Cheating behavior among high school and college students: Student characteristics and situational factors

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Abstract

The growing recognition of cheating as a cross-cultural problem urges educators and researchers to investigate “what is the motivation for such academic behavior. This paper reports the results of two different investigations. The first survey study investigated the relationship between achievement goal orientation and self-reported copying behaviour among college students (N = 2007) enrolled in five different academic programs. The volunteer participants were college students enrolled in three public universities and two vocational/technical colleges in Thailand. We found that compared to humanities students, management, engineering, science, and vocational students were significantly reported significantly higher frequency of copying behaviour. The second survey study tested a conceptual model of the combined influence of individual attributes—materialism, religiosity, achievement goals—on high school students’ propensity to cheat, their self-reported cheating behavior, and the influence of gender and curricular context. Participants were ninth, tenth, eleventh, and twelfth grade high school students from central Thailand (N = 2123). The path analysis showed that materialism and performance avoidance goals were positively associated with both student willingness to cheat and the frequency of self-reported cheating behaviour. We use self-determination and achievement goal theories to interpret the effects of multiple goals, values and institutional environment on academic behaviour of students, and the influence of curricular context.

Keywords: Motivation, academic behavior, cheating behavior
Background

Student cheating occurs across national contexts and has been reported to be on the rise (e.g., Kidder & Verschoor, 2002; Lin & Wen, 2007; McCabe, 1997; Smyth & Davis, 2004; Songsriwittaya, Koul, & Kongsuwan, 2010). McCabe (1997) replicated an earlier survey study to find that the percentage of American college students who reported cheating on college exams increased from 26% in 1963 to 52% in 1993 and cheating on college assignments increased from 11% in 1963 to 49% in 1993. In 2002, The Josephson Institute of Ethics in California, USA found that 72% of the American high school students who were surveyed admitted to cheating on an examination within the prior 12 months (up from 70% in 2000, and 61% in 1992). The increases of student cheating are concurrent with findings reported by the American Council of Education on changes in student value orientations: Between 1968 and 2000, the percentage of college students who perceived a need to become affluent increased from 41% to 73%, at the same time, the percentage of students who gave importance to “developing a meaningful philosophy of life” decreased from 83% to 42% (Kidder & Verschoor, 2002; Smyth & Davis, 2004).

As shifts in academic behaviour pull values to center stage, educators express concerns that cheating results in “unfair advantage” (Bouville, 2010) and “misrepresentation of what has been learned” (Lupton & Chapman, 2002); it “erodes public confidence” in the value of the education our institutions provide (Whitley & Keith-Spiegel, 2002). Cheating undermines the core values of professions for which students prepare, and cheating behaviour may be carried over from school to college and into professional life (Davis & Ludvigson, 1995; Jones & Spraakman, 2011). Cheating behaviour in medical college has been found to be a good predictor of unethical medical practices later on (Hrabak et al., 2004). Unethical behaviours among college business students have been linked to a greater likelihood of similar behaviours in the workplace (Nonis & Swift, 2001). Accountants who are willing to engage in acts that reduce the quality of financial audits are likely to have engaged in cheating as students (Baker, 2007; Koh, Scully, & Woodliff, 2011). “Cheating is a motivated behavior . . . it entails the intentional violation of pre-set rules in order to attain an advantage or credit, or to increase the chance of success” (Murdock & Anderman, 2006, as cited in Van Yperen, Hamstra, & Van der Klauw, 2011, p. s6). What values inform such behaviour?
Research studies have examined the importance of specific values in relation to cheating (e.g., see Rettinger & Jordan, 2005). Materialism (the value attached to worldly possessions) (Belk, 1985; Browne & Kaldenberg, 1997) and religiosity are value orientations that are considered to have significant influence on behaviour (Deci & Ryan, 1985; Kilbourne, Grunhagen, & Foley, 2005; Weber, 1958). There is empirical evidence for the influence of materialism and religiosity on cheating behaviour (e.g., Bruggeman & Hart, 1996; Conroy & Emerson, 2004; Jordan, 2003; Rawwas, Swaidan, & Al-Khatib, 2006). For example, Jordan (2003) found that strong materialistic aspirations for social and financial status contribute to an academic climate of dishonesty and Conroy and Emerson (2004) found that strong religiosity is negatively associated with student acceptance of potentially unethical business scenarios. However, “questions remain about whether research rooted in a unidimensional conception of values adequately addresses the diversity of values that may influence behavior in a given situation” (McCabe, Dukerich, & Dutton, 1991, p. 952; Rettinger & Jordan, 2005).

According to self-determination theory, materialism relates to motivation and behaviour in two ways (Deci & Ryan, 1985; Kasser & Ryan, 1993, 1996): 1) It promotes the acquisition of wealth and worldly possessions as a worthwhile goal; 2) It promotes dissatisfaction with an existing situation in comparison to unrealized, material goals, thus providing motivation to engage in both ethical and unethical behaviours. Religious values provide guidance about what is important in life (Weber, 1958), and how to achieve lifelong objectives (Shah & Marks, 2004). Since religions teach codes of ethical conduct, deep religiosity will, presumably, be inconsistent with a willingness to cheat because it would produce cognitive dissonance (Festinger, 1957).

Socio-cognitive theories of motivation (e.g., Covington, 2000; Schunk, Pintrich, & Meece, 2008) interpret cheating behaviour in terms of achievement goals (e.g., Anderman, 2007). According to goal theory, “all actions are given meaning, direction, and purpose by the goals that individuals seek out” (Covington, 2000, p. 174). In general terms, achievement goal theory defines mastery goals as inwardly focused on mastery of a task and personal improvement and performance goals as outwardly focused on normative outcomes, grades, rewards, and other external evaluations and comparisons (Hyde & Durik, 2005). A student who endorses a performance-approach goal wants to be seen as excellent or superior to others and a student who endorses a performance-avoidance goal wants to not appear stupid.
compared to others (e.g., Church, Elliot, & Gable, 2001). Cheating behaviour is observed more among students who adopt performance goals and less among students who adopt mastery goals (e.g., Anderman, 2007; Anderman & Midgley, 2004). Anderman (2007) says that cheating serves no purpose for mastery goal oriented students because it does not lead to authentic learning and self-improvement. On the other hand, cheating might further the goal of maximizing scores or avoiding low scores for performance goal oriented students.

Objectives/Research questions

Research has shown that students may hold multiple goals or values at the same time (Wentzel, 1991). The investigation reported in this paper was based on the assumption that there may be patterns to values that related to cheating behaviour. The investigation was designed to contribute to understanding the “culture of cheating” by asking the following research questions:

1. What is the relationship between multiple goals and values and students’ attitudes toward cheating? What is the influence on curricular context?
2. What is the influence of gender and professional career aspirations on students’ willingness to cheat and their self-reported cheating behavior?

Research methodology

The volunteer participants for first survey were college students enrolled in three public universities and two vocational/technical colleges in Thailand. Vocational college students were majoring in education for applied technical fields (i.e. production engineering, civil engineering, electrical technology, automotive technology, printing technology, multimedia, and computer and information technology). University students were majoring in science, engineering, business and humanities. The volunteer participants for second survey were high school students enrolled in three public universities and two vocational/technical colleges in Thailand. The school system in Thailand consists of six years of primary education (called Prathom), followed by three years of lower secondary education (called Mathayom 1, 2, 3), and three years of upper secondary education (called Mathayom 4, 5, 6). More than 94% of responses to our surveys were complete.
Our survey questionnaires were written in Thai and divided into two sections. The first part of the survey asked for general information which included gender, grade, and career aspiration (“After completing secondary education, what profession do you intend to choose?”). Surveys assessed materialism, religiosity, achievement goal orientation, willingness to cheat, and self-reported cheating in math classrooms. Each of the measurement scales used in this study were tested and validated in prior studies (Koul, 2007; Ontakharai, Koul, & Neanchaleay, 2008; Songsriwittaya et al., 2010). The section on materialism assessed the value placed on financial success and material possessions (Richins & Dawson, 1992). The questions here were translated and adapted from Chang and Arkin (2002) (e.g., “I believe the amount of material objects people own is a sign of success”). The section on religiosity assessed the level of commitment to the perceived benefits of religion (Ontakharai et al., 2008) (e.g., “Sassana (Thai word for religion) calms my emotions when I am upset or hurt”). The achievement goal orientation section assessed mastery orientation (e.g., “I feel satisfied when I learn new things in my math class”), performance approach orientation (e.g., “I feel good when I perform better than other students in math class”), and performance avoidance orientation (e.g., “My main goal in math class is to avoid looking stupid in math”). The section on willingness to cheat was adapted from Lee, Whitehead, and Ntoumanis (2007) (e.g., “I would cheat if I thought it would help me”). The section on self-reported cheating behaviour was adapted from The Dimensions of Plagiarism survey (Koul, 2007) (e.g., “How often did you lok (Thai word for cheating) by copying math assignments from friends”).

Exploratory principle component analysis with varimax rotation was performed on each section of the survey. Factor loadings ranged from .51 to .83 and scale reliability alpha values ranged from .79 to .93. We used path analysis procedures with SPSS and AMOS to test the combined influence of materialism, religiosity, and achievement goals on willingness to cheat and self-reported cheating behaviour in math classrooms (Byrne, 2009; Joreskog & Sorbom, 2000). Path analysis is considered a good technique to test direct and indirect relations between variables when there is theoretical and empirical justification for the relationship (Cook & Campbell, 1979; Mueller, 1996). We used maximum likelihood method to compute covariance matrices from the raw data. This estimation procedure has been recommended for use with multivariate normally distributed data (Chou & Bentler, 1995). We chose three indexes to evaluate whether our path analysis model was a good fit:
Comparative-fit-index (CFI), norm-fit-index (NFI), and root-mean-square-error-approximation (RMSEA). Models with CFI and NFI values close to .95 and RMSEA value less than .5 are normally considered an acceptable fit (Byrne, 2009).

We used cluster analysis which organizes data into two or more clusters (conceptually meaningful groups) on the basis of common characteristics. We started with hierarchical cluster analysis using Ward’s method, applying squared distance to determine the optimum number of clusters. After examination of the resulting agglomeration schedule and clustering coefficients, it was determined that a two-cluster solution was suitable. We conducted K-means cluster analysis on the following variables: materialism, religiosity, mastery goals, performance-approach goals, performance-avoidance goals, willingness to cheat, and self-reported cheating behaviour. We also examined the influence of gender and career aspirations on cluster membership by calculating the proportion of students that fall into each sub-group within the cluster.

**Findings**

The statistics associated with the path model indicate the fit to data was very good and the model accurately accounted for the relationship obtained among measured variables. The chi-square test \((4, 2123) = 5.262, p = .261\). NFI was .997 and CFI was .999, and RMSEA was .012, all indicating a good-fitting model.

Path analysis shows that the exogenous variables of materialism and performance goals (approach and avoidance goals) are positively associated with each other. Similarly, mastery goals had positive association with religiosity but negligible association with materialism. Religiosity and mastery goals had direct association and indirect association (with the intervening variable of “willingness to cheat”) with self-reported cheating in math classrooms. Materialism and performance-avoidance goals had only indirect association (with the intervening variable of “willingness to cheat”) with self-reported cheating in math classrooms. Materialism, religiosity, mastery goals and performance-avoidance goals accounted for 18.9% of variance in willingness to cheat.

Parameter estimates revealed that materialism and performance-avoidance goals were positively associated with willingness to cheat (beta = .321 and .167, respectively) while
Religiosity and mastery goals were negatively associated with willingness to cheat (beta = -.107 and -.108, respectively). The strongest total effect on willingness to cheat was materialism followed by performance-avoidance goals, and the strongest total effect on self-reported cheating in math classrooms was mastery orientation followed by materialism.

The K-means cluster analysis organized all the survey respondents into two mutually exclusive groups. Each cluster was comprised of students whose values and goals were more similar to each other than to those of the students in the other cluster.

- Cluster 1 (N = 983) was characterized by strong materialism, higher endorsement of performance approach and performance-avoidance goals, higher willingness to cheat, and higher self-reported frequency of cheating in math classrooms.
- Cluster 2 (N = 1009) was characterized by weak materialism, lower endorsement of performance approach and performance-avoidance goals, lower willingness to cheat, and lower self-reported frequency of cheating in math classrooms.

Mean values on religiosity and mastery orientation did not differ significantly between students in Cluster 1 and Cluster 2. A high proportion of both males and students aspiring for business and related professions were classified into Cluster 1 (we will call it the “high willingness to cheat” cluster). A high proportion of both females and students aspiring for teaching, medicine and related professions were classified into Cluster 2 (we will call it the “low willingness to cheat” cluster).

Discussion

We found that males reported higher frequency of copying behavior than females and the frequency of self-reported copying behavior was inversely related to grade-point-average. Ward and Beck (1990) have used gender-role socialization theory to explain gender differences in cheating behavior. These researchers hypothesize that in a society with rigidly defined gender roles, females are more likely than males to be socialized to obey rules and are therefore less likely to engage in cheating behavior. Other researchers suggest the theoretical rationale for the influence of grade-point-average on copying behavior is that students with lower academic achievement have more to gain and less to lose by cheating and
are therefore more likely to engage in copying behavior (see also Bennette, 2005; Park, 2003).

Research has shown that academic context and learning environment can influence the goal orientations of students, which may subsequently influence their copying behavior in a number of ways (see Kaplan & Maehr, 2007, p. 159; also Ames, 1990). Environments that engage the student in personally meaningful and challenging tasks enhance mastery goals while environments that result in rote learning enhance performance goals. Environments that encourage student autonomy and responsibility enhance mastery goals whereas environments in which students follow an authoritarian and prescribed way of learning enhance performance goals. Environments in which the recognition and evaluation of learning outcomes is conducted privately enhance mastery goals whereas environments in which the recognition and evaluation of learning outcomes is conducted publically enhance performance goals. Students perceive the values that their academic environment supports which in turn can influence their achievement goal orientation (e.g., Elliot & Dweck, 2005; Gabel, 2006; Schunk et al., 2008).

We found that strong materialism was positively associated with the endorsement of performance goals and we conclude it is because both are oriented toward external rewards (Kasser & Ryan, 1993, 1996). This finding is consistent with the results of a prior study carried out in Hong Kong which found that social comparison and the perception of discrepancy between ideal and actual conditions triggers a desire for material possessions, and vice versa (Chan & Prendergast, 2007). All of these findings are consistent with self-determination theory which predicts that a strong desire for material possessions encourages social comparison (Deci & Ryan, 1985; Sirgy, 1998).

We found that mastery goals were associated with a lower willingness to cheat and materialism and performance avoidance goals were associated with a higher willingness to cheat. These findings are consistent with the results of prior studies that found that self-reported cheating behaviours are related positively to extrinsic goals and negatively to intrinsic goals (e.g., Anderman & Midgley, 2004).

The two groups of students differentiated by cluster analysis differed significantly in respect to values, goals and cheating profiles: One cluster was comprised of students who had significantly high levels of both materialism and performance goal orientations. They
scored high on “willingness to cheat”. The other cluster was comprised of students who had low levels of both materialism and performance goal orientations and scored low on “willingness to cheat”. In this discussion, we will refer to these clusters as “high willingness to cheat” and “low willingness to cheat”. A significantly higher proportion of males than females were classified into the “high willingness to cheat” cluster.

Differences in value and goal orientations and student willingness to cheat may be seen in light of identity theories (e.g., Aquino & Reed, 2002; Erikson, 1964; Markus & Nurius, 1986; Reynolds & Ceramic, 2007). Individuals develop a set of beliefs about who they are and who they would like to become (Eccles, 2009; Markus & Nurius, 1986). According to Erikson (1964), the primary developmental task of adolescence is the formation of a vibrant identity consistent over time and place. Every individual has the capacity to identify with others on a multitude of variables that include, but are not limited to, shared traits, common familial bonds, gender, and career interests (Aquino & Reed, 2002), which motivate actions and set parameters for individual behaviour (Erikson, 1964; Reynolds & Ceramic, 2007). Markus and Ruvolo (1989) emphasize a relationship between future-oriented self-representation and current academic behaviour. Individuals are motivated to develop strategies and to invest effort in the pursuit of “possible-selves”. Career aspirations are possible-selves (Hoyle & Sherrill, 2006). From these theoretical perspectives, motivation is explained by the principle of consistency in which identification with a particular gender or group creates a need to act consistently with both personal and social identities.

Gender identity theorists have suggested that differential childhood socialization processes contribute to differences in value orientations (Richins & Dawson, 1992). It has been found that females tend to be socialized to hold themselves to higher moral standards than males (Franke, Crown, & Spake, 1997) while males tend to be socialized to be more individualistic and to perceive minor deviance and risk-taking as part of their male gender role (Betz & O’Connell, 1989; Gilligan, 1982). Similarly, our findings indicate that females are less likely than males to emphasize money and material gains when faced with the same set of occupational choices. We found that both gender and career aspirations were positively associated with values, goals, and student willingness to cheat. There was significant interaction between gender and professional career aspirations on the reported “willingness to cheat”. Our findings provide empirical evidence for the relationship between student identity and academic behaviour with respect to the “culture of cheating”. Academic
behaviour is influenced by the values and goals students pursue, who they think they are, and who they want to be.

References


