

Impact of ethical and affective variables on cheating: comparison of undergraduate students with and without jobs

Chun-Hua Hsiao

Published online: 17 April 2014
© Springer Science+Business Media Dordrecht 2014

Abstract Academic cheating is a serious problem among higher education organizations around the world. While most studies on academic cheating have focused on high school or college students, few have examined and compared students with and without jobs. Therefore, this study has empirically assessed the critical cheating issues by comparing undergraduate students with and without jobs. In addition, this study proposes a research framework based on the extended theory of planned behavior by including ethical and affective variables from the dual-process theory, the social learning theory, the decision affect theory, and the prospect theory. The survey method with a two-stage analytical procedure was used to achieve the research purpose. As a result, a total of 525 student samples were collected for subsequent analysis. The results suggest that all antecedents significantly affected students' cheating intention. Moreover, the hypothetical relationships were examined across three groups of students: no jobs, part-time jobs, and full-time jobs. The results showed that some major differences existed in the relationships between antecedents and cheating intention across the different student groups. While perceived behavioral control has the strongest effect on cheating intention among students with no jobs and with full-time jobs, unethical beliefs in the workplace have a significant effect on cheating for students with full-time jobs, but not for students with part-time jobs and with no jobs. Implications for practitioners and academic institutions are discussed.

Keywords Cheating · Anticipated positive affect · Anticipated negative affect · Unethical professional beliefs · Theory of planned behavior · Job status

C.-H. Hsiao (✉)
Department of Marketing, Kainan University, No. 1 Kainan Road, Luzhu, Taoyuan County 33857,
Taiwan
e-mail: maehsiao@gmail.com

Introduction

Academic dishonesty is a serious phenomenon in higher education (Becker et al. 2006; Harding et al. 2007; Teixeira and Rocha 2010). Of the different kinds of dishonesty, cheating on exams¹ is regarded as a particularly serious and unethical form of conduct (Hrabak et al. 2004; Hsiao and Yang 2011). In higher education, there is growing concern over the increasing cheating rates among college students. Baird (1980) found that 64 % of students reported cheating in 1964; however, that figure had increased to 76 % by 1980. A recent survey indicated that 70 % of undergraduate students admitted to having committed at least one form of academic dishonesty while in college (McCabe 2005). This widespread cheating phenomenon also occurs in Asian countries such as Taiwan. According to a survey of 2,068 college students, the cheating rate was as high as 61.7 % (Lin and Wen 2007). It is especially noteworthy that cheating in the context of higher education weakens the mission of academic institutions to transfer knowledge, harms the fairness of the school grading system, and undermines social value judgments (Whitley and Keith-Spiegel 2002).

Working part-time whilst studying full-time is an increasingly common phenomenon among college students. Although the exact numbers of students working part-time are difficult to estimate accurately, several studies have found that about 50–60 % of full-time university students had part-time jobs (Australian Bureau of Statistics 2002; Curtis and Williams 2002), and that this figure is expected to increase. Regardless of the reason for working, working while also studying at school clearly requires a great deal of effort. Previous studies on the effects of students' part-time work have generally found negative associations with academic performance (Stern et al. 1995; Carr et al. 1996). As a result, students with jobs will likely encounter high levels of stress and anxiety, which may contribute to the reasons for not being able to complete their degrees. The pressure and fear of failing in an exam is one of the motivations to cheat (Whitley 1998). However, other studies have shown that full-time students with or without part-time jobs (usually younger students) tend to cheat more often than students with full-time jobs and those studying in evening or weekend programs (e.g., Allen et al. 1998; Storch and Storch 2002; Whitley 1998).

On the other hand, the trend of continuing education (or advanced study) among employees is also increasing. That is, there is a growing number of full-time workers enrolled as part-time students in evening or weekend school programs. Past studies have shown that cheating in college may be a strong predictor of cheating in the workplace (Nonis and Swift 2001), and that there is a close relationship between "unethical workplace behavior" and "college cheating" (Crown and Spiller 1998; Lawson 2004). Sims (1993) found a close relationship between academic dishonesty and work-related dishonesty among MBA students. Shih and Chen (2006) indicated that the ethical policies in organization settings can help establish employees' ethical standards. On the other hand, an immoral culture in the workplace may encourage employees to be dishonest (McCabe et al. 2001). More recently, Hsiao and Yang (2011) further indicated that professional unethical beliefs have significant impacts on the cheating intention of college students with full-time jobs. Therefore, it is necessary for colleges and universities to pay attention to the ethical value system in the workplace, not only in the academic environment. At the same time,

¹ Although novel technology has provided new opportunities for cheating, the present paper focuses on a very serious and common form of academic cheating, pencil and paper tests in the classroom (McCabe et al. 2002).

the influence of organizational moral conduct on college students' dishonest behaviors is worth investigating.

Numerous educational studies have indicated that the theory of planned behavior (TPB) is helpful for explaining and predicting a wide variety of academic ethical and unethical behaviors (Harding et al. 2012; Mayhew et al. 2009; Passow et al. 2006). In addition to the TPB model, theoretical groundwork from the dual-process theory (Sierra and Hyman 2006), the social learning theory (McCabe and Trevino 1997), the decision affect theory (Mellers et al. 1997), and the prospect theory (Kahneman and Tversky 1979) also contributes to the prediction of intentions, over and above attitudes.

While most studies on academic cheating have focused on high school or college students, few have examined and compared students with and without jobs.² Therefore, two research questions are proposed in this study: (1) Among the influential factors, which are more effective in predicting students' cheating intention? (2) Is there any difference in the strength of relationships across students with different job status? To examine the above questions, this study proposes a research framework based on the theory of planned behavior by including critical variables from other theoretical underpinnings to test academic cheating among and across students with and without jobs.

Research framework and development of hypotheses

Previous research on student cheating

Academic dishonesty, consisting of acts of cheating and plagiarism, has received great attention and has been examined in many studies (Crown and Spiller 1998; McCabe 1992, 2005; McCabe et al. 2001, 2002; Smyth and Davis 2004; Whitley 1998). Previous studies have examined factors related to cheating, and have catalogued these factors in various ways. Most research has examined individual factors (or personal factors) and situational factors (or contextual factors) as predictors of academic cheating intentions. Individual factors include demographics (e.g., age and gender), attitude toward cheating, GPA, moral beliefs education, personality (e.g., poor self-image, a lack of integrity, and locus of control) (Chapman et al. 2004; Kisamore et al. 2007; McCabe and Trevino 1997; Tibbetts 1999), and neutralization techniques (e.g., rationalization, denial, deflecting blame to others, condemning the accusers) (McCabe 1992). These studies indicate that male students, younger students, students with lower academic achievement, and students with an external locus are most likely to cheat (Davis et al. 1992; McCabe and Trevino 1997). However, other studies show that there is no difference between men and women (e.g., Baird 1980; Haines et al. 1986), and it is the fear of doing poorly in an exam, not a general lack of academic ability, which motivates students' cheating intention (Whitley 1998).

Situational factors comprise honor codes, surveillance, rewards/sanctions, peer context, fraternity or sorority membership, campus housing, ramifications if caught cheating, testing environment and friends' cheating behavior (McCabe and Trevino 1997; Whitley 1998). Other contextual factors include student perceptions of peer behavior, student perceptions of the faculty's understanding of the academic integrity policies that exist on campus, student perceptions of the effectiveness of these policies, student perceptions of

² This study assumes that the school life of students with and without jobs is different, as are the influential factors on their cheating; therefore, this study classified students into groups of those with and without jobs while investigating the ethical influence of the workplace on students' ethical behavior at school.

the likelihood of being reported for cheating, and student perceptions of the severity of campus penalties for cheating (Whitley 1998). Previous studies show that positive correlates of cheating intentions include friends' cheating behaviors, low detection rates, and fraternity/sorority membership (Chapman et al. 2004; Sierra and Hyman 2006; Tibbetts 1999; McCabe et al. 2001; Whitley 1998). The studies indicate that students involved in extracurricular activities such as fraternities/sororities and other activities devote less time to academic studies and are therefore more likely to cheat (McCabe and Trevino 1997).

While the majority of academic dishonesty research has relied on the above demographic, situational, and personality variables to explain students' cheating, a few studies have used a theoretical framework. The theories used include models of cognitive consistency theory (Tang and Zuo 1997), moral development models (Whitley and Kost 1999), rational choice theory (Caruana et al. 2000), and the dual-process theory (Sierra and Hyman 2006). The most commonly used model is the theory of planned behavior (Beck and Ajzen 1991; Nonis and Swift 2001; Whitley 1998). Ajzen's (1991) theory of planned behavior (TPB) shows parsimony in predicting and providing one possible rationale for academic misconduct (Beck and Ajzen 1991; Harding et al. 2007; Hsiao and Yang 2011; Stone et al. 2007; Whitley 1998). Theory-driven research is helpful for developing an understanding of academic misconduct, investigating factors influencing unethical behaviors, and providing effective means to restrain such behaviors (Beck and Ajzen 1991; Harding et al. 2007; Stone et al. 2007; Whitley 1998). Nevertheless, other studies have attempted to improve the theories' explanatory power by including additional variables (Conner and Armitage 1998; Eagly and Chaiken 1993; Kaiser 2006). For example, anticipated affect and moral norms are believed to increase the variance explained of intentions by 5 and 3 %, respectively (Rivis et al. 2009). While moral norm (i.e., moral obligation or personal norm) has been shown to increase the variance explained of dishonest actions (Beck and Ajzen 1991), another study indicated that moral norms were replaced by a person's general belief (Kaiser 2006). Recently, employee dishonesty has become a major concern, especially in business environments. Some studies have found a strong relationship between "cheating at college" and "unethical workplace behavior" (Crown and Spiller 1998; Davis and Ludvigson 1995; Lawson 2004; Sims 1993). Sims (1993) pointed out that the high correlation between these factors was dependent on "a general attitude about honesty." Hsiao and Yang (2011) further indicated that unethical workplace beliefs are a strong predictor of students' cheating in college.

Although the extant cheating literature provides useful insights into cheating intentions, no study has examined the joint effect of ethical workplace beliefs and anticipated affective variables in the TPB model on students' cheating intentions. Moreover, to augment these insights, this study differentiated and compared students with and without jobs in the proposed model. Hence, our research should provide additional insights into students' cheating.

The theory of planned behavior

The theory of planned behavior (TPB, Ajzen 1991) is widely used for explaining and predicting human behavior across a variety of disciplines (Armitage and Conner 2001), especially for dishonest actions (Beck and Ajzen 1991). The main advantages of TPB are its parsimony and testability.

TPB postulates three conceptually independent determinants of intention. An attitude (AT) towards the behavior reflects feelings of favorableness or unfavorableness towards performing a behavior (Ajzen 1991). In the context of the current study, attitudes are predispositions or feelings toward cheating. A subjective norm (SN) refers to the perceived social pressure that significant others (parents, spouse, friends, etc.) desire an individual to perform or not perform a certain behavior. Those significant others, or referent groups, could exert a key influence on an individual's beliefs, attitudes, and choices, because that individual may want to conform to his/her referent groups for recognition. In the current study, students' classmates, colleagues, friends, or even family members could play the important role of being available for advice. Perceived behavioral control (PBC) reflects a person's past experiences, anticipated obstacles, and resources (e.g., opportunities, time, money, ability, and skills) required to perform a behavior (Ajzen 1991). PBC is significant because it specifies the role of an individual's perceived control over a given behavior or behavioral goal; moreover, it has been successfully applied in the context of ethical decision-making (Chiu 2003).

Behavioral intention is the individual's subjective probability that he or she will engage in that behavior, i.e., cheating in the current study. According to TPB, the immediate determinant of a behavior is the individual's intention to perform or not perform it (Ajzen 1991). Thus, the relationship between behavioral intention and actual behavior is strong (Venkatesh and Davis 2000). This study examines cheating intention rather than cheating behavior as the outcome variable because intention is regarded as an adequate proxy of actual behavior (Nonis and Swift 2001).

Past research indicates that students' attitudes toward cheating have better explanatory power for cheating behavior than other factors (Graham 1994). According to Kohlberg's moral stage theory (1985), most students in high school are expected to be at the "law and order" moral stage; i.e., they would at least acknowledge that cheating is wrong. However, some of them hold a neutralizing attitude to justify their cheating behavior. Haines et al. (1986) suggested that neutralizing attitudes might be especially important in understanding cheating because any blame or guilt resulting from acts of cheating can be counteracted or neutralized (Diekhoff et al. 1996; Jordan 2001; McCabe 1992). McCabe's research (1992) proposed that most cheating students adopt a neutralizing attitude to justify or rationalize their cheating behavior. For example, students may regard cheating as a personal behavior which will not hurt anyone (Haines et al. 1986), or believe that it is acceptable to engage in cheating behavior in certain situations (e.g., fear of being expelled from school).

Even though some researchers have pointed out that the subjective norm is generally seen to be a weak predictor of intentions (Sheppard et al. 1988), researchers have indicated that it is an important factor in fostering dishonest behavior, such as in the study of academic cheating (Nonis and Swift 2001; Whitley 1998). Some studies have found that students are more likely to cheat if they think that cheating is widespread in their school (Graham 1994; Jordan 2001; McCabe and Trevino 1997). Others have concluded that encouragement from one's close friends has a greater impact on cheating acts (Jordan 2001; Michaels and Miethe 1989). Consistent with social learning theory (McCabe and Trevino 1997), some studies have indicated that peer disapproval is the most important determinant of changes in cheating behavior in high school and college. Referring to perceived behavior control, the opportunity to cheat (e.g., faculty does not heed or deter cheating) affects an individual's response to an ethical dilemma (Becker et al. 2006). Other students view cheating as "an academic skill" required in college. Thus, this study postulates that the more chance for or skills of cheating that students perceive themselves to

have, the more likely it is that they would engage in cheating. Accordingly, this study postulates the following:

Hypothesis 1 Attitude towards cheating positively affects the intention to cheat.

Hypothesis 2 Subjective norm towards cheating positively affects the intention to cheat.

Hypothesis 3 Perceived behavioral control toward cheating positively affects the intention to cheat.

Affective variables regarding cheating

Previous studies have indicated that consumer decisions are influenced by cognitive and emotive factors simultaneously (Malhotra 2005), and it is suggested that these two factors can improve the prediction of intention beyond that of the standard TPB variables (Conner and Armitage 1998). Sierra and Hyman (2006) proposed a dual-process model to predict cheating intention with factors such as anticipated positive and negative emotions (i.e., anticipated elation and anticipated regret) simultaneously together with cognition (i.e., locus of control). The anticipated affect, or anticipated post-behavioral affective reaction, refers to people's anticipated feelings after having performed an action, not how they feel about the likely consequences of that behavior (Perugini and Bagozzi 2001). These anticipated affects had their origin from hedonic consumption theory (Hirschman and Holbrook 1982), decision affect theory (Mellers et al. 1997), and prospect theory (Kahneman and Tversky 1979).

The decision affect theory presumes that people make a choice according to their predictions in which they anticipate how they will feel about the outcomes of decisions (Mellers et al. 1997). In general, it is anticipated that positive emotions (e.g., delight) rather than negative emotions (e.g., shame) guide people's choices. In line with the decision affect theory, the hedonic consumption theory postulates that people's decision making is related to the sensory, pleasant, and fantasy aspects of product/service usage experience; therefore, their choices are influenced by the optimal outcome which they could imagine (Hirschman and Holbrook 1982). While facing uncertain results, people's anticipated positive feelings may guide their choice (Currie 1985; Mellers et al. 1997). Earlier research has reported that most students cheat when they fear failure or hold expectations of success (Michaels and Miethe 1989; Whitley 1998). The perceived pleasure (or anticipated elation) of expecting to have a positive outcome from cheating provides an incentive for students to cheat (Tibbetts 1999). Other studies also show that there is a positive correlation between cheating intention and anticipated positive affect (Sierra and Hyman 2006; Tibbetts 1999).

While anticipated positive affect (e.g., contentment, pride) concerns the success of achieving this act, anticipated negative affect (e.g., regret, shame, guilt) refers to the failures while engaging in a behavior (Perugini and Bagozzi 2001). According to the prospect theory (Kahneman and Tversky 1979), people often show a greater concern for losses and negative consequences than they do for gaining positive consequences (i.e., they are risk-averse). Accordingly, if students intend to cheat but imagine that their cheating action might be detected or caught, this thought might stimulate their anticipated negative emotions (Tsiros and Mittal 2000), which in turn should discourage them from cheating. Therefore, anticipated negative emotions, such as anticipated shame or guilt, should relate negatively to cheating intention (Sierra and Hyman 2006; Tibbetts 1999).

While previous studies have emphasized the importance of both anticipated affect variables, other studies have professed one more strongly related to intention than the other, but consistency regarding the dominant role has not been reached. For example, anticipated negative feelings, such as worry, upset, tension, and regret, are considered to have stronger effects on intention than anticipated positive affective reactions (Rivis et al. 2009). However, Sierra and Hyman (2006) study showed that anticipated positive affect positively affects students' willingness to cheat, but no effect of negative affects was found. According to the above inferences, the current study stresses the importance of both anticipated affects, and hypothesizes as follows:

Hypothesis 4 Anticipated positive affect toward cheating positively affects the intention to cheat.

Hypothesis 5 Anticipated negative affect toward cheating negatively affects the intention to cheat.

Unethical professional beliefs regarding cheating

TPB has been criticized for neglecting moral considerations, especially in morally relevant domains (Beck and Ajzen 1991; Harding et al. 2007; Sierra and Hyman 2008; Whitley 1998; Whitley and Keith-Spiegel 2002). One such source of normative influence is the moral norm (Conner and Armitage 1998). The moral norm—also referred to as perceived moral obligation or personal norms—has been shown to be strongly correlated with intentions of behaviors with a moral or ethical dimension (Beck and Ajzen 1991; Rivis et al. 2009). It points to the individual's perception of moral correctness or incorrectness in performing a particular behavior (Ajzen 1991). Following the dual-process theory that demonstrated the simultaneous effects of cognitive and anticipated emotional factors on cheating intention (Sierra and Hyman 2006), the current study adopted students' norm variable as the cognitive factor. In professional settings, ethical professional beliefs refer to the individual's perception of moral correctness in performing certain behaviors in the workplace. McCabe et al. (2002) found that employees who attended schools with honor codes were less likely to have later engaged in deviant workplace behaviors. Likewise, employees from an organization with an ethical policy are expected to avoid cheating when returning to school.

Unethical behaviors in the workplace include property and production deviant behaviors. Property deviant behaviors include theft or improper usage of property belonging to the company. In contrast, production deviant behaviors deal with counterproductive behavior related to the quantity or quality of work produced by the employee (Hollinger and Clark 1983). Harding et al. (2004) suggested that there are certain common factors that influence an individual's decision to participate in deviant behavior, including academic dishonesty. Sims (1993) found that MBA students who admitted to having engaged in a wide range of academic dishonesty also committed a similarly wide range of work-related dishonesty. Recently, another study on employees/students also revealed that an individual's ethical beliefs in the workplace have an influence on his/her propensity for cheating at school after years of work (Hsiao and Yang 2011). It has also been confirmed that work ethic and moral beliefs are related to the prevalence of cheating (Baird 1980). Thus, the following is expected:

Hypothesis 6 The unethical professional beliefs of students positively affect their intention to cheat.

Comparison of student groups of different job status

Most studies on academic cheating have focused on high school or college students; however, the school life for students with jobs is quite different from that of full-time students without jobs. Some studies assert that students with jobs are absent from school more often, invest less time in homework, and earn lower grades (Hunt et al. 2004). Others report that part-time and older students experience greater stress than younger full-time students do, because they need to balance multiple roles, such as work, family, and school (Kramer et al. 1987). The pressure to get high grades, a lack of pride in their job performance, a fear of failure, and peer or family pressure could all lead to cheating (McCabe 2005).

Therefore, in order to fully understand the influential factors affecting students' cheating, it is necessary to classify students according to their job status, that is having no job, having a part-time job, or having a full-time job. Thus, the following hypothesis is stated as follows.

Hypothesis 7 The relationships among variables in the proposed model vary across student job status, namely, having no job, having a part-time job, or having a full-time job.

Methodology

Subjects and procedure

The subjects under investigation in this study are comprised of students with/without jobs from a business school of a university in northern Taiwan. While most full-time students attend regular daytime classes, most employees attend school programs during the evening or weekend. This survey was administered by a trained instructor during regular class time with the permission of both the students and teachers. Extra credits were given to enhance the motivation to participate. Due to the sensitive nature of the issue of cheating, the instructor gave clear instructions that the survey was for academic use only, reassuring all participants of the confidentiality and anonymity of their responses. Then, the instructor gave students a copy of the questionnaire, leaving sufficient time for them to complete it. Upon completion, the respondents were thanked and dismissed.

A total of 580 questionnaires were distributed. While 544 usable questionnaires were collected, 525 copies with complete answers regarding job status were used for subsequent analysis, giving an effective response rate of 90.5 %. Students with no job, a part-time job, and a full-time job made up 37.3 % ($n = 196$), 28.4 % ($n = 149$), and 34.3 % ($n = 180$) of the sample, respectively. Male and female students made up 43.2 % and 56.8 % of the sample, respectively. The average age for all respondents was 27.19 years old (with a standard deviation of 6.25 years); each of the three groups of students had an average age of 24.96, 24.76, and 32.58 years old, respectively. Most daytime students had either no job or a part-time job. On the other hand, all full-time students attended school programs in the evening or at weekends.

Measures

The research items were drawn and modified from existing validated scales using a five-point Likert-type scale, with anchors ranging from 1 (strongly disagree) to 5 (strongly

agree). The back translation method (with items translated from English into Chinese, and back into English) was employed. Any discrepancies between the versions were also compared and resolved to ensure consistency between the Chinese and the original English editions.

One advantage of using TPB is that it is a well-validated measurement. The measures of the subjective norm (SN), perceived behavioral control (PBC), and behavioral intention (BI) were adapted from Beck and Ajzen (1991) (one item of BI was adapted from Harding et al. (2007)). Subjective norm items with reverse meaning were adjusted when analyzing the data. Attitude (AT) employed the concept of a neutralizing attitude adapted from Harding et al. (2007). Most items of anticipated affect were adapted from Perugini and Bagozzi (2001), except for one item of negative affect from Whitley (2001). Participants were asked to evaluate how they would feel if they could get good grades by cheating in the near future. Finally, measures of unethical professional beliefs were adapted from Harding et al. (2004). Appendix lists the individual scale items and their correspondent sources.

The initial version of the survey instrument was modified through a pre-test with 30 subjects. Based on the subjects' suggestions regarding confusing items in the questionnaire and a low item-to-total correlation (<0.5), some items were slightly re-worded. The second pre-test with 50 subjects was then conducted. The subjects of both pretests were drawn from another university similar to the target university. The Cronbach's alpha values ranged from 0.75 (for the subjective norm) to 0.93 (for positive affect). The above process helped ensure the content validity of the questionnaire. The refined instrument was then used to collect the research data.

Data analysis

Two-stage analytical procedures were recommended to analyze our data (Anderson and Gerbing 1988; Hair et al. 1998). Confirmatory factor analysis (CFA) was first conducted to assess the measurement model; then, the structural relationships were examined. The partial least squares (PLS) approach was used to assess the validity and reliability of the data. The advantage of PLS is that it allows latent constructs to be modeled either as formative or reflective indicators and it makes minimal demands in terms of sample size. This study used Smartpls 2.0 for analysis.

Results

Measurement model testing

To ensure the reliability of all constructs, this study used Cronbach's α and composite reliability (CR). As shown in Table 1, the values of Cronbach's α and composite reliability are very good (all above the recommended values of 0.70), indicating the existence of reliability.

Then, this study adopted convergent validity and discriminant validity to ensure the validity of the measurement model. Convergent validity is achieved if different indicators used to measure the same construct obtained strongly correlated scores, via two methods. First, as seen in Table 1, all factor loadings of items contained in the same construct ranged from 0.78 to 0.96, with all being significant at the 0.001 level (Anderson and Gerbing 1988). Second, this study assessed the composite reliability (CR) and average variance

Table 1 Reliability and validity test

Construct	Items	Standardized loading	<i>t</i> value	Cronbach's alpha	CR	AVE
Attitude	AT1	0.89	24.08	0.84	0.90	0.75
	AT2	0.87	21.96			
	AT3	0.84	21.34			
Subject norm	SN1	0.78	6.62	0.74	0.92	0.80
	SN3	0.81	7.18			
	SN4	0.84	8.38			
Perceived behavior control	PBC1	0.80	16.28	0.78	0.94	0.84
	PBC2	0.90	24.25			
	PBC3	0.79	15.35			
Positive affect	PA1	0.95	42.64	0.95	0.97	0.91
	PA2	0.96	38.83			
	PA3	0.96	45.93			
Negative affect	NA1	0.91	17.17	0.91	0.87	0.69
	NA2	0.93	21.53			
	NA3	0.91	19.33			
Unethical professional beliefs	UPB1	0.86	9.72	0.89	0.85	0.66
	UPB2	0.86	10.04			
	UPB3	0.86	11.40			
	UPB4	0.88	10.99			
Behavioral intention	BI1	0.85	30.94	0.87	0.92	0.75
	BI2	0.90	37.78			
	BI3	0.93	40.60			

AT attitudes toward cheating, *SN* subjective norm toward cheating, *PBC* perceived behavior control toward cheating, *PA* positive affect, *NA* negative affect, *UPB* unethical professional beliefs, *BI* behavioral intention toward cheating, *CR* composite reliability, *AVE* average variance extracted

extracted (AVE) (Hair et al. 1998). Table 1 shows that the composite reliability values ranged from 0.85 to 0.97, exceeding the recommended threshold of 0.7 (Chin 1998). The average variance extracted by a measure ranged from 0.66 to 0.91, which is above the acceptable value of 0.5 (Fornell and Larcker 1981). Furthermore, the CRs and AVEs of samples across different job status also reached an acceptable level, as shown in Table 2. Collectively, the above results suggest that convergent validity was successfully achieved.

The discriminant validity of our instrument was measured by comparing the square root of the average variance extracted for the construct with the correlations with other constructs (Fornell and Larcker 1981). Each construct shares greater variance with its own measurement items than with other constructs having different measurement items. The results in Table 3 confirm the discriminant validity: the square root of the average variance extracted for each construct is greater than the correlations between it and other constructs. In addition, students with full-time jobs have the lowest cheating intention in terms of mean value (2.94).

All the measures were self-reported by the same respondents; therefore, there is the potential problem of the occurrence of common method variance (CMV). A Harmon's one-factor test including items of all seven factors was conducted in an exploratory factor

Table 2 Standardized loadings and reliability

Construct	All sample (n = 525)		No job (n = 196)		Part-time job (n = 149)		Full-time job (n = 180)	
	CR	AVE	CR	AVE	CR	AVE	CR	AVE
AT	0.90	0.75	0.92	0.79	0.87	0.69	0.91	0.77
SN	0.92	0.80	0.94	0.83	0.90	0.75	0.92	0.80
PBC	0.94	0.84	0.94	0.85	0.90	0.76	0.96	0.89
PA	0.97	0.91	0.96	0.90	0.96	0.90	0.98	0.94
NA	0.87	0.69	0.89	0.72	0.82	0.61	0.89	0.73
UPB	0.85	0.66	0.88	0.70	0.83	0.63	0.75	0.53
BI	0.92	0.75	0.88	0.66	0.93	0.76	0.94	0.80

analysis (EFA). If common method variance exists, then all items may be found in a single general factor which accounts for the majority of the variance. The first emerging factor accounted for 32.35 % of the variance explained and thus common method bias did not appear to be present.

The structural model testing

With an adequate measurement model, the proposed hypotheses were tested with PLS. The results of the analysis are depicted in Fig. 1 and summarized in Table 4. This study discusses the results in the following sequence: standard TPB constructs (Hypotheses 1, 2, 3), affect constructs (Hypotheses 4, 5), and the ethical construct (Hypothesis 6).

The data supports all relationships in the model. From the TPB, students' cheating intention was determined by three major constructs (i.e., attitude, subjective norm, and perceived behavioral control) at the significance level of 0.001. Next, anticipated negative affect was a significant determinant of cheating ($\beta = -0.19$; $t = 5.07$), while anticipated positive affect was also significant but to a lesser extent ($\beta = 0.13$; $t = 2.72$). Unethical beliefs in the workplace significantly impacted intention to cheat ($\beta = 0.10$; $t = 3.55$). Overall, while the variance explained for TPB accounts for only 47.6 %, the variance explained for the research model reaches the considerable level of 52.8 %.

To verify hypothesis 7, this study tested all the structure relationships across different student groups according to their job status. In the no-job student group, all three determinants of TPB (attitude (H1), subjective norm (H2) and perceived behavioral control (H3)) were clearly supported in the model, along with the extended determinant of anticipated negative affect to explain cheating intention (H5). However, anticipated positive affect and unethical professional beliefs did not significantly affect cheating intention.

In the part-time job group, significant relationships in the posited direction were found only for hypotheses 1 and 4. These results suggest that the students' cheating intention was influenced by their attitude and anticipated positive affect toward cheating. In addition, subjective norm had a partial effect on cheating intention among students with part-time jobs ($\beta = 0.14$, $p < 0.1$).

In the full-time job group, two of the TPB variables (i.e., attitude and perceived behavioral control) had significant influences on cheating intention. Both unethical professional beliefs and negative affect had significant influences on cheating intention ($\beta = 0.169$, $p < 0.01$; $\beta = -0.196$, $p < 0.01$, respectively). It should be noted that most

Table 3 Means, standard deviations, and correlation matrix

	Means	SD	AT	SN	PBC	PA	NA	UPB	BI
Whole sample									
AT	3.24	0.91	0.87	–	–	–	–	–	–
SN	2.94	0.81	-0.18**	0.89	–	–	–	–	–
PBC	2.90	0.84	0.36**	0.17**	0.92	–	–	–	–
PA	2.86	0.94	0.49**	0.09*	0.44**	0.95	–	–	–
NA	3.22	0.87	-0.34**	-0.03	-0.22**	-0.43**	0.83	–	–
UPB	2.18	0.75	0.21**	0.03	0.22**	0.21**	-0.08	0.81	–
BI	3.24	0.91	0.56**	0.26**	0.54**	0.51**	-0.42**	0.27**	0.87
No job									
AT	3.20	0.98	0.89	–	–	–	–	–	–
SN	2.97	0.85	-0.34**	0.91	–	–	–	–	–
PBC	2.89	0.91	0.41**	0.24**	0.92	–	–	–	–
PA	2.83	0.93	0.41**	0.13	0.49**	0.95	–	–	–
NA	3.19	0.87	-0.47**	-0.29**	-0.42**	-0.48**	0.85	–	–
UPB	2.12	0.69	-0.01	0.04	0.09	-0.02	-0.05	0.84	–
BI	3.03	0.99	0.59**	0.41**	0.60**	0.47**	-0.53**	0.10	0.81
Part-time job									
AT	3.34	0.81	0.83	–	–	–	–	–	–
SN	3.04	0.80	-0.43**	0.87	–	–	–	–	–
PBC	2.91	0.74	0.25**	0.21*	0.87	–	–	–	–
PA	2.89	0.93	0.52**	0.30**	0.32**	0.95	–	–	–
NA	3.12	0.78	-0.48**	-0.26**	-0.11	-0.49**	0.78	–	–
UPB	2.13	0.77	0.26**	0.09	0.07	0.25**	-0.04	0.79	–
BI	3.15	0.83	0.59**	0.40**	0.34**	0.60**	-0.41**	0.27**	0.87

Table 3 continued

	Means	SD	AT	SN	PBC	PA	NA	UPB	BI
Full-time job									
AT	3.20	0.90	<i>0.88</i>	–	–	–	–	–	–
SN	2.82	0.76	<i>0.20**</i>	<i>0.89</i>	–	–	–	–	–
PBC	2.89	0.85	<i>0.37**</i>	<i>0.07</i>	<i>0.94</i>	–	–	–	–
PA	2.87	0.97	<i>0.58**</i>	<i>0.12</i>	<i>0.47**</i>	<i>0.97</i>	–	–	–
NA	3.36	0.92	<i>-0.11</i>	<i>-0.41**</i>	<i>-0.07</i>	<i>-0.34**</i>	<i>0.85</i>	–	–
UPB	2.30	0.79	<i>0.42**</i>	<i>0.05</i>	<i>0.46**</i>	<i>0.38**</i>	<i>-0.18*</i>	<i>0.73</i>	–
BI	2.96	0.86	<i>0.49**</i>	<i>0.04</i>	<i>0.61**</i>	<i>0.52**</i>	<i>-0.28**</i>	<i>0.51**</i>	<i>0.89</i>

The italic numbers in the diagonal row are square roots of the average variance extracted

* $p < 0.05$; ** $p < 0.01$; Diagonal elements are the square root of AVE

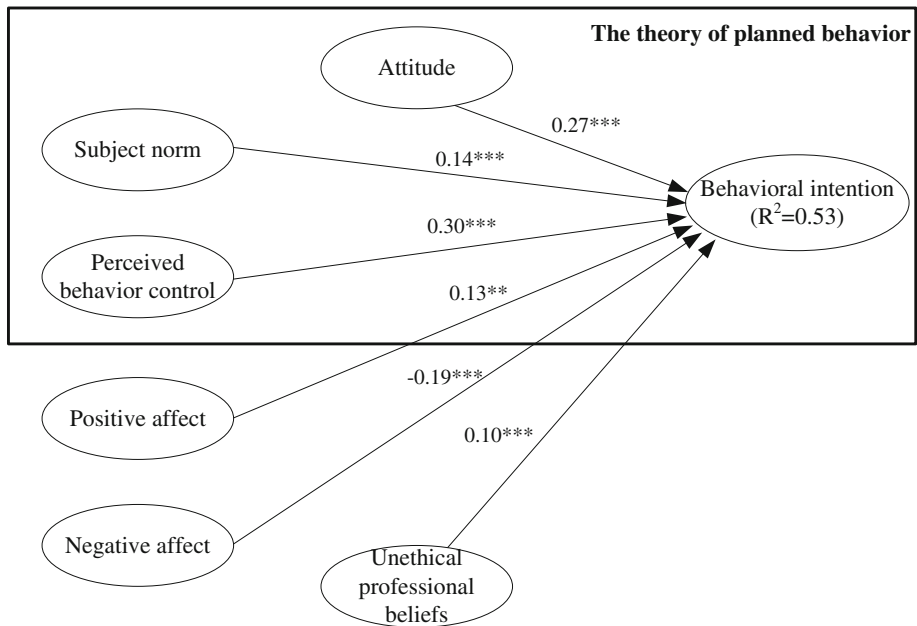


Fig. 1 PLS results for all students ($n = 525$). * $p < 0.05$; ** $p < 0.01$; *** $p < 0.001$

Table 4 Results of hypothesis tests across different job status

Hypothesis	All sample ($n = 525$)		No job ($n = 196$)		Part-time job ($n = 149$)		Full-time job ($n = 180$)	
	β	t value	β	t value	β	t value	β	t value
H1: AT \rightarrow BI	0.27***	6.68	0.28***	4.15	0.28***	3.48	0.23**	3.16
H2: SN \rightarrow BI	0.14***	3.60	0.17**	2.79	0.14	1.81	0.08	1.09
H3: PBC \rightarrow BI	0.30***	6.64	0.32***	5.00	0.12	1.45	0.41***	4.72
H4: PA \rightarrow BI	0.13**	2.72	0.09	1.58	0.32***	3.30	0.07	0.69
H5: NA \rightarrow BI	-0.19***	5.07	-0.17**	2.72	-0.07	0.91	-0.20**	3.15
H6: UPB \rightarrow BI	0.10***	3.55	0.07	1.31	0.08	1.25	0.17**	2.82

* $p < 0.05$; ** $p < 0.01$; *** $p < 0.001$

significant determinants of cheating intention are quite different in the part-time job and full-time job student groups. The only exception is that attitude significantly affected cheating intention in all student groups. Overall, the research model explains a considerable level of variance in cheating intention from 50.7 to 57.7 %, which are both higher than 40 %, the average variance explained of the theory of planned behavior. The figures of structural paths for all student groups are depicted from Figs. 2, 3, 4.

Discussion and implications

Academic dishonesty at college has become an epidemic problem and is difficult to handle. Why students commit academic dishonesty and how to prevent them from cheating have

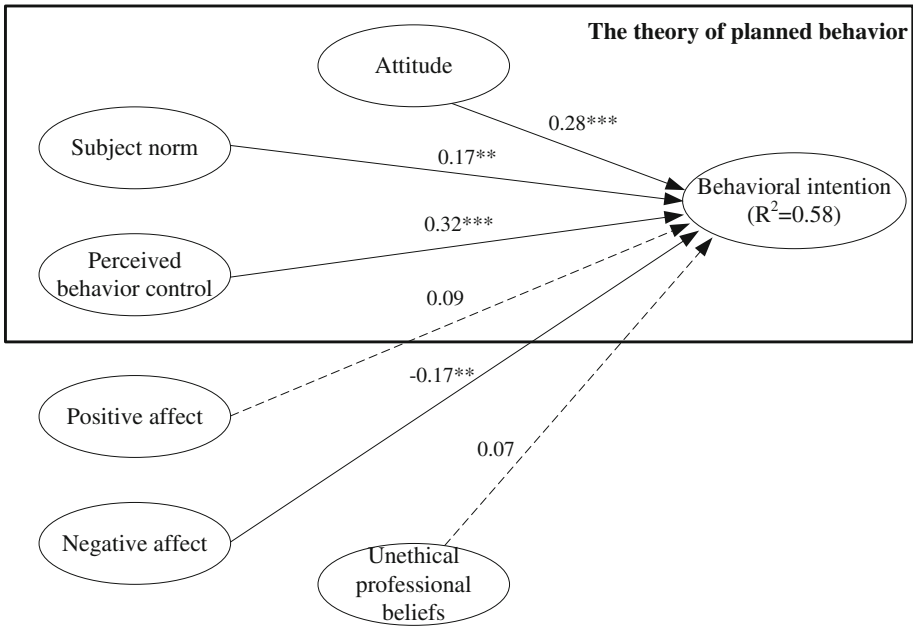


Fig. 2 PLS results for no job students (n = 196). * $p < 0.05$; ** $p < 0.01$; *** $p < 0.001$

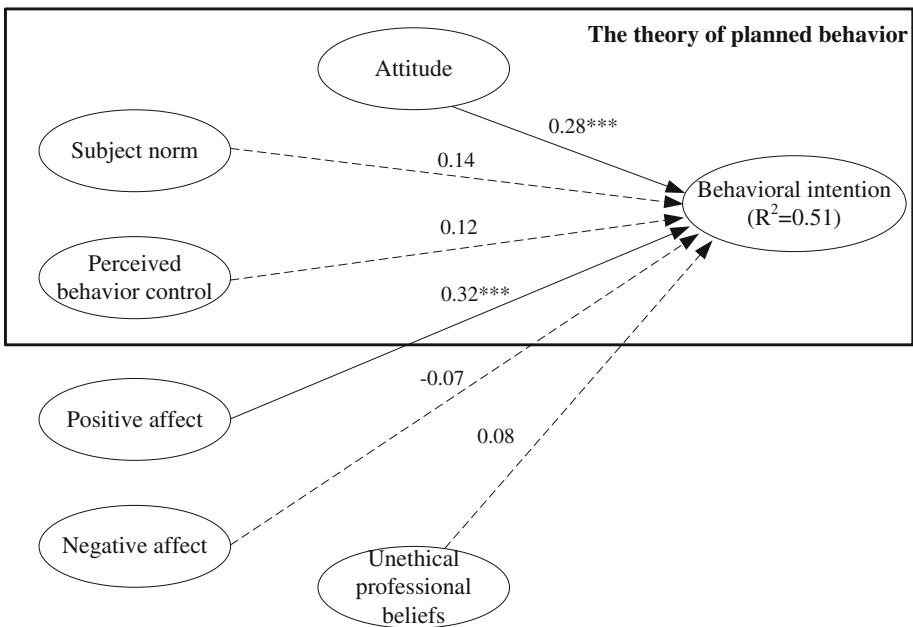


Fig. 3 PLS results for part-time job students (n = 149). * $p < 0.05$; ** $p < 0.01$; *** $p < 0.001$

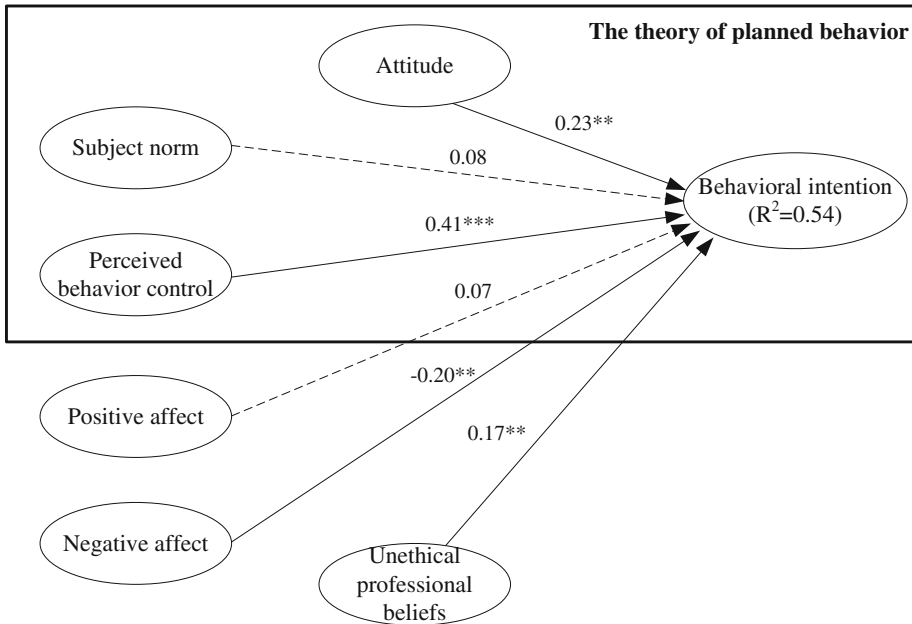


Fig. 4 PLS results for full-time job students ($n = 180$). * $p < 0.05$; ** $p < 0.01$; *** $p < 0.001$

become major issues for school administrators. As more and more colleges offer continuing education or extension programs held in the evenings or weekends, these non-traditional students (i.e., students with full-time jobs) have made the cheating issue more complex in terms of reasons affecting students' cheating. These factors might vary with age, study program, available time for learning and studying, and most importantly, ethical beliefs in the workplace. While some studies have contended that students with full-time jobs are prone to cheat because of limited time and conflicting roles (Stern et al. 1995; Carr et al. 1996), others have proposed that younger students (usually full-time students) cheat more frequently (Allen et al. 1998; Storch and Storch 2002; Whitley 1998).

To solve the inconsistent inferences, the current study proposed and tested a model of cheating behavioral intentions, and made a comparison between students with and without jobs. The main aims of the present study were to determine the applicability of the theory of planned behavior together with anticipated affects and professional ethics to cheating intention across different groups of students with and without jobs. This study posits that all six antecedents significantly influenced cheating intention in the whole student sample. Furthermore, the variance explained of cheating intention reached 52.8 %, indicating the adequacy of the proposed model. Understanding the reasons causing students' cheating would help to deter them from cheating. These factors have been identified and are discussed as follows.

First, attitude and perceived behavioral control had stronger effects on the students' cheating intention than other variables. The results indicate that the students' decision to cheat mostly depends on their justified (or neutralized) attitude and the resources they possess or the opportunities they have in the classroom (Ajzen and Madden 1986). Cheaters neutralize their cheating behavior so effectively that they really do not think it is wrong, either for themselves or for others (Haines et al. 1986). Thus, they are very likely to

commit misconduct in the workplace with the same neutralized attitude. This study suggests that direct school intervention is necessary. Educators should clarify moral standards and moral choices with a clear right and wrong. Any form of cheating is morally wrong and cannot be justified by any excuse. The consequences of cheating should also be emphasized. For example, this “personal, not hurting others” behavior could result in damaging the reputation of the school and discouraging other students’ beliefs in studying/working hard. Strict supervision during examinations is necessary. If the risk of being caught is high, students may adjust their attitudes toward cheating because it becomes less worthwhile.

The significance of perceived behavioral control suggests the necessity of enhancing the obstacles to cheating. For instance, there are several effective methods that instructors can adopt to reduce cheating during exams, including implementing alternative forms of the exam, designing discussion questions instead of memorization questions, providing several versions of multiple-choice tests, avoiding crowded classrooms, and forbidding cell phones or other unauthorized electronic equipment. Others suggest that stricter supervision is a straightforward method which would increase the perceived likelihood of being detected and punished, resulting in more caution and even deterring cheating.

Consistent with previous studies, the subjective norm is significantly related to cheating intention (Nonis and Swift 2001; Whitley 1998). This finding is also in accordance with social learning theory in that peers’ attitudes toward cheating are the most important determinant. Schools can implement academic integrity seminars or introduce academic integrity standards as part of orientation programs for new students to establish group norms. In addition, ethical courses including in-class discussion and related assignments could help students to express their ethical beliefs and receive them from others. If students are in a classroom in which cheating is condemned, this group norm will have certain effects on inhibiting cheating.

Another contribution of this study is that it identifies the role of anticipated affects, which have often been linked to moral issues. Our results show that anticipated negative affect appears to have a stronger effect than positive affect on cheating intention. Successful cheaters might feel a certain degree of positive emotion when they get a satisfying score. However, the implementation of moral education or academic integrity seminars could remind students that cheating is not a “minor offence” and arouse their sense of guilt while engaging in cheating. On the other hand, adequate interventions (e.g., providing remedial teaching) by the school may help to increase or maintain the students’ study efforts, and thus reduce the wrong expectations and sense of joy due to successful cheating.

The current study also shows that ethical beliefs in the workplace significantly influence students’ cheating intention. According to past studies, students who cheat in college are more likely to engage in unethical workplace behavior (Harding et al. 2004; Nonis and Swift 2001). Therefore, it seems to be a circular problem. Indeed, there are certain common factors influencing an individual’s decision to participate in deviant behaviors in different settings (Harding et al. 2004). Therefore, ethical education is no longer just the responsibility of schools. Managers should re-examine their organizational culture, because a culture may deter unethical behavior and help to establish ethical standards (Shih and Chen 2006). From an organizational standpoint, it is important to communicate negative consequences and objection to unethical conduct to employees. Academic dishonesty should be viewed as a counterpart of work-related deviance, and its importance extends beyond the classroom.

This study also examines six antecedents across student groups of different job status. In the no-job group, all major factors of TPB and anticipated negative affect significantly influenced cheating intention. However, anticipated positive affect and unethical professional beliefs failed to explain cheating intention. It is reasonable that ethical beliefs in the workplace did not significantly influence students' cheating intention because they had no jobs. In the part-time job group, to our surprise, only attitude and anticipated positive affect impacted cheating significantly. The reason why most hypothetical relationships were not confirmed may be due to the varying hours of students' part-time jobs, ranging from a few hours to over thirty hours per week. Therefore, this study compares two extreme groups of students: students with and without jobs.

While looking into the group of students with full-time jobs, only two factors, subjective norm and anticipated positive affect, did not significantly influence cheating intention. The major differences among the determinants between non-working students and those with a full-time job are subjective norms and unethical beliefs in the workplace. The reason that subjective norms are insignificant might be that students with a full-time job spend more time in the workplace than in class; therefore, peers' (either classmates or colleagues) influence on cheating in examinations is less significant. Difference in age might be another reason, because young people may be particularly susceptible to peer group influence (Ryan 2001). As expected, unethical beliefs in the workplace exerted their influence on the cheating intention of students with full-time jobs rather than on those with no jobs. From the significant effects of attitude, perceived behavioral control, anticipated negative affect, and unethical professional beliefs on cheating intention for students with full-time jobs, this study suggests certain practical ways to reduce cheating as mentioned above, such as direct school intervention including implementing moral education, ensuring strict supervision, and providing remedial teaching for students receiving low grades. Most importantly, the rectification of employees' misconduct and an emphasis on ethical policy in the workplace are effective ways of reducing their cheating behavior at school.

Finally, the current study discovered that students with full-time jobs were unlikely to cheat compared with those with no jobs and those with part-time jobs based on mean cheating intention. This result is consistent with previous studies which found that full-time students (usually younger students) are more likely to cheat than part-time students with full-time jobs (Allen et al. 1998; Storch and Storch 2002; Whitley 1998). Even though these full-time student-workers require a great deal of effort to overcome the fatigue and stress of their work and study, they seem unlikely to lessen their school load by cheating on examinations. However, colleges and universities should consider any means to support the needs of working students and to prevent possible cheating or dropping out of school, including academic advisory services, distance learning programs, and summer courses.

On the other hand, this study confirms that unethical beliefs in the work environment have an influence on employees' moral judgment, which is reflected in their dishonest behavior at school. Therefore, to cultivate student-workers or worker-students with character, the responsibility does not solely lie with academic institutions. Universities and enterprises should work together on cooperative education to create a supportive culture for working students and to develop character and moral education. Indeed, students with ethical judgment will make moral decisions both at school and in the workplace.

Limitations

Some limitations of this study need to be addressed. First, the subjects' intention to cheat rather than their actual behavior was measured. Even though the correlation between behavioral intention and actual behavior is strong (Venkatesh and Davis 2000), multiple measures of cheating (e.g., including actual cheating in addition to cheating intention) or follow-up surveys of actual cheating behavior are suggested for future research.

Second, self-reported measures often lead to either overreporting or underreporting of dishonest behaviors and to common method bias. Although it is an inherent shortcoming of cross-sectional data collection designs, a complete assessment of the model incorporating actual measures of usage is important for future research.

Third, the subjective norm referent is "important people" as stated in the survey items. One would think that "important people" refers to classroom peers since this "cheating" survey was conducted in the classroom. However, we cannot exclude the possibility that some respondents may not have included classmates. Future research may clearly state "classroom peers" in the survey items.

Finally, the cheating intention investigated in this study is limited to traditional paper-and-pencil cheating. There are other types of academic misconduct, such as plagiarism, which are typically seen as a form of fraud or intellectual theft. Moreover, when students cheat with the help of technological devices such as smart phones, computers, or tablet computers (such as i-Pads), the influential factors of cheating may also differ. Therefore, future research might consider adopting scenarios for analyzing different forms of academic misconduct for further comparison studies.

Appendix: Measures of constructs

Construct	Source
Neutralizing attitude	
AT1. Participants believed that cheating in college is justified to pass a course	Jordan (2001)
AT2. Participants believed that cheating in college is justified to stay in school or to graduate	
AT3. Participants believed that cheating in college is justified if a close friend asks for help	
Subjective norm	
SN1. If I cheated on a test or exam, most of the people who are important to me would not approve	Beck and Ajzen (1991)
SN2. The people in my life whose opinions I value (e.g., my family, friends, colleagues, teachers, etc.) would be willing to cheat on an in-class exam if they were in my situation ^a	
SN3. No one who is important to me thinks it is OK to cheat on a test or exam	
SN4. Most of the people who are important to me will look down on me if I cheat on a test or exam	
Perceived behavior control	

Appendix continued

Construct	Source
PBC1. For me to cheat on a test or exam is easy	Beck and Ajzen (1991)
PBC2. If I want to, I can cheat on a test or exam	
PBC3. I can imagine times when I might cheat on a test or exam even if I hadn't planned to	
PBC4. Even if I had a good reason, I could not bring myself to cheat on a test or exam ^a	
Positive and negative affect	
If I succeed in achieving a satisfying score by cheating over the next few months, I will feel ...	
PA1. Delighted	Perugini and Bagozzi (2001)
PA2. Excited	
PA3. Glad	
NA1. Uncomfortable	Perugini and Bagozzi (2001);
NA2. Ashamed	Whitley (2001)
NA3. Depressed	
Unethical professional beliefs	
Do you agree with the following behaviors in the work place?	
UPB1. Improper use of company supplies	Harding et al. (2004)
UPB2. Taking credit for other people's work	
UPB3. Lying about work quality	
UPB4. Falsification of records	
Behavioral intention	
BI1. If I had the opportunity, I would cheat on a test or exam	Beck and Ajzen (1991),
BI2. I may cheat on a test or exam in the future	Harding et al. (2007)
BI3. I will try to cheat on an in-class test or exam during the current academic term	

All items employ a five-point Likert scale from "strongly disagree" to "strongly agree"

^a These items were dropped due to low item-to-total correlation to better improve the model goodness-of-fit

References

- Ajzen, I. (1991). The theory of planned behavior. *Organizational Behavior and Human Decision Processes*, 50(2), 179–211.
- Ajzen, I., & Madden, T. J. (1986). Prediction of goal-directed behavior: Attitudes, intentions, and perceived behavioral control. *Journal of Experimental Social Psychology*, 22(5), 453–474.
- Allen, J., Fuller, D., & Lockett, M. (1998). Academic integrity: Behaviors, rates, and attitudes of business students toward cheating. *Journal of Marketing Education*, 20(1), 41–52.
- Anderson, J. C., & Gerbing, D. W. (1988). Structural equation modeling in practice: A review and recommended two-step approach. *Psychological Bulletin*, 103(3), 411–423.
- Armitage, C. J., & Conner, M. (2001). Efficacy of the theory of planned behaviour: A meta analytic review. *British Journal of Social Psychology*, 40(4), 471–499.
- Australian Bureau of Statistics. (2002). *Year book Australia 2002: Education and training special article—combining work and study*. Belconnen: ABS.
- Baird, J. S. (1980). Current trends in college cheating. *Psychology in the Schools*, 17(4), 515–522.

- Beck, L., & Ajzen, I. (1991). Predicting dishonest actions using the theory of planned behavior. *Journal of Research in Personality*, 25(3), 285–301.
- Becker, D., Connolly, J., Lentz, P., & Morrison, J. (2006). Using the business fraud triangle to predict academic dishonesty among business students. *Academy of Educational Leadership Journal*, 10(1), 37–54.
- Carr, R. V., Wright, J. D., & Brody, C. J. (1996). Effects of high school work experience a decade later: Evidence from the national longitudinal survey. *Sociology of Education*, 69(1), 66–81.
- Caruana, A., Ramaseshan, B., & Ewing, M. (2000). The effect of anomie on academic dishonesty among university students. *The International Journal of Educational Management*, 14(1), 23–30.
- Chapman, K. J., Davis, R., Toy, D., & Wright, L. (2004). Academic integrity in the business school environment: I'll get by with a little help from my friends. *Journal of Marketing Education*, 26(3), 236–249.
- Chin, W. W. (1998). The partial least squares approach to structural equation modeling. In G. A. Marcoulides (Ed.), *Modern methods for business research* (pp. 295–336). Mahwah, NJ: Lawrence Erlbaum Associates.
- Chiu, R. K. (2003). Ethical judgment and whistleblowing intention: Examining the moderating role of locus of control. *Journal of Business Ethics*, 43(1), 65–74.
- Conner, M., & Armitage, C. J. (1998). Extending the theory of planned behavior: A review and avenues for further research. *Journal of Applied Social Psychology*, 28(15), 1429–1464.
- Crown, D. F., & Spiller, M. S. (1998). Learning from the literature on collegiate cheating: A review of empirical research. *Journal of Business Ethics*, 17(6), 683–700.
- Currie, L. C. (1985). Choice decision and the anticipation of events. *Behavioral Decision Making* (pp. 379–403). Springer.
- Curtis, S., & Williams, J. (2002). The reluctant workforce: Undergraduates' part-time employment. *Education and Training*, 44(1), 5–10.
- Davis, S. F., Grover, C. A., Becker, A. H., & McGregor, L. N. (1992). Academic dishonesty: Prevalence, determinants, techniques, and punishments. *Teaching of Psychology*, 19(1), 16–20.
- Davis, S. F., & Ludvigson, H. W. (1995). Additional data on academic dishonesty and a proposal for remediation. *Teaching of Psychology*, 22(2), 119–121.
- Diekhoff, G. M., LaBeff, E. E., Clark, R. E., Williams, L. E., Francis, B., & Haines, V. J. (1996). College cheating: Ten years later. *Research in Higher Education*, 37(4), 487–502.
- Eagly, A. H., & Chaiken, S. (1993). The psychology of attitudes. Harcourt Brace Jovanovich College Publishers.
- Fornell, C., & Larcker, D. (1981). Evaluating structural equation models with unobservable variables and measurement error. *Journal of Marketing Research*, 18(2), 39–50.
- Graham, M. A. (1994). Cheating at small colleges: An examination of student and faculty attitudes and behaviors. *Journal of College Student Development*, 35(4), 255–260.
- Haines, V. J., Diekhoff, G. M., LaBeff, E. E., & Clark, R. E. (1986). College cheating: Immaturity, lack of commitment, and the neutralizing attitude. *Research in Higher Education*, 25(4), 342–354.
- Hair, J. F., Anderson, R. E., Tatham, R. L., & Black, W. C. (1998). *Multivariate data analysis*. Englewood: Prentice Hall International.
- Harding, T. S., Carpenter, D. D., & Finelli, C. J. (2012). An exploratory investigation of the ethical behavior of engineering undergraduates. *Journal of Engineering Education*, 101(2), 346–374.
- Harding, T. S., Carpenter, D. D., Finelli, C. J., & Passow, H. J. (2004). Does academic dishonesty relate to unethical behavior in professional practice? An exploratory study. *Science and Engineering Ethics*, 10(2), 311–324.
- Harding, T. S., Mayhew, M. J., Finelli, C. J., & Finelli, D. D. (2007). The theory of planned behavior as a model of academic dishonesty in engineering and humanities undergraduates. *Ethics and Behavior*, 17(3), 255–279.
- Hirschman, E. C., & Holbrook, M. B. (1982). Hedonic consumption: Emerging concepts, methods and propositions. *Journal of marketing*, 46(3).
- Hollinger, R. C., & Clark, J. P. (1983). *Theft by employees*. Lexington, MA: Lexington Books Lexington.
- Hrabak, M., Vujaklija, A., Vodopivec, I., Hren, D., Marusic, M., & Marusic, A. (2004). Academic misconduct among medical students in a postcommunist country. *Medical Education*, 38(3), 276–285.
- Hsiao, C. H., & Yang, C. (2011). The impact of professional unethical beliefs on cheating intention. *Ethics and Behavior*, 21(4), 301–316.
- Hunt, A., Lincoln, I., & Walker, A. (2004). Term-time employment and academic attainment: Evidence from a large-scale survey of undergraduates at Northumbria University. *Journal of Further and Higher Education*, 28(1), 3–18.

- Jordan, A. E. (2001). College student cheating: The role of motivation, perceived norms, attitudes, and knowledge of institutional policy. *Academic Dishonesty*, 11(3), 233–247.
- Kahneman, D., & Tversky, A. (1979). Prospect theory: An analysis of decision under risk. *Econometrica*, 47(2), 263–291.
- Kaiser, F. G. (2006). A moral extension of the theory of planned behavior: Norms and anticipated feelings of regret in conservationism. *Personality and Individual Differences*, 41(1), 71–81.
- Kisamore, J. L., Stone, T. H., & Jawahar, I. M. (2007). Academic integrity: The relationship between individual and situational factors on misconduct contemplations. *Journal of Business Ethics*, 75(4), 381–394.
- Kohlberg, L. (1985). The just community approach to moral education in theory and practice. In W. Berkowitz & F. Oser (Eds.), *Moral education: Theory and application* (pp. 27–88). Hillsdale, NJ: Lawrence Erlbaum.
- Kramer, H., Mathews, G., & Endias, R. (1987). Comparative stress levels in part-time and full-time social work programs. *Journal of Social Work Education*, 23(3), 74–80.
- Lawson, R. A. (2004). Is classroom cheating related to business students' propensity to cheat in the "real world"? *Journal of Business Ethics*, 49(2), 189–199.
- Lin, C. H. S., & Wen, L. Y. M. (2007). Academic dishonesty in higher education: A nationwide study in Taiwan. *Higher Education*, 54(1), 85–97.
- Malhotra, N. K. (2005). Attitude and affect: New frontiers of research in the 21st century. *Journal of Business Research*, 58(4), 477–482.
- Mayhew, M. J., Hubbard, S. M., Finelli, C. J., Harding, T. S., & Carpenter, D. D. (2009). Using structural equation modeling to validate the theory of planned behavior as a model for predicting student cheating. *Review of Higher Education*, 32(4), 441–468.
- McCabe, D. L. (1992). The influence of situational ethics on cheating among college students. *Sociological Inquiry*, 62(3), 365–374.
- McCabe, D. L. (2005). *Presidents report: The center for academic integrity*. Durham, NC: Kenan Institute for Ethics, Duke University.
- McCabe, D. L., & Trevino, L. K. (1997). Individual and contextual influences on academic dishonesty: A multicampus investigation. *Research in Higher Education*, 38(3), 379–396.
- McCabe, D. L., Trevino, L. K., & Butterfield, K. D. (2001). Dishonesty in academic environments. *Journal of Higher Education*, 72(1), 29–45.
- McCabe, D. L., Trevino, L. K., & Butterfield, K. D. (2002). Honor codes and other contextual influences on academic integrity: A replication and extension to modified honor code settings. *Research in Higher Education*, 43(3), 357–378.
- Mellers, B. A., Schwartz, A., Ho, K., & Ritov, I. (1997). Decision affect theory: Emotional reactions to the outcomes of risky options. *Psychological Science*, 8(6), 423–429.
- Michaels, J. W., & Miethe, T. D. (1989). Applying theories of deviance to academic cheating. *Social Science Quarterly*, 70(4), 870–885.
- Nonis, S., & Swift, C. O. (2001). An examination of the relationship between academic dishonesty and workplace dishonesty: A multicampus investigation. *Journal of Education for Business*, 77(2), 69–77.
- Passow, H. J., Mayhew, M. J., Finelli, C. J., Harding, T. S., & Carpenter, D. D. (2006). Factors influencing engineering students' decisions to cheat by type of assessment. *Research in Higher Education*, 47(6), 643–684.
- Perugini, M., & Bagozzi, R. P. (2001). The role of desires and anticipated emotions in goal directed behaviours: Broadening and deepening the theory of planned behaviour. *British Journal of Social Psychology*, 40(1), 79–98.
- Rivis, A., Sheeran, P., & Armitage, C. J. (2009). Expanding the affective and normative components of the theory of planned behavior: A meta analysis of anticipated affect and moral norms. *Journal of Applied Social Psychology*, 39(12), 2985–3019.
- Ryan, A. M. (2001). The peer group as a context for the development of young adolescent motivation and achievement. *Child Development*, 72(4), 1135–1150.
- Sheppard, B. H., Hartwick, J., & Warshaw, P. R. (1988). The theory of reasoned action: A meta-analysis of past research with recommendations for modifications and future research. *Journal of Consumer Research*, 15(3), 325–343.
- Shih, C., & Chen, C. (2006). The effect of organizational ethical culture on marketing managers role stress and ethical behavioral intentions. *Journal of American Academy of Business*, 8(1), 89–95.
- Sierra, J. J., & Hyman, M. R. (2006). A dual-process model of cheating intentions. *Journal of Marketing Education*, 28(3), 193–204.
- Sierra, J. J., & Hyman, M. R. (2008). Ethical antecedents of cheating intentions: Evidence of mediation. *Journal of Academic Ethics*, 6(1), 51–66.

- Sims, R. L. (1993). The relationship between academic dishonesty and unethical business practices. *Journal of Education for Business*, 68(4), 207–211.
- Smyth, M. L., & Davis, J. R. (2004). Perceptions of dishonesty among two-year college students: Academic versus business situations. *Journal of Business Ethics*, 51(1), 63–73.
- Stern, D., Finkelstein, N., Stone, J, I. I. I., Latting, J., & Dornsife, C. (1995). *School to work: Research on programs in the United States*. Washington, DC: Taylor and Francis/Falmer Press.
- Stone, T. H., Kisamore, J., & Jawahar, I. M. (2007, June). Predicting academic dishonesty: Theory of planned behavior and personality. In ASAC (Vol. 28, No. 10).
- Storch, E. A., & Storch, J. B. (2002). Fraternities, sororities, and academic dishonesty. *College Student Journal*, 36(2).
- Tang, S., & Zuo, J. (1997). Profile of college examination cheaters. *College Student Journal*, 31, 340–346.
- Teixeira, A. A., & Rocha, M. F. (2010). Cheating by economics and business undergraduate students: An exploratory international assessment. *Higher Education*, 59(6), 663–701.
- Tibbetts, S. (1999). Differences between men and women regarding decisions to commit test cheating. *Research in Higher Education*, 40(3), 323–341.
- Tsiros, M., & Mittal, V. (2000). Regret: A model of its antecedents and consequences in consumer decision making. *Journal of Consumer Research*, 26(4), 401–417.
- Venkatesh, V., & Davis, F. D. (2000). A theoretical extension of the technology acceptance model: Four longitudinal field studies. *Management Science*, 46(2), 186–204.
- Whitley, B. E. (1998). Factors associated with cheating among college students: A review. *Research in Higher Education*, 39(3), 235–274.
- Whitley, B. E. (2001). Gender differences in affective responses to having cheated: The mediating role of attitudes. *Ethics and Behavior*, 11(3), 249–259.
- Whitley, B. E., & Keith-Spiegel, P. (2002). *Academic dishonesty: An educator's guide*. Mahwah, NJ: Lawrence Erlbaum Associates.
- Whitley, B. E., & Kost, C. R. (1999). College students' perceptions of peers who cheat. *Journal of Applied Social Psychology*, 29(8), 1732–1760.