Engineering Students' Attitude towards Plagiarism:
A Survey Study

Alisa Songsriwittaya[1], Sak Kongsuwan[2], Kalayanee Jitgarun[3],
Sittichai Kaewkuekool[4], R. Koul[5]

[1]Learning Innovation in Technology Program, [2~4] Faculty of Industrial Education and Technology, King Mongkut's University of Technology Thonburi, Thailand
[5]Penn State University, Great Valley School of Graduate Professional Studies, USA

alisa.son@kmutt.ac.th[1]

Abstract

In USA, an investigation by the engineering college's academic honesty committee at Ohio University found "rampant and flagrant plagiarism" by graduate students in the institution's mechanical engineering department. In Thailand, for quite some time Thai media has reported about cheating as a major educational problem and a broad social concern. For example, in May 2003, the Bangkok Post reported a study entitled Rien Yang Sien (Mastering deceitful Studying) conducted by researchers from Chulalongkorn University in Bangkok (Sukrung, 2003). According to Piyanand Jittikornyutthana, one of the six researchers on this study, many students in Thailand's highly competitive society cheat their way through college to graduation to careers. Our paper presentation will report the results of an investigation which considered how undergraduate students with different achievement goal orientation profiles (and from different disciplinary areas) view plagiarism. Thai student volunteers (N=700) completed an achievement goal survey (Niemivirta, 1998) and a "Dimensions of Plagiarism" survey (Koul, 2007). We interpret the results of our investigation within the frameworks of goal orientation theory and dimensions of plagiarism.

Introduction

Academic dishonesty has been an important issue in higher education. It has been studied in many countries, however, only few researches were studied in Thailand. It is important to start investigating this issue in Thailand because Thai society has been changed and the education policies have also been reformed. All of these could have influence on social values that would affect students' academic behaviors. Many of the previous researches were only concentrated on the examination cheating behaviors of college students; however, less attention has been focused on other forms of academic dishonesty. Plagiarism is a specific type of academic dishonesty. The word "plagiarize" is defined in the Merriam-Webster Dictionary as: "to commit literary theft: present as new and original an idea or product derived from an existing source". Nonetheless, there is no research on exactly how serious is this issue in higher education in Thailand.

Koul, Clariana, and Jitgarun (2007) investigated how students in Thailand view plagiarism. The factor analysis revealed six dimensions of plagiarism as: 1) personal excuse to plagiarize, 2) to avoid embarrassment, 3) close personal / peer source, peers would 'know' you copied, 4) impersonal source, anonymous but might be caught, 5) impersonal source, anonymous but unlikely to be caught, and 6) impersonal source, quality and very unlikely to be caught. We will use these dimensions as guidelines to interpret the prevalent rates of plagiarism in higher education in Thailand. Students' attitudes toward plagiarism provide better explanation of plagiarism behaviors than background information. Researches show that not all plagiarism behaviors are viewed alike. Individuals who believe plagiarism to be acceptable will engage in plagiarism more frequently than those who believe plagiarism to be less acceptable (Lin, & Wen, 2007). One of the strongest predictor for plagiarism behavior is one's perception of peers' plagiarism behaviors. The perceived plagiarism culture on campus influences students' propensity to engage in plagiarism (Engler, Landua, & Epstein, 2008). According to the social norms literature, people use their beliefs about other people's behavior to make decisions about their participation in similar behaviors (McCabe, 2005).

From a cognitive perspective, an individual's pursuit of a goal creates a framework for interpreting and responding to events that occur or may likely occur, producing associated patterns of cognition, affect, and behavior. Goal orientations are students' reasons for engaging in achievement-directed behavior. Schunk, Pintrich, and Meece (2008) have described two goal orientations: performance and mastery goal orientation. A performance goal refers to a focus on the purpose of engaging in achievement behaviors for demonstrating their ability, besting others, and obtaining recognition. Students with a performance goal define competence in relation to others. A mastery goal refers to a focus on learning, skill development, creativity, and understanding. When students approach achievement tasks with a mastery orientation, they experience a variety of desirable outcomes: enhanced interest in a learning, more positive attitudes toward learning, viewing of errors as informational, attribution of failure to lack of effort (rather than lack of ability), academic engagement and effort, and asking for assistance when needed. They define competence in terms of self-improvement and self-set standards (Harackiewicz, Barron, & Elliot, 1998).

Another variable examined within the scope of this study is disciplinary difference. This variable is particularly selected since some studies on the collegiate cheating behaviors found that business students tended to be more tolerant of unethical behavior than non-business students [Akbulut, Uysal, Odabasi, & Kuzu, 2008).

Thus, the purposes of this study were: (1) to examine the prevalent rates of plagiarism behavior that students engaged in; (2) to investigate whether any differences in plagiarism rates between students who adopted mastery and performance goal; and (3) to investigate whether any differences in plagiarism rates among students from different disciplinary.

Method

Participants

There were 700 undergraduate students from six different faculties and from four institutes participated in this study. Eight of the questionnaires were eliminated from further analysis because respondents failed to disclose either of the key biographical details. The total number of valid questionnaires after the exclusion of missing values was 692. The demographic characteristics of the sample were depicted in Table 1.

Table 1: Demographic characteristics of the sample by faculty

Faculty	N	%
1. Industrial Education & Technology	216	31.21
2. Engineering	67	9.68
3. Education	69	9.97
4. Science	110	15.89
5. Management	200	28.90
6. Liberal Art	30	4.33

Instrument

This study used a student self-report survey questionnaire. The questionnaire included three sections. The first section consisted of demographic information questions. The second section consisted of 12 statements described students' achievement goal orientation adapted from the previous study (Niemivirta, 1998). Six of the items assessed the degree to which the students endorsed mastery goal and six items assessed the degree to which the students endorsed performance goal. Participants rated how much they agreed or disagreed with each statement on a five-point Likert scale from strongly disagree (1) to strongly agree (5). The last section of the questionnaire consisted of 15 statements described different plagiarism behaviors adapted from "Dimensions of Plagiarism" survey (Koul, 2007). The respondents were asked to check on a five-point Likert scale on their engagement of these behaviors from never (1) to always (5).

Procedure

The questionnaires were administered to participants during their normal schedule class periods. They were given clear oral and written instructions about the questionnaires and scales. Given the sensitive nature of the questions, respondents were repeatedly told, orally and in writing, that their responses would be anonymous and confidential. Data collection was completed within two weeks. Participants' responses were coded and analyzed through SPSS. First, the internal consistency reliabilities of the scales were calculated using Cronbach's Alpha. Second, the students were classified into two groups based on goal orientation items scores. Their responses to the six mastery and the six performance statements were summed individually to form a total mastery and a total performance goal scores. From these scores, mastery group was made up of students who had mastery scores higher than performance scores and performance group was vice versa. Third, the plagiarism behavior items scores were used to calculate means and standard deviation. The higher the total scores were the more likely to engage in that plagiarism behavior. The calculated mean would be compared in order to see whether respondents' scores differed according to faculty and goal orientation. Finally was to investigate the interaction of faculty and goal orientation.

Results

The results of internal consistency reliabilities, based on Cronbach's alpha, were 0.7798 for the goal orientation items and 0.8598 for the plagiarism behaviors items. The goal orientation items scores were used to classified students into two groups; performance and mastery groups. There were 198 students (28.6%) adopted performance goal and 494 students (71.4%) adopted mastery goal. The results of goal orientation by faculty were shown in Table 2.

Table 2: The results of goal orientation by faculty

Faculty	Goal-Orientation		Total
	Performance	Mastery	
Science	51	59	110
Liberal Art	4	26	30
Engineering	20	47	67
Management	48	152	200
Education	20	49	69
Industrial Education and Technology	55	161	216
Total	198	494	692

The plagiarism behaviors items scores were used to calculate the prevalent rates of plagiarism. Table 3 showed the prevalent rates of plagiarism behaviors in descending order by mean scores. The top most plagiarism behavior that students engaged in was "copy to get the right answer" and the bottom least was "copy from the person I hired".

Table 3: The prevalent rates of plagiarism behaviors rank by mean scores

Plagiarism behaviors	Mean	SD	Rank
I copy my assignment word by word for the right answer	3.49	1.004	1
I copy my assignment word by word from web site	3.45	0.981	2
I copy my assignment word by word from data source in library	3.34	0.934	3
I copy my assignment word by word from teachers' material	3.31	0.844	4
I copy my assignment word by word from text book	3.27	0.859	5
I copy my assignment word by word from the smartest student in class	3.25	1.008	6
I copy my assignment word by word from my close friend	3.20	1.008	7
I copy my assignment word by word because I have no time	3.06	1.068	8
I copy my assignment word by word from the expert	3.05	0.944	9

I copy my assignment word by word because I have nothing to add	3.01	0.968	10
I copy my assignment word by word because I sick, stress, or work load	2.80	1.090	11
I copy my assignment word by word because I have to look after my family	2.63	1.114	12
I copy my assignment word by word because I don't want to ashamed in front of my friend/family	2.61	1.096	13
I copy my assignment word by word for income	2.39	1.261	14
I copy my assignment word by word from the person I hired	2.23	1.133	15

A t-test was used to compare plagiarism rates between students who adopted mastery goal and performance goal. Table 4 indicated that plagiarism rate was different between these goal orientations. Students with performance goal were more likely to engage in plagiarism behaviors than students with mastery goal.

Table 4: Plagiarism rates across goal orientation

Goal-Orientation	Plagiarism Rates		
	N	Mean	Std. Deviation
Performance	198	3.1680	.67081
Mastery	494	2.9401	.55080

To compare plagiarism rates across faculties, a one-way ANOVA was used. The descriptive results were shown in Table 5. There was a significant difference across faculties. Using a Bonferroni post hoc test (p<.05), the significant differences were found between Faculty of Liberal Art with others faculties.

Table 5: Plagiarism rates across faculties

Faculty	Plagiarism Rates		
	N	Mean	Std. Deviation
Science	110	3.1327	.73433
Liberal Art	30	2.3067	.59361
Engineering	67	2.9413	.54785
Management	200	3.0763	.45237
Education	69	3.0647	.62570
Industrial Education and Technology	216	2.9725	.57555
Total	692	3.0053	.59613

Even though there were significant differences when compared plagiarism rates across students' goal orientation and faculties, but there was no significance difference when interaction goal orientation and faculty.

Discussion

The findings of this study were important because they reflected the current situation concerning to plagiarism in higher education in Thailand. To understand the academic behaviors of college students that consequently affect their achievement, educators must begin by understanding what motivates them to engage in such behaviors in the first place. To interpret the findings of this study, we used goal orientation theory and dimensions of plagiarism. The results from the study indicated that students with performance goal were more likely to engage in plagiarism behaviors than students with mastery goal (see Table 4). An interesting but disturbing finding was the fact that majority of students (71.4%) adopted mastery goal orientation (see Table 2). For mastery goal orientation, they defined competence in terms of self-improvement and self-set standard without comparing to others. However, the results from the plagiarism prevalent rates were conversely (see Table 3). The highest means of plagiarism behavior was; students

plagiarized in order to get the right answer. This meant the reason that motivated students to plagiarize was the goal to get good grade then they would look good when compared to others. In fact, students did not study for mastering in subject matter but they studied for demonstrating their ability. The reasons for clearing up these findings could be cultural. Thai society is similar to other Asian countries that are high context, "relationship orientated" societies (Komin, 1991). People exhibit a strong emphasis on relational concerns and decisions are based on personal face-to-face relationships. The motive matters when describing plagiarism. And as a result of the primacy of relationship orientation, motives may be especially critical to personal attitudes towards plagiarism in Thai cultures. Whether copying is regarded as plagiarism is influenced not only by motive, but also the particular source of the material. The concept of plagiarism requires that there be an author from whom the material is copied. Having a relationship with that author, for example a close friend, has implications for whether the act of copying is regarded as plagiarism. Thus source is likely to be a factor in determining whether plagiarism has occurred or how severe the plagiarism is. The findings of this study have important implications for future research and policy options geared toward reducing plagiarism in higher education in Thailand.

References

01. Akbulut, Y., Uysal, O., Odabasi, H.F. & Kuzu, A. (2008). Influence of gender, program of study and PC experience on unethical computer using behaviors of Turkish undergraduate students. Computers and Education, 51, pp. 485-492.

02. Engler, J.N., Landau, J.D., & Epstein, M. (2008). Keeping up with the Joneses: Students' perceptions of academically dishonest behavior. Teaching of Psychology, 35, pp. 99-102.

03. Harackiewicz, J.M., Barron, K.E., & Elliot, A.J. (1998). Rethinking achievement goals: When are they adaptive for college students and why? Educational Psychologist, 33, pp. 1-21.

04. Komin, S. (1991). Psychology of the Thai people: Values and behavioral patterns. Bangkok, Thailand: National Institute of Development Administration.

05. Koul, R. (2007). Dimensions of Plagiarism. Downloaded from http://dimensions-of-plagiarism.wikispaces.com/

06. Lin, C.-H.S., & Wen, L.-Y.M. (2007). Academic dishonesty in higher education – a nationwide study in Taiwan. Higher Education, 54, pp. 85-97.

07. McCabe, D.L. (2005). It takes a village: Academic Dishonesty. Liberal Education, 91, pp. 26-31.

08. Niemivirta, M. (1998). Individual differences in motivational and cognitive factors affecting self-regulated learning – A pattern-oriented approach. In P.Nenninger, R.S.Jager, A. Frey, & M. Woznitza (Eds.), Advances in motivation (pp.23-42). Landua, DE: Verlad Empirische Padagogik.

09. Schunk, D.H., Pintrich, P.R., & Meece, J. (2008). Motivation in education: Theory, research, and applications (3rd Edition). New Jersey: Pearson Education Inc.