

Academic integrity on college campuses

Dr. Steve Williams
College of Business, University of Arkansas – Fort Smith
Steve.williams@uafs.edu

Dr. Margaret Tanner
College of Business, University of Arkansas – Fort Smith
Margaret.tanner@uafs.edu

Dr. Jim Beard
College of Business, University of Arkansas – Fort Smith
Jim.beard@uafs.edu

Dr. Georgia Hale
College of Applied Science & Technology, University of Arkansas – Fort Smith
Georgia.hale@uafs.edu

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Abstract

A survey of 46 faculty members and 562 undergraduates at a medium-sized Midwestern regional university in May 2011 found that 74% of faculty members believed academic misconduct had recently occurred in their classes; 18% of faculty members have ignored suspected incidents of cheating; and of those faculty members suspecting cheating within their classes, only 18% have reported it to others on campus. Undergraduate students believed all forms of academic misconduct were significantly less serious than faculty members. For undergraduates, 67% admit to academic misconduct in the past year, a percentage that parallels McCabe's (2005) finding that an average of 70% of US undergraduate students admitted to recent academic misconduct. Over 28% of undergraduates admit to having engaged in more serious forms of clearly intentional academic misconduct such as cheating during the past year, and students who have engaged in any academic misconduct are more likely to have engaged in several types of academic misconduct. Those students who admit to having cheated view cheating as being significantly less serious than those who have not cheated. Recommendations for addressing academic integrity issues on campus are offered.

Introduction

Both current research and recent internet headlines such as “Cheating rampant on college campuses, survey reveals” (CNSNews.com, May 25, 2007), “Expert: College cheating on the rise” (WARL.com, October 25, 2010), and “UCF probes cheating scandal involving hundreds” (Zaragoza, Orlando Sentinel, November 8, 2010) indicate that college cheating is widespread and increasing. Academic dishonesty is critical for universities because research indicates that those who cheat in college are more likely to cheat on the job (Swift & Nonis, 1998). This mounting apprehension has transferred to the corporate sector with ongoing public outcries of ethical problems in the workplace.

Recently, the Josephson Institute surveyed a national sample of 43,000 high school students and found rampant cheating. According to the study, “a majority of students (59 percent) admitted cheating on a test during the last year, with 34 percent doing it more than two times. One in three admitted they used the Internet to plagiarize an assignment” (Jarc, 2010, p. 1). This pandemic continues at the college level where more than half of all students surveyed acknowledge at least one incident of serious cheating in the past academic year, and more than two-thirds admit to one or more “questionable” behaviours – e.g., collaborating on assignments when specifically asked for individual work (McCabe & Pavela, 2005). Referring to the current crop of Millennial college students as “Generation Me,” Twenge observes that “in an increasingly competitive world, the temptation to cheat will be ever stronger” for teens and young adults, who are now “resigned to cheating among their peers” (2006, pp. 27–28). Estimations vary, but studies report that from 40% to 90% of undergraduates cheat (Davis & Ludvigson, 1995; Hard, Conway, & Moran, 2006; Klein, Levenburg, McKendall, & Mothersell, 2007; Rettinger, Jordan, & Peschiera, 2004; Stephens, Young, & Calabrese, 2007; Vandehey, Diekhoff, & LaBeff, 2007).

A wide range of factors have been found to result in lapses in academic integrity. The most commonly cited justifications of cheating behaviour given by students include: time pressure to finish assignments, the perceived benefits of cheating, a lack of knowledge about course material and proper approaches to source citation, an overall culture that does not view cheating as a serious issue, lack of preparation, lack of motivation, grade pressure, a professor who deserved it, and material that is too hard (Harding, Carpenter, Finelli, & Passow, 2004). Student justifications for cheating also include fear of failure, difficulty level, work tedium, and upcoming deadlines (Szabo & Underwood, 2004). In addition to individual characteristics, contextual factors such as national culture have been found to influence student cheating behaviour (Holmes, 2004; Sutherland-Smith, 2005) since some actions considered to be instances of academic dishonesty in one culture may be accepted or even encouraged in other cultures. For example, Lin and Wen (2007) report that 62% of Taiwanese students admit to academic dishonesty, but Taiwanese students also claim that cheating is much more culturally acceptable, tolerated, and even supported in Asian countries. Another commonly discussed moderating factor explaining the heightened frequency of academic dishonesty is that plagiarising and similar research-related misconduct behaviours by students are often unintentional and might be due to a lack of knowledge or a lack of familiarity with the proper citation process (Overbey & Guling, 1999; Sutherland-Smith, 2005).

One tactic taken by an increasing number of universities to address academic integrity worries is the implementation of an institution-wide honour code. An honour code has been defined as a code of academic conduct that includes a written pledge of honesty that students sign, a student-controlled judiciary that hears alleged violations, unproctored examinations, and an obligation for all students to help enforce the code (McCabe & Trevino, 1996). McCabe (2005; McCabe & Pavela, 2005) surveyed over 12,000 students on 48 campuses and reported that campuses with honour codes have up to 50% less cheating on tests and one-quarter to one-third less

cheating on written assignments than campuses without an honour code. Some scholars, however, suggest improvements are more likely a result of the accompanying discussions, improvements in campus culture, and initiatives to promote academic integrity that surround the installation of an honour code programme (McCabe, Trevino, & Butterfield, 1999). Nonetheless, McCabe and Pavela (2005) indicate that only 23% of students at colleges with traditional honour codes reported one or more incidents of serious test or exam cheating in the past year, contrasted with 45% of students at colleges with no honour code.

To combat rising academic misconduct concerns, some universities turn to technology (e.g., turnitin.com, etc.) to monitor student work by using web-based software to compare assignments and to assist in the determination of plagiarism. Universities have also increased the amount of training provided to both faculty members and students through academic integration, stand-alone modules, or web-based tutorials. For example, a number of universities have joined the International Center for Academic Integrity which provides specific information on academic integrity projects, research, and a list-serve for members to exchange ideas and information. Additionally, many universities are striving to incorporate modifications within the classroom to help address concerns for increasing academic cheating. For example, McCabe, Butterfield, and Trevino (2006) indicate that increasing numbers of faculty members are creating multiple versions of exams, banning cell phones or other technology from the classroom during an exam, demonstrating technology used to catch plagiarism to inhibit students from cheating, reinforcing academic integrity issues by addressing acceptable collaboration or other integrity concerns on every assignment, considering how student grades influence the likelihood of cheating, consistently taking action when cheating occurs, and working with the institution toward developing an ethical academic integrity culture.

Methodology

This study was designed to answer the following academic integrity research questions at a Midwestern regional university:

- What is the frequency of academic misconduct?
- Are there differences in the perceived seriousness of different types of academic misconduct between students and faculty members?
- Which forms of academic misconduct are more likely to occur?
- What are faculty member perceptions of academic integrity and how is it currently handled?

As the above literature review indicates, academic integrity has been investigated at several other universities. This research project was undertaken as an exploratory study to determine perceptions of the frequency of, and attitudes toward, academic dishonesty at a Midwestern regional university. This university has no institutional honour code but does have an established student code of conduct which is accessible to students on the University's webpage and is distributed as part of the student handbook during new student orientations. This code spells out inappropriate student behaviour, including issues of academic dishonesty as well as possible outcomes of such behaviour. At this institution, issues of plagiarism are covered extensively in all freshman composition classes and other types of academic dishonesty are addressed by individual faculty members within the context of their particular classes. While no specific, high-profile cases of cheating on campus

motivated this study, faculty members have expressed increasing frustration toward the current cohort of students, especially in relation to their lack of understanding or compliance with the need for individual accountability in work submitted for grading. Others have also expressed concern about Millennial students and their attitudes toward cheating, academic misconduct, and inappropriate collaboration (Howe & Strauss, 2007).

The administration of a Midwestern university's business school initiated a survey to explore these concerns. Survey responses were collected primarily from faculty members and students at the College of Business and the College of Applied Science and Technology, with 12% of responses from students in other colleges on campus. The academic integrity survey was administered to a large number of undergraduates in May 2011 resulting in 562 useable responses: 348 (62%) from business, 149 (27%) from applied science, and 65 (12%) from the remaining colleges – this sample represents 8% of the total 2011 spring enrollment of 7,054 students. Twenty-one business faculty members (62% of all full- and part-time faculty members) and 25 applied science faculty members (45% of all full- and part-time faculty members) completed the faculty version of the questionnaire.

The surveys were adapted from Broeckelman-Post's dissertation, which was based upon McCabe's (2003) work at Kansas State and other universities. The surveys for both students and faculty members consisted of groups of similar questions, as well as measures of the Patterns of Adaptive Learning Scale (Midgley, Maehr, Hruda, Anderman, Anderman, Freeman, Gheen, Kaplan, Kumar, Middleton, Nelson, Roeser & Urdan, 2000), which was included in an attempt to identify individual student characteristics that might be able to predict academic dishonesty. Questionnaires were intended to determine the frequency of academic dishonesty behaviours and to develop a baseline of cheating perceptions and attitudes.

1. *What is the frequency of academic misconduct?*

Self-reported results indicate that 67% of undergraduate respondents admit to some form of academic misconduct in the past year. McCabe (2005) has reported that an average of 70% of undergraduate students admitted to academic misconduct when a similar survey was collected on 60 American campuses. In this sample, two-thirds of students admit to recent academic misconduct, a finding that has been consistently reported on campuses across the nation since the 1990s.

1. *Are there differences in the perceived seriousness of different types of academic misconduct between students and faculty members?*

Students and faculty members were asked the extent to which the behaviours listed (see Table 1) were serious forms of cheating using a five-point scale ranging from 1= not at all, 2 = to some extent, 3 = moderately, 4 = to a great extent, and 5 = extremely serious cheating. As shown in Table 1, means for all items, except "Copying few sentences from written source w/o citing" and "Copying a few sentences of material from an Internet source without footnoting them in a paper," were lower for undergraduates than for faculty members. As the listed significance levels indicate, student respondents believe most academic misconduct behaviours are significantly less serious than do faculty respondents.

Table 1:

Perceptions of seriousness of cheating behaviour means for students and faculty members

| | Students | Faculty | Difference |
|---|----------|---------|------------|
| Turning in work done by someone else. | 4.09 | 4.44 | .35** |
| Working on an individual assignment with others. | 2.62 | 3.02 | .40** |
| Receiving unpermitted help on an assignment. | 3.03 | 3.75 | .72*** |
| Writing or providing a paper for another student. | 4.26 | 4.58 | .32* |
| Providing a graded assignment to another student to submit. | 4.24 | 4.53 | .29* |
| Sharing an assignment with other to use as an example. | 2.83 | 3.07 | .24 |
| Getting questions/answers from someone who has taken test. | 3.80 | 4.22 | .42** |
| Copying a friend's computer program. | 3.73 | 4.26 | .53*** |
| Helping someone else cheat on a test. | 4.37 | 4.62 | .25* |
| Fabricating/falsifying a bibliography. | 4.09 | 4.36 | .27 |
| Falsifying/fabricating research data. | 4.14 | 4.51 | .37** |
| Copying on test from another without their knowledge. | 4.40 | 4.69 | .29* |
| Copying on test from another with their knowledge. | 4.42 | 4.68 | .26* |
| Copying few sentences from written source w/o citing. | 3.71 | 3.68 | -.03 |
| Turning in a paper obtained in large part from a term paper "mill" or website that did not charge for this information. | 4.30 | 4.47 | .17 |
| Copying a few sentences of material from an Internet source without footnoting them in a paper. | 3.62 | 3.40 | -.22 |
| Using unpermitted crib notes (cheat notes) during a test. | 4.30 | 4.51 | .21 |
| Copying material word for word from a written source. | 4.19 | 4.38 | .19 |
| Altering a graded test and submitting it for additional credit. | 4.40 | 4.60 | .20 |
| Turning in a paper copied from another student. | 4.44 | 4.67 | .23 |
| Using a false excuse to obtain an extension on a due date. | 3.61 | 3.96 | .35* |
| Hiding library or course materials. | 3.74 | 3.83 | .09 |
| Damaging library or course materials. | 3.71 | 3.90 | .19 |
| Cheating on a test in another way. | 4.25 | 4.51 | .26 |
| Cheating on a written assignment in another way. | 4.16 | 4.42 | .26 |
| Plagiarising myself by turning in a paper completed for another course. | 3.45 | 3.70 | .25 |

***Significant at the 0.1 level, ** significant at the 0.05 level, *** significant at the 0.01 level**

3. Which forms of academic misconduct are more likely to occur?

To determine if student respondents viewed the listed range of academic integrity behaviours differentially and to determine the extent to which they engaged in ranges of behaviours differentially, an exploratory factor analysis was performed on the seriousness of behaviours scale using principal axis factoring with Varimax rotation. Bartlett's test of sphericity indicated the items met assumptions necessary for factor analysis ($\chi^2 = 15172.08$ (325), $p < 0.0001$) and eigenvalue scores indicated three retainable factors. The rotated factor matrix specified one item (getting questions and answers from someone who has taken a test) should not be retained since it did not meet the 60/40 factor analysis retention criterion. Using the same 60/40 retention criterion, one item (copying a friend's computer program) did not exceed the 0.60 loading on its primary factor, but it was retained since its secondary loadings were less than 0.40. Table 2 lists the items and loadings for all factors. The three factors combined to account for 72.33% of the total variance. Factor 1, which was labelled *Cheating*, exhibited a Cronbach alpha of .98, Factor 2, labelled as *Research Misconduct*, exhibited a Cronbach alpha of 0.90; and Factor 3, labelled as *Collaboration Misconduct*, exhibited a Cronbach alpha of 0.80. Factor analysis results indicate that academic misconduct behaviours are perceived differentially by undergraduate students and can be classified into cheating (i.e., behaviors which have traditionally been considered deliberate, blatant, or intentional academic dishonesty), research misconduct (i.e., behaviours associated specifically with research, some of which may include unintentional cheating), and collaboration misconduct behaviours (i.e., behaviour related to teamwork or working with others to complete assignments that are often encouraged by teachers as a regular pedagogical practice).

Table 2:
Factors for the cheating seriousness scales

| Items | Factors | 1 | 2 | 3 |
|---|---------|-------------|------|------|
| Copying on test from another with their knowledge. | | <u>0.88</u> | 0.24 | 0.18 |
| Turning in a paper copied from another student. | | <u>0.87</u> | 0.29 | 0.10 |
| Helping someone else cheat on a test. | | <u>0.84</u> | 0.29 | 0.16 |
| Using unpermitted crib notes during a test. | | <u>0.82</u> | 0.35 | 0.14 |
| Writing or providing a paper for another student. | | <u>0.82</u> | 0.25 | 0.25 |
| Providing a graded assignment to another student to submit. | | <u>0.81</u> | 0.21 | 0.27 |
| Altering a graded test and submitting it for additional credit. | | <u>0.80</u> | 0.35 | 0.07 |
| Turning in a paper from a term paper mill or website. | | <u>0.75</u> | 0.39 | 0.11 |
| Cheating on a test in another way. | | <u>0.74</u> | 0.46 | 0.17 |
| Turning in work done by somebody else. | | <u>0.73</u> | 0.23 | 0.33 |
| Copying material word for word from written source. | | <u>0.67</u> | 0.49 | 0.11 |
| Cheating on a written assignment in another way. | | <u>0.65</u> | 0.53 | 0.19 |

Table 2: Continued

| | | | |
|---|-------------|-------------|-------------|
| Falsifying/fabricating re- search data. | <u>0.64</u> | 0.58 | 0.13 |
| Falsifying/fabricating a bibli- ography. | <u>0.63</u> | 0.59 | 0.13 |
| Getting questions and an- swers from someone who has taken test. | <u>0.52</u> | 0.26 | 0.48 |
| Damaging library or course materials. | <u>0.28</u> | <u>0.73</u> | 0.15 |
| Hiding library or course ma- terials. | <u>0.39</u> | <u>0.72</u> | 0.21 |
| Plagiarizing myself with a paper for another course. | <u>0.16</u> | <u>0.67</u> | 0.26 |
| Copying a few sentences without footnoting. | <u>0.33</u> | <u>0.67</u> | 0.33 |
| Copying a few sentences without citing. | <u>0.37</u> | <u>0.66</u> | 0.33 |
| Using a false excuse to ob- tain a due-date extension. | <u>0.35</u> | <u>0.61</u> | 0.37 |
| Copying a friend's computer program. | <u>0.39</u> | <u>0.52</u> | 0.32 |
| Working on an individual as- signment with others. | <u>0.08</u> | 0.18 | <u>0.85</u> |
| Receiving unpermitted help on an assignment. | <u>0.28</u> | 0.24 | <u>0.78</u> |
| Sharing an assignment with others to use as an example | <u>0.07</u> | 0.36 | <u>0.70</u> |
| % of Variance | 38.88 | 21.45 | 12.00 |
| Chronbach's Alpha | 0.98 | 0.90 | 0.80 |

Note: Underlined factor coefficients indicate factor upon which the item loaded.

Factor Clustering

Factor 1: *Cheating*

Factor 2: *Research Misconduct*

Factor 3: *Collaboration Misconduct*

As Table 3 shows, 28% of students report engaging in serious and intentional academic misconduct behaviours (i.e., cheating). Additionally, 35% of respondents admit to research misconduct and 59% acknowledge they have engaged in collaboration misconduct. McCabe and Trevino (1996) reported that 83% of students do not view collaboration as serious cheating, a finding that is confirmed by the proportionally greater number of students who self-report collaborative behaviours compared to other forms of academic misconduct. Since collaboration and cooperation are increasingly the norm among Millennial college students (Howe & Strauss, 2007), some might argue that collaborative behaviours should not be included in the broader definition of cheating or academic misconduct.

Table 3:

Percentage of students who admitted to engaging in specific types of academic misconduct within the past year

| | % of Students |
|--------------------------|---------------|
| Cheating | 28 |
| Research Misconduct | 35 |
| Collaboration Misconduct | 59 |

Further analyses of the findings reported in Table 3 above indicate that students who have self-reported that they have engaged in academic misconduct are also more likely to have engaged in multiple forms of academic misconduct. The same students who admit to having cheated in the recent past are also significantly less likely to view cheating as seriously as those who do not self-report cheating behaviours.

4. *What are faculty member perceptions of academic integrity and how is it currently handled?*

When professors were asked whether they suspected cheating in their own classes, 74% of responding faculty members reported that they believe academic misconduct has recently occurred. Only 18% of faculty members have reported suspected cheating to others on campus, however, and another 18% admit that they have ignored suspected incidents of cheating. Research suggests that faculty members view some forms of academic misconduct, such as cheating on exams, as more serious than other forms of dishonesty, such as cheating on coursework (e.g., papers, homework, outside assignments, etc.); faculty members also believe the appropriate response (i.e., punishment or education) should be dependent upon how serious the faculty member believes the offense to be (Pincus & Schmelkin, 2003). Broeckelman-Post (2009) has suggested that faculty members might be hesitant to report suspected academic misconduct because they worry about losing control over academic dishonesty cases occurring within their classes. At the institution used in this study, survey responses indicate that the primary reasons given by faculty members as to why they sometimes ignore suspected cheating by students include the lack of clear evidence or proof that cheating has occurred, the suspected cheating is often perceived to be of a trivial nature that is not serious enough to report, and/or the belief that students will eventually receive suitable punishment for cheating indiscretions either with a lower course grade or some other appropriate outcome. Anecdotal evidence also suggests that faculty members may feel reluctant to report cheating at this campus due to a lack of clarity as to how much and the extent to which administrative support will be available. McCabe, Trevino, and Butterfield (1999) indicate that concerns of this nature are likely to increase when institutional policies are unclear and when an overall honour code system is not widely disseminated. As with other research (Broeckelman-Post, 2009; Pincus & Schmelkin, 2003), this study found that faculty members at the surveyed institution were reluctant to confront suspected student cheating. This may be a significant problem if student belief that faculty members are hesitant to report incidents of cheating results in an increase in inappropriate academic behaviour.

Further analysis using the three factors of cheating, research misconduct, and collaboration misconduct revealed that students viewed cheating and collaboration behaviours as significantly less serious forms of academic misconduct than did faculty members. Table 4 below shows that no significant differences existed between students and faculty members for the perceived seriousness of research misconduct,

but both cheating and collaboration are seen as significantly more serious forms of academic misconduct by faculty members than by students.

Table 4:

Perceived seriousness of cheating behaviours for students and faculty members

| | Students | Faculty | Difference |
|---------------------------------|-----------------|----------------|-------------------|
| Cheating | 4.25 | 4.51 | .26* |
| Research Misconduct | 3.63 | 3.66 | .03 |
| Collaboration Misconduct | 2.82 | 3.18 | .36* |

* *Significant at 0.05 level*

Recommendations

Broeckelman-Post (2009) has indicated that a principal element that is likely adding to heightened college-level academic dishonesty is the lack of training and/or understanding of existing practices. As with previous work, we believe that a primary reason for the increasing frequency of academic dishonesty on many university campuses is the lack of education provided to both faculty members and students. For example, if faculty members are unaware of 1) how prevalent academic dishonesty might actually be, 2) the creative methods and strategies used by students to cheat, 3) overall university cheating and academic dishonesty policies and practices, and 4) the importance of reporting and tracking academic dishonesty, they may not enforce the standards in an appropriate manner. If students are unaware of 1) the established standards of academic integrity (i.e., what actually constitutes cheating and academic misconduct), 2) the correct citation process for written and research assignments, 3) overall university cheating and academic policies and practices, and 4) the potential long-term and work-related effects of academic integrity misbehaviours, compliance with policies is likely to be low. Most of the suggestions listed below are intended to offer mechanisms for addressing this lack of information (McCabe, Trevino, & Butterfield, 1999).

Honour Code

To assist in the development of a culture of academic integrity across campus, our primary recommendation is to consider adopting a modified honour code similar to honour codes in use at a number of other public universities (e.g., Kansas State University, University of Georgia, etc.). The International Center for Academic Integrity's research shows that campus norms and practices, especially those codified as effective honour codes, can make a significant difference in student behaviours, attitudes, and beliefs. If a university decides to explore introducing an honour code system, it might be advantageous to work with a nearby mentoring institution that has already developed and implemented a similar system.

McCabe, Trevino, and Butterfield (1999, p. 213) define a traditional honour code as "a policy that includes one or more of the following elements: a written pledge in which students affirm that their work will be or has been done honestly; the majority of the judiciary that hears alleged violations of academic dishonesty is comprised of students, or the chair of this group is a student; unproctored examinations; and a clause that places some degree of obligation on students to report incidents of cheating they learn about or observe." Instead of a traditional honour code, several public universities (e.g., Kansas State University, University of Maryland at College Park, University of Tennessee, University of Georgia, etc.) have chosen to adopt a modified honour code (McCabe & Pavela, 2000). Modified honour codes vary among

universities, but most focus on two strategies: 1) the institution makes it clear that academic integrity is a major priority, and 2) “students are given a significant role both in the judicial or hearing body on campus and in developing programs to inform other students about the purposes of the code, its major components, enforcement strategies, and so forth” (McCabe, Trevino, & Butterfield, 2002, p. 363).

Whitley and Keith-Spiegel (2001, 2002) suggest that modified honour codes should 1) include a statement of why the university values academic integrity, 2) condemn dishonesty, 3) specify prohibited behaviour, 4) specifically explain the responsibilities of the students, faculty members, and administrators, 5) explain resolution procedures, and 6) specify penalties. Additionally, these authors recommend that the penalties should not be too harsh or lenient for the offense, and universities should consider adopting a policy in which an XF grade (which represents failure due to cheating) is assigned for the course but can be removed from the transcript if students meet certain criteria.

McCabe (2005, p. 10) emphasises that “while a campus honor code may have a significant impact on the peer culture, it is the peer culture itself (student perceptions of how faculty members and other students feel and behave with regard to academic integrity) that appears to be the most significant factor influencing the level of academic dishonesty.” One suggestion that might assist in developing a campus-wide culture of academic integrity would be to join the International Center for Academic Integrity, which provides guidelines and other relevant information on academic integrity issues.

Faculty members have distinctive views on academic dishonesty and generally view cheating on exams as a more serious infraction of ethics than cheating on coursework such as papers; they also believe the severity of punishment should depend upon the gravity of the offense (Pincus & Schmelkin, 2003). Research indicates that faculty members who are sceptical as to how administration will handle cheating are more likely to deal with cases of academic dishonesty personally rather than report incidents for institutional processing. On the other hand, faculty members at schools with honour codes are more likely to have faith in their school’s academic integrity system and are more likely to share responsibility for monitoring student academic behavior (McCabe, Butterfield, & Trevino, 2003).

Examples of honour codes and a list of member schools using the honour code system can be found at the International Center for Academic Integrity, George Washington University lists a 10-page Code of academic integrity, Gary Pavela (1997) provides a Model code of academic integrity, and the Fundamental values of academic integrity booklet can be downloaded from the International Center for Academic Integrity website.

Academic integrity module within a university first-year experience course

An academic integrity module embedded within a required first-year experience course taken by all students would likely be an effective mechanism for introducing academic integrity and plagiarism issues. Including academic integrity material in an introductory course would allow early exposure to concepts and allow students to discuss issues with peers and to open a dialog with faculty members allowing immediate responses to concerns students might express. McCabe and Trevino (1996, p. 30) suggest “students consistently indicate that when they feel part of a campus community, when they believe faculty members are committed to their courses, and when they are aware of the policies of their institution concerning academic integrity, they are less likely to cheat.” Examples of tying academic integrity issues into first-year experiences can be found at McGill’s First-Year Office website, and the University of Waterloo has an orientation to academic integrity for first-year students.

Educating students and faculty members about academic integrity

Bennett (2005), Overbey and Guiling (1999), Park (2003), and Sutherland-Smith (2005) pointed out that students often unintentionally plagiarise because they do not fully understand what “counts” as plagiarism or know how to properly document their sources. Students are less likely to cheat when there are clearly communicated expectations of moral and academic integrity (McCabe, Trevino, & Butterfield, 1999). Therefore, taking time to educate students about university-wide expectations of academic integrity and providing training in the proper source citation process could help prevent cheating and plagiarism by increasing student knowledge and by helping to develop a shared culture of academic integrity. Faculty members could use class time, especially early every semester, to reinforce academic integrity principles and concepts. For example, Indiana University offers a short quiz and concept lesson covering what plagiarism is at Indiana University. Other institutions provide online tutorials that cover important research skills, discuss the importance of research ethics, and demonstrate the citation process. For example, Georgetown University, Carnegie Mellon, and the University of Maryland all offer online access providing plagiarism and academic integrity information.

Since research shows that teaching strategies can influence student academic integrity (Whiteman & Gordon, 2001), providing instructor training in structuring assignments and exams would be helpful in raising awareness, generating ideas, and engendering support for building a culture of cheating intolerance across campus. Campus-wide instructor training could provide information about ways to detect and deter dishonest behaviour in the classroom and convey acceptable procedures to follow when professors believe a cheating incident has occurred. Faculty member training would also ensure that all members of the teaching community, including adjunct instructors, are aware of the established processes and practices on campus.

Classroom strategies for reducing academic dishonesty

McCabe, Butterfield, and Trevino (2006) suggest that faculty members can pursue numerous strategies within the classroom to minimise academic dishonesty, including clearly communicating expectations regarding cheating behaviour, establishing policies regarding appropriate conduct, and encouraging students to abide by those policies. McCabe and Pavela's (1997) list of ten suggested principles of academic integrity (see appendix) represents strategies that faculty members can employ to minimise cheating in their classrooms and has been included within the appendix. A number of web links have been developed offering strategies to assist faculty members in deterring cheating in their courses. The University of Idaho, Point Loma Nazarene University, and the University of California – Berkeley all list strategies aimed at reducing academic dishonesty among students. If faculty members make it a point of reinforcing academic integrity principles by utilising classroom strategies designed to minimise academic dishonesty throughout all of their courses every semester, cheating and other forms of academic misconduct can be greatly reduced throughout the institution (Stearns, 2001).

Limitations

The findings reported here are subject to limitations due to characteristics of the design and/or methodology used that could have potentially influenced the collection or interpretation of the results. As a study utilising data collected from a single institution, the reported findings may not be generalisable beyond the sample population. However, our findings do compare favorably with other reported research with greater external validity like McCabe's (2005) analysis involving 60 American

universities. Another limitation of this study is the use of self-reported data which are subject to bias due to misattribution and/or self-esteem beliefs. Socially undesirable behaviour such as academic misconduct would likely be under-reported, leading to attenuated results. Even if respondents under-reported their actual cheating behaviours due to misattribution or the self-serving bias, however, this study found meaningfully high levels of self-reported negative academic misconduct indicated by students. Finally, student cheating on campus may be affected by factors not addressed in this study. For example, some research has indicated that organisational justice perceptions may play a role in unethical campus behaviour (Greenberg, 1987, 1990). This study does not speak to those issues and, therefore, we cannot add additional insight with respect to perceptions of negative inequity. Matters of procedural and distributive justice would need to be addressed in a future study.

Conclusion

Based upon the findings presented above, we believe the following institutional strategies/practices should have a positive impact on the reduction of academic misconduct on college campuses:

- Promote a culture of academic integrity by developing and implementing a university-wide honour code that will heighten awareness and educate both faculty members and students about academic integrity issues.
- Educate students and faculty members about university expectations of acceptable academic practices, provide clear definitions and examples of unacceptable cheating behaviours, and highlight specific university policies and procedures to be employed in addressing violations of academic integrity.
- Offer embedded material in a required freshman-level course, possibly within a required first-year experience course.
- Develop classroom strategies to reinforce academic integrity expectations in all courses and assignments.

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About the authors

Dr. Steve Williams is Dean of the College of Business and Joel R. Stubblefield Endowed Chair of Business at the University of Arkansas – Fort Smith. He received his PhD from the University of Nebraska. He is author of the popular textbook, *Making better business decisions: Understanding and improving critical thinking and problem-solving skills*, as well as several dozen articles in prominent journals. His research interests include managerial risk behaviour, the effects of mood on decision-

making, creative problem-solving, and generational influences in education and the workplace.

Dr. Margaret Tanner is an Associate Professor of Accounting and Head of the Department of Accounting, Economics and Finance at the University of Arkansas – Fort Smith. She received her PhD in Accounting from the University of North Texas in 1992. She currently teaches Managerial Accounting, Government and Non-for-Profit Accounting, and Advanced Accounting courses. Her research interests include pedagogical issues, financial reporting, and curriculum development and assessment.

Dr. Jim Beard is an Associate Professor of Management and Department Head of the Department of Business Administration at the University of Arkansas – Fort Smith. He received his PhD in Communication Studies from Northwestern University in 1999. Dr. Beard currently teaches Business Communications, Social Responsibility and Ethics in Business, and Organisational Behavior courses. His research interests include business ethics and pedagogical issues and strategic human resource management.

Dr. Georgia Hale is Dean of the College of Applied Science and Technology at the University of Arkansas – Fort Smith. She received her PhD from Arizona State University. She is the co-author of three editions of the study guide for the Organisational Behavior textbook by Hellriegel & Slocum. Her research interests include women in non-traditional careers, pedagogical topics, and applications-based learning.

Appendix A

Ten Principles of Academic Integrity

(Donald L. McCabe and Gary Pavela, 2007)

1. Affirm the importance of academic integrity.
2. Foster a love of learning.
3. Treat students as ends in themselves.
4. Promote an environment of trust in the classroom.
5. Encourage student responsibility for academic integrity.
6. Clarify expectations for students.
7. Develop fair and relevant forms of assessment.
8. Reduce opportunities to engage in academic dishonesty.
9. Challenge academic dishonesty when it occurs.
10. Help define and support campus-wide academic integrity standards.