International Plagiarism: Comparing Thai, Taiwanese, and American University Students’ Knowledge, Behaviors, and Attitudes towards Academic Integrity

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Abstract

This study aimed at identifying potential differences in behavior, attitudes, and beliefs with respect to academic integrity, plagiarism, and the use of anti-plagiarism tools of 961 university students from Thailand, Taiwan, and the United States. A survey instrument was deployed in three languages at regional universities to both undergraduate and graduate student participants. Mean scores on scales were compared by country and level. Results showed significant differences among countries as well as among levels. General tendencies showed that students in the USA scored more favorably as compared to their peers in the other two countries, controlling for level. Differences were also found between levels, with graduates generally scoring higher than undergraduates.

Introduction

Increasing trends in higher education toward distance learning are yielding more diverse student populations. As a result, institutions experience greater opportunities for cultural exchange; however, they also face new challenges to effectively address academic integrity. Plagiarism is especially difficult to control, due to the fact that it is intimately linked to research and academic writing skills, and requires higher levels of interpretation along with a strong command of language. Studies have found that international students who are writing in a foreign language may face additional difficulties to produce academic writing that avoids plagiarism; a lack of confidence and general language ability may lead to excessive copying of original sources, especially at a time when an abundance of sources is only clicks away (Abasi, Akbari, & Graves, 2006; Hayes & Introna, 2005; Pecorari, 2006; Sun, 2009). Do these students know that they are bending or even breaking the rules of academic integrity? Are there any cultural differences in the interpretation of appropriate behavior or the severity of academic misconduct?

Building on findings from other studies that showed differences in cheating (Chapman & Lupton, 2004) and knowledge of correct citing and referencing in academic writing (Wan, Nordin, Halib, & Ghazali, 2011), the present study investigates questions about cultural and regional differences in knowledge, attitudes, and behaviors related to academic integrity. A comprehensive survey that had previously been developed at Florida State University was translated into Thai and Chinese and deployed at local universities in the United States, Thailand, and Taiwan. Kim & Wise (2009) had developed a set of questionnaires adopted from previous empirical studies (Hayes & Introna, 2005; Sun, 2009; Wan et al., 2011) to address the original research questions. The survey instrument was designed to capture the respondents’ knowledge and awareness about commonly accepted forms of plagiarism; attitudes toward plagiarism; behavior; as well as their educational and cultural exposure to the concept of plagiarism. Additional questions were included to investigate respondent’s knowledge and attitudes toward the use of anti-plagiarism tools.

The present study extends findings from this survey that were presented in previous years that set the baseline for international comparison (Kim & Wise, 2009) and found significant differences between responses from American and Taiwanese undergraduate students (Wise & Chen, 2012). The differences found by Wise & Chen included knowledge about and behavior related to plagiarism and academic integrity in general, with Taiwanese respondents admitting to having copied text portions without proper citation and submitted entire papers they had not written. Knowledge about what constitutes plagiarism, as well as attitudes about the severity of specific infractions also differed significantly. Interestingly, there were no differences between the respondent’s attitude that plagiarism is a serious offense and that it is morally wrong for students to plagiarize. Furthermore, Taiwanese
students were not as aware of anti-plagiarism tools in use at their university as American students. The findings of that study prompted the researchers to probe further into the topic.

This year’s iteration of the study included data from Thailand in addition to extended data from the United States and Taiwan, including both graduate and undergraduate students. This offered the opportunity to confirm previous findings and triangulate the results in order to identify whether differences may co-vary based on region (Southeast Asia versus America) or level. Both dimensions are important distinctions that may qualify the previous findings and identify more precisely which sub-group may need additional education and feedback on how to write academically and how to cite properly. Additionally, one major methodological change was introduced in that the survey, which was previously deployed in English only, was translated into both Thai and Chinese. Since language skills were identified as a factor that may lead to plagiarism in the context of producing academic texts in a foreign language, the researchers wanted to rule out the possibility that language barriers could in any way influence the survey responses. With this change, the population of potential participants could be extended to students who are not necessarily fluent in English, which had been a limitation of the previous study.

Research Questions

How do students in Taiwan, Thailand, and the USA differ with respect to:
1. Their knowledge of what constitutes plagiarism?
2. Their behavior in terms of academic dishonesty?
3. Their attitude toward academic honor?
4. Their awareness of anti-plagiarism tools?
5. Their beliefs about anti-plagiarism tools?
6. Their behavior in light of anti-plagiarism tools?

Method

Participants

Participants included both undergraduate and graduate students from universities in Taiwan, Thailand, and the USA. Students were recruited for participation via email invitations from professors or department representatives at each university. Since participation was entirely voluntary, it was not possible to control the sample in terms of gender and level. While the differences were accounted for in data analysis, it should be noted that the samples are not necessarily representative of the corresponding populations. Table 1 summarizes the distribution of participants by region, level, and gender.

<table>
<thead>
<tr>
<th>Gender by Level</th>
<th>Taiwan</th>
<th>Thailand</th>
<th>USA</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Graduate Students</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Male</td>
<td>31</td>
<td>199</td>
<td>245</td>
<td>475</td>
</tr>
<tr>
<td>Female</td>
<td>23</td>
<td>115</td>
<td>149</td>
<td>287</td>
</tr>
<tr>
<td>Prefer not to answer</td>
<td>0</td>
<td>1</td>
<td>9</td>
<td>10</td>
</tr>
<tr>
<td>Undergraduate Students</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Male</td>
<td>101</td>
<td>40</td>
<td>40</td>
<td>181</td>
</tr>
<tr>
<td>Female</td>
<td>159</td>
<td>97</td>
<td>40</td>
<td>296</td>
</tr>
<tr>
<td>Prefer not to answer</td>
<td>6</td>
<td>1</td>
<td>2</td>
<td>9</td>
</tr>
<tr>
<td>Total</td>
<td>297</td>
<td>337</td>
<td>327</td>
<td>961</td>
</tr>
</tbody>
</table>

Instrument

The survey instrument was adapted from a survey that was originally developed and validated by Kim and Wise (2009) and translated into Thai and Mandarin Chinese. The translations were supervised and verified by participating professors from the respective countries. The instrument included of six scales covering participants’
knowledge, behavior and attitudes towards academic integrity, plagiarism, and anti-plagiarism tools (APTs). The first section consisted of a set of statements about cases that may constitute plagiarism, such as ‘Plagiarism includes paraphrasing source texts without crediting the source’ and participants were asked whether they agree, disagree, or were not sure. Items were scored 1 for selecting the correct option, -1 for selecting the incorrect option, and 0 for selecting ‘Not Sure’. The Knowledge score was calculated by adding up the score for the six items for a maximum score of 6. The second section listed a number of statements that constitute academic integrity violations and participants were asked whether they had done them and how many times; for example, ‘Turned in an assignment that I have partially copied from assignments I previously submitted.’ The Dishonesty score was calculated by adding up the score of the individual items for a maximum of 24. The third section consisted of statements about academic behavior, such as ‘Cheating is okay if everyone else seems to be cheating,’ and asked the participants to indicate their level of agreement with each statement on a five-point scale. Two items were reverse coded. The Attitude score was calculated by adding the scores of individual items for a maximum of 60. The fourth section included statements about APTs and asked the participants to indicate whether they were aware of them. Three items asked whether or not APTs were experienced, for example, ‘Anti-plagiarism tools are currently available to instructors at my university.’ Two items asked how often respondents had experienced the use of APTs, for example, ‘Taken a course that used an anti-plagiarism tool.’ The Awareness score was calculated by adding up the score on the individual items for a maximum of 13. The fifth section listed a number of beliefs about APTs, such as ‘No APTs can detect all cases of plagiarism,’ and asked the participants to indicate their level of agreement with each statement on a five-point scale. Six items were reverse coded. The Beliefs score was calculated by adding the scores of the individual items for a maximum of 50. The sixth section listed a number of behaviors in light of APT use, such as ‘If I knew that my work was being checked by an APT, I would try to find out how to avoid committing plagiarism,’ and asked the participants to indicate their level of agreement with each statement on a five-point scale. Three items were reverse coded. The Behavior score was calculated by adding the scores on the individual items for a maximum of 40. A summary of the instrument along with reliability scores is provided in Table 2.

<table>
<thead>
<tr>
<th>Section/Dependent Variable</th>
<th>Scale</th>
<th>Number of Items</th>
<th>Cronbach’s Alpha</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Knowledge of Plagiarism</td>
<td>Disagree, Not Sure, Agree (test score)</td>
<td>6</td>
<td>N/A</td>
</tr>
<tr>
<td>2. Academic Dishonesty Behavior</td>
<td>Never (0) to Three Times or More (3)</td>
<td>8</td>
<td>.823</td>
</tr>
<tr>
<td>3. Academic Honor Attitude</td>
<td>Strongly Disagree (1) - Strongly Agree (5)</td>
<td>12</td>
<td>.829</td>
</tr>
<tr>
<td>4. APT Awareness</td>
<td>Never/No (0) , Once/Yes (1) – 5 or more (5)</td>
<td>5</td>
<td>.497</td>
</tr>
<tr>
<td>5. APT Beliefs</td>
<td>Strongly Disagree (1) – Strongly Agree (5)</td>
<td>10</td>
<td>.772</td>
</tr>
<tr>
<td>6. APT Behavior</td>
<td>Strongly Disagree (1) – Strongly Agree (5)</td>
<td>8</td>
<td>.512</td>
</tr>
</tbody>
</table>

Data Analysis

The overall mean score differences among countries controlling for level were analyzed using MANCOVA with a Bonferroni post-hoc correction. The mean score differences among regions by level were analyzed for each variable by using ANOVA with a Bonferroni post-hoc correction.

Results

The research questions focused on identifying potential differences in responses based on country with respect to the six main variables measured by the survey: knowledge of plagiarism, academic dishonesty behavior, academic attitude, APT awareness, APT beliefs, and behavior in response to the use of APTs.

Summary of Findings

The data in Table 3 show the mean scores for overall responses compared by country controlling for level. Means for scores of respondents from the three countries on all but the sixth variable differed significantly from each other. According to these findings, respondents for the USA had a significantly better understanding of plagiarism, with a mean score four times greater than respondents from the other two countries. Although the mean score between Taiwan and Thailand only differed by .06 the difference was statistically significant due to the large
number of participants. US respondents on average self-reported fewer than two incidents of academic dishonesty as compared to over eight reported by the respondents of the other countries. While statistically significant, the difference between the mean scores of Taiwanese and Thai respondents is only .23. The mean expression of attitude toward academic honor was more evenly spread among respondents from the three countries, with Taiwanese respondents scoring 43.95 on average, Thai respondents 48.65, and US respondents 51.62. Similarly, although means differed significantly among all three groups for APT Awareness, US respondents indicated 1.5 times greater awareness than Thai respondents, whose mean scores were 1.1 times greater than those of the Taiwanese respondents. APT Beliefs mean scores were more evenly spread and significant across the board, with a 3.29 point difference between Taiwan and Thailand, and a 3.74 point difference between Thai and US respondents. Finally, none of the differences among the three groups were statistically significant with respect to adjusting their behavior in light of APTs being used to check their academic work.

<table>
<thead>
<tr>
<th>Variable</th>
<th>Taiwan</th>
<th>Thailand</th>
<th>USA</th>
</tr>
</thead>
<tbody>
<tr>
<td>Knowledge of Plagiarism</td>
<td>1.19*</td>
<td>1.13*</td>
<td>4.94*</td>
</tr>
<tr>
<td>Academic Dishonesty Score</td>
<td>8.41*</td>
<td>8.64*</td>
<td>1.54*</td>
</tr>
<tr>
<td>Academic Honor Attitude</td>
<td>43.95*</td>
<td>48.65*</td>
<td>51.62*</td>
</tr>
<tr>
<td>APT Awareness Score</td>
<td>5.44*</td>
<td>6.18*</td>
<td>9.32*</td>
</tr>
<tr>
<td>APT Beliefs Score</td>
<td>30.41*</td>
<td>33.70*</td>
<td>37.44*</td>
</tr>
<tr>
<td>APT Behavior Score</td>
<td>28.84</td>
<td>29.11</td>
<td>29.59</td>
</tr>
</tbody>
</table>

* Mean difference to each of the two other groups is significant at .05

In the following we inspect each variable separately, differentiating between undergraduate and graduate levels within countries. The charts feature two categories for each country in the following order: Taiwanese Undergraduates (TWUG), Taiwanese Graduates (TWG), Thai Undergraduates (TLUG), Thai Graduates (TLG), US Undergraduates (USUG), and US Graduates (USG). A matrix is included along with each chart marking significant differences between group pairs with ‘x’.

Knowledge of Plagiarism

![Image](image1.png)

**Figure 1: Mean Knowledge of Plagiarism Scores for Country by Level**

The chart shows a clear difference between respondents from the USA as compared to the other two countries, with no statistically significant difference between US undergraduates and graduates. Thai undergraduates showed the lowest knowledge of plagiarism, differing significantly from all other groups, whereas Thai graduate students showed no difference to either Taiwanese undergraduate or graduate respondents. Overall, respondents
from the two Asian countries scored less than half as compared to US respondents, indicating a significant gap in knowledge of plagiarism in these respondents. The items that showed the greatest difference include “Using someone else’s idea in your paper without copying any words may not require proper citation,” “Submitting someone else’s paper is acceptable if your friend exclusively wrote it for you” and “Completely paraphrasing source texts may not require proper citation.”

Academic Dishonesty

According to the chart in Figure 2, the difference between US undergraduate and graduate respondents was not statistically significant and the two groups reported between four and five times higher frequencies of academic dishonesty behavior. The highest mean score on academic dishonesty was reported by Thai undergraduates with an average of 10.4 incidents per respondent. The dishonesty behaviors reported most frequently include “I have copied a few sentences from an Internet source without properly citing it,” “I have worked with others on an assignment when asked for individual work,” and “I have paraphrased material from a written source without citing it.”

Academic Honor Attitude

Figure 2: Mean Academic Dishonesty Scores for Country by Level

Figure 3: Mean Academic Honor Attitude Scores for Country by Level
The chart representing the respondents’ attitude toward academic honor shows that the difference between graduates and undergraduates is not significant for any country. In general terms, respondents from Taiwan scored lowest and respondents from the USA scored highest on academic honor attitude; however, the differences between Taiwanese graduates and Thai undergraduates, and Thai graduates and US undergraduates were not significant. Responses differed most significantly for the following items: “I have read my university's academic honor policy” and “I am familiar with the content of my university's academic honor policy.”

APT Awareness

![APT Awareness Diagram]

Figure 4: Mean APT Awareness Scores for Country by Level

The results for anti-plagiarism awareness are similar to the previous variables in that the US respondents are set apart from the other two countries. However, in contrast to the previous variables, there is a significant difference between levels of US respondents in that undergraduates reported the use of APTs at a much higher frequency than graduates. Nevertheless, the difference between US graduates and all remaining respondents is also significant. Asian responses group around a mean between 5 and 6 with the only significant difference being between Thai graduates and Taiwanese graduates, who reported the lowest APT awareness.

APT Beliefs

![APT Beliefs Diagram]
Beliefs about anti-plagiarism tools show a slightly different pattern of response, where US graduates stand out as scoring the highest with significant differences to all other groups. Next, US undergraduates, Thai graduates and Thai undergraduates set themselves apart with no significant difference among them. The lowest belief score was reported by Taiwanese respondents with no significant difference between graduates and undergraduates. The greatest differences were observed in the following items: “I am worried that I could get caught by an APT,” “I feel offended by the use of APTs because it feels like I am being suspected of plagiarizing,” and “I believe that trust between student and instructor is diminished as a result of using APTs.”

### APT Behavior

![Figure 6: Mean APT Behavior Scores for Country by Level](image)

The last variable measured students’ reported behavior in light of APTs being used to check their academic work. Group means ranged from 28 to 31 out of a possible 40, representing a moderate positive effect of anti-plagiarism tools on students’ academic behavior especially with respect to plagiarism. Significant differences were observed between the following groups: Taiwanese undergraduates and US undergraduates, Thai undergraduates and Thai graduates, Thai undergraduates and US undergraduates, and US undergraduates and US graduates. Given the great differences between levels within the Thai and US respondents, the overall difference among countries controlling for level turned out not to be statistically significant for this variable (see Table 3 above).

### Teaching about Plagiarism

As illustrated in Figure 7, a majority of respondents from Thailand indicated that they were not taught about plagiarism until later in their career with 53.3% stating that they learned about plagiarism in college or university. This compares to 53.8% of US respondents indicating that they first learned about plagiarism in primary or middle school. A majority of Taiwanese respondents (45.5%) also listed early exposure; however, 24.3% of Taiwanese respondents selected ‘College or University’ as compared to only 7.6% of US respondents. Finally, 5.4% of Thai respondents indicated that plagiarism was never discussed at all as compared to 1.3% of Taiwanese and 0.3% of US respondents. In a chi-square analysis the differences among countries were significant at the .05 level for each category. For Primary or Middle School, Thai respondents differed significantly from the other two; for High School, US respondents differed significantly from the other two; for College or University, all three countries differed significantly; and for the last category, the difference between US and Taiwanese respondents was significant.
The findings of this study suggest that there is a significant gap in knowledge about plagiarism between respondents from the USA and those of the other two countries. Based on responses to the survey, teaching about plagiarism appears to happen later for Thai students and is more evenly spread across school levels for Taiwanese students, whereas US students generally tend to learn about plagiarism in earlier grades. The Plagiarism Knowledge scores for both Thai and Taiwanese respondents were four times lower than those of US respondents, which clearly illustrates this gap. Similarly, the Academic Dishonesty scores were dramatically lower for US respondents as compared to those from the other two countries. Could the lack of knowledge about plagiarism be the cause for more frequent infractions? This may be a possible conclusion if the infractions were limited to actions that are not clearly identified as dishonest behavior. However, the Dishonesty scale included items that were clearly marked as inappropriate, for example: “I have worked with others on an assignment when asked for individual work,” “I have received unpermitted help from someone on an assignment,” and “I have falsified information on a bibliography.” Therefore, the higher dishonesty scores cannot simply be attributed to a lack of understanding. Further insight into the difference in behavior is provided by inspecting the respondents’ attitude toward academic integrity.

While the difference among countries is less pronounced for the Academic Honor Attitude score, the trend of US respondents scoring more favorably as compared to respondents from the other two countries is confirmed in the data. Interestingly, the items referring to an academic honor policy stood out as particularly differentiating between the US and the other respondents. This might indicate that the presence and awareness of such a policy impacts students’ behavior and attitudes. Monitoring students’ behavior through anti-plagiarism tools may be done in combination with academic integrity policies in order to enhance their effect. When it comes to the awareness of and beliefs about APTs, the group differences followed a similar trend as observed for the other variables with respect to differences in countries. In fact, with the exception of the last variable that measured respondents’ behavior in light of having their work checked by APTs, all the results point to a possible cultural difference between Asian and American students with respect to the teaching and practice of plagiarism, which likely contributes to student attitudes and beliefs about plagiarism, anti-plagiarism tools, and academic integrity in general.
The observation that graduate students generally scored more favorably on the variables of interest as compared to their undergraduate peers makes sense based on the premise that students will continue to be exposed to concepts of academic integrity over the course of their education. However, it is important to note that the differences in level of education were not confounded with the observed differences in country. The findings of this study clearly suggest that students in these three countries differ in their knowledge of plagiarism and their attitudes toward academic integrity regardless of their level of education.

**Conclusion**

The results have given rise to concern among some faculty who were involved with the study, prompting them to consider increasing education efforts to raise awareness of students about plagiarism and how to avoid violating integrity expectations in academic work. The importance of producing original work that appropriately credits sources is a core value that is being increasingly recognized across the globe especially in light of rising international collaboration and technological advances that facilitate sharing and exchange of academic work. It should be noted that the study was limited to the participation of individual institutions in each country, and the respondents are not necessarily representative of the overall population. Future iterations of this study will aim at increasing generalizability by recruiting participants from a greater number of institutions. Furthermore, in addition to including data from other countries in future studies, efforts should be made to identify cultural factors that may account for specific differences in attitudes, beliefs, and behaviors in order to design appropriate educational interventions and set institutional policies to govern and guide the behavior of university students with respect to their academic writing.

**References**


