

Academic dishonesty among college students: Predictors and interventions

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Abstract

Academic dishonesty among college students for the most part manifests itself through several forms of cheating. This behavior poses a substantial threat to the academic integrity of institutions of higher learning, as well as to the proper development of students' academic skills, because it undermines the learning process. Nevertheless, it is a common phenomenon. What conditions lead to dishonest academic behavior among college students and what can be done to change it? In this review, factors that predict dishonest academic behavior and its maintenance are discussed. In addition, different interventions are described and evaluated.

Three categories of predictors have been identified: demographic, individual and contextual variables. The strongest predictors seem to be peer influence and the way academic dishonesty is emphasized by universities, so interventions should mainly be aimed at these factors. Nevertheless, all predictors can in some way be used in interventions to change academic dishonesty. Concerning interventions, honor codes have generally been found to be the most effective method of preventing cheating behavior. However, an honor code should be implemented under the right conditions. Furthermore, detection measures for cheating are effective in motivating students not to cheat when students are not intrinsically motivated. Both honor codes and detection measures can contribute to a culture of academic integrity.

Keywords: academic dishonesty, college students, predictors, interventions, honor code.

Introduction

There are numerous reasons why college students cheat. Kleiner and Lord (1999) reported on several cases: Melissa cheated because she didn't have enough time; Sam cheated because everyone else was doing it; some top students admitted cheating in order to be the best.

Several studies suggest that academic dishonesty among college students is a common phenomenon. For example, some researchers estimated that approximately 50-65 percent of college students engage in dishonest academic behavior (Haines, Kieffhoff, LaBeff & Clark, 1986; LaBeff, Clark, Haines, & Diekhoff, 1990; Davis, Grover, Becker & McGregor, 1992; McCabe, 1992, Pino & Smith, 2003). Others

report rates of 70 percent and more of dishonest academic behavior among students (Stern & Havlicek, 1986; Eskrigde & Ames, 1993; Genereux & Mcleod, 1995). Similarly, in a meta-analysis of 107 studies that were published between 1970 and 1996, the mean prevalence of dishonest academic behavior was found to be 70 percent (Whitley, 1998). In addition, an increase in dishonest academic behavior among college students over the last decades has frequently been reported (VandeHey, Diekhoff & LaBeff, 2007; Murdock, Hale & Weber, 2001).

What exactly is dishonest academic behavior among college students? According to some researchers, it involves giving or receiving unauthorized assistance on

academic tasks, or being credited for others' work (Kibler, Nuss, Paterson & Pavela, 1988). This description, however, is not sufficient to capture the concept of academic dishonesty. In his literature review, Kibler (1993) identified the absence of a generally accepted definition of academic dishonesty as a pervasive problem. According to Pavela (1978), academic dishonesty contains four broad areas: students can cheat by using materials that are not authorized; they can fabricate information, results and references; students can engage in plagiarism; and finally students can help other students engage in dishonest academic behavior. Because all of these areas are components of academic dishonesty, the definition is rather complex. In addition, another point of interest is the issue of terminology (Lambert, Hogan & Barton, 2003). Frequently, 'dishonest academic behavior' and 'cheating' are used interchangeably, as will be the case in this article.

Lambert et al. (2003) note that academic dishonesty has serious implications, since one of the possible consequences is that successfully cheating students will end up not having the knowledge and skills that they are expected to have when they graduate. Similarly, Whitley and Keith-Spiegel (2001) argue that academic dishonesty is not compatible with the mission of educational institutions to enhance their students' knowledge and competence. Actually, widespread academic dishonesty can pose a considerable threat to universities in several ways (Gehring, Nuss & Pavela, 1986). First of all, students who have never engaged in dishonest academic behavior may be encouraged to do so if the campus climate seems to be tolerant of such behavior. Secondly, students may come to consider integrity and honesty as having no importance, due to faculty indifference. Faculty indifference involves faculty and staff members ignoring obvious cases of

dishonest academic behavior. Ignoring academic dishonesty may lead to negative feelings, such as anger, that damage the sense of community, and that may end up alienating promising students. Finally, academic dishonesty may lead those who accept (dishonestly obtained) student results at face value to assume that students have skills and abilities that they in fact do not possess.

In order to combat academic dishonesty, it is important to study ways in which academic integrity among college students can be encouraged and improved. The aim of this review is to identify factors that lead to dishonest academic behavior among college students, and to evaluate interventions aimed at eliminating cheating behavior. First, studies on determinants of cheating behavior will be discussed. Subsequently, interventions and their effectiveness will be evaluated. The findings will be integrated in order to draw conclusions as to how academic integrity can be improved.

Predictors of dishonest academic behavior

Given that cheating has been recognized as a serious problem, a lot of research has been conducted to determine the factors that predict this undesirable behavior. The various predictors that have been examined can be divided into three main categories: demographic variables, individual characteristics, and contextual influences.

Demographic variables

Several demographic variables seem to be related to academic dishonesty. Many studies have shown that gender may be related to academic misconduct, with males more frequently engaging in dishonest academic behavior than females (Kelly & Worrel, 1978; Michaels & Miethe, 1989; Davis et al., 1992; Genereux & McLeod, 1995; McCabe & Trevino, 1997; Whitley,

1998; Nonis & Swift, 2001; Smyth & Davis, 2004). Sex-role socialization theories have been used to explain this difference. Ward and Beck (1990) argue that men and women are socialized in different ways, which makes women perceive dishonest academic behavior as more negative. In contrast, some researchers have suggested that the link between gender and academic dishonesty is weak (Haines et al, 1986; Pino & Smith, 2003; Jordan, 2001). A possible explanation provided by Haines et al. is that freshmen, sophomores and females were overrepresented in their sample, thus resulting in a difference with studies that did identify a gender difference.

Apart from gender, a negative relationship seems to exist between age and academic dishonesty, with younger students cheating more often (Kelly and Worrell, 1978; McCabe and Trevino, 1997; Whitley, 1998; Nonis and Swift, 2001; Smyth and Davis, 2004). Younger students may be more likely to engage in cheating behaviors because they are more immature (Haines et al, 1986; Diekhoff et al., 1996), less committed to the academic culture (Diekhoff et al. 1996), and because they lack interest in their compulsory courses (Lord & Chiodo, 1995). Tang & Zuo (1997), however, reported higher rates of academic dishonesty in older students. No clear explanation for this contradictory finding can be found.

For both gender and age, the relationship with academic dishonesty is not very robust; at least, the findings are not consistent. However, most studies tend to conclude that males and younger students are more prone to cheating, and these findings should be taken into account.

Individual characteristics

Apart from demographic variables, some individual characteristics have been linked to academic dishonesty. For example, religious

beliefs seem to decrease academic dishonesty (Allmon, Page & Roberts, 2000). Furthermore, grade point average (GPA) has been associated with dishonest academic behavior (Tang & Zuo, 1997; Whitley, 1998), with a higher probability of cheating among students with a lower GPA. Genereux and McLeod (1995) noted that the mediating factor here is the desired GPA of students. Thus, students are more likely to engage in dishonest academic behavior to the extent that they desire a higher GPA. This indicates that academic achievement, particularly the focus on performance, is inversely related to academic misconduct. Moreover, students with intrinsic motivation are less likely to engage in academic dishonesty than students with extrinsic motivation (Jordan, 2001). In addition to these factors, learning strategies may influence academic dishonesty: students are less likely to cheat if their strategy is to process information deeply, instead of superficially (Anderman, Griesinger & Westerfield, 1998; Norton, Tilley, Newstead, & Franklyn-Stokes, 2001). Involvement in extracurricular activities unrelated to education, such as sports and fraternity or sorority membership, has also been linked to academic dishonesty (Haines, et al., 1986; McCabe & Trevino, 1997; Whitley, 1998).

Contextual factors

Fraternity and sorority membership, which have been classified as individual characteristics, may be considered a contextual factor instead of an individual characteristic, since they seem to provide a context in which dishonest academic behavior is more likely (McCabe & Trevino, 1997). Moreover, the influence of these extracurricular activities on academic dishonesty may be enhanced by peer influence, since students involved in such activities are more likely to interact with peers who engage in cheating behavior (Pino

& Smith, 2003). Peer influence itself is considered to be an important factor as well. More specifically, the perception of peer behavior influences students' cheating behavior, whether these perceptions are accurate or not (Perkins, 2003). Therefore, it is important to identify students' beliefs and perceptions about academic dishonesty, because these beliefs and perceptions may influence their intentions and actions, which may, in turn, influence behavior (Jurdi, Hage & Chow, 2012). Although many students agree that it is wrong to engage in dishonest academic behavior, numerous students do engage in such behavior (LaBeff, et al., 1990; Davis et al., 1992; McCabe, 1992; Lawson, 2004). McCabe, Trevino and Butterfield (2002) found that students perceive dishonest academic behavior to be normal among their peers. This perception of peers' dishonest academic behavior is one of the strongest predictors of such behavior (McCabe & Trevino, 1997). According to social norms theory, individuals' behavior is guided by their perception of how other people behave (Perkins & Berkowitz, 1986). Thus, if students believe that their peers engage in dishonest academic behavior, they may adopt such practices as well. Jordan (2001) notes that this may also work the other way around: students who engaged in dishonest academic behavior believed that more students engaged in such behavior. The construction of such beliefs could be seen as a way of preserving one's self-image or as a (deceptive) strategy for confirming one's perceptions. People actually tend to be inaccurate when it comes to judging normative behavior, so they may conform to a social norm that does not even exist (Engler, Landau, Epstein, 2008).

Dishonest academic behavior may be learned by observing the behavior of peers (McCabe & Trevino, 1993). According to social learning theory, individuals learn by observing the behavior of other people and

the consequences of such behavior (Bandura, 1986). This implies that seeing others cheat should increase the tendency to behave in a similar way. Peer behavior and attitudes are indeed considered to be important influences in this regard (McCabe & Trevino, 1997; Jordan, 2001; Jurdi, Hage & Chow, 2003).

The academic culture of an institution is considered to be very important as well (McCabe et al., 2002). An academic culture of integrity comprises values of an institution with regard to the promotion of academic honesty and the prevention and punishment of academic misconduct (Kisamore, Stone & Jawahar, 2007). Such values may be apparent through tolerance of students and faculty members, the presence (or absence) of an honor code, and the severity of punishment if academic integrity is violated. Academic dishonesty may indeed increase if expectations of academic integrity are not defined clearly by institutions (Pulvers & Diekhoff, 1999).

In conclusion, it is clear that cheating behavior can be predicted by many different factors. Some of these factors can be used to create effective interventions. For example, contextual factors and some individual characteristics such as the institutional climate, motivation and peer influence can be altered. Other factors, mainly demographic in nature, along with some individual characteristics, such as gender, age and GPA, are more difficult, or impossible, to change. However, these factors should be used in identifying those groups that are most likely to engage in dishonest academic behavior. More specifically, the interventions should particularly be aimed at those groups, as the change in behavior is desired to affect those groups (Jordan, 2001).

Interventions and their effectiveness

In the discussion on interventions, different studies and proposals will be mentioned.

Most importantly, interventions aimed at improving the academic climate and using peer influence will be discussed, as these factors have been shown to be strong predictors of dishonest academic behavior. Moreover, the effectiveness of the various interventions will be evaluated.

Honor codes

One of the most extensively investigated interventions is the implementation of honor codes. An honor code involves guidelines that specify the responsibility of students to act honestly and to report the cheating behavior of other students (Melendez, 1985. In McCabe, Trevino & Butterfield, 1999). Hence, an honor code can contribute to an academic culture of integrity (McCabe, Trevino & Butterfield, 2001).

Findings regarding the effectiveness of honor codes have been mixed. Some studies indicate that honor codes decrease the incidence of cheating, whereas others do not indicate such a decrease. These inconsistent findings may be ascribed to the various outcome variables that are used to measure academic dishonesty. For example, McCabe et al. (2002) found a lower rate of cheating at universities that used an honor code than at universities without an honor code. In their study, incidence of cheating was measured via students' self-reports. However, in another study, the effect of honor codes was investigated by measuring students' attitudes toward cheating before and after implementing an honor code. For this measurement, two independent samples of students were used. The honor code was implemented by distributing it among students during some of the courses they were enrolled in and discussing it briefly with them. In this case, no effect of the honor codes was found (Roig & Marks, 2006). The researchers argued that, even though underlying attitudes are not always consistent with actual behavior, it is a useful

predictor of the likelihood of cheating, a finding similar to that of the previously mentioned study of Jurdi et al. (2012) described earlier. The fact that Roig and Marks' (2006) investigation resulted in no change in the attitudes toward cheating might indicate that honor codes are not effective. On the other hand, they propose that a possible explanation for this finding is that honor codes are only effective when students are continuously made aware of it, instead of incidentally, as was the case during the study. Another limitation of the study was that only relatively few students were actively involved in formulating the honor code, a factor which might have diminished the effect.

Jordan (2001), in the study discussed previously, notes that it is not merely the implementation of an honor code, but the way it is developed and implemented, that is important. Honor codes can vary on a number of dimensions. For example, Gurung, Wilhelm and Filz (2012) examined 30 honor codes to identify the differences among them. They found that honor codes vary in length, formality of language, and specification of consequences when the honor code is violated. To determine which variations are most effective, they created eight honor code statements that varied on the dimensions of length, formality and consequences. In addition, they used a survey in which students had to rate the likelihood they would cheat for each statement. Their results were clear: for the honor code statements that were formal, longer and that specified consequences, the students reported a much lower likelihood to cheat. Although these findings were considered useful, an important limitation of the study was that the likelihood of cheating was measured via self-report rather than actual behavior. Thus, its results cannot be used to support the assertion that honor codes that are formal, longer and have

specified consequences are more effective in practice.

Taking into consideration peer influences as one of the predictors of the likelihood to cheat, it could be argued that the effectiveness of honor codes depends on students' perception of the way their peers use the honor code – an explanation offered for the finding that cheaters report that they in fact do agree with the statements of the honor code (Vandehey et al., 2007).

Interventions with a positive focus

Instead of focusing on students who cheat, some researchers attempt to identify the characteristics of students who do *not* cheat and to develop interventions other than honor codes. Based on the ideas of positive psychology, Staats, Hupp, Wallace and Gresley (2009) sought to identify a model for individual honest academic behavior. They propose the term 'academic hero', which refers to a person who possesses the characteristics of a hero operating in an academic context, including bravery, empathy and honesty. Their findings indicated that students with these characteristics were less likely to cheat, would feel more guilt when cheating, and reported less intention to cheat in the future. Furthermore, they propose that the model of an 'academic hero' should be encouraged as a role model in order to change college students' behavior. Since other studies provide evidence for hero concepts positively influencing self-concepts (Sullivan & Venter, 2007. In Staats et al., 2009), they argue this intervention would be successful. On the other hand, the concept 'heroic' could be perceived as a characteristic that is extraordinary and therefore not the norm. As most people will behave in a way conform the norm, which can be explained by social norms theory, labeling honest academic behavior as heroic will not lead to more people behaving

academically honest. So although the idea of implementing a model of honest academic behavior might be effective, naming it as 'heroic' could undermine its effect.

A positive approach has also been advocated by others, such as Walker and Townley (2012), who claim that a culture of trust instead of distrust would be effective in encouraging academic integrity. Their idea is that the focus on the detection of cheating creates a culture of distrust, and thus might end up functioning as a self-fulfilling prophecy. Furthermore, they argue that students who cheat will be motivated to find a way to deal with detection techniques and will continue their behavior. Performance pressure might be a reason for this. To overcome this, they suggest students' motivation *not* to cheat could be increased by providing reasons for it. Intrinsic as well as extrinsic motivation could be enhanced through education about the benefits of producing one's own work. An example of an intrinsic reward is the learning process that enhances students' development of thinking processes, and extrinsic motivation might be the acquisition of their academic skills that are needed for future performance. In addition, it is suggested that the academic culture should convey a message of caring about the personal work of the students (e.g., by providing feedback on assignments).

Detection and punishment of cheating behavior

Although these positive approaches might work, they are theoretical, and there is evidence that indicates that punishment as a consequence of cheating is what works best. For example, students rated the fear of being caught as the best discouragement of cheating (Diekhoff, LaBeff, Clark, Williams, Francis & Haines, 1996).

As noted earlier, social learning plays an important role in cheating behavior. Social learning theory can also offer an

explanation for the effectiveness of punishment. The theory predicts that observing the consequences of others' behavior leads to the internalization of these consequences. Hence, observing others being punished for cheating behavior will discourage it (O'Fallon & Butterfield, 2012). Again, this explanation highlights the important role of peers' behavior.

Contrary to the findings that punishment is *most* effective, Miller, Shoptaugh and Woolridge (2011) found that it is not the most effective deterrent to cheating. They compared three reasons not to cheat: personal learning goals, personal morality, and the threat of punishment. The motivation of personal learning goals and high morality standards were associated with lower levels of cheating and higher feelings of responsibility, whereas students who were motivated not to cheat by the threat of punishment displayed higher levels of cheating and lower levels of responsibility. Thus, punishment is not the best way to reduce levels of cheating for all students. However, students who were most prone to cheating behavior to start with were most strongly motivated not to cheat by the threat of punishment, so it is still an effective method for this particular group.

In summary, evidence has for the most part been reported on honor codes and the detection of cheaters. The results indicate that honor codes may be effective, but only under the right conditions. Students should be actively and continuously made aware of the existence and importance of the honor code in order to be committed to it; the code should preferably specify the consequences of violating it; and students should receive education about the benefits of following the code and of engaging in academically honest behavior. The influence of peers should also be considered.

The detection of cheating behavior has been shown to be effective, first because

it makes students perceive cheating as wrong, and second because it makes them fear the negative consequences of cheating.

Other interventions have been proposed, but have not yet been studied. Thus, there is no evidence on the effectiveness of these potentially promising ways to curb cheating behavior. Therefore, it is recommended that further research will be conducted on ways in which academic integrity among college students can be encouraged. Hopefully, universities will take the evidence currently available to heart and either implement honor codes in an active manner or improve detection of cheaters. This would be an important step toward creating a culture of academic integrity.

Conclusion

Academic dishonesty among college students is mainly expressed through several forms of cheating. It is a disturbing problem, as any results tainted by cheating will make students appear to be more capable than they really are. In order to understand cheating, the literature on predictors has been examined. The main conclusion is that peer influence and institutional culture play an important role, and thus, interventions dealing with those factors have been evaluated. Three forms of interventions have been discussed: honor codes, interventions with a positive focus, and detection and punishment.

Whether cheating detection measures should be used is a complex question. On the one hand, the focus on the punishment of cheating might convey a message of distrust, which is counterproductive according to Walker and Townley (2012). On the other hand, detection measures can prevent academic misconduct in students who are not intrinsically motivated to stop cheating (Miller et al., 2011). It seems that universities need to find a balance between providing sufficient detection measures and

trusting their students' own sense of responsibility.

An honor code might contribute to an environment of trust and responsibility. However, the code must be formulated carefully, as research indicates that some formats are effective whereas others are not. If formulated correctly, the honor code must be implemented effectively. As Jordon (2001) notes, simply having an honor code in place is not sufficient. The more students are involved, the more peer influence will lead to positive reinforcement of academic integrity. Using the frame of reference of social learning theory, peer influence and observational learning have been proven to be strong determinants of students' academic behavior. Accordingly, interventions are expected to be effective when they are built on this principle. An honor code might make use of peer influence as well as institutional

influence, in order to maximize its effectiveness.

Honor codes are more positive interventions than detection. Besides, the interesting idea of creating a role model called the 'academic hero' (Staats et al., 2009) might motivate students to be academically honest persons. However, there is as yet no evidence for the efficacy of practical (as opposed to theoretical) support.

Overall, several interventions to combat academic dishonesty have been evaluated. Some of the students will become university professors or researchers, so it is very important to teach them how to operate appropriately and to assure that they embrace the value of academic integrity. Using the evidence available, it is hoped that at least some progress can be made regarding the academic culture.

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