jane work together on the exam.
a) John is cheating
b) Jane is cheating

No $\square$
No $\square$
12) John is taking a test in class, while professor Absent Minded is not looking, John looks at his friend Jane's test and see that she answered " C " for question \#5.
a) John is cheating
b) Jane is cheating
Yes

No $\square$
Yes $\square$
No $\square$
13) John couldn't be here for a test and asked his professor if he could take it at a later time. Before taking his test, John discusses with Jane about what he really needs to review for the test.
a) John is cheating
b) Jane is cheating

No $\square$
No $\square$
14) Jane is taking a test in a learning center by herself. She is stumped by one question and texts her friend Maria for help. Maria responds with the correct answer. Jane is cheating $\quad$ Yes $\square \quad$ No $\square$
15) Professor Absent Minded likes to use listing questions in his test (i.e. list the Marketing four Ps). John knows that and writes possible questions and answers on paper to help in his review. Jane asks John if she can use his review notes.
a) John is cheating
b) Jane is cheating
Yes $\square$
No $\square$
No $\square$
16) Jane's calculator, which is approved by her mathematics professor, comes preloaded with mathematical formulas. Before a test, Jane entered more formulas in her calculator. Jane didn't use any of the extra formulas during the test.

$$
\text { Jane is cheating } \quad \text { Yes } \square \quad \text { No } \square
$$

17) What is your classification?

Freshman $\square \quad$ Sophomore $\square \quad$ Junior $\square \quad$ Senior $\square \quad$ Faculty $\square$
18) What is your major?
19) Would you consider yourself a religious person?

Not at all $\square \quad$ a little $\square \quad$ very much $\square$ very strongly so $\square$
20) Have you ever seen someone cheating in College/University?

Yes $\square \quad$ No $\square$

If Yes, please list which of the previously described situation(s) you have seen.
$\qquad$ 1 $\square$ $2 \square 3$ $\square$ $\square$ $5 \square$ $6 \square$ $7 \square 8$ $8 \square 9$ $\square$ $\square 10 \square 11$ 12 $\square 13 \square$ $14 \square 15$ $15 \square$ 16
21) Have you ever cheated in College/University?

Yes $\square$
No $\square$
If Yes, please list which of the previously described situation(s) you have done (all answers will be kept confidential).
$\qquad$
$\square$ $5 \square 6$ $\qquad$ $\square 8$ $\square 9$ 9 $\square 10 \square 11$ $1 \square$ 12 $\square$ $13 \square$ $14 \square$ 15 16
22) If you have seen someone cheating, please tell us what you did about it?

Nothing... because I didn't know what to do $\square$
Nothing.... because it didn't matter to me $\square$
Talked to the cheater
Report it to the professor directly $\square$ indirectly/anonymously
Reported it to the school administration directly $\square$ indirectly/anonymously
23) On average how many times in a month do you attend religious activities (i.e. attending Church/Temple, confession, or other rites)?
$0 \square 1 \square 2 \square 3 \square 4 \square 5 \square 6 \square 7$ or more $\square$


[^0]:    * Significant at the .1 level, ** Significant at the .05 level, *** Significant at the .01 level
    a: exact same mean between the two groups

