

Rhetorical Structures and Linguistic Features of English Abstracts in Thai Rajabhat University Journals

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ABSTRACT

Abstracts are an essential part of research articles (RAs) because they are the readers' first encounter in their search for relevant literature. Writing an effective abstract in English which can "sell" the article to a wider circle of readers is therefore important to novice writers, especially multilingual ones. Based on the corpus of 584 English abstracts of Thai empirical RAs published by six Rajabhat (teacher-training) university journals which are indexed in the Thai-journal citation index center (TCI), this study aims to explore not only their rhetorical structures but also the grammatical and interactional metadiscourse features. The results show that there were three types of abstracts (Informative, Indicative and Combinatory) and the absence of certain moves in a large number of abstracts of each type. Moreover, this abstract corpus had a few instances of move embedding, a complete absence of move cycles and the existence of abstracts with several paragraphs. Regarding the linguistic features, there was a prominent presence of active voice, future tense and the sparing use of interactional meta-discourse devices across the moves. These findings tend to indicate a need for journal editors and novice writers, especially those from non-English backgrounds to be informed about the characteristics of good RA abstracts in English (i.e., rhetorically and linguistically) and an increased amount of form-based instruction in academic courses to address the linguistic deficiencies of new multilingual writers.

Keywords: abstracts; Thai writers; Thai university journals; rhetorical structures; linguistic features

INTRODUCTION

Publication is a major means for researchers in all academic disciplines to communicate their research findings to the relevant discourse community, and RAs are considered as a central genre of this channel. It is thus essential for academics to have a good command of the discourse conventions of this genre for their knowledge production to be accepted for publication. However, in this knowledge exchange, abstracts in RAs play a pivotal role because they are a "concise summary" of the accompanying paper (Lorés 2004, p. 281). As claimed by Ventola (1994, p. 333), RA abstracts "have become a tool of mastering and managing the ever-increasing information flow in the scientific community". In fact, abstracts assist both journal editors to select or reject contributions and readers to determine whether or not the paper is worth reading (Gillaerts & Van de Velde 2010). Furthermore, because abstracts are readers' first encounter with RAs in their search for relevant literature, they are generally the only part of RAs that journals will make accessible through databases and search engines. Also, to promote the worldwide dissemination of RAs, English-language abstracts are sometimes required although journals publish in other languages other than English (Martín 2003, Safnil 2014, Santos 1996, Ventola 1994).

Due to their significance in publication, RA abstracts have attracted considerable attention from text analysts, and their rhetorical organisation has become the object of extensive research. Previous research has suggested that the textual structure of an English abstract follows the generally-accepted structural patterns of a RA. The observed patterns of the latter have been variously described as: Introduction–Methods–Results–Discussion (IMRD) (Lorés 2004, Ventola 1994) and Introduction–Methods–Results–Conclusion (IMRC)

(Bhatia 1993, Martín 2003, Samraj 2005). However, in the analysis of 94 RA abstracts in three journals in applied linguistics, Santos (1996) proposed a pattern with five basic moves and a number of optional steps for RA abstracts. While the IMRC pattern identified by Bhatia (1993) is found in the last four moves in his newly-proposed model, the first move (*Situating the research*), the newly added move, is similar to the first move in Swales' (1990) CARS model of the RA introduction (Move 1 (M1): *Establishing a territory*; Move 2 (M2): *Establishing a niche*; Move 3 (M3): *Occupying the niche*). Similarly, from his study of RA abstracts across eight disciplines, Hyland (2000) proposed a five-move pattern (Introduction–Purposes(P)–Methods–Product(Pr)–Conclusion - IPMPPrC), which is slightly different from the rhetorical macrostructure IMRC of abstracts. The newly-added move is the Introduction, which aims to establish the context of the paper and motivate the research or discussion. Hyland argues that the move signaling the writer's purpose should be distinguished from the introduction move, where it is located because it is the introduction move that provides a justification for the research. In addition to these studies, Lorés (2004) found that there are three possible rhetorical organisations of RA abstracts, namely Informative, Indicative and Combinatory. According to her, the Informative abstracts take the IMRD structure, informing the global structure of the RA itself while the Indicatives, which display the Swales' (1990) CARS model, indicate the need for research (e.g. gaps, research questions or problems). The Combinatory abstracts, a mixed type of Indicative-Informative abstracts, begin with the CARS structure with the IMRD embedded in the last move.

Furthermore, as claimed by Bhatia (1993, 2004), abstracts are a distinct genre because they share the same communicative purposes, and to achieve these purposes, certain linguistic features are employed. Studies of linguistic features in RA abstracts have provided much insight into the genre. Two broad categories of the features investigated are lexicogrammatical features (tense, voice, nominalizations, *That*-complement clauses) and interactional metadiscourse devices (hedges, self-references, boosters and attitude stance). In RA abstracts, the present tense is used to summarise the article while the research is typically reported in the past tense (Cooley & Lewkowicz 2003, Swales 1990). Furthermore, because abstracts are employed as an advertising means for attracting readers to the full RAs (Hyland, 2000), *That*-complement is an outstanding linguistic feature for promoting the research findings in the abstracts (Hyland & Tse 2004). Additionally, as stated by Biber (2006) and Hyland (2005), RA abstracts involve the interaction between the writers and their readers, interactional metadiscourse is frequently present. In her study of RA abstracts across applied linguistics and educational technology, Pho (2008) provided an informative list of both linguistic and metadiscourse features that are important for abstract writing.

Although these investigations have undoubtedly enhanced our understanding of the rhetorical structures and linguistic realisations in RA abstracts, a few studies have been conducted on these elements of English abstracts written by multilingual writers who publish their RAs in other languages (Safnil 2014, Vathanalaoha & Tangkiengsirisin 2018). In particular, studies on how English abstracts of Thai RAs published by Thai universities are structured tend to be non-existent in the literature. The current study will therefore attempt to explore the rhetorical structures and linguistic features of English abstracts written by a group of Thai academics whose Thai RAs were published in Thai university journals.

In Thailand, research is one of the core missions of higher-education institutions, and faculty members are assessed and promoted in accordance with their research and publications (Jaroongkhongdach et al. 2012, Kiatkheeree 2016, OHEC 2014). Furthermore, as one of the main requirements of quality assurance, lecturers' academic-work publications or dissemination is used to evaluate the quality of their universities for the research capabilities and potential. In this sense, the more academic publications there are, the more social prestige universities obtain. Besides international publications, all universities have

been encouraged to host at least one academic journal to disseminate research findings in Thai language for social and community benefits (OHEC 2014). As a result, as reported by Sombatsompop et al. (2012), currently almost every university publishes many Thai journals because each faculty/department accommodates their own journal to publish their own staff's papers for their own academic promotion. To ensure the quality of Thai journals and increase the readership for Thai RAs published in these national journals, TCI was established. In fact, besides setting up databases for searching publications and citations in Thai academic journals, TCI aims at evaluating and developing the quality of Thai academic journals to meet international standards (TCI 2008). There are three categorisations of journals indexed in TCI according to their quality, ranking from 1 to 3 (TCI1, TCI2 & TCI3 in short, respectively). TCI1 journals are those that have three-year quality approval and verification by TCI and remain indexed in the TCI database, and they will be selected for indexing in the ASEAN Citation Index (ACI). TCI2 journals also have three-year quality approval and verification by TCI and remain indexed in the TCI database, but they are undergoing quality improvement in order to be transferred to the TCI1 group. The third group of journals indexed in TCI are those that have not yet qualified for approval by TCI. The TCI's assessment and categorisation of Thai journals are recognized because many government offices and universities use the TCI database to evaluate quality and calculate weights of academic RAs. In particular, university lecturers or researchers' RAs published in TCI-indexed journals are calculated for their yearly performance, appraisal and salary adjustments with a slightly lower weight as compared with their publications in international journals indexed in Thomson Reuters and Scopus. Furthermore, Thai universities and Thailand Research Fund accept graduate students and scholars' publications in TCI-indexed journals as meeting the requirement for graduation and completing the funded scholarships and research projects, respectively (Sombatsompop et al. 2012).

Due to the national recognition of TCI-indexed journals, Thai universities have made great effort for their university journals to be considered and included in the TCI databases. Besides a good diversity of authorship and editorial members, consistent format, rigid peer-review process, publication frequency and journal websites, their journals are required to have the titles, abstracts and keywords of RAs written in both Thai and English in order to increase their visibility to readers (TCI 2008). Among these three elements, English abstracts are the longest and tend to be the most difficult part to write. However, no specific guidelines on how to write English abstracts are provided by TCI, and each journal develops its own general instructions for writing RA abstracts (e.g., *Abstract should be written in Thai and English. The Thai version should be placed first. It should be clear, concise and easy to understand and should not have more than 300 words. It should summarise the main points without going into details. It should be typed in TH SarabunPSK with 14 pt. font*). Moreover, as reported in several previous studies (Jaroongkhongdach et al. 2012, Kiatkheeree 2016, Phothongsunan 2016), Thai academics have great difficulties in writing for publication in English despite the fact that they are English lecturers. Given the necessity of publication as a means of securing professional development in Thai educational settings and the challenges Thai academics encounter in English writing, the purpose of this study is to examine the rhetorical structures of English abstracts in TCI-indexed journals of six Rajabhat universities in the North-eastern part of Thailand. Moreover, the study also attempted to explore how this group of Thai academics realised the rhetorical moves linguistically when writing RA abstracts in English. However, due to this rather small-scale study, six aspects of language use (namely tense, voice, *that*-complement, self-reference words, hedges and stance expressions) listed in Pho (2008) as important linguistic features for abstract writing were investigated (see *Corpus and Procedures* for more details). Besides partly showing how a group of Thai writers construct their English abstracts, the findings of this study are expected

to inform the journal editors and educational institutions of the teaching of academic writing to novice Thai researchers in order to maintain and increase the national and international reputation of Thai universities along with quality assurance.

CORPUS AND PROCEDURES

Due to the inaccessibility to the journal websites of all Rajabhat institutions and other departments, the study collected only 584 electronic RAs from six Humanities and Social Sciences journals of six Rajabhat universities in the North-eastern region of Thailand. As the main purpose of this study is to explore how English abstracts of Thai RAs published in the TCI-indexed journals were written, despite the presence of few English RAs, only Thai empirical RAs with English titles, abstracts and key words published in the TC11 and TC12 journals were collected. As generic structures are subject to variation across time and to represent the current practice of English abstract writing by Thai academics, only RAs written during the years from 2014 to 2017 were selected. After the collection of these RAs, their English abstracts were extracted and saved on a separate file and randomly coded for the ease of the analysis (A1-A584). The resulting corpus consisted of 131,392 words with an average of 225 words each.

These abstracts were then divided into appropriate types: Indicative, Informative, and Combinatory, and three compatibly analytical frameworks for the analysis of their overall rhetorical structures were adopted. For the Informative abstracts, Hyland's (2000) model was selected because it provides a clear description for the communicative purpose for each move. Furthermore, because Hyland's model (2000) is the direct result of an investigation of abstracts across eight disciplines, it may describe all the moves found in the abstracts. Swales' CARS model (1990) was adopted as an analytical framework for the Indicative abstracts in this corpus because these kinds of abstracts provide the general nature and scope of the research, but it does not present a step-by-step account of the process involved like the CARS model does (Lorés 2004). Finally, the moves and steps in the Combinatory abstracts were recorded as they appeared in the texts.

For the linguistic and metadiscourse features, only the Informative abstracts were examined as they are the most common types of abstracts in the literature (Bhatia 1993 & 2004, Hyland 2000, Lorés 2004, Martín 2003, Samraj 2005). Six linguistic features were classified into two groups: grammatical features (tense, voice and *That*-complement) and interactional metadiscourse devices (hedges, self-reference words and attitudinal stance expressions). While the rationale for grammatical grouping was obvious, hedging, attitudinal stance and self-reference words were grouped under the umbrella term "interactional metadiscourse" as these devices reflect the writer's perspective towards both the reader and propositions in the text (Hyland & Tse 2004). According to Hyland and Tse, hedges are expressions of tentativeness and possibility by means of such vocabulary items as *can*, *could*, *might*, *probably*, *likely*, and so on. Attitudinal stance markers are expressions of the author's judgements or attitudes towards a proposition (e.g., *unfortunately*, *honestly*, *actually*, *frankly*, *no doubt*) while first-person pronouns (*I*, *we*, *my*, *our*) and other words referring to the author himself/herself (*the author*, *the researcher*) are self-reference words.

The abstracts were manually analysed first for their move structures, and then the Informative abstracts were further investigated for linguistic and metadiscourse features in each individual move by the researcher and her colleague, who holds a doctoral degree in English Language Studies. Since text analysis involves a certain degree of subjectivity, the analysis of 100 randomly-selected texts were examined and compared, yielding high inter-rater reliability rates (89%). After the moves and steps were identified, their frequencies were

recorded and classified following the criteria (obligatory, conventional and optional) suggested by Kanoksilapatham (2005). The frequencies and percentages of linguistic features in each abstract move were also computed.

RESULTS AND DISCUSSION

THE CORPUS OVERVIEW

Although an average length of abstracts was 225 words each, there was a wide range of word numbers among them in the corpus. In fact, the longest abstract with 709 words was identified while the shortest had 47 words despite the word limits of either 250 or 300 words each indicated in the journal guidelines. Similarly, with a total of 871 paragraphs (an average of 1.5 paragraph each), this corpus contained a great number of abstracts with more than one paragraph (13%) providing detailed information of research objectives, participants, instruments, statistical tests and findings, making them almost two pages long. Given the limited number of words in abstracts as a synopsis (Bhatia 1993 & 2004) and an advance indicator of the content and structure of the accompanying text (Swales 1990 & 2004), the existence of several long paragraphs in an abstract seems to be inappropriate.

Like the findings in Lorés (2004), the text analysis showed that there were three types of abstracts, and among them the Informative accounted for a majority of abstracts in the corpus, followed by Indicative and Combinatory abstracts (91%, 6.7% & 2.3%, respectively) (Table 1). This finding corresponded with previous research reporting that Informative abstracts are the most popular type in their abstract corpora (Bhatia 1993, Graetz 1985, Lorés 2004, Nguyen Li, Nguyen & Pramoolsook 2014, Swales 1990, Ventola 1994). This consistency could result from the description and acknowledgement of the rhetorical structures of this abstract type as the canonical global organisation of academic abstracts in the literature (Bhatia 1993 & 2004, Hyland 2000, Lorés 2004, Swales 2004).

TABLE 1. Three types of abstracts

Indicative	Informative	Combinatory
39(6.7%)	532(91%)	13(2.3%)

MOVE STRUCTURES OF EACH ABSTRACT TYPE

THE INFORMATIVE ABSTRACTS

Table 2 shows the move structures of the most prominent abstract type in this corpus. There were no obligatory moves in these abstracts because no move occurred in every abstract (Kanoksilapatham 2005). Like the findings on English abstracts in the national journals written by Indonesian novice writers (Safnil 2014), the most frequently-employed moves in this abstract type were Purpose(P), Method(M) and Product(Pr), accounting for 86%, 95% and 89% respectively, and making these three moves conventional in the corpus (Kanoksilapatham 2005). Although the Indonesian journals' requirement of 50-70 words for each abstract was accounted for making these three moves compulsory, their high frequency of occurrences in this study could be because they are the three key elements of an Informative abstract (Hyland 2000). Given their crucial roles in this abstract type, however, the absence of these three moves in some abstracts in the corpus failed them in achieving their communicative purposes of portraying the organisation of the RAs.

TABLE 2. Move structures of 532 Informative abstracts (IPMPrC)

I	P	M	Pr	C
67(12.7%)	457(86%)	505(95%)	473(89%)	96(18%)

Introduction(I) and Conclusion(C) were classified as optional in this study as they were found far below 60% (12.7% and 18%, respectively). It is possible that the absence of I and C moves in most of the Informative abstracts signifies cultural variations. It might be that RA abstracts in Thai journals are expected to only have P-M-Pr moves. Without previous research into English abstracts published in Thai university journals to support this reasoning, the researcher is more inclined to consider it as a sign of rhetorical knowledge inadequacy on the part of these writers. Although the authors presented the most important information of their research in terms of P-M-Pr, they failed to situate their investigations in context and mention the immediate practical benefits of their findings. As described in Hyland’s (2000), the IPMPrC model is the norm in the international academic community, the incomplete picture of these RA abstracts inevitably rendered them ineffective in realising their communicative purposes of attracting potential readers. It is thus necessary to use a genre-based approach to sensitize Thai would-be researchers to the overall rhetorical structures of English RA abstracts.

Similar to Hyland’s (2000) study of abstracts in eight disciplines, this study found the most dominant move-sequence (67%) in the Informative abstracts was P-M-Pr. In other words, most abstracts of this type began with P, followed by M and Pr, respectively. The similarity between the two corpora could lie in their nature. As mentioned earlier, this study selected abstracts of empirical studies in which research purposes, methods and results are very crucial. Therefore, these three elements were arranged in this sequence to present a logical order of research activities of an empirical investigation. Besides, there was a complete absence of move cycling in these Informative abstracts. It could be argued that the omission of move cycles was due to “the compact nature” of abstracts (Pho 2008, p. 283), and it is thus very difficult for writers to present move cycles with limited words without missing necessary elements. However, the presence of only nine instances of move embedding (Example 1), which helps save space in these abstracts tended to show these writers’ inexperience in writing a concise text of abstracts.

- (1) *This quasi-experimental design research (M) aimed to compare learning achievement (P) in a photography technology course between using multimedia lesson with cooperative learning technique and conventional method.* (A167)

Furthermore, a closer look at these three key moves in the Informative abstracts revealed some unexpected findings. First, the full RA titles were found to function as a grammatical subject of the statements indicating research purposes in about 4% of all abstracts (Example 2). Additionally, the RA titles were also identified at the beginning of around 2.5% of these abstracts without any syntactic functions, followed by the purpose statement (Example 3). Besides these, the P move was presented in infinitive phrases separated by a full stop instead of a comma in some abstracts (3%) (Example 4). This writing style could indicate that these Thai writers directly translated their Thai research objectives into English because in Thai language, the subject of a sentence can be omitted (Bennui 2008, Hinnon 2014). Although the English sentences without identifiable subjects can be easily understood by Thai readers, they would make their non-Thai counterparts confused.

- (2) *The purposes of the study on The Development of Village Cultural Tourism in Ban Takhu Pak Thong Chai District Nakhon Ratchasima Province are: 1)...2)...* (A21)
- (3) *Research on the Development of Principles of Design Documentation for Students of the Faculty of Industrial Technology. The objective of the research is as follow: 1)...2)...* (A534)
- (4) *The objectives of this study were: firstly, to identify the existing condition of technology management model of digital TV broadcasting Thai PBS. Secondly, to study factors affecting technology management model of typicality of digital TV broadcasting of Thai PBS. And thirdly, to study a technology management model of digital TV broadcasting.* (A115)

As seen in Table 3, the M move mainly focused on participants, statistical analysis and instruments (61%, 54.3%, and 46%, respectively), and these steps were reported at length while research design, setting, procedure, sampling method and data collection were also present and briefly stated in one sentence. Similarly, a closer look at the Pr move revealed that this group of Thai writers tended to translate their Thai abstracts into English. In fact, this move in almost a third of abstracts of this type (32%) started with similar phrases, such as “*The results of this research revealed the following, The research findings were, and The results are expressed as follows*”, followed by a colon and then a list of paragraphs with numbers indicating the order of the findings. Besides the same organisation of several findings reported in several paragraphs between Thai and English abstracts, the study also found 15% of this move reporting on statistical results without any interpretation. Such ways of presenting the three key components of Informative abstracts identified in this abstract corpus would result in rejections if their respective RAs were submitted to international journals.

TABLE 3. Steps in the M move of Informative abstracts

Research design	Research setting	Instrument	Procedure	Participant	Sampling	Data collection	Data analysis
149 (28%)	15 (2.8%)	244 (46%)	45 (8.5%)	326 (61%)	50 (9.4%)	75 (14.1%)	289 (54.3%)

THE INDICATIVE ABSTRACTS

Table 4 displays the move structures of 39 Indicative abstracts in the current study. Different from the Informative abstracts, all Indicative abstracts in this corpus established the research territory by presenting the research contexts in which the research was conducted (M1), making this move obligatory. However, M2 and M3 were categorised as optional because they were present in 13% and 46% of this abstract type, respectively. Although this corpus revealed the general move structure of this abstract type, the existence of a few instances of M2, which indicated research gaps, problems or hypotheses, showed that a majority of these abstracts did not establish the research niche. Despite the absence of M2, M3, which announces the ways in which the research planned to investigate, was present in some abstracts (Example 5), these abstracts failed to position the reported research into the literature as no gaps were indicated or no questions were raised to be answered. These abstracts, therefore, did not fulfill the function of the Indicative abstracts which mirrors the structure of the Introduction section in RAs (Lorés 2004, Vathanaloaha & Tangkiengsirisin 2018).

TABLE 4. Move structures of Indicative abstracts

M1	M2	M3
39 (100%)	5 (13%)	18 9(46%)

- (5) *Among various environmental factors for plant growth, light is one of the most important variables affecting plant cultivation through the process of photosynthesis. Plants usually absorb sunlight and especially tend to use red and blue light of the visual spectrum which have the greatest impact on plant growth (M1). In this study, the array of light-emitting diodes (LEDs) was designed to determine the effect of light intensity with different spectrum, such as red, white and blue light on plant growth, shoot length, fresh weight and dry weight (M3). (A476)*

THE COMBINATORY ABSTRACTS

Table 5 shows the move structures of 13 Combinatory abstracts, starting with the Indicative structure and an IMRD model is embedded in the last move (M3). M3 appeared in every abstract of the Combinatory type while M1-2 were conventional (Table 5). The frequently-found move sequences in these mixed abstracts were M1-M2-M3 (46%). Similar to the findings in the Indicative type, there was an absence of M2 in some abstracts, leading to the inadequacy of realising the rhetorical functions of this abstract type. Regarding M3, a majority of this move (85%) contained all IMRD elements (Example 6), 15% of the abstracts were found to have only M3-I and M3-M.

TABLE 5. Move structures of Combinatory abstracts

M1	M2	M3
8 (61.5%)	9 (69%)	13 (100%)

- (6) *The ASEAN Community will be soon established in 2015 and thus the ASEAN Economic Community (AEC) will surely receive great interest. With the policy of the free-flow of skilled labor, Thai vocational graduates can anticipate the challenge of using English as the main working language (M1). However, what English teachers prepare them for participating in the ASEAN Community is not known yet (M2). This study therefore aims to investigate the understanding of vocational English teachers about the EASEAN Community and its impact on their beliefs in what and how to teach English (M3-I). Four experienced vocational school English teachers were interviewed (M3-M). The results showed that the teachers were aware of the ASEAN Community establishment. However, their knowledge of ASEAN was still superficial (M3-R). The findings suggested that assistance from the Ministry of Education and a clearer English teaching policy and curriculum are needed (M3-D). (A342)*

LINGUISTIC FEATURES

GRAMMATICAL FEATURES

Table 6 summarised the use of grammatical features in 532 Informative abstracts published in six Thai university TCI1-TCI2 indexed journals. The frequency counts are presented in relation to each move where they occurred. Because some abstracts did not contain certain moves and moves varied in length considerably, the study does not compare the absolute-frequency values of the features across the moves, but the frequency of a particular feature is discussed with the total number of abstracts containing that move.

TABLE 6. Use of grammatical constructions in moves

Moves	I	P	M	Pr	C	Total
Number of abstracts containing the move	67 (12.7%)	457 (86%)	505 (95%)	473 (89%)	96(18%)	
Voice						
Active	66	477	564	557	89	1753
Passive	18	27	414	109	18	586
Tense						
Present	55	169	136	126	67	553
Past	17	337	838	534	32	1758
Future	0	4	6	8	10	28
<i>That-complement</i>	0	0	0	251	36	287

VOICE

With a total number of 2,339 finite verbs, the active voice was used almost three times as frequently as the passive voice in these Informative abstracts (1753 & 586 verbs, respectively). Moreover, the former was by far more common than the latter in all the five moves of these abstracts. Although these Thai writers' preferences for the active form could result from the absence of passive voice in Thai language (Thep-Ackrapong 2005), the prominent presence of the former in the M move of these abstracts tended to indicate their unawareness of the rhetorical purposes of this move in scientific writing. As explained by Pho (2008), the passive voice should be more frequent in the M move as authors need to stay objective in reporting what was done. As seen in Examples 7 and 8 below, despite the absence of human agents acting as the subjects of all sentences, the impersonality of this move was not strengthened in the use of the active voice. Moreover, in Example 8, although the employment of the past participle "used" tended to indicate the writer's high level of English proficiency, the repetition of this participle and the existence of some simple grammatical errors (i.e., the phrase *stratify random sampling from the school's sizes* has no syntactic function, *school's* should be *schools'*, and *were* should be *was*) demonstrated the writer's deficiency in the English language. It could be argued that the M moves in these abstracts were a direct translation from Thai language because previous research (Bennui 2008, Hinnon 2014, Phuket & Othman 2015) has claimed that literal translation is one of the main causes of Thai writers' errors in English writing.

(7) *The samples were 271 school administrators, official teachers and administrators of basic school boards. The research instrument for data collection was the 5-level rating scale with IOC = 1.00 and Reliability of total issue = 0.82. The statistics for data analysis were Percentage, Mean, Standard Deviation and Frequency. (A309)*

(8) *The sample used in the research consisted of 496 teachers from 256 schools including 155 directors and 341 teachers by Krejcie and Morgan table and stratify random sampling from the school's sizes. The research instrument was the questionnaire with a confidence value equivalent to 0.98. Statistics used in data analysis were percentage, mean, standard variation, t-test and F-test. (A24)*

TENSES

As also seen in Table 6, the past tense was employed more than three times more frequently than the present tense (including the present simple and present perfect), with 1758 and 553 instances, respectively. The dominance of the past tense in these Informative abstracts indicated that the writers summarised their research rather than their RAs. As indicated by Cooley and Lewkowicz (2003) and Swales (1990), the use of verb tenses in abstracts depends on the nature of the abstract: if the abstract is in itself a summary of the RA, the present tense is typical while the past tense is generally used if the abstract is a summary of the research. Furthermore, the overwhelming employment of the past tense in the current study confirms Graetz's (1985) claim that RA abstracts are characterised by the past tense. However, a closer look at the occurrences of tenses in each move type revealed that the present tense was more

common than the past tense in the I and C moves while the latter was prominently present in the P, M and Pr moves (Table 6). The frequent presence of the present tense in the first and last moves of abstracts can be explained by their communicative purposes. As stated by Hyland (2000), the I move in RA abstracts introduces the topic and makes generalisations about the topic in the field while the meanings of the results and claims made on the reported results are presented in the last move (C). As claimed by Pho (2008), the use of the present tense in these two moves thus makes them sound more general and applicable, respectively. However, the prominent presence of the past tense in the three key moves of these Informative abstracts not only showed a report of what the research was about, how it was conducted and what was found but also left the reader with the impression that the writers were objective in reporting their research (Pho 2008). As stated by Santos (1996), the past tense should be used in these three moves, especially the Pr move to signify the narrow claim of the research findings, resulting in not being seen as taking a bold attempt to imply that the research reported has yield indisputable and established knowledge.

Although these Thai authors' use of the present and past tenses was in line with the common trend in RA abstracts, the presence of a few instances of the future tense in the corpus tended to indicate that some of the authors did not know its rhetorical uses in relation to the communicative purposes of each move (Table 6). Although the presence of the future tense in the C move is likely to be accepted as this move may indicate a promise on the significance of the research for future practice or investigations (Example 12), its occurrences in the P, M, and Pr moves (Examples 9, 10 & 11) are unconventional. In fact, as discussed earlier, these three moves report on the key components of empirical studies which have already been conducted, so the presence of the future tense in these moves is inappropriate. However, the wrong employment of this tense in the current corpus could indicate the effort that these Thai authors made in using tenses in writing their English abstracts because the Thai language does not have tenses (Bennui 2008, Phuket & Othman 2015). This finding tends to point to the need to introduce an explicit form-based instruction when training Thai would-be researchers in English academic writing.

- (9) *The objective of this research will study the shared beliefs on amulets in the borderlands of Thailand, Laos and Cambodia.* (P) (A43)
- (10) *Two instruments will be used in this study: firstly, the questionnaire to study teachers' opinions on the schools' preparation for ONET, and secondly, statistics to analyse the data.* (M) (A210)
- (11) *The results of this study will show as follow: 1)...2)...* (A485)
- (12) *This article will provide information about Li language from Chinese scholars for Thai scholars who conducts further research related to the topic in the future.* (C) (A186)

THAT-COMPLEMENT CLAUSES

As seen in Table 6, *That*-complement was largely restricted to the Pr and C moves (251 and 36 instances, respectively). This finding was in line with Pho's (2008) which also found the presence of *That*-complement in these two last moves while it was non-existent in the first three moves (I, P & M) of RA abstracts. Furthermore, similar to Pho (2008), the present study found the high frequency of occurrences of this structure in the Pr move (53%), and as claimed by Pho, this structure was an important characteristic of the move. Besides these writers' preferred employment for reporting their findings, this structure helped them project their findings more easily by signaling that the move is now changed to the reporting of the findings of their own studies (Example 13). Moreover, the prominent appearance of this clause could also confirm the claim by Hyland and Tse (2004) on the function of the

evaluative *That*-complement in showing the promotional aspects of the abstracts where writers could highlight their research findings to hook and convince readers to continue to read their full papers. Similar to the employment of *That*-complement in the Pr move, thirty-six instances of this structure in the C move started with references to the findings or data being reported, such as *The findings*, *Our results* and *The data*, or the use of self-reference words like *The author* and *The researcher*. These nominal references were accompanied by some tentative reporting verbs, namely *suggest*, *indicate*, *demonstrate*, and *hope* (Examples 14 & 15). Additionally, the signal words “*In conclusion*” were also used to indicate the C move in nine abstracts with *That*-complement (Example 15).

- (13) *The study found that the public opinion about the ethic of lawyers in Maha Sarakham province court was at a high level (X=3.68, S.D. = 1.09).* (A12)
- (14) *The author hopes that the content of this paper can be beneficial for teachers and learners to learn by using peer-feedback.* (A569)
- (15) *In conclusion, our results indicated that the growth of red oak was strongly influenced by blue and read light.* (A101)

METADISCOURSE FEATURES

Table 7 summarises the use of interactional metadiscourse devices employed in 532 Informative abstracts. With a total of 93 instances of hedges and self-reference words (84 and 9, respectively) and a complete absence of attitudinal stance markers, it can be concluded that this group of Thai writers used much less interactional metadiscourse than expected, as compared with the total number of the move occurrences in the corpus. As indicated in previous studies (Biber 2006, Gillaerts & Van de Velde 2010, Hyland 2005), abstracts are deeply intertwined with subjectivity which result from the use of hedges, attitudinal stance expressions and self-reference words and other interactional metadiscourse devices. The sparing use of interactional metadiscourse features in these abstracts may indicate that the writers’ ignorance of the need to negotiate with their readers through the employment of these devices to comment on and evaluate their own research findings and soften their claims. Although Gillaerts and Van de Velde (2010) attribute the abstract writing guidelines and manuals which require RA abstracts to be a fully objective summary to the scanty presence of these interactional devices in abstracts, the researcher assumed that these Thai writers’ inexperience in writing English abstracts and their lack of linguistic resources for expressions of their own opinions and their interaction with readers would lead to their infrequent use of these features.

TABLE 7. Interactional metadiscourse devices

Moves	I	P	M	Pr	C	Total
Hedges	10	0	0	8	66	84
Attitudinal stance markers	0	0	0	0	0	0
Self-reference words	0	0	0	2	7	9

Table 7 also displays the mapping of interactional metadiscourse devices onto different moves of the Informative abstracts. While hedges were concentrated in the I, Pr and C moves, self-reference words were found in the last two moves (Pr & C). This finding tended to confirm the claim by Gillaerts and Van de Velde (2010) that the interactional markers are not equally distributed across various moves of abstracts. Moreover, more than three quarters of these markers (73 instances) were present in the C move, and most of them were hedges. As argued by Gillaerts and Van de Velde (2010), it is necessary to have more hedges in the C move to negotiate with the readers for accommodating alternative voices for the writers’ possible controversial claims. However, this study found that modal verbs were mainly used

for hedges in all I, Pr and C moves (Examples 16, 17 & 18, respectively), and this could be due to their limited knowledge of the target language for argumentative purposes. Regarding the use of self-reference words, they were largely restricted to the Pr and C moves (Examples 14, 15 & 19). Although Pho (2008) found the negligible presence of this strategy in the Pr move, the C move was reported to be more prominent with self-mention in both Hyland (2003) and Pho (2008). As claimed by these scholars, besides the self-promotion, the presence of self-references words makes the writers explicit in the abstracts to take on the responsibility for their findings and claims.

(16) *Nowadays, learners should participate in the learning process.* (A63)

(17) *The results of the research can be concluded as follows: 1)...2)...* (A313)

(18) *This article would be of value to people who wish to write their own mawlum poetry in order to produce their personalized trop of mawlum for school performances.* (A511)

(19) *The researcher found 1) that poetic form used was the “Klongsaan” form, beginning with the secondary verse and followed by the main verse 2) the art of word selection was employed using metaphors...3)...* (A491)

CONCLUSION

This study attempted to explore the rhetorical structures of 584 English abstracts of Thai empirical RAs published in TC11 and TC12-indexed journals of six Rajabhat universities in the North-eastern part of Thailand. The analysis showed that there were three types of abstracts (Informative, Indicative & Combinatory), and the Informative was by far the most common abstract type in the current corpus. Most abstracts in the Informative type had three important moves of P, M and Pr but lacked I and C moves. The typical order of the moves was (I)-P-M-Pr-(C), and there were a few instances of move embedding and a complete absence of move cycles in the Informative abstracts. Moreover, M2 was found to be infrequently present in the Indicative and Combinatory types. Besides these, some Informative abstracts were found to be very long and have more than one paragraph reporting on a list of findings and statistical results without interpretation. The lack of these moves in most of the abstracts of each type and the unconventional practice of writing these abstracts reduced the effectiveness of these RA abstracts. In terms of the linguistic realisations of the moves in the Informative abstracts, six linguistic features characterising abstract writing listed by Pho (2008), namely tense, voice and *That*-complement, hedges, self-reference words and attitudinal stance expressions were studied. The outstanding presence of the active voice (especially in the M move), the presence of future tense in most of the moves and the limited use of interactional metadiscourse devices indicated these Thai writers' unfamiliarity with the rhetorical uses of these linguistic features. Furthermore, although this study did not focus on their writing errors, Thai writers' common mistakes (spelling, punctuations, fragments, word choices, noun determiners and subject and verb agreement) in English writing reported in previous studies (Bennui 2008, Hinnon 2014, Phuket & Othman 2015, Thep-Ackrapong 2005) were occasionally seen.

The findings in this study tended to suggest that effort should be made to familiarise Thai academics at universities in particular and novice multilinguals in general with limited English proficiency with the genre because structural and linguistics inadequacies may hamper the general readability of an English abstract. Also, Thai university journal editors should study the rhetorical and linguistic characteristics of good English abstracts to encourage RA writers who submit their RAs to the journals to follow such characteristics in

composing their English abstracts. Furthermore, a genre-based approach should be provided to new writers to help them become sensitive to the prototypical moves of an abstract and can conscientiously model their abstracts on internationally-accepted conventions. Furthermore, they should also be assisted with an appropriate amount of explicit, form-based instruction in the classroom with a clear focus on the lexical grammatical aspect of language use. As indicated in previous research (Jaroongkhongdach et al. 2012, Kiattkheeree 2016, Phothongsunan 2016), writing for international publications in English poses great challenges for Thai academics although they are English lecturers, more attention and strenuous support regarding writing for publication in English are thus needed to assist Thai lecturers whose majors are not in English. Appropriate guidance and instructions will therefore be given to help them write effective abstracts in English in order to increase their visibility to readers as expected by TCI (2008). That would enhance not only the quality of their research works published by their institutional TCI-indexed journals but also increase and maintain the national and international reputation of Thai universities along with quality assurance.

Although the findings may be applicable to this specific genre, generalisations from these findings about English abstracts published by other Thai university journals should be made with cautions due to the small-scale study on empirical RA abstracts from six TCI-indexed journals of Rajabhat universities. Therefore, further studies on how English abstracts are written by Thai academics whose Thai RAs are published by TCI-indexed journals from other Thai universities are necessary to provide a complete picture of how this genre is constructed by Thai academics. Furthermore, studies of English abstracts of theoretical papers published in these national journals may yield interesting results. Also, interviews with actual RA writers and journals editors should also be conducted to provide better understanding of their challenges and difficulties in writing and publishing RAs with English abstracts.

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