A Cross Discipline Comparison of Tense Choices in Research Abstracts

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The purpose of this study is to compare tense choices in writing research abstracts across different academic disciplines: Humanities & Social Sciences (HSS) and Natural Sciences & Technology (NST). Specifically, across the disciplines, it compares 1) tense distributions, 2) associations between tense choices and rhetorical functions, and 3) tense distributions in each of the rhetorical functions. One hundred research abstracts were randomly drawn from the Internet databases. Verb tenses and rhetorical functions of the main clauses in the abstracts were identified and the rhetorical functions were further classified as deictic functions and referential functions. Separate analyses were done for deictic functions and referential functions. The results showed that the conventions of tense choices were not different across HSS and NST. For example, tense distributions did not differ in both the disciplines in that the present tense was dominantly found the same for both. Deictic functions were not significantly associated with tense choices in both the disciplines and the tense distributions of each of the deictic functions did not differ across the disciplines. Referential functions, on the other hand, were significantly associated with tense choices in both the disciplines, and the tense distributions of each of the referential functions did not differ across the disciplines. Educational implications are also discussed about tense choices in writing abstracts.

I. INTRODUCTION

In recent decades, much attention has been paid to the conventions of tense choices in academic written discourse in applied linguistics and English for specific purposes (ESP) (e.g., Een, 1982; Gunawardena, 1989; Hanania & Akhtar, 1985; Lackstrom, Selinker, & Trimble, 1973; Malcolm, 1987; Oster, 1981; Shaw, 1992; Taylor, 2001). These are limited in their genres and disciplines that were covered, however. Most of them focused on tense choices in the genre of research articles of English of Sciences and Technology (EST). Not many studies have dealt with tense choices in research abstracts in humanities and social
It has been indicated that different conventions on tense choices may exist according to the genres and disciplines. According to Hyland (2004) the abstract is regarded to be unique from other genres in its characteristics. For example, it is distinct from the article itself in terms of “its purpose, rhetorical construction, and persuasive intent” (p. 64). Also, Ventola (1997) suggested that the abstract presents the “gist of the article in a precise and maximally efficient way” (p. 333). These unique rhetorical characteristics of the abstract may lead to its tense usage distinguishable from other genres.

It is also suggested that the abstract from different disciplines follow differential conventions (Hyland, 2004). In other words, writers should recognize and follow “the field’s organizational structure, belief and authorized institutional practices” (p. 63) in order to show that abstracts are written from the inside of the circle of the particular disciplines. The way abstracts are written convinces the potential readers of the articles that the writers have the professional credibility to discuss their topic as an inside member, which ultimately could lead the readers to the associated articles. The differential practices in writing abstracts among disciplines, if any, may incur differential conventions of tense choices. Martin (2003) also emphasized the need of contrastive analysis on the abstract between soft knowledge domains such as humanities and social sciences and hard knowledge domains such as physics in order to more clearly identify the way academics write the abstract. In light of these concerns, the purpose of this study is to examine and compare tense choices in academic research abstracts between Humanities & Social Sciences (HSS) and Natural Sciences & Technology (NST).

II. LITERATURE REVIEW

1. Tense Choices in Research Articles

Tense choices in research articles were mainly examined with respect to correlations between tense forms and rhetorical divisions of articles (e.g., Biber, Conrad, & Reppen, 1998; Gunawardena, 1989; Hanania & Akhtar, 1985; Heslot, 1980). These studies dealt with EST research papers, and showed that tense choice is governed by the demand of rhetoric functions of paragraphs. For example, while Introduction and Discussion are mostly presented in the present tense, Methods and Results are mainly presented in the past tense. It was also shown that the present perfect tense is rarely used but concentrated in Introduction and Discussion (Gunawardena, 1989).

Oster (1981) and Lackstrom et al. (1973) investigated tense choices for reporting past research. The analyses of EST articles demonstrated that the present perfect tense or the past tense is used according to the level of importance or generality of the past research. If
the past research is general or important, the present perfect tense is preferred, but if the information of the past literature is specific the past tense is usually preferred.

Shaw (1992) and Swales (1990) were interested in the structural characteristics of sentences. Shaw (1992) observed that while non-reporting verbs are likely to be expressed in the present tense, reporting verbs are likely to be expressed in the past tense. Shaw also observed that active sentences tend to co-occur with the past tense whereas passive sentences tend to co-occur with the present tense. Swales (1990), on the other hand, showed that non-integral non-reporting sentences are expressed in the present tense; integral reporting sentences are expressed in the past tense; and non-integral reporting sentences are expressed in the present perfect tense. As observed, various attempts were made to examine tense choices in research articles but the results varied among the studies.

2. Tense Choices in Research Abstracts

Regarding tense choices in research abstracts, the results varied. For example, abstracts are featured by the past tense (Graetz, 1985) or the present tense (Kaplan et al., 1994; J. Kim, 2008) across the rhetorical moves. Or even though the past tense is dominantly used, the present tense is used as well to enhance the generalizability of the specific results or to express universal truth or established knowledge and the present perfect tense is used to show the gap or disagreement with the previous research (Salager-Meyer, 1992).

Tense choices varied across rhetorical moves. Martin (2003) found that Methods and Results are mostly expressed in the past tense; Conclusion is mostly expressed in the present tense; and deictic functions are expressed in the present tense. Similarly, Jai Hee Lee (2004) indicated that while Introduction and Conclusion are generally expressed in the present tense or the present perfect tense, Methods and Results are expressed in the past tense. Soon-Boon Park (2007), on the other hand, showed that Introduction, Purpose, and Conclusion are mostly expressed in the present tense but Methods are mostly expressed in the past tense. However, different from the prior research, quite a few of Product moves are expressed in the present tense as well as the past tense. As far as the present researcher knows, no study was found that examined tense choices in terms of rhetorical functions in research abstracts.

3. Rhetorical Functions and Tense Choices

As can be seen thus far, the findings about tense choices in the abstracts varied among the studies. The present study attempts to explain tense choices in abstracts from a different perspective. Specifically, it examines the extent to which tense choices in abstracts are attributed to rhetorical functions of phrases. The definitions and categories of
rhetorical functions in the present study are based on the classifications used in Malcolm (1987). In this study, rhetorical functions of clauses are differentiated into deictic functions and referential functions. Deictic functions, basically, deal with the medium which connects the writer to the readers. The medium includes the physical activity of writing and reading that connects the reader and the writer to the paper itself or the charts, graphs, printed discourses, and visual displays on the paper. Deictic functions include statement of purpose, outlining argument and commentary and evaluation and commands. Examples of these deictic functions can be The purpose of this paper is or Table 1 shows where references are made to the physical paper itself or part of it. It was shown that these functions were mostly expressed in the present tense (Malcolm, 1987).

Referential functions, on the other hand, deals with the content of the paper and references are made to primary sources (first-hand information), secondary sources (previous research), or the writer’s own experiment. So the target tasks of these functions entail reviewing previous research, or introducing and discussing procedures or results of the writer’s paper. These referential functions are differentiated into propositional contents, references to more than a single study, and references to a single study. In propositional contents a researcher agent is not integrated into a clause but appears in the parentheses or implied. In references to more than a single study and references to a single study a researcher agent(s) is integrated into a clause. Propositional contents were found to be expressed in the present tense as ideas or generalizations about data, hypotheses, conclusions, questions, and interpretations. References to a single study were mostly expressed in the past tense. These indicated procedures or results of a specific experiment or research. References to more than a single study were expressed in the present perfect tense where these indicated an area of research.

4. Research Questions

The purpose of this study is to examine tense distributions of verbs in research abstracts and compare the associations between rhetorical functions and tense choices across HSS and NST. The specific research questions are addressed as follows:

1) To what extent do tense distributions differ between HSS and NST?
2) To what extent are tense choices and rhetorical functions associated within the disciplines? If so, is there any difference in the associations between the two disciplines?
3) To what extent do the tense distributions for each of the rhetorical functions differ across the disciplines?
III. METHOD

1. Corpus

A total of 100 academic journal abstracts were drawn from databases via the Cambridge Scientific Abstracts on the Internet. The databases were randomly chosen and include Linguistic and Language Behavior Abstracts (LLBA), Philosopher’s Index (PI), Education (ED), Communication Studies (CS), Psyc Info (PSY), Environmental Sciences & Pollution Management (ESPM), and Recent References to Related Technology (RRRT). Efforts were made to make articles retrieved from various journals as evenly as possible, and not retrieved from particular journals. All of the journals selected in this study were limited to those published between 2005 and 2006 because the articles published long before may not be representative of current writing practices or tense use. The databases chosen to represent HSS were LLBA, PI, ED, CS, and PSY, and those chosen to represent NST were ESPM and RRRT.

2. Analyses

Main finite verbs were collected from the corpus of the abstracts and their tense forms were identified based on Celce-Murcia et al. (1999). Rhetorical functions of the clause that contained the verbs were identified according to Malcolm (1987) and Taylor’s (2001) classification. In other words, the rhetorical functions of the clauses were first identified either as deictic or referential functions. And then deictic functions were further identified as statement of purpose, outlining argument, recapitulation, commentary and evaluation and commands. Referential functions of the clauses, on the other hand, were further classified based on the level of generality into propositional contents, references to a single study, and references to more than a single study.

In order to investigate Research Question 1), the chi-square test of association was performed to compare tense distributions between HSS and NST. In order to investigate Research Question 2), the chi-square tests of association were performed separately for deictic functions and referential functions within each discipline. In order to investigate Research Question 3), a series of chi-square tests of associations were executed to compare tense distributions for each of the rhetorical functions across the disciplines.
IV. RESULTS

1. Tense Profiles

Table 1 shows tense distributions across HSS and NST.

<table>
<thead>
<tr>
<th>Tense forms</th>
<th>HSS</th>
<th>NST</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>n (%)</td>
<td>n (%)</td>
</tr>
<tr>
<td>Simple present</td>
<td>184 (57%)</td>
<td>248 (63%)</td>
</tr>
<tr>
<td>Simple past</td>
<td>108 (34%)</td>
<td>103 (26%)</td>
</tr>
<tr>
<td>Present perfect</td>
<td>10 (3%)</td>
<td>25 (6%)</td>
</tr>
<tr>
<td>Future</td>
<td>5 (2%)</td>
<td>4 (1%)</td>
</tr>
<tr>
<td>Modal</td>
<td>15 (5%)</td>
<td>13 (3%)</td>
</tr>
<tr>
<td>Total</td>
<td>322 (100%)</td>
<td>393 (100%)</td>
</tr>
</tbody>
</table>

For 715 main finite verbs (322 from HSS and 393 from NST), the simple present tense was found the most frequently, followed by the simple past tense the same for both the disciplines. The simple present accounted for 57% and 63%, and the simple past accounted for 34% and 26% for HSS and NST respectively. Other tense forms such as the present perfect, the future, and the modals were scantly observed. The present progressive and the present perfect progressive were collapsed into the simple present and the present perfect respectively. The occurrences of can, could, may, might, must, and should were collapsed into Modals because these can express either modality or temporal meanings. Among these, only will was classified as expressing future. The result of the chi-square test of association indicated that the proportions of tense forms did not significantly differ between HSS and NST ($\chi^2=9.32, df=4, p>0.05$).

2. Tense Distributions of Deictic Functions

From the corpus of the abstracts analyzed in this study, four deictic functions were identified. Those were statement of purpose, outlining argument, commentary and evaluation, and commands. Statement of purpose indicates the purpose or main activities of the article and this function is characterized by the phrases such as the goal of this paper, the objective of this study, this article, or this study in the subject or prepositional position. Outlining argument outlines the topics of the paper, but it is more specific compared to statement of purpose in terms of the scope. Commentary and evaluation works as revealing the author’s feelings or opinions about the paper. Lastly in commands, the author asked the readers to let or suppose some mathematical contents.
The example sentences of these deictic functions are as follows:

1) **Statement of Purpose**

   The objective of this article is to provide an analysis of processes by which the diversity of interest representation.
   In this paper, we reconsider some of the processes that distinguish production & comprehension.

2) **Outlining Argument**

   …several views of how they contribute to language processing are considered in the light of this evidence.
   Theoretical & clinical implications are discussed.
   In conclusion, the authors propose different intervention approaches for use in social skills training programmes for students with behavioural disorders.

3) **Commentary and Evaluation**

   It is also rewarding to see a collection of papers with such a strong European flavor.
   It is hoped that the readers of Psychology, Crime & Law will find the results and discussions ...interesting and stimulating

4) **Commands**

   Let $X^\prime{}1$ and $X^\prime{}2$ be two independent random variables representing the populations $@P^\prime{}1$ and $@P^\prime{}2$, respectively.
   …suppose that the random variable $X^\prime{}i$ has a gamma distribution with shape parameter $p$, same for both the populations, and unknown scale parameter.

Table 2 exhibits distributions of the deictic functions that appeared in the analyses.
The distributions were different for the two disciplines. For example, statement of purpose and outlining argument were the most frequently observed in HSS and NST respectively. Other functions such as commentary and evaluation and commands were rarely found (6% and 3%, respectively). The chi-square test of association indicates that these distributions significantly differed between the two disciplines ($\chi^2=16.79$, $df=3$, $p=0.008$). Tables 3 and 4 illustrate tense distributions of each of the deictic functions within each of the disciplines.

The tense forms other than the simple present tense were collapsed into the *Non-present tense* because these were never observed or very few. For the similar reason, commentary and evaluation and commands were collapsed into one function. As can be seen in the tables, the majority of deictic functions were expressed in the present tense in both the disciplines. Examples of tense choices of deictic functions are followed.
The article puts forward for discussion ideas, trends and tendencies in philosophy about the nature of society.

In this paper, it will be shown that such an approach can be adopted for disability annuities (also known as income protection policies) in a three state model under Markov assumptions.

We will provide an overview of some issues which have arisen in these years, giving examples from a number of laboratories & illustrating with experiments of our own.

The simple past tense was not observed at all and the future tense was rarely found (around 6%). The chi-square test of association was executed to examine an association between deictic functions and tense forms. The results showed that the association was not found significant ($\chi^2=1.66$, $df=2$, $p>0.05$ for HSS; $\chi^2=0.46$, $df=2$, $p>0.05$ for NST), which indicated that for both disciplines, the present tense was dominantly observed regardless of functions. Also, a series of chi-square tests of association were performed to compare tense distributions of each of the specific functions between HSS and NST. Because multiple comparisons were involved, the Bonferroni correction was applied to control the probability of a Type-1 error. An alpha level was adjusted to 0.025 (0.05/2). The results indicated that the tense ratios for each of the deictic functions were not significantly different between the two disciplines (for statement of purpose, $\chi^2=0.54$, $df=1$, $p>0.025$; for outlining argument, $\chi^2=0.53$, $df=1$, $p>0.025$), which suggests that for these deictic functions, the present tense is used more frequently than other tense forms the same for both the disciplines. The chi-square test was not performed on commentary and evaluation/commands because these were not observed for non-present.

3. Tense Distributions of Referential Functions

Three specific referential functions were identified according to the level of generality given to the statement: propositional contents, references to a single study and references to more than a single study. In propositional contents a researcher agent is not integrated in the clauses, but appears in parentheses at the end of the clause or implied. The implied researchers were previous investigators or the writer oneself. In references to a single study and references to more than a single study, on the other hand, a researcher agent is integrated into a sentence as one of the following forms: research agents appear in a subject position; researcher agents or primary sources are implied in passive sentences; nouns that refer to researcher agents appear in subject position; and lastly nouns that refer to the findings of researcher agents appear in subject position. Examples are followed:
1) Propositional Contents

Hydrocarbon oxidation is still a growing field of industrial interest. In conclusion, only few commercial LAB products meet the basic requirements for probiotic functions.

2) References to a Single Study

Zhang [Metrika 46 (1997) 221-244] has proved a functional central limit theorem for the empirical process pertaining to this modified empirical distribution function. The analysis shows that, in this application, the Modified Latin Hypercube Sampling (MLHS) outperforms each type of Halton sequence.

3) Reference to More than a Single Study

Recent studies have pointed to the importance of second language learners' use of repetition for conversational participation & language learning. Previous explanations of this frequency-independent AoA-effect have attributed it to the organisation of the semantic system or to the way phonological word forms are stored in the mental lexicon.

Table 5 illustrates the distributions of referential functions for HSS and NST.

<table>
<thead>
<tr>
<th>Functions</th>
<th>HSS</th>
<th>NST</th>
</tr>
</thead>
<tbody>
<tr>
<td>Propositional contents</td>
<td>128 (63%)</td>
<td>145 (64%)</td>
</tr>
<tr>
<td>References to more than a single study</td>
<td>4 (2%)</td>
<td>10 (4%)</td>
</tr>
<tr>
<td>References to a single study</td>
<td>71 (35%)</td>
<td>72 (32%)</td>
</tr>
<tr>
<td>Total</td>
<td>203 (100%)</td>
<td>227 (100%)</td>
</tr>
</tbody>
</table>

The chi-square test of association showed that the distributions of referential functions did not significantly differ across the disciplines ($\chi^2 = 2.30$, $df = 3$, $p > 0.05$). The same for both the disciplines, most are concentrated on propositional contents, followed by
references to a single study and references to a more than a single study. Tables 6 and 7 illustrate tense distributions of referential functions differentiated on the basis of generality continuum for HSS and NST.

### TABLE 6

<table>
<thead>
<tr>
<th>Functions</th>
<th>Present (n=88)</th>
<th>Present perfect (n=7)</th>
<th>Past (n=108)</th>
<th>Total (n=203)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Proposition contents</td>
<td>65 (51%)</td>
<td>5 (4%)</td>
<td>58 (45%)</td>
<td>128 (100%)</td>
</tr>
<tr>
<td>References to more than a single study</td>
<td>2 (50%)</td>
<td>0 (0%)</td>
<td>0 (0%)</td>
<td>2 (100%)</td>
</tr>
<tr>
<td>References to a single study</td>
<td>21 (30%)</td>
<td>0 (0%)</td>
<td>50 (70%)</td>
<td>71 (100%)</td>
</tr>
</tbody>
</table>

### TABLE 7

<table>
<thead>
<tr>
<th>Functions</th>
<th>Present (n=107)</th>
<th>Present perfect (n=19)</th>
<th>Past (n=101)</th>
<th>Total (n=227)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Proposition contents</td>
<td>95 (66%)</td>
<td>6 (5%)</td>
<td>44 (30%)</td>
<td>145 (100%)</td>
</tr>
<tr>
<td>References to more than a single study</td>
<td>2 (20%)</td>
<td>7 (70%)</td>
<td>1 (10%)</td>
<td>10 (100%)</td>
</tr>
<tr>
<td>References to a single study</td>
<td>10 (14%)</td>
<td>6 (8%)</td>
<td>56 (78%)</td>
<td>72 (100%)</td>
</tr>
</tbody>
</table>

The future tense and modals were excluded from the analysis because the future tense was not observed at all and modals were rarely observed (16 and 15 for HSS and NST each). The chi-square tests of association indicated that tense choices were significantly associated with generality of clauses for both disciplines ($\chi^2=40.02, df=4, p=0.0000$ for HSS; $\chi^2=102.01, df=4, p=0.0000$ for NST). That is, tense choices differed according to the generality levels of the clauses. For example, for HSS, the present tense and the past tense were used the most for propositional contents, and references to a single study respectively. The present tense and the present perfect tense were equally used for references to more than a single study. For NST on the other hand, the present tense was used most frequently for propositional contents. The present perfect tense was used most frequently used for propositional contents. The past tense was used most frequently used for references to a single study. Examples of tense choices for propositional contents are followed:
This definition reduces to the classical one in case of a Schoenberg space.

Ninety respondents completed a 55-item survey, eight of whom then participated in eight-item interviews.

Examples of references to a single study are followed:

we assessed category fluency in a sample of 90 self-identified Latino community residents.
She argued that since this gender system militates against the equal liberty of the sexes it ought to be dismantled. (edited)

A series of chi-square tests of association were executed to examine whether tense distributions differ across HSS and NST on each of the referential functions. Similar to the analyses for the deictic functions, because multiple comparisons were performed, the Bonferroni corrections were also applied to control the probability of a Type-1 error, so that the alpha level was adjusted to 0.016 (0.05/3). The results indicated that tense distributions did not significantly differ between HSS and NST for propositional contents ($\chi^2=7.16$, df=2, $p>0.016$) and for references to more than a single study ($\chi^2=1.48$, df=2, $p>0.016$). These suggest that the ratios of the tense forms are equal for both the disciplines on these two referential functions. For references to a single study, on the other hand, the ratios of the tense forms significantly differed between the two disciplines ($\chi^2=10.24$, df=2, $p=0.006$). In order to examine the difference more in detail, references to a single study were sub-categorized into references to a previous study and reference to a study of writer’s own. The chi-square test of association was performed on tense distributions on these sub-categories. The results indicated that the tense distributions of these categories did not differ across HSS and NST (for references to a previous study, $\chi^2=6$, df=2, $p>0.016$; for references to a study of the writer’s own, $\chi^2=6.5$, df=2, $p>0.016$). For both the disciplines, references to a previous study were made in the present or past tense but references to the author’s own study were made in the past tense.

V. DISCUSSION

The purpose of this study was to examine whether tense choices in writing research abstracts are attributed to academic disciplines. Two academic disciplines, HSS and NST were compared with respect to tense distributions, the associations between tense choices and rhetorical functions, and tense distributions in each of the specific rhetorical functions.

First of all, findings indicated that the finite verbs in the main clauses were dominantly
expressed in the present tense, followed by the past tense and the distributions did not significantly differ across HSS and NST. Further analysis showed that more than half of the present tense was used to realize deictic functions. This supports Hyland’s (2004) assertion that the research abstract is characterized as medium for realizing the associated articles. Deictic functions are expressed in the present tense because the moment of the event that is referred to coincides with the moment of writing. Findings also indicated that the past tense was substantially used as well. Further analysis indicated that most of the occurrences were concentrated on Methods and Product as referential functions, which suggests that abstracts are also featured with descriptions of the methods used in or results of the particular research. These overall tense distributions seem contradict to Jin-Seok Kim (2008) and Kaplan et al. (1994) who observed that abstracts are characterized with the present tense.

1. Deictic Functions

It was observed that deictic functions were particularly concentrated on statement of purpose and outlining argument, which, again, seems to reflect the inherent characteristics of abstracts, claiming the significance of the article to engage the readers to the contents as Hyland (2004) contends. The distributions of deictic functions significantly differed across HSS and NST. Among other things, for example, outlining argument was more frequently found in NST (72%) than in HSS (53%). As previously mentioned, outlining argument is more specific compared to statement of purpose in terms of the scope. HSS was less specific than NST in terms of stating purpose. This would be attributed to difference in practice of writing purpose statements among the disciplines. Hyland (2004) stated that the soft disciplines such as humanities and social sciences tend to “introduce the reader to the areas to be covered, and perhaps the interpretation that would be made, rather than signal an explicit research claim” (p. 72).

Regardless of the types of deictic functions, the simple present tense was dominant and a few or none of future or past tenses was found. And this was observed in both the disciplines. Also tense distributions of each of the deictic functions did not significantly differ between the disciplines. The simple present tense could be used for deictic functions because the associated articles are treated as a complete whole right in front of the authors when they are referred to (Taylor, 2001). Few were expressed in the future tense, which suggests the article could be interpreted as a work not completed when the abstract is being written. From these observations it could be suggested that most writers embark on writing abstracts after the article has been completed.
2. Referential Functions

It was found that the distributions of referential functions did not differ between HSS and NST. For both the disciplines, for example, propositional contents accounted for more than 60% of referential functions. According to Thompson and Yiyun (1991), the non-use of reporting verbs indicates that the writer who cites agrees to the cited author’s proposition. Similarly, according to Hyland (2004), in hard science areas such as physics or engineering, the cited authors are generally not included within the sentence because the actions or roles of the cited authors are not acknowledged, or suppressed on the ground that “the authority of the individual is subordinate to the authority of scientific procedures” (p. 33). In other words, the dominant use of propositional contents, regardless of disciplines, seems to reflect the non-use of reporting verbs, unique characteristics of the functions of abstracts as ‘crystallization’ (Salager-Meyer, 1992, p. 58), or as a ‘distillation’ (Swales, 1990, p. 179).

There was a significant association between the types of referential functions and the tense forms for both the disciplines. Propositional contents, references to more than a single study, and references to a single study tend to be expressed in the present tense, the present perfect tense and the past tense respectively. This seems to support the hypotheses established by Malcolm (1987). That is, the generality of the contents being delivered comes into play for tense choices in writing abstracts in the same way as writing research articles. There are some exceptions to this however. For example, propositional contents were substantially made in the past tense (45% in HSS and 30% in NST) as well. The choice between the present tense and the past tense for propositional contents is left with the writer’s interpretations about the generality of the contents being delivered. That is, if one interprets that research findings, results, or methods are specific to a particular study, these are more likely to be expressed in the past tense. If these are interpreted to be generalizable and thus accepted as theories or hypotheses in the field these are more likely to be expressed in the present tense. The observation that propositional contents were more frequently expressed in the present tense than other tense forms indicates that propositional contents are used to introduce theories or hypotheses rather than findings from particular studies.

The association between references to more than a single study and the present perfect tense, on the other hand, could be explained by the uses of the present perfect tense in general English. Malcolm (1987) stated that the present perfect tense expresses “a past experience with current relevance, as a situation that started in the past and persists into the present, and as referring to a situation that has held at least before the present moment” (p. 37).

The majority of references to a single study were expressed in the past tense. Almost all
of these references were made to the writer’s own research (i.e., the descriptions of methods or findings). The choice of the past tense for this function could be explained by the writer’s interpretation about the level of generalization of the methods or findings of their own study. In other words, this function was made in the past tense because the writer interpreted that the methods or findings were not generalizable beyond his or her own research. The past tense was used here because a single action or situation happened in the past prior to the moment of utterance (Celce-Murcia et al., 1999).

The tense distributions for referential functions did not significantly differ between HSS and NST. In other words, as indicated previously, for both the disciplines, propositional contents were more expressed in the present tense; references to more than a single study were more expressed in the present perfect tense; references to single study were expressed in the present or past tenses; and references to author’s own study were expressed in the past tense. Consequentially, it could be said that the tense distributions for referential functions do not differ across HSS and NST. In other words, when writing research abstracts there are no particular conventions in terms of tense choice that distinguish among disciplines for fulfilling referential functions.

Tense variations in references to more than a single study and references to a single study can also be attributed to the communication verbs or reporting verbs such as indicate, confirm, show or reveal, to name a few. According to Malcolm (1987), the acts of reporting can be interpreted as an event in the past, which are expressed in the past tense or an on-going event through a published report, which can be expressed in the present tense and the present perfect tense. These variations are left with strategic choices among the authors.

VI. CONCLUSION

The purpose of abstracts is to persuade readers to the associated papers by displaying that not only the articles are worth reading but also the authors “have the professional credibility to address their topic as an insider” (Hyland, 2004, p. 63). Adherence to the practices in tense choices within disciplines would be one of the ways to promote the credibility of the authors. According to the findings of the present study, there were no significant differences in tense choices attributable to different disciplines HSS and NST, which seems not to support Hyland (2004) and Martin (2003) who asserted that different academic disciplines may have different conventions of abstract writing. This suggests some pedagogical implications in teaching abstract writing, particularly for ESL learners. It might be unnecessary to teach the ways of tense choices differently according to the learner’s disciplines. Different writing classes may not have to be offered for the learners.
from different academic backgrounds. Also, it may be too simple to instruct ESL learners that only particular tense forms are used in abstracts (e.g., Graetz, 1985; Kaplan et al., 1994; Jin-Seok Kim, 2008) or tense forms are correlated with rhetorical moves (e.g., Jai Hee Lee, 2004; Martin, 2003; Soon-Boon Park, 2007). Instead, it would be desirable to teach both groups of learners that tense choices in abstracts are attributed to various factors such as rhetorical functions of the phrases, generalizability and generality of the contents being delivered, and authors’ individual preferences.

In addition, it may be also worthwhile to present the ESL learners with the use of rhetorical functions in writing abstracts. The learners from NST backgrounds could be encouraged to state their purpose more specifically than those from HSS backgrounds in that outlining argument was more frequently found in NST than HSS. In terms of the use of referential functions, on the other hand, both groups of learners would be advised to express propositional contents without using reporting verbs.

The present study focused only on tense choices in research abstracts published in academic journals. Different findings can be found in the analysis on conference call abstracts, which could be written before the main articles were completed. Also, this study dealt with the tense choices in the main clauses. Thus a different picture of tense choices may be obtained if the verbs in subordinate clauses are also included. Lastly, the corpus of the present study may have contained the abstracts written by non-native speakers of English, which implies that their tense choices may not constitute the representative samples of tense usage due to their lack of proficiency in English. Accordingly, different findings could be obtained if the native speakers’ corpus is only analyzed.

REFERENCES


Applicable levels: higher education
Key words: rhetorical functions, writing abstracts, tense choices