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ตีพิมพ์ในวารสารไทยและวารสารต่างประเทศ : ทัศนคติและกลุ่มคำศัพท์

นางวิรดา อำนวย

วิทยานิพนธ์นี้เป็นส่วนหนึ่งของการศึกษาตามหลักสูตรปริญญาศิลปศาสตรดุษฎีบัณฑิต

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ปีการศึกษาที่ 2555

**A COMPARATIVE STUDY OF ENGLISH APPLIED
LINGUISTICS RESEARCH ARTICLES BETWEEN THAI
AND INTERNATIONALLY PUBLISHED JOURNALS:
MOVES AND FORMULAIC SEQUENCES**

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**A Thesis Submitted in Partial Fulfillment of the Requirements for
the Degree of Doctor of Philosophy in English Language Studies**

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AND FORMULAIC SEQUENCES**

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ในปัจจุบันการวิเคราะห์ประเภทของบทความวิจัยทั้งในเชิงโครงสร้างทางภาษา และลักษณะทางภาษาศาสตร์ได้รับความสนใจเป็นอย่างมาก การวิเคราะห์ทั้งสองแนวทางถือเป็นประเด็นหลักของงานวิจัยฉบับนี้ โดยในส่วนของงานวิจัยเป็นการวิเคราะห์โครงสร้างของทัศนภาค (Move) สำหรับส่วนที่สองเป็นการวิเคราะห์กลุ่มคำศัพท์ (Formulaic Sequences) ของแต่ละทัศนภาค ของสองคลังข้อมูล (คลังข้อมูลไทย และคลังข้อมูลต่างประเทศ) โดยแต่ละคลังข้อมูลประกอบด้วย 30 บทความวิจัยทางสาขาภาษาศาสตร์ประยุกต์ที่เขียนเป็นภาษาอังกฤษ สำหรับคลังข้อมูลต่างประเทศประกอบด้วย บทความวิจัยที่คัดมาจกวารสารต่างประเทศ 10 รายชื่อ ส่วนคลังข้อมูลไทยประกอบด้วยบทความวิจัยที่เขียนโดยคนไทยและตีพิมพ์ในวารสารไทย 10 รายชื่อ การวิเคราะห์แต่ละภาคของบทความวิจัยได้ยึดตามแนวทัศนภาควิเคราะห์ที่แตกต่างกันออกไป กล่าวคือ ภาคบทนำใช้ทัศนภาควิเคราะห์ของ Swales (2004) ภาควิธีวิจัยใช้ทัศนภาควิเคราะห์ของ Lim (2006) ภาคผลวิจัย ภาคอภิปรายผล และภาคบทสรุปใช้ทัศนภาควิเคราะห์ของ Yang and Allison (2003) ผลจากการวิเคราะห์พบว่าทัศนภาคของบทความจากทั้งสองคลังข้อมูลคล้ายคลึงกันแต่ต่างกันในเรื่องของรูปแบบการเรียงตัว และการเกิดซ้ำของบางทัศนภาคในบางภาคของบทความ ในส่วนของการวิเคราะห์กลุ่มคำศัพท์พบว่า ในแต่ละทัศนภาคมีการใช้กลุ่มคำที่เฉพาะ นอกจากนี้จำนวนกลุ่มคำศัพท์ที่ได้จากวิเคราะห์คลังข้อมูลต่างประเทศมีมากกว่าที่ได้จากคลังข้อมูลไทย งานวิจัยชิ้นนี้ได้แสดงถึงโครงสร้างทัศนภาคของบทความวิจัย ที่นักวิจัยมือใหม่ และนักศึกษาที่ไม่ใช่เจ้าของภาษาสามารถใช้เป็นแนวทางประกอบอ่านและการเขียนบทความวิจัยในด้านภาษาศาสตร์ประยุกต์ รวมทั้งกลุ่มคำศัพท์พร้อมบริบทที่ใช้ สามารถใช้เป็นตัวอย่างในการเขียนงานวิจัยได้ ยิ่งไปกว่านั้นการวิเคราะห์ทั้งสองส่วนนี้ (ทัศนภาคและกลุ่มคำศัพท์) จะมีประโยชน์สำหรับครูภาษาอังกฤษในการออกแบบเครื่องมือการสอนเรื่องประเภทการสื่อสาร (genre) ซึ่งใช้สำหรับการเรียนการเขียนงานวิชาการ

สาขาวิชาภาษาต่างประเทศ
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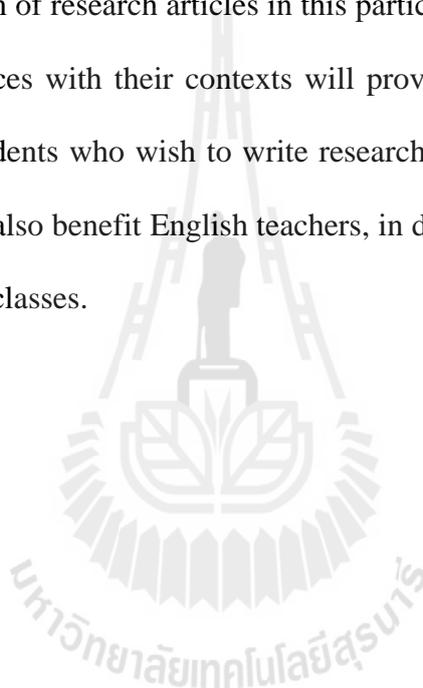
ลายมือชื่อนักศึกษา _____
ลายมือชื่ออาจารย์ที่ปรึกษา _____

WIRADA AMNUAI : A COMPARATIVE STUDY OF ENGLISH
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MOVE/FORMULAIC SEQUENCES/RESEARCH ARTICLES/APPLIED
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In recent years, there has been a growing interest in identifying the research article genre both in terms of rhetorical structure and characteristic features. An analysis of both rhetorical structure and linguistic features are the focus of the present study. The first phase of the identification focused on identifying what rhetorical moves are employed and the second phase explored what formulaic sequences are typically linked to particular moves of the research articles in the two datasets. Each of the two corpora (Thai corpus and international corpus) was represented by thirty English research articles in the field of applied linguistics. The English RAs were published in ten internationally renowned journals and were selected for the international corpus, whereas the English RAs written by Thai writers were published in ten refereed Thailand-based journals were the samples of the Thai corpus. Each section of the traditional sections was analyzed by different move models: Introduction: Swales (2004), Methods: Lim (2006), Results, Discussion, and Conclusion sections: Yang and Allison (2003). The move analysis revealed that rhetorical moves/steps of both sets of data was quite similar, however, move structure

and move cyclicity were rather different in some sections. For the identification of the formulaic sequences, the findings showed that each move/step in each section of the research articles of the two corpora was expressed by distinct formulaic sequences. In addition, a number of formulaic sequences taken from each section of the RAs from the international corpus were higher than those in the Thai corpus. The findings may provide guidelines for novice researchers or non-native students in understanding the rhetorical organization of research articles in this particular field. The identification of the formulaic sequences with their contexts will provide a practical template which will be useful for students who wish to write research articles. Moreover, the results of both analyses will also benefit English teachers, in designing genre-based materials for academic writing classes.



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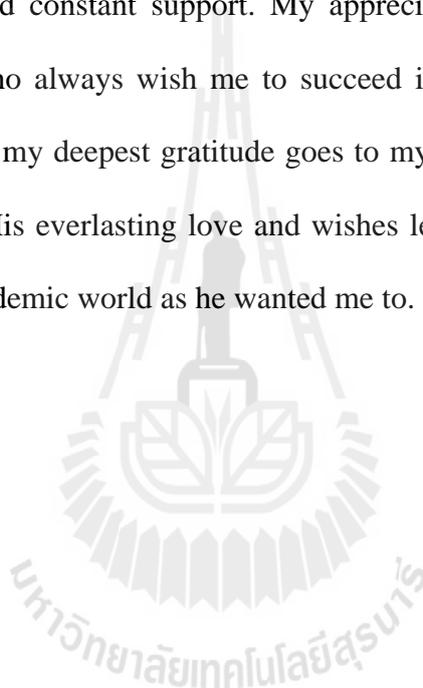


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LIST OF ABBREVIATIONS

CARS	Create a Research Space
ESP	English for Specific Purposes
FL	Formulaic Language
FS	Formulaic Sequence
IMRDC	Introduction, Method, Result, Discussion, Conclusion Sections of Research Articles
ISI	Institute for Scientific Information
M	Move
RA	Research Article
S	Step
TCI	Thai-Journal Citation Index Centre

CHAPTER 1

INTRODUCTION

This chapter includes descriptions of the rationale of the study, the significance of the study, the statement of the problems, the purposes of the study, the scope of the study, and it is followed by the limitations of the study. It will end with abbreviations and definitions of the key terms used in the study.

1.1 Rationale of the Study

The ability to write academic papers effectively is not solely based on linguistic ability, but also on an awareness of the rhetorical features used in academic writing as accepted by the discourse community. Members of any discourse communities need a specialized literacy that consists of the ability to use discipline-specific rhetorical and linguistic conventions to serve their purposes (Berkenkotter, Huckin, and Ackeman, 1991 quoted in Zhu, 2004; Duszak, 1994; Isik Tas, 2010; Tardy 2005). It can be said that when writing academic papers, more insights are needed into what makes a given style appropriate and functional in a given discursal environment.

Research articles (RAs), one genre of academic writing, represent the preferred medium of exchanging and advancing knowledge among members of the academic community (Flowerdew, 1999; Kanoksilapatham, 2003). At more advanced levels of education, reading and writing research articles are indispensable for

members of the academic community. This has led to a growing interest in research publications in all academic communities. Besides their unique genre and importance, some studies (e.g Ozturk, 2007; Samraj, 2002, Yakhontova, 2006) have documented that schematic organization of research articles have both inter-and intra-disciplinary variations. Therefore, to be able to organize and publish RAs, authors need to understand conventional styles as well as the rhetorical structure of research articles (Martínez, 2003).

With this in mind, corpus-based genre analysis would be an appropriate method of establishing a clear picture of the research article genre. Such an analysis is one of the current trends that have received considerable attention in academic writing (Isik Tas, 2010). In linguistics, genre analysis aims to describe the higher level organization and structure of written or spoken texts (Flowerdew, 1993). It is the study of how language is used within a particular context. As Duszak (1994) noted, there are various intellectual styles that are combined with specific patterns of discourse organization and discourse expectations. Therefore, knowing how text is organized and how it functions may help writers of research article writers have a clearer understanding of their language and structure.

One of the genre-based approaches used to identify the structure of RAs is ‘move analysis’, which has recently become an important area of research. Some influential research on this particular form of analysis has been conducted in Swales’ (1981, 1990) studies. Swales’ CARS model has been used to analyze research articles in different disciplines. A ‘move’ means a discursal segment that performs a particular communicative function (Swales, 2004). The focus of move-based analysis is on the hierarchical schematic structures of texts (Nwogu, 1997). Move as defined

by Nwogu is “a text segment made up of a bundle of linguistic features (lexical meaning, propositional meanings, illocutionary forces, etc) which give the segment a uniform orientation and signal the content of discourse in it” (p. 122). With this in mind, it can be said that a move is a semantic unit that associates with the writer’s purpose. Also, move analysis method or a two-layer level of analysis, is now being widely used in genre analysis.

Much research has been done on the organizational patterns of the different sections of research articles using the move-based approach. Among these studies, some focus on the Introduction section (e.g. Jogthong, 2001; Samraj, 2002; Shi and Wannaruk, 2010; Swales, 1990), the Methods section (Lim, 2006; Peacock, 2011), the Results section (e.g. Brett, 1994; Thompson, 1993; Williams, 1999), the Discussion section (e.g. Fallahi and Erzi, 2003; Holmes, 1997; Yang and Allison, 2003), whereas other studies analyze all the four sections (Introduction, Methods, Results, and Discussion) or “IMRD” patterns (e.g. Kanoksilapatham, 2003, 2007; Nwogu, 1997; Pho, 2008; Posteguillo, 1999). Also, studies on move-based analyses have been extended to compare rhetorical moves in other languages such as Chinese (Loi and Evan, 2010), and Slavic (Yakhontova, 2006) with English. It can be seen therefore that analyzing RA sections using the move-based approach has attracted many researchers.

In Thailand, where the present research is being conducted, research focusing on the rhetorical move structure of research articles with a conventional format seems limited. Most corpus-based genre analysis studies seem to have focused on a genre-approach analysis used in language teaching and learning (e.g. Chakorn, 2005, 2008; Kongpetch, 2006; Nakai and Rojjanaprayon, 2001), and other genres such as theses

(Rasameenin, 2006), movie reviews (Charoenchasri, 2007). To my knowledge, only a small number of move-based studies (Jogthong, 2001; Kanoksilapatham, 2007) have analyzed RAs written by Thai writers. Jogthong compared the rhetorical moves used in the Introduction sections of research articles in two different fields: education and medicine, while Kanoksilapatham identified all four major sections of RAs in Biochemistry. However, the corpora of these two studies are RAs written in Thai and published in journals in Thailand. Although some studies focus on English RAs written by Thai writers, only Abstract sections have been identified (e.g. Phanthama, 2000; Promsin, 2006). It can be seen from these examples that there are a limited number of research studies identifying the schematic structure of English RAs written by Thai writers and published in Thai journals or comparing their rhetorical moves with those published in international journals.

In addition to conducting a move analysis, the present study aims to identify the formulaic language (FL) used to express the communicative function of move boundaries. Analyzing formulaic language, which links to move boundaries, seems consistent with Pho's (2009) notion that the identification of moves should be based on a cluster of features rather than on any single linguistic feature. Formulaic language is a group of words which co-occurs frequently (Reppen, 2010). It has been given various terms (e.g. formulaic sequences, lexical bundles, chunks, phraseological patterns, multi-words sequences, etc.); however, in this study the term 'formulaic sequence' will be used. This is because "the word 'formulaic' carries with some associations of 'unity' and of 'custom' and 'habit', while 'sequence' indicates that there is more than one discernible internal unit, of whatever kind" (Wray, 2002, p.9). Therefore, in the present study, 'formulaic sequence (FS)' is the most appropriate

term for referring to a frequently used string of linguistic items which is used as a key linguistic signal for the realization of a move/step boundary. Generally, formulaic sequences are viewed as simple expressions and they will therefore be acquired easily in the natural course of language learning (Biber and Conrad, 1999 quoted in Cortes, 2004). They appear to play a prominent role in language usage because they are stored in the mind as pre-formulated holistic units, which can be easily retrieved rather than constructed anew (Pawley and Syder, 1983; Simpson-Vlach and Ellis, 2010).

The formulaic sequences identified in the current study are those collected from the move/step boundaries which function as linguistic signals to indicate the specific communicative function of a discursal unit. With this notion, the formulaic sequences referred to in the present study are in line with the 'genre-functional formulaic sequences' defined by Hüttner (2005, 2010), that is, the identification of those sequences that fulfill the function of furthering the communicative intention of a particular move (Hüttner, 2005). Previous studies have suggested that four-word sequences are frequently found in academic writing (Biber, 2009; Cortes, 2004, 2006; Hyland, 2008a), however, in the present study, in order to get a larger number of formulaic sequences, at least 3-word combinations will be focused on. Examples of formulaic sequences with their contexts are as follows: example 1 (taken from the present study) and example 2 (drawn from Shi and Wannaruk, 2010).

(1) The formulaic sequences with their contexts which are used as the key linguistic signal in identifying Move 1 (Establishing a territory)

- *Several studies have examined the...*
- *Several studies have shown...*
- *Several studies have been carried out to determine...*

(2) The formulaic sequences with their contexts which are used as the key linguistic signal in identifying Move 3 Step 1 (Stating purpose).

- *The aim of this paper is to determine...*
- *The aim of this paper was to examine...*
- *The aim of this paper is to study...*

The use of formulaic sequences in academic writing varies according to the writers. It was found that native professional writers prefer to employ formulaic sequences more frequently than non-native and novice writers (Cortes, 2004). Also, the ways in which formulaic sequences are used in the writing of expert writers differ from those used in the writing of novices. Cortes found that some target bundles which were found frequently (e.g. *at the turn of, in the course of*) in published articles were rarely or never used by students. Also, most of the students preferred using only a few particular bundles repeatedly (e.g. time markers—*the beginning of the, the end of the, at the end of*), which made the discourse sound redundant.

As mentioned earlier, move-based analyses have been extensively used to analyze research articles in different fields. The findings of the studies using this particular approach are interesting and need further investigation, particularly those which compare the rhetorical organization of RAs written by L2 writers. Studies have shown some differences in the rhetorical structure of RAs written by native and non-native English speakers. The selection of journals for the analysis of RAs is also interesting. A considerable amount of research has been centered on the schematic structure of English RAs published in well-established journals as listed in Journal Citation Reports, but little research has focused on the rhetorical structure of RAs published in journals in Thailand.

This study, therefore, attempts to fill these gaps by comparing the rhetorical structure of English RAs with complete IMRDC sections published in journals in

Thailand (hereinafter called Thai journals) with those published in international journals. In addition, only RAs in Applied Linguistics are the focus of the present study. As Yang and Allison (2003) pointed out, applied linguistics is of particular interest for pedagogical reasons because raising awareness of genre features is directly relevant as part of its disciplinary content. Thus the comparison of the rhetorical organization of RAs in this particular field, which remains under-explored, will benefit especially English language teaching and learning. On the other hand, this study also explores the formulaic sequences employed in RAs from the two corpora. The findings from both kinds of analyses in the present study will provide non-native research writers with explicit ideas for producing research articles in the field of Applied Linguistics, especially for Thai writers who wish to publish their work internationally.

1.2 Statement of the Problem

There is a consensus among scholars that writing in English is one of the most serious problems for non-native speakers. As Jogthong (2001) stated, in countries where English is not the mother tongue, most learners, even if they reach a high standard of proficiency in English, experience serious problems when attempting to write in language appropriate to academic discourse, particularly at the level of text organization. More specifically, most non-native speakers face a challenging and difficult task when writing English research articles for publication.

Writing research articles for publication is one of the requirements for students at higher education levels. It has also become an integral skill for researchers across disciplines, but it can be a daunting and frustrating task for non-native writers. Several

studies have documented that writing for publication in peer-reviewed international journals is important for researchers, institutions, and academic communities (Cargill and O'Connor, 2006; Huang, 2010). However, some scholars (e.g. Belcher, 2007; Flowerdew, 2001; Li, 2006) note that the process of reaching this stage is a rather long and challenging process for non-native academic writers. Research articles may be refused for publication if their rhetorical structures do not meet a journal's criteria.

Research articles are governed by various conventions of form and content organization (Duszak, 1994). Several studies have revealed that the rhetorical structure of research articles varies across communities (Brett, 1994; Lim, 2006; Ozturk, 2007; Samraj, 2002; Swales and Feak, 2004; Valero-Garces, 1996). On the other hand, most writers, especially new entrants into the field of academic discourse, ignore the existence of the internal ordering of information in the various sections of research articles (Nwogu, 1997; Vassileva, 1997). This lack of awareness causes them to face serious problems when attempting to produce clear, coherent and logically organized research articles. In some disciplines, such as applied linguistics, the structure of empirical research articles tends to be more flexible towards the end (Yang and Allison, 2003).

The rhetorical structure of RAs produced by native and non-native writers seems to be different. Findings from some research studies support this claim. Amirian, Kassaian and Tavakoli (2008), for example, found that the sequence of moves in the Discussion sections of English RAs written by Persian EFL writers differed from those in English RAs published in international journals. Hirano (2009) also found that rhetorical patterns of the Introduction sections of RAs taken from two international journals in the field of ESP (*English for Specific Purposes* and *ESP*

ecialist) were different, that is, the rhetorical moves of English RAs from the former journal followed Swales' model closely than those of the Portuguese RAs in the latter journal. Also, RA Introduction sections from the *ESP ecialist* journal tended to omit Move 2 (Establishing a niche) and presented fewer moves than those in the English for Specific Purposes Journal. Another study, Cmejrkova (1996, quoted in Jogthong, 2001) observed that language signals and strategies used for presenting moves of English RA Introduction sections written by Czech writers were different from those described in Swales' study. For example, RA Introduction sections written by Czech scholars included delayed purpose, multiplicity of standpoints and free-writing, which make the text difficult to read in the eyes of English native speakers. The results from these studies have confirmed that the rhetorical structures produced by native and non-native English speakers were different in terms of the frequency and sequences of moves. Some culture-specific factors were also adduced as the reason for these differences.

As a result of analyzing RAs written by Thai writers, some studies have reported the differences and difficulties of writing RAs. In her study, Kanoksilapatham (2007) also found that there were some differences in terms of the move structure in Thai biochemistry RAs when compared with English RAs. The differences were discernible possibly due to a number of factors such as the close-knit nature of Thai research communities, reflecting the size and expectations of the community members, and the scope of research conducted in a Thai context. In a study carried out by Pupipat (1998), he found that the Abstract, Introduction, and Discussion sections of RAs are the most difficult sections for Thai scientists to write. He believes that familiarity with the written style of the English language, Thai

cultural characteristics such as the face phenomenon and the seniority system, were the causes of writing difficulties. He concluded that all these factors resulted in Thai scientists showing a lack of critical thinking and argumentative writing skills. Pupipat's findings correspond with those of Thongrin (2000) which show that EFL writers often bring with them not only linguistic but also cultural backgrounds, which to some extent may cause their writing processes and products to differ from those written by their native English-speaking counterparts.

It can be seen therefore that writing research articles for publication can present serious problems. Specifically, it tends to be harder for writers who do not use the English language in their daily lives. Studies have revealed differences in terms of the rhetorical structure of RAs produced by native and non-native speakers depending on whether those RAs are written in English or other languages. Consequently, one of the methods being used for dealing with RA writing problems is to analyze their rhetorical structures. Also, it is necessary to see how the rhetorical moves identified are realized linguistically by investigating formulaic sequences, which serve the function of supporting the communicative intention of particular moves which should help novice writers/learners 'frame their research neatly and be able to market it more successfully in the competitive sphere of international publications in English' (Mur-Dueñas, 2012 p. 72).

Therefore, more emphasis on rhetorical moves and typical language usage in research articles should assist novice non-native writers to write research articles more effectively.

1.3 Purposes of the Study

The present is being conducted to analyze rhetorical organization pattern and word forms that are most appropriate used in particular moves/steps in English research articles in the field of Applied Linguistics. Therefore, the first aim of the present study is to examine the rhetorical organization of English research articles in Applied Linguistics published in two different contexts, that is, to see whether there are any differences or similarities between English articles published in Thai journals and in international journals. Unlike some other previous studies which analyzed only a particular RA section (e.g. Bruce, 2008, 2009; Holmes, 1999; Jogthong, 2001; Lim 2006; Peacock, 2002; Samraj, 2002; Williams, 1999), the analysis in this study examines all the conventional sections (IMRDC) of research articles. Three influential scholars' models (Lim, 2006; Swales, 2004; Yang and Allison, 2003) are used as tools for analysis. This is because these move models have been developed based on the results of the analysis of RAs in the field of social science (except for Swales' (2004) model, which was developed from the results of the analysis of three different fields, namely, hard, social, life and health science), which is in line with the present study. Apart from analyzing rhetorical patterns of RAs in both corpora, identifying formulaic sequences is the second aim of the present study. The analyses are expected to answer the following research questions.

1. How is the rhetorical move pattern for each section of applied linguistics research articles published in international journals similar to or different from that in Thai journals?
2. What formulaic sequences are typically found in each move of research articles in the two corpora?

The answers to these research questions should provide valuable descriptions of the rhetorical structures and lexical patterns used in applied linguistic RAs for the writers of research articles, particularly those who are inexperienced non-native writers who are required to present and publish their works for the public.

1.4 The Significance of the Study

Research articles play an important role in academic writing as they are a major means of introducing scientific knowledge to a large number of readers. In this age of information technology, reading and presenting research articles in English is one of the ways for researchers/writers to gain acceptance and international recognition for their works (Soler, 2007).

Identifying the structural organization of RAs by using a move-based approach is one productive method for understanding the structure of RAs. The primary aim of a move analysis is to focus closely on the texts or discourse type which is recognized by its users and its characteristic features of style or form. Knowing text functions will provide valuable guidance to those composing academic writing in various genres. Generally, when writing academic papers, writers of any discourse communities should not only conform to linguistic conventions, but should also be acceptable to the academic communities (Bhatia, 1993). Moreover, analyzing research article genres by using a move-based approach should also provide great benefits for article writers. It is also useful for instruction in reading and writing research articles (Kanoksilapatham, 2003, 2004).

Besides studying the rhetorical patterns of research articles in Applied Linguistics, the formulaic sequences which serve as a linguistic signal linking to the

function of rhetorical moves/steps are also examined. Such formulaic sequences may be useful for particularly for inexperienced writers who are confronted with the need to satisfy genre-specific demands and at the same time struggle to find appropriate words. Knowing how to employ appropriate formulaic sequences will make writing flow more smoothly and naturally. As asserted by Hyland (2008b), such knowledge also helps readers identify texts and offers a better understanding of what register they belong to, which ultimately leads to more effective reading and writing of academic texts. In addition, knowing how to use formulaic sequences appropriately is of great help in L2 learning (Hüttner, 2005; Hsu, 2008; Pang, 2010; Yu, 2009). Therefore, formulaic sequences collected from the two corpora of the present study will serve to some extent as a practical guide for academic writing, particularly in the writing of research articles.

As mentioned earlier, the primary aim of the present research is to analyze the schematic structure of the conventional pattern (IMRDC) of research articles in Applied Linguistics. The advantages of such study seem consistent with Nwogu's (1997) suggestions. He noted that analyzing whole sections of research articles would provide readers with both an understanding of the organization of discourse and a demonstration of how an overall move analysis can give a real insight into each part of a research article that sectional studies alone cannot provide. Each section of research articles is different in relation to both communicative purpose (function) and linguistic realization.

It is therefore anticipated that the findings of this study will give a clear picture of how research articles of the two corpora are generally written based on a move-based analysis. The results of the study on move schemata of RAs of the two

different published contexts and the formulaic sequences found in move boundaries will lead to pedagogical suggestions for teaching the writing of English RAs for EFL learners. It is also hoped that the findings will empower non-native students, especially Thai students, to produce and publish their articles in professional journals more effectively.

1.5 Scope of the Study

1. Only research articles with the Introduction, Methods, Results, Discussion and Conclusion sections selected from international and local Thai journals were examined. However, in the Thai corpus, there were six articles which did not contain Conclusion section. This is due to the limited number of English applied linguistics RAs with complete IMRDC format published in Thai journals.

2. The research articles in ten English international journals used in this study were printed during the years 2003-2010, while the research articles taken from ten peer reviewed local journals were published during the years 2002-2010.

3. The analysis of the rhetorical structure of the research articles was conducted on the basis of three models of move analysis: Swales (2004), Lim (2006), and Yang and Allison (2003). The reasons behind the selection of these move models will be discussed in Chapter 3.

4. Formulaic sequences are identified according to their functions that link particular rhetorical moves/steps.

1.6 Limitations of the Study

1. Only sixty research articles were analyzed in this study.

2. The lowest cut-off point in identifying formulaic sequences was 3-word sequences.

3. As move identification is considered subjective (Crookes, 1986; Kanoksilapatham, 2003), we must be cautious of the reliability and validity of the analysis. Thus, in order to reduce the weaknesses of such an analysis as much as possible, inter-coder analysis was employed in the present study. With systematic coding and reliability checks, the researcher believes that the analysis was more valid and reliable.

1.7 Definitions of Key Terms

The definitions of key terms used in the present study are as follows.

(1) **Move** refers to a discursal or rhetorical unit that performs a coherent communicative function in a written or spoken discourse (Swales, 2004). A move can be a phrase, a sentence, a group of sentences, or even a paragraph.

(2) **Step** refers to a lower level text unit than a move that provides a detailed perspective on the options open to the writer in setting out the moves (Dudley-Evans and St John, 1998)

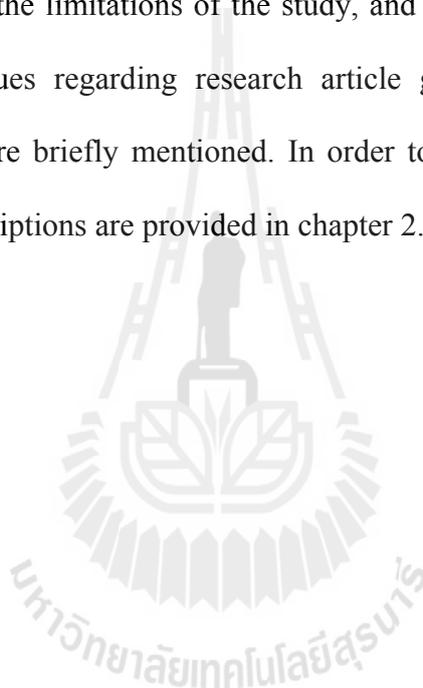
(3) **Move analysis** is a study of how language made by a writer forms a meaningful unit by identifying its forms and functions in the discourse (Jogthong, 2001).

(4) **Formulaic sequence** refers to a group of words co-occurring frequently to perform a communicative function in research articles such as '*result revealed that*', '*it was found that*', and '*the table shows*' which are found in the text boundaries functioning for reporting results.

(5) **Thai journals** are academic journals published by universities in Thailand. These journals are listed in TCI.

(6) **International journals** are professional English journals listed in Journal Citation Reports, which are published by the Institute for Scientific Information (ISI).

This chapter gives an overview of the present study, including the rationale of the study, the statement of the problems, the purposes of the study, the significance of the study, the scope, the limitations of the study, and the definition of terms used in the study. Some issues regarding research article genres, rhetorical moves, and formulaic language are briefly mentioned. In order to have a clear picture of these themes, detailed descriptions are provided in chapter 2.



CHAPTER 2

REVIEW OF RELATED LITERATURE

This chapter includes a review of the literature relevant to move analyses and formulaic language. The review covers the theoretical framework of genre, genre analysis in ESP, move analysis, contrastive rhetoric, and an overview of formulaic language. Related research concerning move analyses and formulaic sequences are also presented in this chapter.

2.1 Overview of Genre

The sophisticated concept of genre was proposed by Swales' (1990). He provides a detailed definition of genre within the field of English for Specific Purposes:

A genre comprises a class of communicative events, the members of which share some sets of communicative purposes. These purposes are recognized by the expert members of the parent discourse community, and thereby constitute the rationale of the genre. This rationale shapes the schematic structure of the discourse and influences and constrains choice of content and style (1990, p.58).

Bhatia (1993) delineated Swales' term into four main aspects. First, genre is a recognizable communicative event characterized by a set of communicative purposes(s) identified and mutually understood by members of the professional or academic community in which it regularly occurs. It is, in other words, a set of communicative purpose (s) which shapes the genre and gives it an internal structure,

and its communicative purpose is a fairly reliable criterion to identify and distinguish the sub-genre. Second, genre is a highly structured and conventionalized communicative event. Community members are generally credited with their knowledge from both the communicative goals and the structure of the genre to which they belong. Third, various genres display constraints on allowable contributions of terms of their intent, positioning, form, and functional value. This means writers in a particular community must conform to certain criteria within the boundaries of a particular genre. This can be seen from the use of some specific lexical resources, certain kinds of meanings associated with specific genres, and the positioning of certain rhetorical elements. The last aspect, constraints are often exploited by expert members of the discourse community to achieve private intentions within the framework of socially recognized purpose(s). As we look at this explanation, it is clear why expert genre writers often appear to be more creative in the use of genres they are most familiar with than those who are non-specialists.

Another view of genre described by Biber, Connor and Upton (2007) was the varieties associated with particular situations of use and particular communicative purposes. They pointed out that although some researchers (e.g. Biber and Barbieri, 2007; Biber, Johansson, Leech, Conrad, and Finegan, 1999) sometimes use the terms 'register' instead of 'genre', both terms shared the same meaning when investigating discourse. However, when these two terms were used independently, they had a different focus (Biber, Connor, and Upton (2007). In particular, 'register' refers to a general kind of language associated with a domain of use which is concerned with lexico-grammatical features and investigating how particular words and grammatical features vary systematically in accord with the situation. In terms of genre, it refers to

“a culturally recognized ‘message type’ with a conventional internal structure, such as an affidavit, a biology research article, or a business memo. Genre studies have usually focused on the conventional discourse structure of texts or the expected socio-cultural action of a discourse community.”(Biber, Connor and Upton, 2007, p. 8). With respect to research article analysis, the term ‘genre’ is employed since it refers to the study of linguistic structure beyond the sentence.

In this regard, Lin (2006) stated that, although genre-based approaches have both varied theoretical bases in linguistics and forms or guises, the main focus is on the unit of text rather than the sentence. Genre-based approaches are concerned with the social macro-purposes of communication. Hence, it can be said that the classification and labeling of genres may vary depending on the theoretical influences behind each approach, for example, written genres can be classified into Narratives, Description, Persuasion and Argumentation.

According to Jogthong (2001), “genres vary in terms of their complexity and rhetorical purpose and the mode or medium through which they are expressed. They are defined and used within discourse communities” (p. 9). Different types of communicative events result in different types of discourse. Each of these will have its own distinctive characteristics.

Johns (2002) expresses her view on this issue by stating that genre refers to more or less sophisticated spoken or textual reactions to the challenges presented by social context, while genre knowledge means knowledge about socially and culturally appropriate forms that writing takes in a given situation for a given purpose (Weigle, 2002).

According to Hyland (2003), there are three models of genre-based approaches. First, the New Rhetorical approach is influenced by post structuralism, rhetoric and first language composition. It refers to motivated, functional relationships between text types and rhetorical situations. The second model is more associated with linguistics, which sees genre as a class of structured communicative events employed by specific discourse communities. Thirdly, orientation is related to systematic functional linguistics (SFL), or the Sydney School, which stresses the purposeful, interactive, and sequential character of different genres and the ways language is systematically linked to context through patterns of lexico-grammatical and rhetorical features. Although the last two theories are closely related to L2 teaching, the second model, the ESP genre approach has perhaps had the most influence on L2 writing instruction. Hyland also stated that genre theory seeks to (1) understand the ways individuals use language to orient to and interpret particular communicative situations, and (2) how to employ this knowledge for literacy education.

It can be noted that “writing is a basic resource for constructing our relationships with others and for understanding our experience of the world, and as such genre is centrally involved in the ways we negotiate, construct, and change our understanding of our societies and ourselves” (Hyland, 2003, p. 27).

In regard to pedagogy, genre is useful for teachers since it offers principled ways of assisting both pre-and in-service writing teachers to provide their students with targeted, relevant, and supporting instruction. In other words, genre-based pedagogies enable teachers to ground their courses in the texts that students will need to write in their target contexts, thereby helping learners to participate effectively in

the world outside the ESL classroom. Genre theory gives teachers a more central role in both preparing individuals to teach second language writing and developing curriculum materials and activities for writing instruction (Hyland, 2007).

2.2 Discourse Community

According to Swales (1988), ‘genres are the properties of discourse communities’ (p.211), that is to say, genres belong to discourse communities, not to individuals, other kinds of grouping or to wider speech communities. In his landmark book, Swales (1990) states that discourse communities “are sociorhetorical networks that form in order to work towards sets of common goals” (p. 9). He described ‘discourse communities’ as groups that have goals or purposes, and use communication to achieve these goals. One of the characteristics that established members possess in order to achieve those sets of goals is familiarity with the particular genres that are used to communicate among members.

Based on Borg’s (2003) notion, the concept of discourse communities is developed from the concepts of speech community and interpretive community. However, Borg noted that the concept of discourse community is different from the other two concepts. He adds that membership of a discourse community is usually a matter of choice, and members of a discourse community actively share goals and communicate with other members to pursue those goals. According to Pogner (2005), the main aim of a discourse community is to produce and disseminate knowledge in texts and discourses. Additionally, its members are those who work on similar problems and with shared interests.

Regarding the unique values of a discourse community it is, in practice, difficult to separate one community from another (Canagarajah, 2002). This is due to the fact that communities are characterized by a heterogeneous set of values and discourses. In the previous literature, Killingsworth (1992) proposes two kinds of discourse communities—the local and the global. He describes that local communities as including groups of readers and writers who habitually work together in colleges, departments, or other groups defined by specific demographic descriptions, while global discourse communities are groups of writers and readers defined exclusively by a commitment to particular kinds of action and interest, regardless of where and with whom they work. Killingsworth (1992) further illustrates these two levels of discourse community by adding that “the local community holds its members close to itself and is defined largely by metonymy (the trope of contiguity and close association); the global community inspires a loose confederation of like-minded individuals and is defined mainly by metaphor (the trope of identify-in-difference)” (p. 112).

Based on this distinction, in the present study, the articles used in the international corpus and those in the Thai corpus were the production of two groups of authors (local Thai authors and international authors) from two different discourse communities. The differences and similarities in terms of rhetorical moves and formulaic sequences reflect their rhetorical preferences in written presentation. To write and publish their research articles, the authors in these two discourse communities (local-Thai and global-international) adopt several standard practices used in their own communities. For example, for the Thai discourse community, Thai ELT or applied linguistics academic writers need to write their paper to comply with

the expectations of the different levels of discourse communities ranging from lower to higher status, such as schools, departments, and universities. Apart from these levels, these Thai writers need to conform to the criteria required by the target journals (e.g. local Thai journals). Also, the target journals for publication can be viewed as another important discourse community. This is because each journal has its own regulation and practice for accepting and publishing articles. In other words, the writer needs not only to negotiate the existing practices within his/her own discourse community, but he/she also need to follow the regulations and conventions required by international journals. However, if the Thai writers or non-native writers want to show their work to the wider community or academic world, writing for publication in an international journal is a serious challenge, because it involves another discourse community. To this end, as Pramoolsook (2008) pointed out, the negotiation is then made between the existing discursal conventions of a particular (i.e. local) discourse community and the different conventions of the wider community.

2.3 Contrastive Rhetoric

The notion that each culture has its own writing conventions has been widely acknowledged. This leads to the concept of contrastive rhetoric which is directly relevant to the investigation of academic writing across language and cultures. Originally, contrastive rhetoric was initiated by Kaplan (1966) as a field of inquiry in Applied Linguistics, especially in a pedagogically oriented study of English as a second language (ESL) and English as a foreign language (EFL). Contrastive rhetoric is premised on the idea that language and writing are cultural phenomena, and that

different cultures have different rhetorical tendencies (Connor, 2002). Fundamentally, the notion of contrastive rhetoric “is that any given language is likely to have written texts that are constructed using identifiable discourse features, and these features may differ across languages or be coded using different linguistic configurations” (Connor, 2003, p. 218). The idea of contrastive rhetoric has the greatest potential practical application in writing classes (Connor, 2002; Leki, 1991). In terms of its definition, contrastive rhetoric refers to “an area of research in second language acquisition that identifies problems in composition encountered by second language writers and, by referring to the rhetorical strategies of the first language, attempts to explain them” (Connor, 1996, p. 5).

With the concept of contrastive rhetoric, different cultures have their own perceptions of how to present ideas in texts. According to Connor (2002), the investigation of contrastive studies has mainly focused on the four domains: text linguistics, the analysis of writing as a cultural and educational activity, classroom-based studies of writing, and contrastive genre-specific studies. For the last domain (contrastive genre-specific studies), genres cover such texts as journal articles, business reports, letters of application, grant proposals, editorials, and so on. In line with the present study, several studies have emphasized the genre of the research article (e.g. Amirian, et al, 2008; Arvay and Tanko, 2004; Bhatia, 1993; Duszak, 1994; Hirano, 2009; Im-O-Cha, et. al, 2004, Kanoksilapatham, 2007; Swales, 1990; Taylor and Chen, 1991; Valero-Garces, 1996). Duszak (1994), for example, who analyzed RA Introduction section written in Polish and English, found that non-native English writers preferred indirect, affective and tentative styles of writing, while the writing produced by native writers tended to be direct, assertive and positive in style.

In a comparison of English research papers written by Spanish and English writers, Valero-Garces found that there was intercultural variation in the rhetorical preferences of writers. Native speakers used more matatext and their writing was more symmetrical and linear than those written by Spanish speakers. A study conducted by Taylor and Chen (1991) who focused on the rhetorical structure of research article Introduction sections written by Chinese and native writers found that the rhetorical structure of the three corpora (English RAs written by Chinese, Chinese RAs written by Chinese, and English RAs written by English-speaking writers) was different. They found that Chinese writers were less likely to elaborate the moves or use unconventional moves and that they wrote at relatively short length. Also, papers written by Chinese writers tended to cite literature less frequently than did English papers. In the Thai context, the order of move patterns was the main difference found in Im-O-Cha et al.'s (2004) study. Most English RAs began with Move 1 (Establishing a territory) (93.33%) compared to Thai RAs (60%). Occupying the Niche (Move 3) was an initial move in Thai RAs (40%) but there were not any English RAs beginning with this move.

Based on a knowledge of contrastive rhetoric, different cultures produce different kinds of texts and those texts are organized differently. For instance, Ostler (1990 quoted in Kubota, 1998), found that there were some rhetorical differences in the essays written by English, Arabic, Spanish and Japanese speakers. From the findings, Ostler suggested that ESL students wrote according to the styles preferred in their own cultures. These findings correspond with those of Söter (1988, quoted in Cahyono, 2001) which showed that the stylistic and rhetorical patterns of narrative writing produced by Vietnamese and the Arabic students were different from those of

native English writers. In a study focusing on written tasks in Asian languages, Kaplan (1966) found that those papers tend to express indirect ways and come to the point only at the end, or the ideas were conveyed in circular manner. This means the authors tend to avoid expressing their ideas directly regarding the main point. Culture is considered to be the cause of this distinction.

It is therefore worth investigating the rhetorical structure of the English articles written by Thai speakers who published their work in refereed Thai journals and comparing it to that of RAs published in international journals. The aim of the present analysis differs from those of previous contrastive analyses, which mainly emphasize English RAs written by Thai writers, but not the first language (Thai) as carrying out by some studies (e.g. Im-O-Cha et al., 2004, Kanoksilapatham, 2007). The literature on contrastive rhetoric studies as mentioned above has pointed out that rhetorical structure of research articles produced by different native language backgrounds tend to be different. Therefore, the findings reflected by a contrastive genre-analysis should provide valuable information for second or foreign language pedagogy (Connor, 1996; Jogthong, 2001; Leki, 1991). They may facilitate EFL teachers to prepare appropriate activities, tasks, and content for the teaching of writing. In so doing, non-native students may acquire a better understanding of the strategies used for producing written tasks by comparing the written tasks produced by native language speakers with their own papers. In this way then teachers may be able to raise students' awareness of the discourse community to which students seek admission and acceptance. With knowledge of contrastive rhetoric, students may be able to produce their English written tasks more effectively and conventionally.

2.4 Genre Analysis

Studies concerning the identification of the rhetorical structure of texts aim to explain how texts are constructed or organized in systematic ways and what the communicative functions of the texts are. This also involves the study of move analysis, which is the main focus of the present study.

Genre analysis has become an important approach to text analysis, especially in the field of English for Specific Purposes (Dudley-Evans, 1994). The term 'genre analysis' was initially used in the ESP context by Swales' (1981, 1990) pioneering work on the Introduction to an academic article (Connor, Upton, and Kanoksilapatham, 2007; Dudley-Evans and St John, 1998). Genre analysis defined by Dudley-Evans and St John referred to a type of text analysis concerning the regularities of structure that distinguish one type of text from another type. This view is also supported by Brett (1994), who stated that genre analysis has been largely interested in across discipline studies from the hard to the applied sciences. For example, in the field of Applied Linguistics, Coffin (2001) pointed out that genre in ESP is concerned with researching and describing structure and stylistic features of texts. Genre is seen as pivotal either in workplaces or in educational systems. A more detailed genre analysis made by Bhatia (2002) is the analysis of language use in a broader sense of the aspects which account for not only the way text is constructed but also for the way it is likely to be interpreted, used and exploited in specific contexts to achieve specific goals. It can be concluded that genre analysis is the study of the rhetorical organization of a particular genre and the functional value of the language of those patterns as used by professional users. To understand and account

for the realities of the world of texts is considered to be one of the main objectives of genre analysis.

In ESP contexts, genre has been used as a tool for analyzing and teaching the spoken and written language required of nonnative speakers in academic and professional settings (Bhatia, 1993; Flowerdew, 1993; Flowerdew, 2000; Hyon, 1996; Nwogu, 1991; Thompson, 1994). Different genres have been investigated, for example, the structure of textbooks (Moore, 2002; Nwogu, 1991), university lectures (Thompson, 1994); the rhetorical structure of grant proposals (Connor and Mauranen, 1999); conference proposals (Halleck and Connor, 2006), the literature reviews of doctoral theses (Kwan, 2005), and so on. However, with respect to rhetorical patterns, many studies have focused on research articles (RAs). Different research article sections have been investigated, such as, the Abstract (Lores, 2004; Samraj, 2005), the Introduction (Ozturk, 2007; Samraj, 2002; Swales, 1990), the Methods (Bruce, 2008; Harwood, 2005; Lim, 2006), the Results (Brett, 1994; Yang and Allison, 2003; Williams, 1999), the Discussion (Amarian, et. al, 2008; Fallahi and Erzi, 2003; Holmes, 1997; Peacock, 2002), and all the four sections or IMRD patterns (Kanoksilapatham, 2005; Nwogu, 1997; Pho, 2008; Posteguillo, 1999).

In a nutshell, as many scholars have noted, ESP programs aim to assist students to recognize and learn the patterns of language required in various academic and professional contexts (Bhatia, 1993; Dudley-Evans and St John, 1998; Swales, 1990). Most studies conducted in this area aim to provide valuable findings, which can enhance ESP writing instruction, teaching/learning resources, and provide templates for writing research articles (Hyon, 1996).

2.5 Research Articles

Research articles are a familiar genre to academic writers in virtually all disciplines (Jogthong, 2001). Several research studies have investigated the RA genre in a variety of perspectives. Analyzing the rhetorical organization of RAs is an area that has attracted many researchers. However, before moving to rhetorical structure analysis, some brief details of research articles regarding background and characteristics should be given.

Research articles emerged historically more than three hundred years ago (Swales, 1990). This genre had been developed from the information used in letters for scientists to communicate with each other, which has developed nowadays into what is known as research articles. By citing Smith (1982), Swales suggested that 'research articles vary in terms of degree of standardization and of the prevalence of nominalized impersonal style' (p. 175). Over the last two decades, academic writing studies have centered on the research article genre (Samraj, 2002). Several aspects of research articles, including research article structure, social construction and historical evolution have been examined. There are some good reasons why research articles have attracted the greatest attention among other genres: they have been widely published annually and they are used to help researchers and postgraduate students succeed in the construction of texts for publication (Martínez, 2003).

Identifying research articles regarding their rhetorical structure is useful for researchers to gain a better understanding of the research article genre. This is due to the fact that within the standard Introduction-Methods-Results-Discussion (IMRD) format, every section of research articles is different in terms of functions and contents. Therefore, identifying the schematic patterns of RAs is not only for the

purposes of having a clear picture of the research article genre, but also for improving academic writing. Furthermore, move analysis represents semantic and functional units of texts that have specific communicative purposes, which may accordingly shed light on rhetorical consciousness as well as the differences between each written discourse. Broadly speaking, rhetorical practice should enable non-native English speakers to recognize the role of language in written communication (Hyland, 2003).

2.6 Move Analysis

Move analysis comes under the umbrella of genre analysis (Dudley-Evans, 1994). After the pioneering move model proposed by Swales (1990) on the analysis of the moves within the Introduction section of research articles emerged, move analysis has been extensively conducted across different disciplines and genres. A ‘move’ refers to a section of a text that performs a specific communicative function with its own purpose and for the overall communicative purposes of the genre (Swales, 1990). According to Nwogu (1997), “ Move means a text segment made up of a bundle of linguistic features (lexical meaning, propositional meanings, illocutionary forces, etc.) which give the segment a uniform orientation and signal the content of discourse in it” (p. 122). In addition, the ways to classify moves in particular texts is “on the basis of linguistic evidence, comprehension of the text and understanding of the expectations that both the general academic community and the particular discourse community have of the text” (Dudley-Evans, 1994, p. 226).

Move-based analysis, led by Swales (1990), has stimulated substantial research on the rhetorical structures of academic and professional texts (Connor, Upton, and Kanoksilapatham, 2007). It was viewed as a top-down approach to

analyze the discourse structure of texts from a genre and the text is described as a sequence of ‘moves’, where each move represents a stretch of text serving a particular communicative function (Biber, Connor, and Upton, 2007). The process of analyzing moves begins with the development of an analytical framework, and identifying and describing the move types that can occur in the genre. The subsequent process is to segment selected texts into moves, noting the type of each move. Analytical results can be described in terms of the sequences of move types (Biber, Connor, and Upton, 2007). This qualitative approach is commonly used to analyze the internal organization of texts from a single genre. Move analysis is, therefore, a study of how language is used by the writer to form a meaningful unit by identifying its forms and functions in the discourse. Research articles, for example, are one of numerous genres which have been analyzed by using a move-based model.

2.7 Seminal Works on the Move Analysis of Research Articles

A move model proposed by Swales (1981) is a pioneering and influential work in the approach to discourse analysis. His model was first used to analyze the Introduction sections of research articles with the aim of facilitating reading and writing research articles for non-native speakers and to also help them to publish their articles in English. Swales analyzed the Introduction sections of 48 research articles in three different disciplines, sixteen each, from medicine, physics, and the social sciences. After analyzing the research articles, Swales established four distinct moves: *Establishing a territory*; *Summarizing previous research*; *Establishing a niche*; and *Occupying the niche*. However, this model has been revised by Swales (1990), which consists of only three moves. In practice, each move in Swales’ (1990) model can be

cyclical in a particular genre. It can be described as conventional if occurring frequently, where other moves occurring less frequently can be described as optional. Moreover, each move may contain multiple elements, which Swales (1990) called “steps”. A step is primarily used to achieve the purpose of the move to which it belongs.

However, Swales’ model has been modified because of criticism about the difficulty in separating Move 1 (establishing field) from Move 2 (summarizing previous research). By merging the first two moves, a new modified move model was established by Swales’ (1990), which is known as the Create a Research Space (CARS) model. The model consists of three moves. The following figure shows the sequences of moves and steps, which are largely predicable in RA Introduction sections.

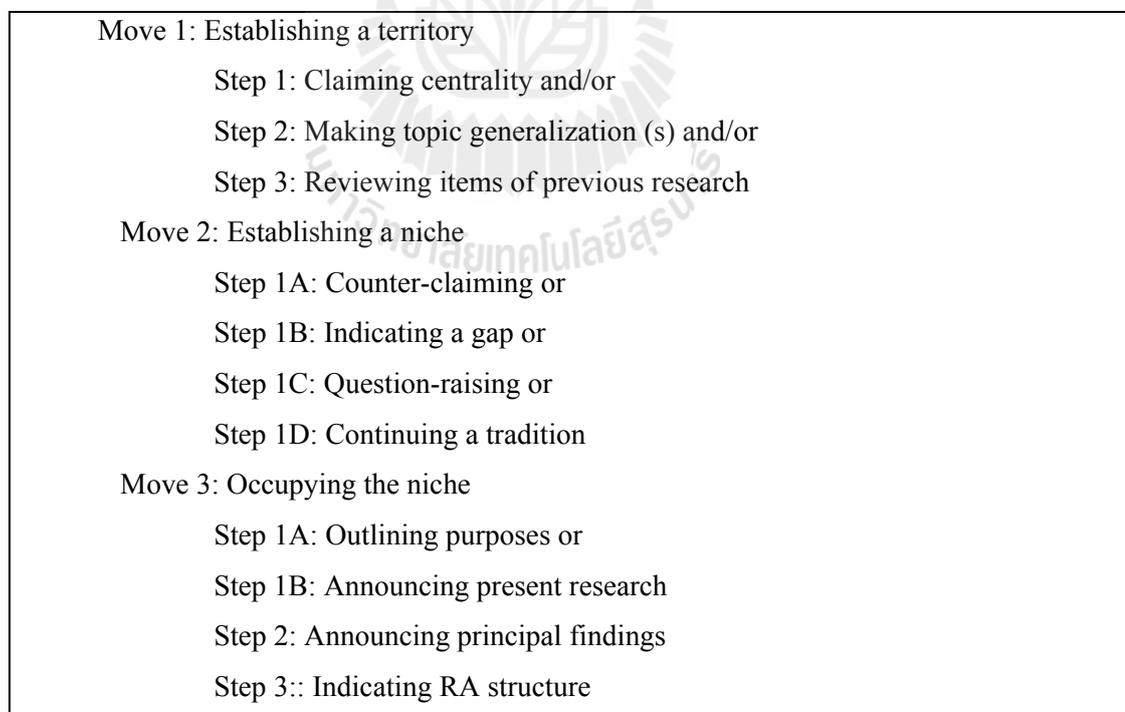


Figure 2.1 Swales’ (1990) CARS model for research article Introduction section

These three obligatory moves play significant roles in research articles. Move 1 (Establishing a territory) is used to introduce the topic of research. The author has to

indicate the research field of the article by making claim of centrality. In this stage, the writer tries to encourage readers to accept his/her research as part of a significant area of inquiry. This can be achieved by making topic generalizations and reviewing previous research. Move 2 (Establishing a niche) requires the writer to indicate the limitations or weaknesses of previous studies by making a counter-claim, indicating a gap, raising questions, and continuing a tradition. For Move 3 (Occupying a niche), the author tries to indicate some important points of current study by indicating specific purposes, valuable findings, as well as research article structure. We can see that it is only in Move 3 that the author can express the salient points of his/her own research.

Swales (1990) claimed that his CARS models can account for the structural organization of RA Introduction sections irrespective of disciplines. His move model has been empirically investigated and it has validated the schematic structure of various research articles in terms of sections and fields (e.g. Amirian, et al., 2008; Anthony, 1999; Bhatia, 1993; Fakhri, 2009; Holmes, 1997; Hirano, 2009; Jogthong, 2001; Ozturk, 2007; Samraj, 2002, 2005). Some studies (e.g. Anthony, 1999; Bhatia, 1993; Brett, 1994; Holmes, 1997; Lim, 2006; Samraj, 2002; Swales and Feak, 2004; Yakhontova, 2006) have nevertheless indicated that the structure of RA Introduction sections may vary in significant ways across disciplines. Comments made by some experts (e.g. Bhatia, 1993; Samraj, 2002) have reflected Swales' model. For example, there has been a problem in distinguishing one move from another move, because the review of literature can be found in all three moves, rather than move one only, and there are no steps in the CARS model for dealing with the definition of terms or

examples to illustrate difficult concepts. Accordingly, disciplinary variations need to be considered when applying Swales' model.

Due to the criticism of its limitations, the CARS model has been revised. The most significant changes in the revised model are in Move 1 and Move 3 (Swales, 2004). The number of steps in Move 1 has been reduced to only one: 'topic generalizations of increasing specificity'. Review of literature is not restricted to Move 1 Step 3, but it occurs throughout the Introduction section. In Move 2, only two steps remain with a new optional step called 'presenting positive justification'. The last move is renamed as 'presenting the present work' together with seven steps. Finally, the updated CARS model for the Introduction section of research articles is as follows:

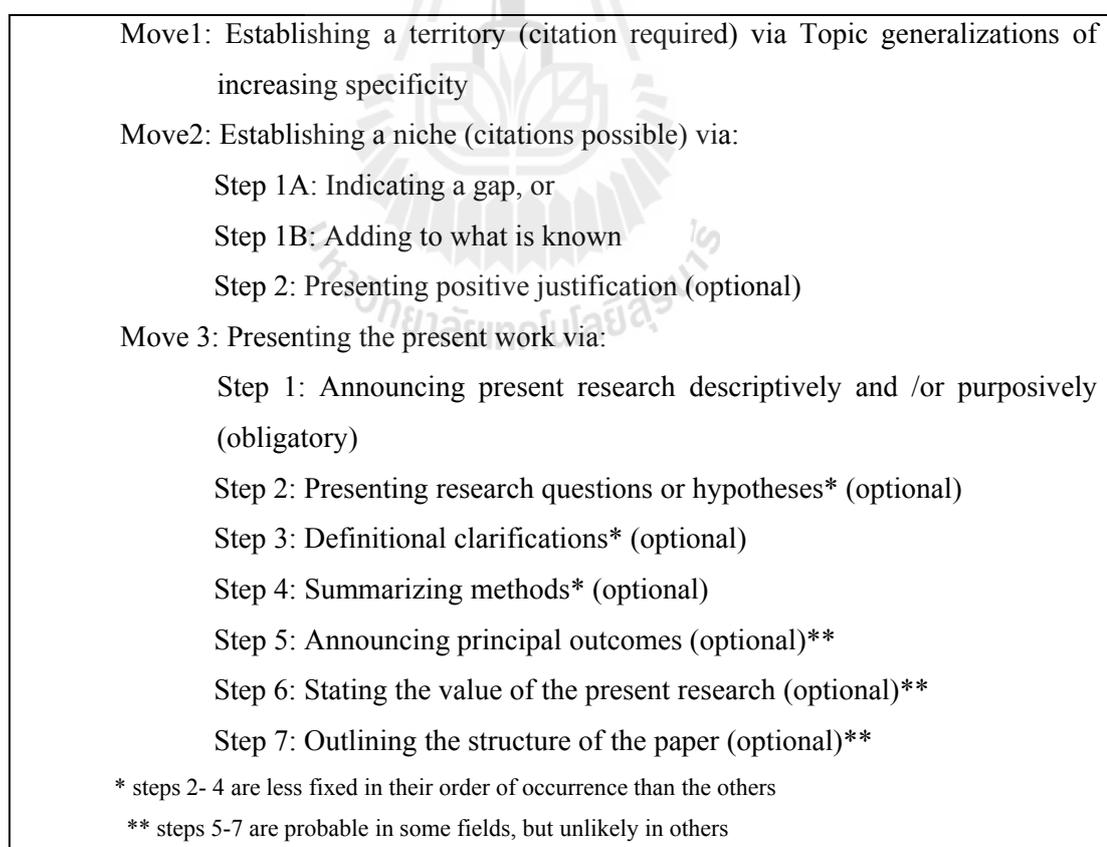


Figure 2.2 Swales' (2004) revised CARS model for research article Introduction section

Swales' CARS Model has been validated and extensively applied to many other disciplines, including medicine (Nwogu, 1997; Williams, 1999), biochemistry (Kanoksilapatham, 2005, 2007), biology (Samraj, 2002), computer science (Posteguillo, 1999), applied linguistics (Amirian, et al., 2008; Ozturk, 2007; Yang and Allison, 2003; 2004;), management (Bhatia, 1993; Lim, 2006), sociology (Brett, 1994); sociology and organic chemistry (Bruce, 2009); social science (Holmes, 1997); various fields (Fallahi and Erzi, 2003; Peacock, 2002), and to a variety of academic genres such as university lectures (Thompson, 1994) and textbooks (Nwogu, 1991).

Having been revised several times, the CARS model, especially the updated version (2004) seems to be the most appropriate and reliable version for accounting for the rhetorical structure of the introduction section of research articles. Therefore, this version will be used as the framework for identifying the introduction sections of RAs in the present study.

2.8 Structural Move Models Used in the Present Study

Drawing mainly on the seminal move model presented by Swales, it is somewhat intriguing to further explore other move models applied in the present study, including Methods section-Lim (2006), Results, Discussion, and Conclusion sections—Yang and Allison (2003).

The Methods section purportedly serves to describe the details of research methodology, materials, subjects, and procedures. It is acknowledged that Methods section is the easiest section for writing. However, as Swales (2004) stated, the Methods section varies across disciplines. Besides its ease and variations, the Methods sections vary according to how much information and explanation they

contain. The variation in the Methods sections in the hard and soft sciences are written in the form of condensed and extended approaches respectively. Linking phrases are used in the extended Methods section, while hyphens in noun phrases are used in condensed Methods section. Different domains have their own typical rhetorical structures. In the social sciences, Methods section shows “careful step-by-step description massively supported by anaphoric reference and lexical repetition, produces the kind of explicitness that we associate with standard academic description” (Swales, 1990 p. 169). However, move models used for analyzing research articles in the field of ESP have not been extensively proposed. Swales (1990) did not provide a clear move and step model for identifying Methods sections. In their published pedagogical materials, Swales and Feak (2004) offer pedagogical advice to learner writers on the characteristics of Methods sections only but do not propose a model. It can be said that there is a gap for further studies in both the investigation and development of the Methods section of research articles. Although this section has been viewed as an easy section to write (Swales and Feak, 2004), to my knowledge, detailed move models for identifying this particular section are rare. However, only a model developed by Lim (2006) was a prominent and detailed one. Lim has provides an exclusive description of the schematic structure of the organization of research articles in business management. His model has been developed based on the communicative function or move of the texts. As we know, both management and applied linguistics fields are under the umbrella of the social sciences. Hence, it is reasonable to apply Lim’s model to the present research. The model is delineated as follows:

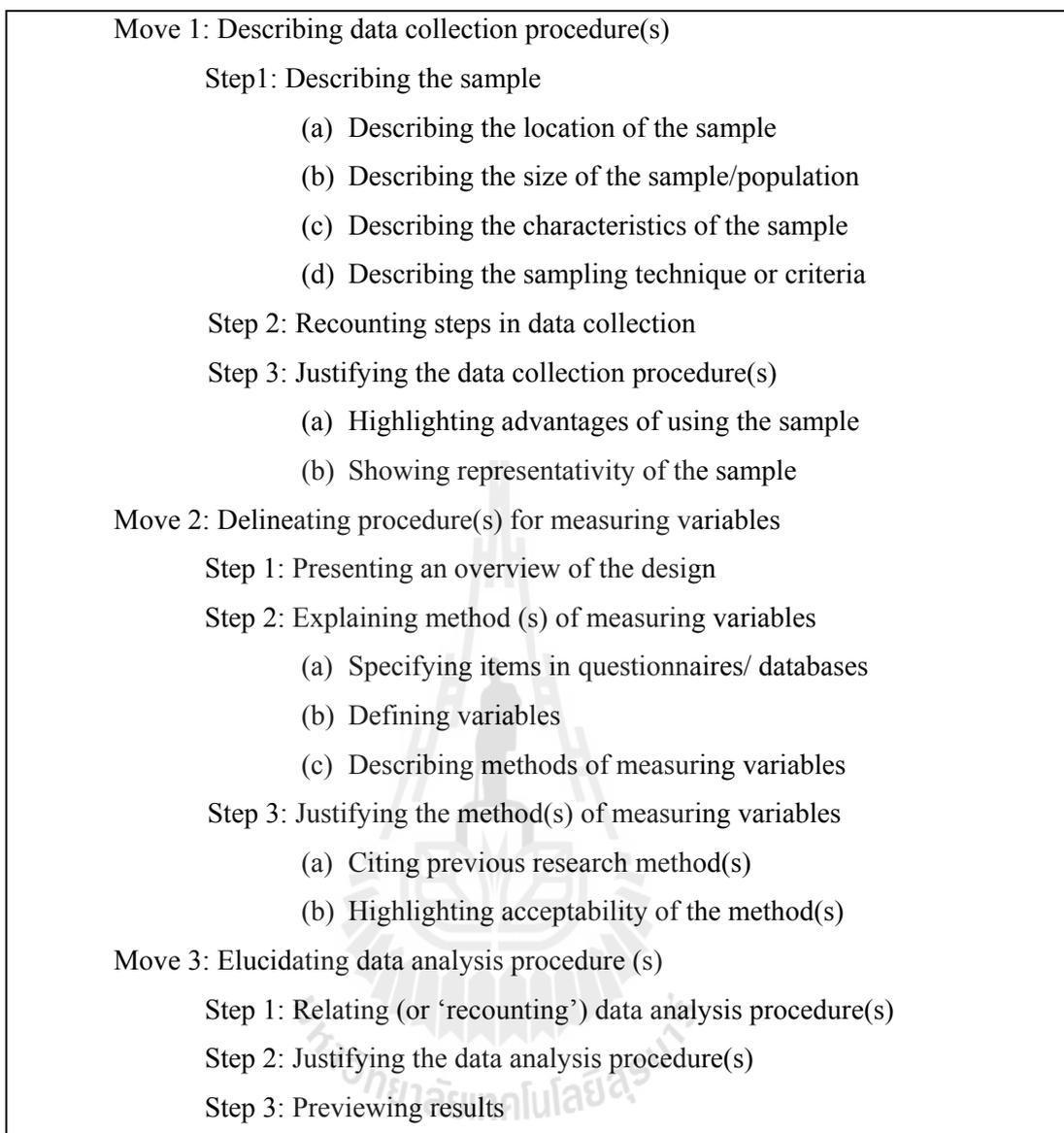


Figure 2.3 Lim's (2006) model for research article Methods section

To Lim's (2006) model, three main moves were labeled, including 'Describing data collection', 'Delineating procedures for measuring variable', and 'Elucidating data analysis procedure'. Each move contained detailed steps. There were three steps which occurred in one hundred percent in his study, namely 'Move 1 Step 1: Describing the sample', 'Move 2 Step 2: Explaining methods of measuring variables', and 'Move 2 Step 3: Justifying the methods of measuring variable'. Lim (2006) also

provided useful distinct linguistic indicators, which were used to realize each move/step boundary.

The Results section has principally been used to report the data being collected and to describe the actual results. It may or may not have subsections, which are used to reflect the different stages or parts of the investigation (Swales and Feak, 2004). The analysis of the Results section in the present study is based on Yang and Allison's (2003) model. This model has been developed based on the analysis of RAs in the field of Applied Linguistics, as in the case of the present study, this therefore their model will be used. The model is delineated as follows:

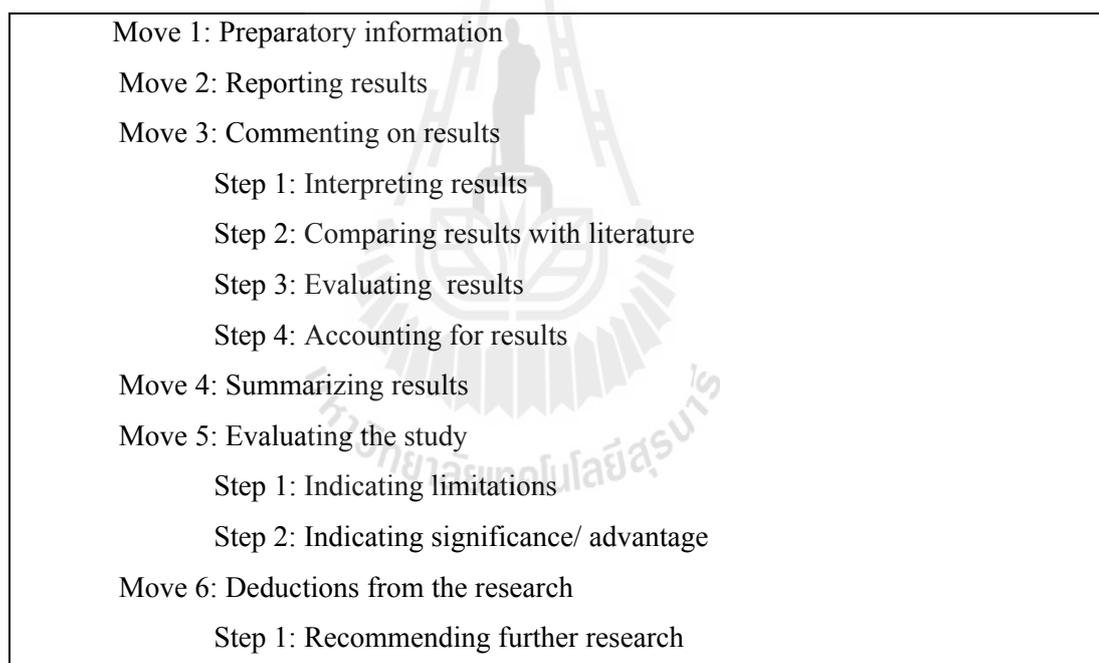


Figure 2.4 Yang and Allison's (2003) model for research article Results section

Based on Yang and Allison's model, Reporting results (M2) and Commenting on results (M3) occurred frequently in the Results section. Accordingly, these two moves were classified as obligatory moves. Move 1 (Preparatory information) was a dominant move; however, its appearance in the Results section was not as high as for the other two moves (M2, M3). As such, it can be considered as a conventional move.

The other three moves, including Summarizing results (M 4), Evaluating the study (M5), and Deductions from the research (M 6) were optional moves. In addition, Yang and Allison found that the Results sections have a highly cyclic structure, and this section was not only used for reporting results but also for brief comments on results. The sequence of moves and steps in each cycle tended to follow a similar pattern, that is, most of the cases begin with Move 1 which is then followed by Move 2 and then the remaining 4 moves. However, if Move 1 was absent, Move 2 was the initial element in a cycle, followed by Move 3.

The Discussion section offers an increasingly generalized account of what has been learned from the study. This is usually done through a series of points which have previously been described in the Introduction section. This section is the most important section; however, it is the most problematic section for both native and non-native speakers to write (Kanoksilapatham, 2003). Discussion sections vary considerably depending on a number of factors, for example, some scientists, perhaps especially those in the life sciences, believe that a long Discussion section implies weak methods and results, while social scientists and humanists may well believe the opposite. The position of the Discussion section is important. By the time readers reach the Discussion section, authors can assume a fair amount of shared knowledge. Authors may assume that the readers have understood the overall research. Therefore, they can pick and choose what to concentrate on in the Discussion section. This allows the writer greater freedom in Discussion section than in the Introduction section because authors have some flexibility in deciding which of their possible points to include and then which to highlight. However, Discussion sections should be more than summaries, they should be more theoretical, abstract, general, integrated

with the field, connected to the real world, and concerned with implications or applications (Swales and Feak, 2004). For the present study, the move model proposed by Yang and Allison (2003) has been used. As mentioned earlier, Yang and Allison's model was developed from an analysis of RAs in Applied Linguistics. Hence, their model will be appropriate and reliable for use in the present study. The move model proposed by Yang and Allison (2003) consists of 7 moves and 10 steps as follows.

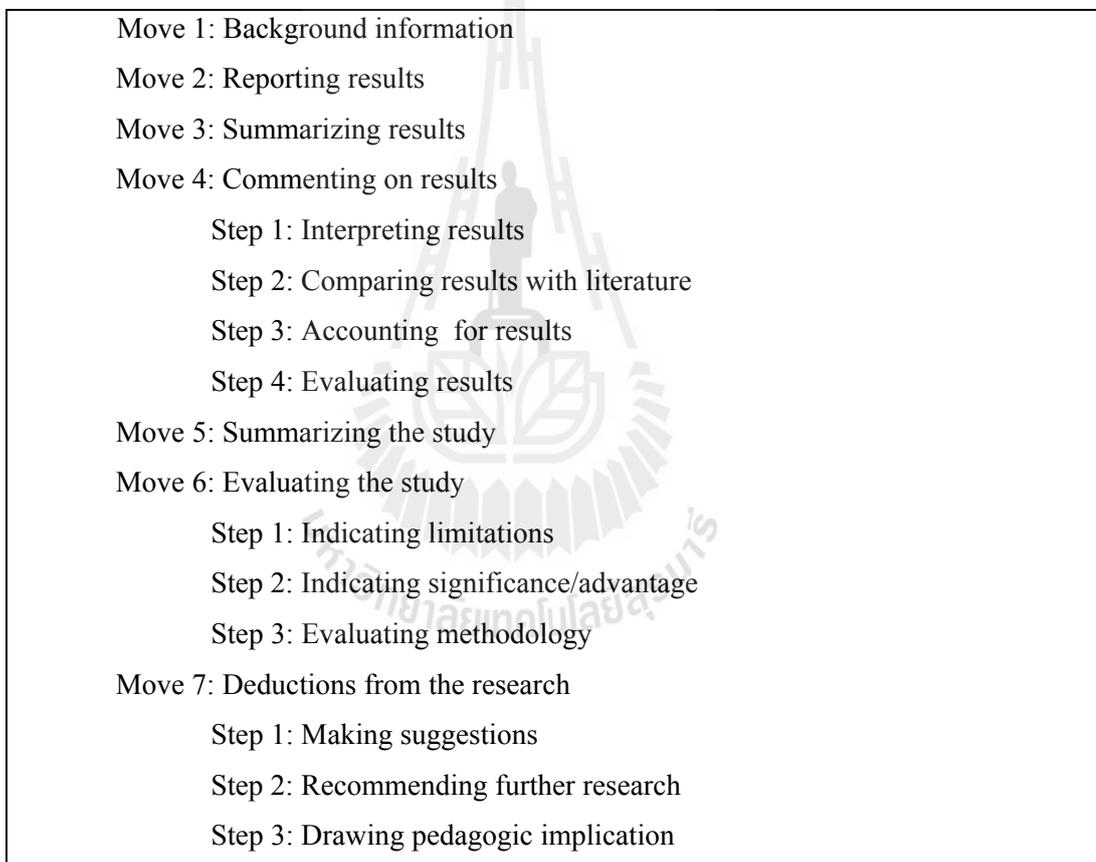


Figure 2.5 Yang and Allison's (2003) model for research article Discussion section

The Discussion section is presented as a mirror image of the Introduction section. Accordingly, the information included in the Discussion section is expected to proceed from the particular to the general. For example, the function of the Discussion section aims to move the reader back from the specific information reported in the previous two sections (Methods, Results) to a more general view of

how the findings should be interpreted (Weissberg and Buker, 1990). Based on Yang and Allison's (2003) model, only Move 4 (commenting on results) is the most frequent and obligatory move, while Reporting results (M2) is considered as a conventional move or quasi-obligatory move (their term). The remaining moves were classified as optional moves.

The Conclusion section has usually been considered as part of the Discussion section of an RA or it has not been distinguished separately from the Discussion section (Dudley-Evans, 1994; Posteguillo, 1999; Swales, 1990; Swales and Feak, 2004; Weissberg and Buker, 1990). The literature shows that Discussion section is more prominent than Conclusion section, where Conclusion section is usually seen as an alternative name for the Discussion section of a research article (Bunton, 2005). However, a seminal research study that reports on separate Conclusion sections in RAs has been carried out by Yang and Allison (2003). They analyzed applied linguistics research articles and formulated with a Conclusion section model as follows.

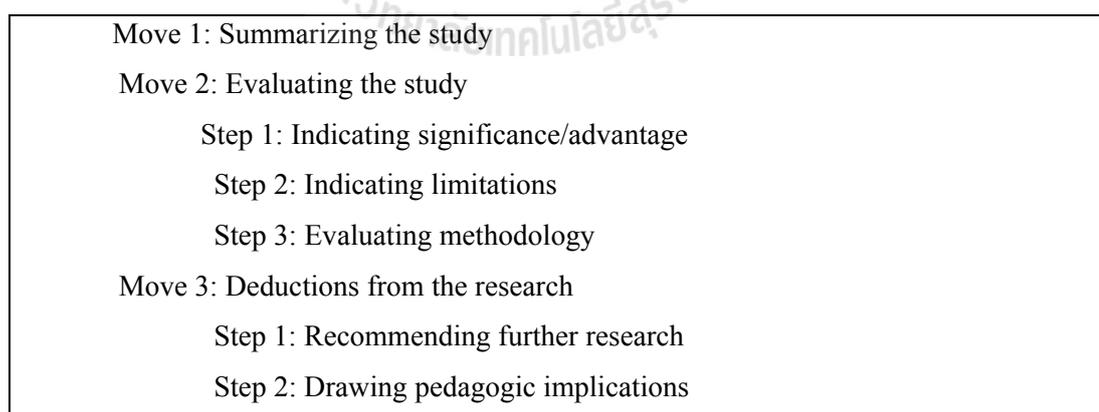


Figure 2.6 Yang and Allison's (2003) model for research article Conclusion section

As illustrated in Figure 2.6, three rhetorical moves are identified in applied linguistics RAs. Move 1 (Summarizing the study) was the most frequent move, both in terms of occurrence and cycle. Move 3 Step 2 (Drawing pedagogic implications)

was the second most frequent move. Most of the Conclusion sections in Yang and Allison's (2003) study were likely to be in a linear structure. Based on the model, although the three moves in this model were also found in the Discussion section, Yang and Allison claimed that these two sections were not the same. They are different in terms of primary communicative purposes. The Discussion section focused more on commenting on specific results, while the Conclusion section was more concerned with highlighting the overall results and evaluating the study. Due to the differences between the two sections, which are more in emphasis than in kind, some moves can recur in both these two sections.

2.9 Related Research on Move Analyses

The primary purpose of Swales' framework on move analysis was to address the needs of advanced non-native English speakers and to deal with their needs for the writing of research. However, it has been applied and extended to other areas or genres (Connor, Upton and Kanoksilatham, 2007). The research article is only one of many genres which have been analyzed by using this approach. Hence, this section will summarize some prominent studies on move-based analyses.

2.9.1 Studies Focusing on the Introduction Section

Apart from an influential study done by Swales (1990), the Introduction section has been frequently analyzed in various disciplines.

Jogthong (2001) analyzed research article Introduction sections written in Thai by Thai academic writers. Her corpus consisted of 40 Thai RA Introduction sections taken from Thai journals in education and medical fields. The rhetorical organization

as well as the linguistic features and signals of RA Introduction sections are examined using the CARS model proposed by Swales (1990).

The results of the study indicate that the pattern of the RA Introduction sections follows Swales' framework, but the specific steps in the Introduction sections were less consistent with the model. In Move 1, Thai research writers tended to avoid establishing a centrality claim and evaluating previous studies. Jogthong (2001) explained these differences in terms of Thai culture in which such a claim is considered to be too assertive and culturally unacceptable. In other words, Thai authors tend to be reluctant to evaluate the works of others preferring to elaborate the problem or the situation and leave it for their readers to evaluate and make their own decisions.

Moreover, Thai writers did not reveal the findings of their study and research structure in their Introduction section. Besides announcing their present research and outlining the purposes of their study, Thai writers prefer to end their Introduction section with the implications of their research. Based on her study, Jogthong (2001) found that Thai writers use only a few reporting verbs to present previous studies, whereas such verbs are frequently employed in the English RA Introduction sections studied by Swales.

In a similar study to that conducted by Jogthong (2001), Samraj (2002) analyzed the rhetorical structure of RAs from two disciplines (Wildlife Behavior and Conservation Biology) by using Swales' (1990) CARS model. The study showed that there were disciplinary variations in the structure of the genre between these two disciplines. Samraj (2002) suggested that the reason for these differences might be because Conservation Biology is a newly emerging field which lacks a substantial

body of established research to draw on as in other fields with a longer history. In addition, based on her research findings, Samraj found that the review of literature can be found in all three moves. She then modified the CARS model and added one step in Move 2 (Positive justification) to use as a means of realizing this move, namely, Creating a Niche in the CARS model.

Move-based analysis has also been employed in identifying rhetorical properties of research article Introduction sections written in Arabic. In his study, Fakhri (2004) analyzed 28 RA Introduction sections in Arabic in the humanities and social sciences. Swales' (1990) model was used for the analytical framework. It was found that there were important differences between the RAs structure in Arabic and those analyzed in Swales' study. The differences were in the treatment of other scholars' research, the degree of explicitness in revealing the structure of the articles, and the unexpected appearance of frequent repetition and flowery expressions in the Arabic writing genre. One reason behind the distinctions might be the RA writers' rhetorical background. This may have led to a mixture of rhetorical organizations being used in the organization of their Introduction sections. However, it seems likely that there is an increasing trend in the acceptance of diverse rhetorical styles (hybridization), which Fakhri recommended for further investigation.

Ozturk (2007) analyzed the Introduction sections of RAs in Applied Linguistics. His corpus consisted of 20 research articles from applied linguistics journals of Second Language Acquisition and the Journal of Second Language Writing. Swales (1990) was used as a framework for his analysis. The primary aim of the study was to investigate the variations between these two sub-disciplines, which was ignored in Swales' framework. The study shows that only one type of move

structure was predominant in a second language acquisition corpus while in the second language writing corpus two different types of move structure were almost equally frequent. His research findings were consistent with previous studies in different disciplines (e.g Holmes, 1999; Samraj, 2002). These researchers had also noted that variations were not only found between disciplines but also across related disciplines. This particular finding led him to argue that there was variability within a single discipline. In addition, he agreed with Crookes' (1986) notion that Swales' (1990) model was only appropriate for a short Introduction section. This makes him conclude that the more established a discipline is the more likely convergence will occur in the structural organization of RA Introduction sections.

Hirano (2009) analyzed the rhetorical organization of twenty RAs of two journals (in Brazilian Portuguese and English) in *Applied Linguistics* on the basis of Swales' (1990) model. The findings showed that the rhetorical organization of RAs in these two journals was significantly different. Most articles from the ESP journal follow Swales' model, while RAs from the Brazilian Portuguese journal varied in their structures. The research article Introduction sections in the Brazilian Portuguese journal tended to omit Move 2 and presented fewer moves than those in the ESP journal, which conformed to the previous study as described in Jogthong (2001). It was suggested that culture was one of the factors affecting the rhetorical structures of these research articles.

All studies reviewed in this subsection use Swales' (1990) model as an analytical tool for identifying rhetorical move. Studies conducted by Jogthong (1990) Fakhri (2004), and Hirano (2009) confirm that the rhetorical structure of the research article Introduction section which produced by native and non-native is different. For

example, non-native writers tended to omit Move 2 (Establishing a niche) (Hirano, 2009; Jogthong, 2001). Also, as in Jogthong's study, she found that Thai writers tend to avoid making claims about previous studies. Both Jogthong and Hirano believe that socio-cultural aspects, cultural linguistics and research environment are the factors affecting the rhetorical structure of research articles. Comments made by Samraj's (2002) have influenced the CARS model. 'Positive justification' has been inserted as one of the two steps in move two of the updated CARS model. After revision, the newest version of the CARS model will be suitable for the present study. However, the analysis of English RAs published in different contexts in the present study which was different from those in the three studies (Fakhri, 2004; Hirano, 2009; Jogthong, 2001) reveal some interesting or different points concerning the rhetorical structure of the research articles.

2.9.2 Study Focusing on the Methods Section

After reviewing previous research studies, it was found that only a few studies focus on the Methods section. These studies aim to identify different aspects of the Methods sections of research articles, such as linguistic features (Harwood, 2005; Martínez, 2003), discourse organization (Bruce, 2008), and rhetorical moves (Lim, 2006; Mur-Dueñas, 2007; Peacock, 2011).

Lim (2006) analyzes twenty RA Methods sections from two high-status management journals. He found that most Methods sections in his corpus contained three major moves: describing data procedures, delineating procedures for measuring variables, and elucidating data analysis procedures, which were then used as the key moves in his model. Based on these findings, there were differences between each rhetorical move and the linguistic features in the constituent steps of each move, that

is, within the same moves, the specific function of each step was different, which was then reflected in the use of its linguistic features. In addition, the occurrence of moves was different: *justifying the data collection procedures* (Move1: Step 3) and *justifying the data analysis procedures* (Move 3: Step 2) occur in only 50% and 70%, of the Methods sections, respectively, whereas *justifying the method of measuring variables* (Move 2: Step 3) can be found in all of the research articles. In terms of tenses, the past simple tense was frequently used in the Methods sections. These findings are useful for teachers to find ways to help students to get a better understanding of how the Methods sections of research articles are organized and analyzing the linguistic features employed in each move and step will also be useful for student writers.

In a study conducted by Mur-Dueñas (2007), who analyzed 24 business management Methods sections of the two corpora (English and Spanish), some marked differences between the two corpora were revealed, that is, the range and number of steps (corresponding to the same move) included in the Spanish RA Methods sections were less homogenous than those in the counterpart. Three steps occurred predominantly in the English corpus ('Reference to the past research which follows a similar methodological procedure', 'Reference to previous literature', and 'Claiming validity'), while they were infrequently found in the Spanish corpus. Mur-Dueñas (2007) believes that the differences may be the result of influences from the socio-cultural context in which the RAs were written and published. These findings indicate that the English' authors were more likely to give a sense of continuation within the field and previous works in order to convince the reader of the research's credibility, which was different from those found in the work of the Spanish authors. In addition, it is acknowledged that publication in scholarly international journals is

highly competitive; therefore, it is not surprising to see a high occurrence of the 'Claiming validity' step in the English corpus.

Another study focusing on the Methods section is by Peacock (2011). He analyzed 288 RA Methods sections across eight disciplines. Seven moves were found in his large corpus. The interdisciplinary differences were found in relation to rhetorical moves and move cycles. The predominant move was 'Procedure' occurring in all the Methods sections. Two moves ('Materials' and 'Analysis') were extremely common in the hard sciences (biology, chemistry, and physics), while 'Subjects' and 'Data analysis' were the salient moves in the soft sciences (business, language & linguistics, law, public and social administration). The move cycle was found more frequently in science Methods sections than those in non-science Methods sections. The most obvious difference was the description of methodological information provided for the reader, that is, most science (biology, chemistry, and physics) Methods tended to rely on shared knowledge and had little statement of rationale or discussion, while in the social sciences (business, language and linguistics, law, and public and social administration) were more likely to provide a careful step-by-step description of method. Based on the analysis, the author suggested that the conventions of individual disciplines reflect differences between individual discourse communities, as well as agreement about the appropriateness of the Methods sections in individual disciplines.

The three research studies reviewed in the Methods section provide valuable findings. Methods sections from different disciplines emphasize different communicative moves and features, particularly between the hard and soft sciences. This confirms the claim made by Swales (2004) that the Methods section was one of

the two sections where variation between disciplines was found. Because the corpora of the present study are in the social sciences, Lim (2006) has been used to provide the framework for the analysis. His move model has advantages over other move models, such as Kanoksilapatham, (2005), Nwogu (1997), Pho (2008), and Posteguillo (1999) because it was developed on the basis of RAs in the social sciences (Management). Therefore, the model developed from the analysis of RAs in the social sciences as in Lim's model is appropriate for the present study.

2.9.3 Studies Focusing on the Results Section

Move-based studies focusing exclusively on the Results section include Brett, (1994), Thompson, (1993), Williams, (1999), and Yang and Allison, (2003).

One of the studies concerning the Results sections was carried out by Thompson (1993). Her study aims to analyze the typical structural patterns of experimental RAs in the field of Biochemistry. Her corpus consisted of 16 articles written by a Noble Prize-winning biochemist (Arthur Kornberg) published in the *Journal of Biological Chemistry* (JBC) and 20 articles written by other biochemists published in the JBC and *Proceedings of the National Academy of Sciences*. Based on her corpus, six rhetorical moves were identified: (a) justifications for methodological selections, (b) interpretations of experimental results, (c) evaluative comments on experimental data, (d) statements citing agreement with pre-established studies, (e) statements disclosing experimental discrepancies, and (f) statements admitting interpretive perplexities. It was found that Move 1 (Methodological justifications) and Move 2 (interpretations of results) appeared most frequently. Based on the analysis, Thompson noticed that biochemists not only presented results in an expository, factual manner, but also employed a variety of rhetorical moves to argue for the

validity of scientific facts and knowledge claims. Her findings challenge the traditional statements that the Results sections engage in only simple, factual reporting. However, due to the heterogeneous nature of the corpus analyzed, it may be difficult to generalize the findings to other disciplines.

Brett (1994) analyzed twenty research articles from five sociological journals in order to present a provisional, pedagogically usable description found in the Results sections. Categories of moves in his study were described in terms of function, lexis, and grammatical form. Brett proposed 13 rhetorical moves used in sociology research Results sections. These communicative categories can be classified into three major groups: metatextual, presentation and comment. These three communicative categories include a number of rhetorical moves and steps. Based on his study, Brett noted that the occurrence of three main organizational categories is cyclical with the most frequent pattern being *Pointer* (Metatextual) followed by *Statement of Finding* (presentation), and *Substantiation of Finding* (presentation). However, only 'Statement of finding/results (SOR)' was an obligatory category and of cyclical occurrence. When compared to Swales' (1990) study, Brett's research findings are explicit evidence of disciplinary variation in the Results section. A subsequent study on the 'result sections of medical research articles by Williams (1999) also confirms the disciplinary variation in the Results section of research articles.

Examining the Results sections of eight medical research articles using Brett's (1994) modified model, Williams (1999) found that the model is "an adequate basic model of the rhetorical categories of Results sections for interdisciplinary genre analysis' (p. 362). The findings showed that the 'Statement of Finding' move

occurred at a high frequency (77 %) in medical research articles, both in linear and cyclical patterns. However, from his corpus, Williams also found ten kinds of moves in the Results sections, including Pointer, Procedure of section, Procedural, Statement of finding/result, Substantiation of finding, Non-validation of finding, Explanation of finding, Comparison of findings with literature, Evaluation of finding re hypotheses, and Interpretation of finding. He pointed out that the types of report and subject matter were found to influence the organization and pattern of presentation. Also, his findings could be used to confirm the disciplinary variations in the Results sections.

After analyzing RA sections from the result to the closing sections of 20 articles in applied linguistics research articles, Yang and Allison (2003) found that the last four sections in research articles (Result, Discussion, Conclusion and Pedagogic implications sections) in applied linguistics field tended to relate to one another. Based on their study, they found that there were six moves in the Results sections and seven moves in the Discussion sections. The Results sections were highly cyclical with moves recurring across sections. To illustrate, the Results section can cross over to the Discussion section in terms of the Move 'Commenting on results', and the Discussion section can cross over to the Conclusion section in terms of 'Summarizing the study', 'Evaluating the study' and 'Deductions from the study'. In other words, although all these four sections differed in terms of their primary communicative purposes, their rhetorical functions sometimes overlap. Thus, it can be said that the structure of research articles in Applied Linguistics tends to be flexible towards the end.

The findings of the above studies, especially Brett (1994) and Williams (1999) provide additional evidence of disciplinary variation in the Results section.

Obviously, it confirmed Swales' (2004) idea that the rhetorical structure of Methods and Results sections was relatively higher than those in the Introduction and Discussion sections. Thompson (1993) analyzed 36 articles in Biochemistry and found that two moves (Methodological justifications and Interpretations of results) occurred frequently. The degree of occurrence of these two moves was consistent with Kanoksilapatham's (2005) study. Their findings showed that these two moves were conventional moves which showed a high percentage. The overlap of the communicative function found in the last four sections in Yang and Allison's (2003) study will to some extent reflect the results of the present study. This is because Yang and Allison's model was an analytical tool for identifying Results and Discussion sections. The use of multiple coders will be employed in order to enhance or assess coding reliability.

2.9.4 Studies Focusing on the Discussion Section

Holmes (1999) carried out a move-based analysis on a corpus of Discussion sections of 30 social science research articles from three fields, namely, history, political science and sociology. Ten articles from each field were selected for analysis. Then, these articles were analyzed according to a modified version of the moves, or communicative categories, as presented by Hopkins and Dudley-Evans (1988). The results of the study revealed that although there were fundamental similarities to the natural sciences, the social science Discussion sections displayed some distinctive features. The rhetorical structure of RAs from these three disciplines tended to be different from those in the natural sciences. There was no completely obligatory move in the Discussion sections of social science RAs. These findings might be useful for teaching academic reading and writing skills to non-native

speakers. The characteristic functions and structures of this genre might help learners produce appropriate schemata for their academic writing.

Peacock (2002) analyzed the rhetorical moves of research articles in seven disciplines, including Physics, Biology, Environmental Science, Business, Language and Linguistics, Public and Social Administration, and Law. Thirty-six Discussion sections of research articles from each discipline were analyzed by using Dudley-Evans's (1994) model. Based on the analysis, a number of marked interdisciplinary and NS/NNS were found in the type and number of moves and move cycles. It was found that no move was obligatory across all the 252 Discussion sections. Three moves, including Move 7 (Claim), Move 3 (Finding), Move 5 (Reference to previous research), were the most frequent moves. Their occurrence was 90 %, 84%, 73% respectively. Move 9 (Recommendations) was found very frequently, occurring in 59 % of the RAs. Peacock suggested that the findings may provide insights into the teaching of research article writing.

By focusing on language teaching articles, Fallahi and Erzi (2003) analyzed sixty-one articles from seven journals, including Applied Linguistics, English for Specific Purposes, International Review of Applied Linguistics, Language Learning, The Modern Language Journal, Research in the Teaching of English, and TESOL Quarterly. The articles were analyzed based on Dudley-Evans' (1994) and Swales' (1990) models. They found that eleven moves are distributed differently in the Discussion section of research articles in this field. Also, the order of moves found in their corpus differed from those in the frameworks they drew on. Two moves (*Finding* and *Claim*) appeared to be the most frequent moves, while *Unexpected outcome* seemed to be the least frequent move used in this field. It can be concluded

from this that the purpose of the Discussion section was to provide specific findings and then to make generalizations. Research articles in language teaching disciplines were subject to intra-discipline variations. In terms of pedagogical applications, the findings may help raise the students' awareness of generic conventions of research article Discussions. In addition, the findings could be of great help in designing writing courses in second language learning.

Amirian, et al. (2008) analyzed research articles in the field of Applied Linguistics in order to examine the possible differences at the level of move schemata and lexico-grammatical realizations of Discussion sections. There were three main corpora used in the study, including articles published in international journals, Persian journals, and articles written by EFL writers which were rejected by international journals. Twenty articles from each of the three corpora were randomly selected from several journals. The rejected articles were written by MA holders and Ph.D. candidates. This criterion was set to ensure that the rejection was not from grammatical or lexical problems, but that troublesome factors may lie at a higher level of organization. It was found that the generic structure of RAs in these corpora was significantly different. Although there was a kind of universality in moves across English and Persian texts, there were some discrepancies in the frequency and sequence of moves. In addition, three moves (Hedging statement, Reference to previously mentioned statement, and Expressing wish for further research) were found in the Persian RAs which were absent in the English corpus. Persian writers tended to make strong claims when explaining and justifying their findings and they tried to validate their findings by repetitively referring to past literature. The most conspicuous difference between English and EFL Discussion sections was the

separation between the 'Result' and 'Discussion' sections. That is, almost all the English corpus separated the two sections in content, however, a blending of these two sections was frequently found in the EFL corpus as was also the case in the Persian corpus. As a result, the Discussion section in these articles put a great burden on the readers because it included a blend of tables, statistical procedures, and diagrams as well as their interpretations, claims, supporting arguments and implications. The sequence of moves in the English and the EFL corpora was different. In the English corpus, the communicative purpose of the Discussion section was accomplished through a set of moves which appeared in a logical sequence, while in the EFL corpus the logical sequence of different moves was not observed. In the authors' view, this distinction may be caused by cultural differences, that is to say, writing styles differ across cultures. These findings might raise EFL students' awareness of research Discussion section writing. The authors believe that the findings may be useful for both native and non-native writers, allowing them to better understanding published RAs and facilitating the process of writing RAs for publication. In addition, based on their findings, the authors proposed a move model which could be used for analyzing the Discussion section of English RAs. Their model consists of three moves: introduction, body, and conclusion, while each move made up of some micro-moves or steps.

There was no obligatory move in the study conducted by Holmes (1999) and Peacock (2002). The corpus of Fallahi and Erzi's (2003) study is similar to the present study. The results of their study seemed consistent with those in Peacock's study, that is, Claim (Move 7) appeared to be the most frequent move. This move, 'Claim' means the writers make generalizations arising from their results. The comparison of the

three corpora in Amirian, et al.'s (2008) study was also interesting. The primary aim of their study was to see the similarities and differences of schematic structure of Discussion sections of RAs written by native and non-native English speakers. Moves found in non-native writers occurred in an illogical sequence whether written in the native language or in English. Two heading sections (Results and Discussion) were mixed in the Discussion section of EFL corpus. These findings might be valuable for non-native writers when writing English RAs for publication in international journals.

2.9.5 Studies Focusing on the Conclusion Section

To the researcher's knowledge, research studies which aim to analyze the rhetorical structure of RA conclusions are limited. To date, only Yang and Allison's (2003) has been widely cited and has already been reviewed in section 2.8. Another research study devoted to this section is carried by Moritz, Meurer, and Dellagnelo (2008).

The research aim of the study investigated by Moritz, et al. (2008) is to compare the rhetorical organization of RA Conclusion sections of the three corpora which were written by three different groups of authors (Portuguese L1, English L1, and English L2). Twelve Conclusion sections from each corpus were identified. On the basis of the results, six moves were found, including 'Restating the introductory statement', 'Consolidating the research space', 'Summarizing the study', 'Commenting on results', 'Evaluating the study', and 'Making deductions from the research'. The three most frequent moves in order as 'Making deductions from the research', 'Consolidating the research space', and 'Evaluating the study'. It was found that the Portuguese L1 and the English L2 writers tended to elaborate more in their pieces of writing as compared to their native English-speaking counterparts, which is

demonstrated by the number of words per sentence. Based on their findings, the authors concluded that linguistic and rhetorical conventions of the first language interfere with the writing of the second language. From the results, it can be seen that L2 writers are more influenced by their own rhetorical background when favoring a more elaborate style of writing. On the other hand, they must also follow certain universal social conventions in the organization of their content, otherwise their papers would certainly not have been published.

2.9.6 Studies Focusing on All Four Sections (I-M-R-D)

Although individual sections of RAs have been widely analyzed by using move-based approach, the number of studies focusing on a combination of sections (I-M-R-D) is relatively small. One of the studies analyzing the four sections of RAs has been conducted by Nwogu (1997). His corpus consisted of fifteen research articles with complete IMRD sections in medical research for which Swales' (1990) model was used as an analytical tool. Based on his findings, he found that RAs in this field tended to be made up of eleven schematic moves—three each in the Introduction and Methods sections, two in the Results section and four in the Discussion section. Each move was characterized by distinct linguistic features. He claimed that his eleven moves were developed concisely and unambiguously, particularly the Methods and Result sections which he found were reliable and consistent in their usage in the medical field. Nwogu suggested that the findings of the study might help the authors of experimental research to get a better understanding of how the overall research rhetorical patterns were organized. However, Kanoksilapatham (2003) has argued that the limited number of research articles investigated might not be considered sufficient to support his claims and the corpus might not fully represent the field of study.

In computer science, Posteguillo (1999) analyzed forty different research articles from three different academic journals. There were two analytical models used in his study: Brett's (1994) and Swales' (1990) frameworks. To analyze the Introduction and Discussion/Conclusion sections Swales' model was used, while the Results sections were analyzed using Brett's model. Posteguillo found that the computer science Methods section was embedded in the Introduction section, which was implied by the description of an algorithm or the process of implementing a system, program, or application. In addition, although Swales has claimed that Move 1 Step 3 (Reviewing items of previous research) in his CARS model was an obligatory step, it was found to be an optional step in Posteguillo's study. There was frequent use of Move 3, Step 2 (announcing the principal findings). Also, Indicating RA Structure (Move 3, Step 3) was an obligatory move in Computer Science. The prevalence of Move 3 Step 3 was due to the fact that the structural organization of RAs in this field remained ambiguous, thus the authors of RAs needed to make an effort to guide their readers. It was found that the results of the analyzed research articles appeared not only in the Results section but they were also included in the Introduction sections in the form of a review. Posteguillo concluded that research articles in computer science still lacked a systematic pattern and that the IMRD pattern could not be completely applied to this new discipline.

In an exclusive study of move-based analyses, Kanoksilapatham (2005) analyzed sixty research articles from the top five journals in biochemistry published in the United States in the year 2000 by using Swales' (1990) move model. Based on the findings, a two-level rhetorical structure (moves and steps) was proposed, which was further classified into 15 distinct moves. There were three moves in the

Introduction section and four moves for each of the other three sections. Although the moves found in the Introduction sections seemed consistent with Swales' model, the recurrent moves tended to be different. In addition, some of the articles in the corpus did not include Move 2 in their Introduction section. To explain this omission, Kanoksilapatham noted that article writers might assume the readers have background knowledge of the work presented. This made them prefer to omit that move. Also, Move 3 was significantly different from Swales' study because no explicit outline of the structure of the research article was found in her corpus. Kanoksilapatham believed that her move model would be a representative template for the rhetorical organization of the structure of biochemistry research articles. This framework might shed some light on research article writing for both native and non-native scientists concerning the publication of research articles.

In her subsequent work, Kanoksilapatham (2007) compared the generic patterns of biochemistry articles written in Thai as published in Thai journals with those presented in English by using Swales' (2004) model. Her previous research (Kanoksilapatham, 2005) was used as a baseline for this study. The results indicated that the rhetorical patterns used in both corpora were quite similar. However, only the Results section was found to be different: there were three moves in the Thai corpus, while four moves were found in the English corpus. Besides the differences in the structural organization of the moves, the use of steps in each move was flexible. She noted that the discrepancies were due to a number of factors such as size and expectations of the research communities, the scope of the study, the national research policy, and the typical characteristics of Thai society as influenced by the Thai family system and Buddhism. The author suggested that the findings would not only provide

guidelines for all scientists in writing research articles, but they also enabled them to effectively disseminate scientific discoveries and to better satisfy the expectations of their respective scientific communities.

Pho (2008) analyzed the rhetorical structure of research articles with the main five sections (from the abstract through to the conclusion) in the social sciences. Pho focused on two disciplines: Applied Linguistics and Education Technology. Twenty research articles from each discipline were analyzed. These selected articles were published in prestigious international journals during the year 2006-2007. The rhetorical moves and steps of the research articles in his corpus were identified by using a top-down approach, that is to say, the identification of moves and steps was based on the function or content of the text. From his study, Pho found that there were some interesting differences in the prototypical functions and typical strategies (steps) in two the disciplines and in the different sections. The research articles in Applied Linguistics seemed to be more elaborate than those in Educational Technology. Moreover, articles in the applied linguistics field tended to give justifications for the procedures more frequently than those in the Educational Technology. In the Results section, the authors of the applied linguistics articles reported both the findings of the study and made comments on the results. In the Discussion-Conclusion section, the research article authors were more likely to give some background information at the beginning of the section and to state the conclusions of their study explicitly. Although there were some slight differences, the moves and steps of RAs in these two fields were quite similar. This is perhaps due to the fact that they are both sub-disciplines in the broader field of teaching and learning. From the findings, Pho noticed that the moves and steps found in his study tended to occur cyclically. He

suggested that the findings might provide insights into the rhetorical structure of research articles in these two disciplines and that a study of these findings would enable international students to integrate better into the academic world.

It can be seen that these previous studies have identified the rhetorical structure of the fully-fledged IMRD structure of research articles in different disciplines. Swales CARS model is an influential analytical tool for move identification in these previous studies. Although the four studies mentioned in this subsection focused on the four sections (IMRD), there are some issues for the present research to explore. First, the present study aims to identify and compare the rhetorical structure of RAs in the field of Applied Linguistics in two different publication contexts. Although one of the corpora used in Pho's (2008) study is RAs from applied linguistics, he aims to compare the rhetorical structure of these RAs with those in Educational Technology. Pho (2008) did not focus on location of RA publication (local or international settings) but on the fields. Second, the remaining three studies (Kanoksilapatham, 2005; Nwogu, 1997; Posteguillo, 1999) identified RAs in hard sciences which were different from the present study. Presumably, the findings of these studies would be of greater benefit for those who in the hard science community. Third, the findings from the limited number of the corpus as found in Nwogu (1997) might not be sufficient for generalization. In order to gain reliable information on the schematic structure of RAs, a large number of systematically selected texts are needed. As such, analyzing and comparing the rhetorical structure of 60 applied linguistics RAs in English with complete IMRDC format in the present study should be useful for both teaching second language writing in general and also for teaching academic writing in various genres.

All studies reviewed in this section regarding move-based analyses were carried out by different researchers in various fields. Table 2.1 below is a summary of these studies.

Table 2.1 Summary of Previous Studies of Move-based Analyses Reviewed in the Present Study

Section (Studied)	Author (s)	Discipline(s)	No. of RAs
Introduction	Swales (1990, 2004)	Mixed (hard, social, life and health sciences)	48
	Jogthong (2001)	Education & Medicine	40
	Samraj (2002)	Wildlife Behavior and Conservation Biology	12
	Fakhri (2004)	Humanities and Social Sciences	28
	Ozturk (2007)	Applied Linguistics	20
	Hirano (2009)	Applied Linguistics	20
Methods	Lim (2006)	Business Management	20
	Mur-Dueñas (2007)	Business Management	24
	Peacock (2011)	Mixed (Eight Disciplines)	288
Results	Thompson (1993)	Biochemistry	36
	Brett (1994)	Sociology	20
	Williams (1999)	Medical Science	8
	Yang and Allison (2003)	Applied Linguistics	20

Table 2.1 Summary of Previous Studies of Move-based Analyses Reviewed in the Present Study (cont.)

Section (Studied)	Author (s)	Discipline(s)	No. of RAs
Discussion	Holmes (1997)	History, Political Science, and Sociology	30
	Peacock (2002)	Mixed (7 disciplines of Social Sciences)	252
	Fallahi and Erzi (2003)	Mixed (Social Science—language teaching)	61
	Amirian, et al. (2008)	Applied Linguistics	60
Conclusion	Moritz, et al. (2008)	Applied Linguistics	36
All four sections (I-M-R-D)	Nwogu (1997)	Medical Science	15
	Posteguillo(1999)	Computer Science	40
	Kanoksilapatham (2005)	Biochemistry	60
	Pho (2008)	Applied Linguistics and Educational Technology	40

It can be seen that a move-based approach has been widely used to examine the rhetorical structure of RAs in various disciplines by different researchers. However, in the Thai context, it seems likely that this issue has not been widely investigated. Although there are some studies which have centered on such analyses, the corpora of these studies are taken from professional international journals published abroad. Also, most of them focus on the Abstract sections (e.g. Phanthama, 2000; Oneplee, 2008; Vongvanit, 2001). Apart from the notable works of

Kanoksilapatham (2005, 2007) which are reviewed above, to my knowledge, research on the analysis of rhetorical structure of RAs with IMRDC format is under-explored.

Besides analyzing the communicative purposes of RAs, many studies have centered on the identification of linguistic features, and the rhetorical/grammatical characteristics used in research articles. The findings of these studies have shed some light on the linguistic realizations that warrant move boundaries (Kanoksilapatham, 2003). In the present study, groups of co-occurring words or formulaic sequences which are used as linguistic signals to express move units are also identified. An overview of the formulaic sequences is given in the following subsection.

2.10 Overview of Formulaic Sequences

With regards to studies of linguistic features, several research articles have identified the distribution and functions of particular linguistic features or groups of words used for expressing move units, for example, some studies have fully or partly investigated tenses (e.g. Jogthong, 2001; Phanthama, 2000; Vongvanit, 2001), hedges/modality (e.g. Hyland, 1994, 1996; Promsin, 2006; Salager-Meyer, 1994), reporting verbs (e.g. Thomas and Hawes, 1994; Thompson and Yiyun, 1991), and multi-word units/lexical bundles/ formulaic sequences/phraseological patterns (e.g. Biber and Barbieri, 2007; Charles, 2006; Cortes, 2004, 2006; Hyland, 2008a,2008b; Li and Schmitt, 2009; Simpson-Vlach and Ellis, 2010; Wray, 2000, 2002; Wray and Perkins, 2000;). In the present study, the formulaic sequences will be identified.

The study of groups of words which commonly occur together has been largely identified in corpus linguistics (Reppen, 2010). “These words that tend to co-occur are called collocates. When there are several words that tend to co-occur

together, say a group of three, four, five words that often are found together, these are called lexical bundles, or chunks, or formulaic sequences” (Reppen, p. 25). However, there are some technical differences in the use of these different terms based on how they are defined.

Groups of words/ formulaic language can be described and termed differently. Although there may be several terms used to refer to such groups of words, three influential terms which relate to the present study are reviewed. According to Nattinger and DeCarrio (1992), “chunks of language of varying length, phrases like *as it were, on the other hand, as X would have us believe, and so on*” (p. 1) are termed ‘lexical phrases’.

In Biber et al.’s (1999) view, these words are described as ‘lexical bundles’, that is, lexical bundles are “recurrent expressions, regardless of their idiomaticity, and regardless of their structural status” (p. 990). Lexical bundles are combinations of three or more words that frequently co-occur in a register and they are identified empirically by means of a computer program that works on a corpus of language text. In addition, “most lexical bundles in conversation are building blocks for verbal and clausal structural units, while most lexical bundles in academic prose are building blocks for extended noun phrases or prepositional phrases” (p. 992).

More importantly, to qualify as a lexical bundle, words must frequently recur in a register at least ten times per million words in a register and they must be distributed over a number of different texts. However, in terms of the occurrence of these multi-word strings, Cortes (2004) has different cut-off points from Biber et al. She emphasized that lexical bundles are those sequences words which occur more than 20 times in a million words. “This frequency is very high when compared to the

frequency in which some other word combinations occur, as in the case of pure idioms (e.g. kick the bucket), which occur 0.5 times in a million words” (p. 400). Moreover, lexical bundles defined by Cortes are extended collocations, they are those sequences of three or more words that statistically co-occur in a register, for example, *as a result of, on the other hand, in the case of the, the context of the, and it is likely to.*

In Wray (2000, 2002), recurrent words/multi-word sequences are defined as ‘formulaic sequences’. A formulaic sequence is a useful term as “the word *formulaic* carries with it some associations of ‘unity’ and of ‘custom’ and ‘habit’, while *sequence* indicates that there is more than one discernible internal unit, of whatever kind” (Wray, 2002, p. 9). Therefore, a formulaic sequence means “ a sequence, continuous or discontinuous, of words or other elements, which is, or appears to be, prefabricated: that is, stored and retrieved whole from memory at the time of use, rather than being subject to generation or analysis by the language grammar” (Wray, 2002, p. 9).

In summary, formulaic language or groups of words frequently co-occur together in the texts. These groups of words are sometimes named differently as phraseological patterns, lexical bundles, formulaic sequences, multi-word clusters, multi-words expression, and so on. However, in the present study, the term formulaic sequences will be used. The formulaic sequences in the present study are the frequently co-occurring words which are used as key linguistic signals to express the communicative functions of each move/step unit. In other words, formulaic sequences are associated with the specific moves or functions of the RAs.

2.10.1 Research on Formulaic Sequences

Marco (2000) analyzed the use of certain formulaic sequences or phraseology (the term used in her study) in a corpus of medical research papers. Three frameworks, including *the....of*, *a....of*, and *be....to* which are used in medical research papers were examined. The findings showed that phraseology or linguistic features have important roles in scientific discourse such as the framework of *the...of* was the preferred pattern in the construction of nominalization, *a...of* was highly useful in the process of quantifying and categorizing, and *be...to* framework was frequently used in terms of expressing cause or similarity (e.g. be related to, be similar to). Also, phrases made from the frameworks were associated with the specific moves or functions of a research paper. Therefore, an awareness of the functions of phraseology will help students improve their medical research papers because knowledge of the phraseology of the genre will help students to understand and create meaning.

In a study comparing the formulaic sequences used by experts and apprentice writers in some particular disciplines, Cortes (2004) identified the use of formulaic sequences, which she called lexical bundles, in academic writings of published authors in history and biology and she investigated students at three different levels in those disciplines. Four-word lexical bundles used by both published writers and students were identified and classified structurally and functionally. Lexical Bundles program (LBP) 4.0 and MonoConc Pro 2.0 were used to identify target lexical bundles in different corpora of academic writing. Cortes found that students rarely used target bundles in their writing. Although they used some target bundles, their usage was different from that of professional authors. Moreover, the functions that

students tried to convey when using these expressions were completely different from those identified in the use of bundles by published authors. Possible reasons for this difference in use might be the lack of formal instruction that students in the disciplines had on the frequency and function of these expressions. Consequently, Cortes suggested that a good way to help students master these expressions would be to teach students to use lexical bundles frequently in order to make them more familiar. Then students would be able to employ lexical bundles in their academic writing more appropriately and confidently.

In her subsequent study relating to lexical bundle instruction, Cortes (2006) focused her study on the teaching of certain lexical bundles (called target bundles) in an intensive writing history class for third and fourth year native English students in order to compare the use of structurally complex lexical bundles and the use of more structurally simple expressions. In her study, Cortes focused only on four-word lexical bundles used in historical academic writing. Also, those target bundles were a four-word combination that must reoccur at least 20 times in a million words, and they must also recur in five or more texts in order to avoid users' idiosyncratic tendencies. There were three stages in her study. First, a corpus of research articles from selected journals was collected. The most frequent four-word lexical bundles in that corpus were identified and classified according to their functions, and then these bundles were analyzed. The second stage consisted of planning and teaching the target bundles to the students in that class. The third stage focused on the analysis of the use of these target bundles and other functionally equivalent expressions in the written production of the students in the class and in the corpus of published articles. Eight participants were asked to complete the exercises (five 20-minutes micro-

lessons). The study revealed that although students rarely used target bundles both before and after instruction, most participants confirmed that they paid more attention to the functions of the target bundles and they also reported that lexical bundles helped them both in writing and reading. By employing pre-and post instruction, there was no difference in the use of target bundles. However, such instruction increased students' awareness of interest in these expressions. Cortes (2006) pointed out that several functions of the use of formulaic sequences were associated with academic writing. Accordingly, students should pay close attention to this issue and employ them in their writing.

Another corpus study concerning citation in academic writing is in Charles (2006). The focus of her study is on the formulaic sequences (she referred to them as phraseological patterns) employed in reporting clauses in theses. Charles (2006) compared the two contrasting disciplines (social science and natural science) by using the WordSmith Tools program. The data were drawn from two corpora of theses written by native speakers from two contrasting disciplines: material science versus natural science. Both corpora contained 490,000 words. Four verb groups (argue, think, show, and find) were the focus of the study. The findings show that both disciplines use a significant number of finite reporting clauses with that-clauses and that they most frequently occur as integral citations with a human subject. The most frequent verb group in both corpora was 'argue' and the most frequent tense was the present tense. However, it was found that 'find/show' verb groups occurred predominantly in past tense in material science. Charles also pointed out that using a particular phraseology within a particular context was crucial for academic writing. Students should be encouraged to recognize both type and pattern of citation used in

writing academic discourse. This would help them to write in a way which was not just grammatically correct, but also appropriate both for their specific purposes and within their disciplinary community.

An exclusive study on formulaic sequences was conducted by Biber and Barbieri (2007) relating to a pedagogical focus. The study investigated the use of formulaic sequences in a wide range of spoken and written university registers, including instructional registers, the advising of students, management registers, instructional register, and student-student academic interactions. The corpus used for analysis was a sub-component of the TOEFL 2000 Spoken and Written Academic Language (T2K-SWAL). The spoken register included classroom teaching, classroom management, office hours, study groups, and service encounters, while the written register included textbooks, course management, and institutional writing. Only four-word sequences were investigated in the study. The findings showed that formulaic sequences were more prevalent in a non-academic university register than in the core instructional registers. Interestingly, lexical bundles were common in written course management; conversely, in previous studies, they were much more common in speech than in writing. Differences between registers also existed and needed to be considered, especially when applied to classroom instruction.

In this regard, Hyland (2008a) investigated the most frequent 4-word formulaic sequences used in three electronic corpora of written texts, including research articles, Ph.D. dissertations, and MA/MS theses from four disciplines. The RA corpus consisted of 120 published papers comprising 30 in the leading journals of each of the four fields. The other two corpora (Ph.D. dissertations, and MA/MS theses) were written by Cantonese L1 speakers studying at five Hong Kong

universities and they contained 20 texts in each discipline. The size of the corpus was 3.5 million words. From the study, Hyland (2008a) found that writers in each discipline relied differently on resources to develop their arguments, to establish their credibility and to persuade their readers. There were considerable variations in the frequency of forms, structures and functions across types of academic writing. Formulaic sequences used in each genre varied across the corpora.

A study using a corpus-driven approach was conducted by Biber (2009) who identified two types of formulaic sequences (multi-word lexical collocations and multi-word formulaic sequences) in conversation and academic writing, and examined the different types of patterns in the two registers. It was found that the kinds of formulaic patterns common in conversation were fundamentally different from the formulaic patterns common in informational writing, that is, conversation preferred fixed continuous sequences of words, with a preceding or following variable slot. Function words predominated in conversation, in both fixed and variable slots, while academic writing preferred formulaic frames with an internal variable slot. Function words predominated in the fixed slots, forming the frame, while content words predominated in the internal variable slot.

A longitudinal study conducted by Li and Schmitt (2009) aims to examine the use of formulaic language in student's writing. The researchers follow a Chinese MA student over a course of an academic year to see how that student employed lexical phrases in her language learning. They found that the participant could make good use of lexical phrases and she had more confidence in using those formulaic sequences through both explicit and implicit sources. The participant acquired some new lexical phrases and improved her degree of appropriate usage although she tended to rely

heavily on a limited range of phrases. Based on their study, Li and Schmitt also suggested that pedagogies need to be designed for learning courses that encourage students to build up more diverse phrasal lexicons in order to help students to improve their writing skills. Moreover, the study reinforced previous findings that learners tended to rely too heavily on a limited repertoire of phrases, thus pedagogy should take this into consideration when helping L2 learners to have more confidence in using formulaic sequences and to employ more diverse phrases in their academic writing.

Durrant and Mathew-Aydinli (2011) focused their study on the identification of formulaic language by using a function-first approach. With this method, formulaic languages are identified as the most frequent recurrent forms in a relevant corpus. Durrant and Mathew-Aydinli employed this approach through a comparative analysis of Introduction sections to student essays and research articles. The results showed that both the choice of the function and the choice of linguistic forms that realize the function appeared to be discipline specific amongst article writers, but not amongst students. Also, research articles tended to be more formulaic in expressing the function than student essays. The authors claimed that identifying formulaic sequences on the basis of communicative functions had the potential to provide useful insights into writing discourse.

Chen and Baker (2010) carried out a comparative study on the use of recurrent word combinations in academic writing written by native-speakers and non-native speakers. Three corpora were analyzed: native expert writing, native peer writing, and learner writing. This comparative study has revealed that published academic writing uses the widest range of lexical bundles whereas L2 student writing shows the

smallest range. In terms of structural and functional comparison, both student groups (native and non-native) preferred to use VP-based bundles, while NP-based bundles and referential markers were prominent in native expert writing. Some high-frequency expressions in published texts, such as ‘in the context of’, were underused in both student corpora, while the L2 student writers overused certain expressions (e.g. all over the world) which native academics rarely used. From their research findings, the authors claimed that there was a gap in terms of the use of lexical bundles between native expert academic writing and university student writing (native and non-native alike). The authors suggested that knowing the frequency of formulaic sequences found in native expert writing could be of great help to learner writers to achieve a more native-like style of academic writing, and should thus be integrated into EFL/ESL curricula.

In brief, formulaic sequences are a group of words co-occurring together frequently in the texts. Formulaic sequences are relevant and important to readers and writers. They can help readers to understand texts easily without focusing on every single word. On the other hand, these recurrent words may help writers to make their writing conform as much as possible to that of the conventional discourse communities. Previous studies have investigated the use of formulaic sequences in academic texts such as research articles, theses, essays, and variety of genres. However, the identification of formulaic sequences in previous studies is considered as a corpus-based approach in which researchers pre-select formulaic sequences and then analyze the corpus to discover how those expressions are used. Conversely, a corpus-driven analysis assumes only the existence of words; co-occurrence patterns among words, discovered from the corpus analysis (Biber, 2009). The corpus-driven

approach is applied to the present study. On the other hand, to my knowledge, there has not been any corpus-driven study focusing on the formulaic sequences employed in English applied linguistics RAs published in two different contexts, especially English RAs in Thai journals. In the Thai context, although there are some lexical studies, it seems that no research has directly investigated formulaic sequences used in research articles. Some studies (e.g. Boonyasaquan 2005a, 2005b; Wasuntarasophit 2009; Ward 1999, 2009) have focused mainly on vocabulary use or lexical acquisition, and collocation acquisition. This present study, therefore, attempts to investigate the formulaic sequences used in the two corpora (Thai and international corpora), which may be used as a guideline for writing RAs. In other words, the intention of the researcher is to provide a comprehensive description of both the rhetorical structure of English applied linguistics RAs and the formulaic sequences which are linked with the move/step boundaries in order to help novice researchers or non-native learners to organize their research papers effectively and successfully.

This chapter has reviewed the theoretical framework and previous research related to rhetorical moves in research articles in a variety of aspects and disciplines. The review also covers the literature on formulaic language/a group of co-occurring words and previous studies focusing on this particular issue. The next chapter will explain the methodology used in the present study.

CHAPTER 3

RESEARCH METHODOLOGY

This chapter includes details of the methodology used in the present study. It is divided into two major phases: move analysis and formulaic sequence identification. In the move identification stage, corpus compilation, framework of move analysis, and move analysis procedure are described. The formulaic sequence identification stage includes the procedure, criteria, and program used for the formulaic sequence identification. The chapter ends with a description of the pilot study.

3.1 Description of the Corpora

One of the central methodological issues for corpus-based studies is to ensure that the corpus chosen for analysis actually represents the discourse domain being studied (Biber, Connor, and Upton, 2007). Corpora for analysis have to be designed with relatively well-specified sub-corpora that represent particular text categories, so “when corpora studies have been based on particular sub-corpora, the findings have been much more interpretable” (Biber, et al., 2007, p. 18). As such, the corpora used in the present study focus only on one particular text category, English academic research articles in the field of Applied Linguistics.

3.1.1 Corpus of Research Articles Published in International Journals

The international corpus consists of 30 applied linguistic research articles taken from odd issues (issue one and/or three) from ten international journals published during the year 2003-2010. Only articles with conventional section formats (IMRDC) were randomly selected. The selection of the journals was based on the ranking of journals in the Journal Citation Reports published by the Institute for Scientific Information (ISI). Within a broad range of subject categories of Journal Citation Reports, it thus ensures that the selected journals were from the world's leading scholarly journals. The selected journals can be accessed via an electronic database or libraries. It can be said that the criteria for selecting the corpus are representativeness, reputation, and accessibility.

Selected journals included Applied Linguistics, Language Testing, English for Specific Purposes, Journal of Pragmatics, Journal of Second Language Writing, Language Learning, Modern Language Journal, Studies in Second Language Acquisitions, TESOL Quarterly, and System (see Table 3.1). It should be noted that these journals were considered as applied linguistics journals because articles related to Applied Linguistics are accepted for publication. Particularly, 'System' whose name may mislead readers, who are outside the field of Applied Linguistics, into thinking that it is a hard sciences journal. In fact, it is defined as an international journal of education technology and applied linguistics. These journals were selected according to their impact factor presented in the year 2007 or 2009. Details of the corpus together with their impact factor and the number of articles used for move analysis are shown in the following table.

Table 3.1 Corpus of Research Articles Published in International Journals

International Journals	Impact Factor (2009)	Number of RAs
1.The Modern Language Journal	1.914	3
2. Applied Linguistics	1.469	3
3. Studies in Second Language Acquisition	1.323	3
4. Journal of Second Language Writing	1.250	3
5. Language Testing	1.106	3
6. Language Learning	0.984	3
7. TESOL Quarterly	0.942	3
8. Journal of Pragmatics	0.798	3
9. English for Specific Purposes	0.795	3
10. System	0.44 (2007)	3
Total		30

3.1.2 Corpus of Research Articles Published in Thai Journals

This corpus consists of English RAs in Applied Linguistics written by Thai writers. Thirty research articles with IMRDC format were taken from ten peer reviewed journals published during the years 2002-2010 by universities in Thailand, including PASAA, Humanities and Social Sciences, The Journal, KMUTT Research and Development Journal, Humanities Journal, Silpakorn University International Journal, Journal of Humanities Naresuan University, Journal of English Studies, Journal of Humanities & Social Sciences, Nida Development Journal (see Table 3.2). From the list of the journals in Table 3.2, five journals (journal number 1, 3, 5, 6, and 8) only publish articles written in English, while the remaining five journals welcome articles either in Thai or English. All selected journals (except KMUTT Research and Development Journal) publish articles in the Social Sciences and Humanities field in which articles in applied linguistics fields are also included. It was found that only

the 'KMUTT Research and Development Journal' accepts articles from a variety of areas, including interdisciplinary areas of Science and Technology, Engineering, Industrial Education, Social Science and Linguistics.

Due to a limited number of English RAs in the field of Applied Linguistics, the Thai corpus was chosen based on purposive sampling. Furthermore, since there were a limited number of RAs with a complete IMRDC format in the two journals (Journal of Humanities & Social Sciences and Nida Development Journal), two RAs with complete IMRDC format from PASAA were used instead. This was because, during the time of data collection, PASAA was the only journal that contained articles with a complete IMRDC format. Therefore, these two articles with complete IMRDC format were used instead. The selected peer reviewed journals were listed in the Thai-Journal Citation Index Centre (TCI), which can be accessed from the website (http://www.kmutt.ac.th/jif/public_html/). The list of the journals and the number of articles used in the Thai corpus are shown in the following table.

Table 3.2 Corpus of Research Articles Published in Local Thai Journals

Thai National Journals (Published by)	Number of RAs
1. PASAA (Chulalongkorn University)	5
2. Humanities and Social Sciences (Khon Khan University)	3
3. The Journal (Mahidol University)	3
4. KMUTT Research and Development Journal (King Mongkut's University of Technology Thonburi)	3
5. Humanities Journal (Kasetsart University)	3
6. Silpakorn University International Journal (Silpakorn University)	3
7. Journal of Humanities Naresuan University (Naresuan University)	3
8. Journal of English Studies (Thammasat University)	3
9. Journal of Humanities & Social Sciences (Prince Of Songkla University, Pattani Campas)	2
10. Nida Development Journal (National Institute of Development Administration)	2
Total	30

Altogether, the number of RAs used in the present study were 60 RAs in the field of Applied Linguistics. In the literature, the number of RAs used as a sample for data analysis varies considerably. Some of the research studies which were analyzed used only a small sample of RAs (e.g. Nwogu, 1997; Samraj, 2002; Williams, 1999), while some examined a large number of RAs (e.g. Peacock, 2002, 2011). These studies yielded good results, however, a large number was always recommended for the future studies. In some studies such as Chang and Kuo, (2011); Kanoksilapatham (2005, 2007); Pho (2008), which analyzed RAs with conventional sections (IMRD), the number of samples used for these studies was between 40-60 RAs. For example, in Kanoksilapatham's (2005) study, 60 RAs were used as a representative sample. With this particular sample, her study yielded significant results, which were

generalizable to the biochemistry RA genre. Accordingly, sixty RAs as used in the present study should be an adequate representation of the applied linguistics RAs from each context (Thai and international contexts) and they should yield significant findings.

3.2 Move Identification

3.2.1 Framework of Move Analysis

Move identification is based on the models of three scholars. The revised CARS model (Swales, 2004) was used for analyzing the Introduction section, while the Methods section was analyzed using Lim's (2006) model. For the Results, Discussion, and Conclusion sections, Yang and Allison's (2003) framework was employed. The reasons for choosing these models are as follows.

Swales' (2004) model was adapted to identify Introduction sections of RAs in the present study for two main reasons. First, Swales CARS model is acknowledged as a seminal move model for identifying rhetorical moves of RAs. Swales' CARS model was developed from the results of the analysis of RAs in contrastive fields (soft sciences and hard sciences). Accordingly, RAs in the applied linguistics field, which was considered as a field under the umbrella of the social sciences, was able to adopt such framework for the analysis. Although Hirano (2009) and Ozturk (2007) analyzed articles in the applied linguistics field, they did not propose a model based on their studies. They presented only move structures which were found in their studies. Therefore, Swales (2004) model is the most appropriate one used in the present study. Second, Swales CARS model has been modified according to the criticism made by several researchers (e.g. Antony, 1999; Batia, 1993; Samraj, 2002). The newest

version attempts to accommodate all of the new steps identified and to overcome the problems encountered in the application of certain steps within Moves 1 and 2 in some disciplines of study (Del-Saz Rubio, 2011). Also, Move 3 (Presenting the present work) of the new version (2004) contains more explicit functional steps than those in the previous version (Loi and Evans, 2010). After several revisions, the new version should be the strongest version as stated by Ozturk (2007) who confirmed that this new version can successfully account for most of the limitations mentioned by researchers regarding the previous ones.

So far not much research has examined the rhetorical move structure of the Methods section, particularly that of RAs in the field of Applied Linguistics. Lim's (2006) model was used to analyze moves and steps in the present study. There were some reasons why this particular model was employed. In the literature, it was found that although there were some studies which analyzed Methods section (e.g. Kanoksilapatham, 2005; Lim, 2006; Mur-Dueñas, 2007; Nwogu, 1997; Peacock, 2011; Pho 2008; Posteguillo, 1999), their models revealed some limitations. For example, the models developed by Kanoksilapatham (2005), Nwogu (1997) and Posteguillo (1999) were from the results of the analysis of RAs in the hard science field. Other models developed by some researcher as Mur-Dueñas, (2007) and Peacock, (2011), which were based on the results of analyzing RAs in the social sciences, also resulted in certain drawbacks, as their model included only moves; no steps were used to realize individual moves. With such characteristics, their models seemed less sophisticated to account for all the various moves/steps found in the present study. In addition, to the researcher's knowledge, these models seemed less valid (especially Mur-Dueñas's (2007) model) than Lim's model. Therefore, Lim's

(2006) model was the most appropriate move model for the present study. It includes detailed steps used to realize each move and it has been verified and cited in several studies (e.g. Bruce, 2008; Li and Ge, 2009; Pho, 2008). Although Pho's (2008) model was developed based on an analysis of RAs taken from the applied linguistics field, his model is not as detailed as Lim's model. For example, Pho's model contains only two moves, while three moves are labeled in Lim's. In particular, Lim's model includes a step describing the research design (Move 2 Step 1 in his model), and there is a step used to justify the data analysis procedure (Move 3 Step 2 in his model). Although the frequency of occurrence of these two steps was considered as optional in both sets of data, the results obtained were sufficiently significant for generalization. These are the reasons why Lim's (2006) model was used in the present study. His model was developed based on the structure of RAs in the social sciences (Business Management), which is considered a soft science like the present study. Also, this particular move model provided clear details for each move and step, which was different from the other models mentioned above. However, it should be noted that since Lim's model was created from an analysis of business management RAs, the word 'variable' is typically used in Move 2 (Delineating procedures for measuring variables in his study). This term is rarely used in RAs in the field of Applied Linguistics. In the present study, this move is used to account for any expected factors that researchers attempt to investigate (e.g. refusal production, English performance).

The move models proposed by Yang and Allison (2003) was used as a framework for identifying Results, Discussion, and Conclusion sections for the following reasons. First, Yang and Allison's model was developed from an analysis of RAs in Applied Linguistics, which was also the focus of the present study. Second,

Yang & Allison's model can account for the typical communicative purposes of the applied linguistics RAs. In other words, their move model was very detailed which is appropriate also for the present study. For example, to realize Move 3 (Commenting on results) of applied linguistics RAs, only one step (Interpreting results) as found in Pho's (2008) model was inadequate to account for this particular move. Therefore, Yang and Allison's (2003) model was chosen for the analysis in the present study. For the Discussion section, the moves and steps provided in Pho's (2008) model seem consistent with Yang and Allison's (2003) model. However, two moves (Summarizing results and Summarizing the study) were not mentioned in Pho's model. Although these two moves are not obligatory moves, they are important and pedagogically useful. Third, Yang and Allison's model was cited and applied in previous studies (e.g. Amirian, et al., 2008; Basturkmen, 2009; Rasmeenin, 2006), which will ensure the reliability of their model. Finally, to the best knowledge of the researcher, only Yang and Allison's model was considered as a reliable and detailed framework to analyze RA Conclusions.

Based on the three move models (Lim, 2006; and Yang and Allison, 2003; Swales, 2004) used in the present study, the coding protocol was established. A coding protocol is used to provide operational criteria for identifying rhetorical moves in a text, to control the possible variations of coding, and to make move identification possible for reliability assessment. The list of moves and steps in the coding protocol used in this study is shown in Appendix A.

3.2.2 Reliability of Move Analysis

Identification of moves and steps based on function can be criticized for its subjectivity. Inter-rater reliability is one of the ways to eliminate this concern

(Crookes, 1986). In addition, a number of factors such as the background of the coders, coder training, and the coding scheme are important and need to be considered when doing text coding (Shohamy, Gordon, and Kraemer, 1992). Therefore, two coders (including the researcher) are used in the present study. The invited coder is a Ph.D. candidate and he is a lecturer in English and he has taught in tertiary education for more than 18 years. Also, he is interested in corpus-based analysis and has also conducted research on move-based analysis. With such a high profile, it is certain that the coder is well-qualified for this task.

The invited coder was trained before conducting the move analysis in order to help him have a clear picture of the move frameworks and the identification processes. After training, the coder received ten (33.33 %) articles from each corpus or twenty out of sixty of the RA samples. The articles given to the coder were randomly selected from two corpora. Then he analyzed the moves and steps of those RAs independently.

Instrument reliability is also important for text analysis. Thus, the inter-reliability of the move identifications was determined. To this end, the move analyses were carried out independently by the researcher and the invited coder were verified and checked in terms of their agreement. Although there are various ways to measure the index of inter-coder reliability such as agreement rate or percentage agreement and kappa value (Orwin, 1994 quoted in Kanoksilapatham, 2003), the percentage agreement rate was used in the present study. Percentage agreement has been widely used because it is relatively simple to interpret. It can be computed by using the formula $A/(A+D) \times 100$ where A= the number of agreements and D= the number of disagreements. For example, if the researcher and the coder code a total of 60 move

units and they agree 57 times, the percentage agreement rate is 95 %. However, in order to be able to categorize move and move sequences for all of the selected research articles, one hundred percent agreement is required. Thus, discussion between the coders took place when there was disagreement about the coding of a particular move unit. In other words, to obtain agreement, move units from the coders need to be identical in terms of move(s), their position in the discourse, and their sequences of moves. Besides inter-rater reliability, which was examined through the use of the coders, intra-rater reliability was also implemented (Jalilifa, 2010; Mahzari and Maftoon, 2007). To this end, a sample of twenty (ten from each corpus) was extracted out of the two sets of the corpora and was re-analyzed by the researcher two months after the first rating.

3.2.3 Move Analysis Procedure

For the purpose of identification and easier access, all 60 RAs (See Appendix B) from each corpus were separately codified (T1-T30 for the Thai corpus, and I1-I30 for the international corpus). The notion of communicative purpose was central to the analysis. However, there were cases where the communicative purpose of a unit of text was not self-evident, where multiple functions were served in the context, or one sentence contained two moves. The common practice used in these cases, as stated by Del- Saz Rubio (2011: 5); Holmes (1997:325), and Ozturk, (2007:29), was to analyze the text according to the most salient function.

Move analysis involves a certain degree of subjectivity that is perhaps unavoidable when conducting text analysis studies (Yang and Allison, 2004). The frequency of each move in each RA is recorded in order to verify the extent to which a particular move is used. The criteria for justifying and classifying the frequency of

each move are defined. In Kanoksilapatham's (2005) study, the cut-off point was 60%. By using such criterion, a move is considered to be a conventional move, if its frequency reaches 60% or more. If the frequency of occurrence of a move is below 60 %, it is considered as an optional move. However, in the present study, the cut-off point for move classification was 75 %. This particular cut-off point was established as a potential measure of move stability for any move occurrence. Thus, to be categorized as conventional, a move must occur ranging from 75-100 %. If the frequency of a move falls below 75%, it is considered as optional. The reason for this particular cut-off criterion is because the present study aimed to establish which rhetorical moves/steps are more conventional than others (if their frequencies were conventional, they were viewed as important moves/steps which should be useful for pedagogical implications). More importantly, the frequency count of each move/step is based on the type, not the token.

In the process of move analysis, it may be possible to find new moves or steps. If so, they will not be considered as new move(s) unless they have occurred with about 50% regularity in a corpus (Nwogu, 1997). However, in the present study, any new moves or steps, whose frequencies did not reach the standard (50%), were called "potential moves/steps". Additionally, it is acknowledged that there are many kinds of linguistic features and they are all very important. In a move-based analysis, they are conventionally used to express individual moves/steps. However, in the present study, only three main linguistic features, including tense, voice, and personal pronouns which appear in individual moves or steps are examined.

The outlines of move identification are summarized in the following steps.

1. Analyze RAs from two corpora on the basis of three main rhetorical move frameworks, including Swales (2004) for the Introduction sections; Lim (2006) for the Methods sections, and Yang and Allison (2003) for the Results, Discussion, and Conclusion sections. Importantly, moves and steps in each section of each RA were thoroughly identified according to their function.

2. Compare the findings of the two corpora in terms of frequency, move structure, and move cycles.

3. Report the overall rhetorical structure of the analyzed RAs.

3.3 Formulaic Sequence Identification

This phase contains the details for the identification of formulaic sequences. It includes the criteria, procedure, and program used for the identification of formulaic sequences.

3.3.1 Criteria for Formulaic Sequence Identification

A considerable amount of research has suggested that 4-word bundles are the most frequent bundles found in academic writing (e.g. Biber, 2009; Cortes, 2004; Hyland 2008a). Also, three and four-word bundles are both good discriminations of register and three word-bundles have added advantages, especially for pedagogical purposes (Scott and Tribble, 2006). In the present study, to obtain the formulaic sequences as large as possible, at least 3-word sequences that co-occur together are examined. In addition, to be identified as a formulaic sequence, each of them must occur in at least three different RAs, which helps to avoid the idiosyncrasies of individual writers.

The formulaic sequences found in the study were validated by a native speaker. He is a teacher with a degree in Linguistics and has experience in identifying formulaic language. However, before checking the reliability of the selected formulaic sequences, the native speaker had been introduced to the aims of the present study and formulaic sequence identification.

3.3.2 Procedure for Formulaic Sequence Identification

The steps in identifying formulaic sequences related to a particular communicative function are described as follows.

First, linguistic indicators used to signal a communicative function of each move/step boundary in each RA were collected and grouped. It is important to note that such linguistic indicators had been marked and recorded in the first phase (move identification). Consider the following example.

*In recent years **there has been** a growing interest in the study of academic writing.* (I14)

From the example, '*there has been*' are the collected linguistic indicators which are used as the key words to realize Move 1 (Establishing a territory) in the Introduction section.

Second, if each linguistic indicator was found in at least three different RAs in realizing the same move/step (criteria set in section 3.3.1), it was labeled as a formulaic sequence.

Third, all identified FSs with their contexts drawn from each move/step of each corpus were listed.

Finally, the FSs were verified by a native speaker who has experience in identifying formulaic sequences.

However, to ensure the procedure of FS identification, the Antconc3.2.3w program was also used as shown in the following subsection.

3.3.3 Software Program for Formulaic Sequence Identification

Identifying FSs using hand-tagged analysis is possible to make mistakes. Therefore, in order to verify and ensure the process of FS identification, a program-supported analysis (AntConc program) is used.

AntConc program is a freeware concordance program developed by Professor Laurence Anthony. It is a freeware corpus analysis toolkit and it can be downloaded from the website (<http://www.antlab.sci.waseda.ac.jp/software.html>). AntConc can generate Key Word in Context (KWIC) concordance lines and concordance distribution plots. It also has tools to analyze word clusters, n-grams, collocates, word frequencies, and keywords. However, in order to find formulaic sequences in the two datasets used in the present study, only 'Clusters' are identified.

Identifying FSs by using Antconc software program is summarized according to the following steps:

2. Click 'Cluster' tab and then type the key words in the textbox. Next, click the 'Start' button. The cluster will occur in the window if they match the command.

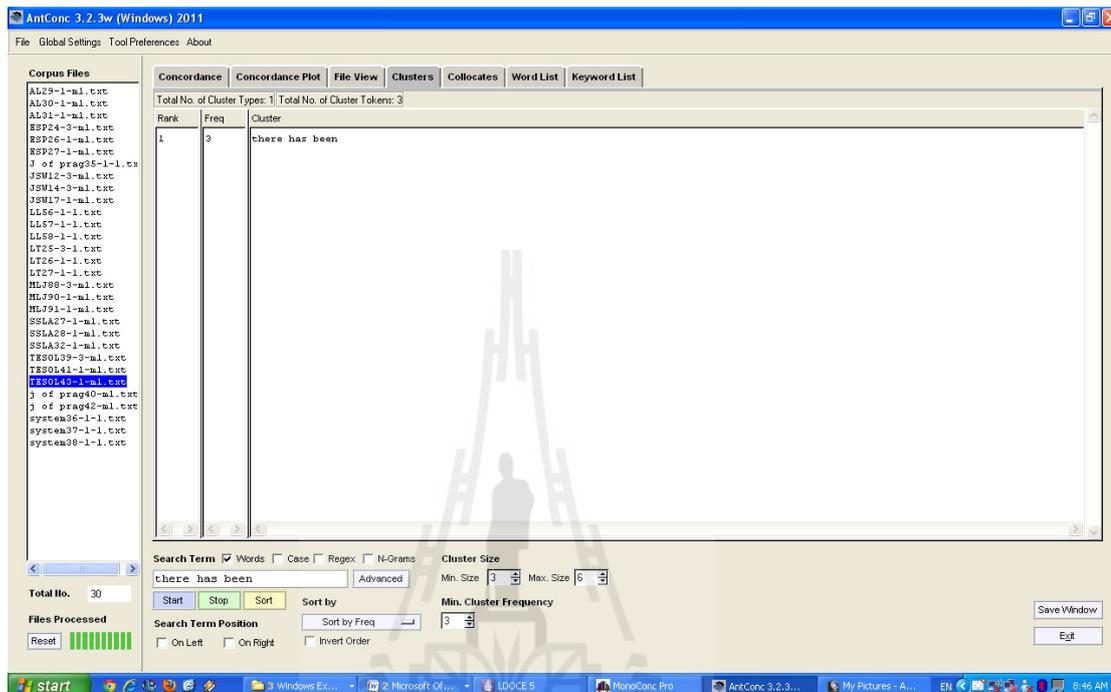


Figure 3.2 Steps of Searching Key Words

3. Click the occurring formulaic sequence in the 'Cluster' window. Then the concordance is displayed in KWIC format.

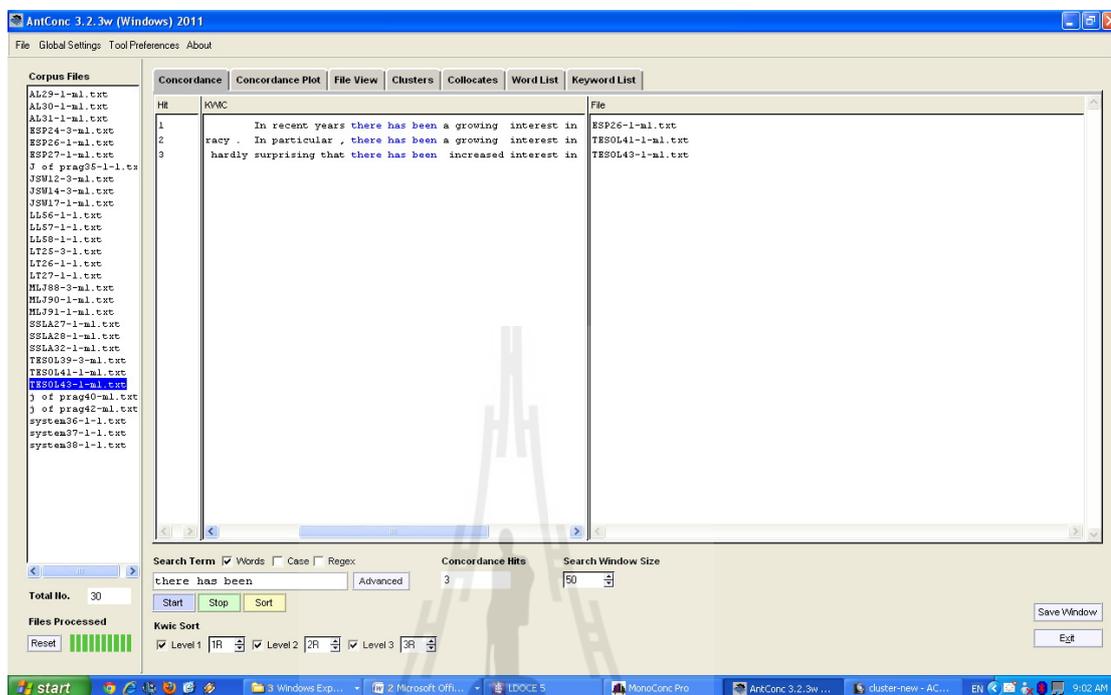


Figure 3.3 Example of Concordance Output

4. Click each formulaic sequence in the concordance line to find its context.

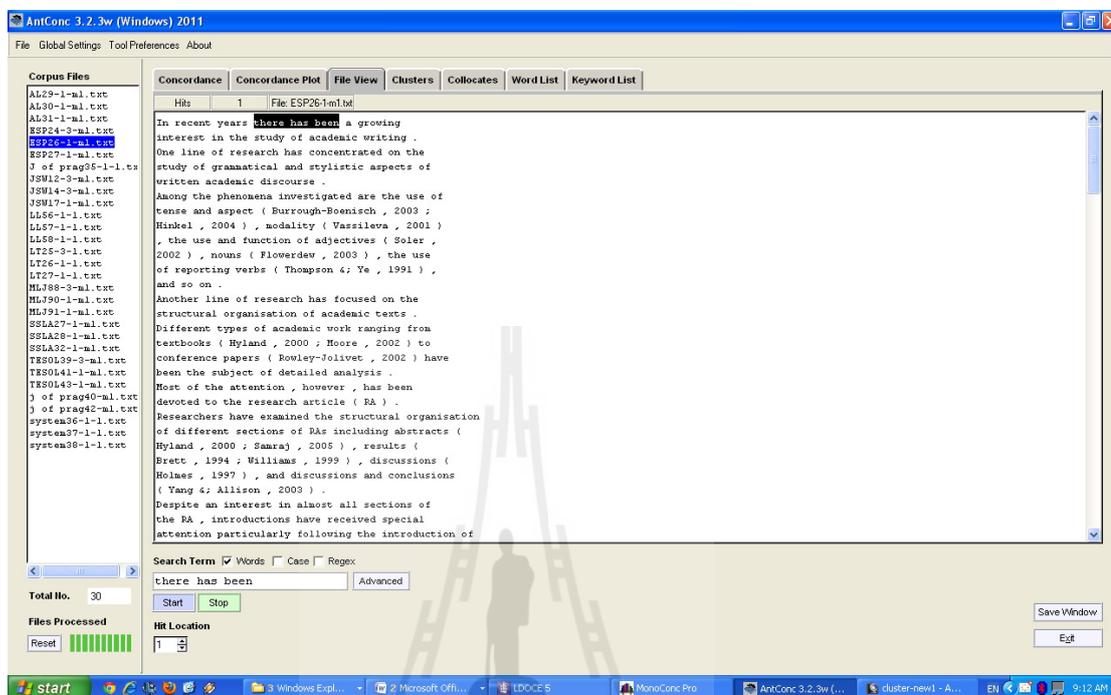


Figure 3.4 Example of Formulaic Sequence in its Context

It is important that the files loaded into the program (used in step 1) are the group of move/step boundaries which have been classified according to move/step type. This will ease the FS identification when using the program.

3.4 Pilot Study

In order to help organize the present study, a pilot study was conducted. Ten English research articles with complete IMRD sections in the field of applied linguistics were used. Of these, five RAs were taken from five international journals and the other five RAs were taken from five Thai journals. It was believed that such a number of RAs used in pilot study would provide an adequate sample for validating the coding scheme and for representing the rhetorical move structure of the RAs used

in the main study. Compared to Jogthong's (2001) study, which analyzed 20 RA Introduction sections, for which only two RAs were used in her pilot study. For the international corpus, one article was selected from each of the following five journals: Applied Psycholinguistics, Journal of Pragmatics, Modern Language Journal, Studies in Second Language Acquisition, and System. For the Thai corpus, one article was drawn from each of the five peer reviewed journals, including Manusya: Journal of Humanities, The Journal, Journal of Srinakhrinwirot Research and Development, BU Academic Review, and Journal of English Studies. However, these articles were not included in the main study. The results of the pilot study are summarized in the following subsection.

3.4.1 Summary of the Findings

The preliminary findings of the pilot study revealed some similarities and differences in terms of move occurrence. For the Introduction section, Move 1 (Establishing a territory) and Move 3 (Presenting the present work) were conventional, while Move 2 (Establishing a niche) was conventional. All steps of each move were found in different degrees of frequency. However, only one step of Move 2 was found (Move 2 Step 1A: Indicating a gap). In the Methods section, RAs from local journals showed more variations than those in the international journals. Move 1 Step 4 (Describing the sample) was the only step occurring in all ten RAs. A new step labeled as 'Describing research instruments' was found and emerged in all ten RAs. With a high frequency, this additional step was included in the main study.

Regarding the Results section, Move 7 (Preparatory information), Move 8 (Reporting results), and Move 9 Step 1 (interpreting results) were used frequently in the Results sections of RAs from both contexts. Move 7 (Preparatory information)

occurred in all five RAs from Thai journals and was also found in three RAs from the international journals. Among the four steps of Move 9, only Step 1 (Interpreting results) was of relatively high occurrence. Three moves proposed in Yang & Allison's (2003) model did not appear in the Results sections: Move 9 Step 2 (Comparing results with literature), Move 11 Step 1 (Indicating limitation), and Move 12 Step 1 (Recommending further research).

In Discussion section, Move 11 (Background information), Move 12 (Reporting results) and Move 14 (Commenting on results) were frequently found in RAs from both corpora. Move 12 was conventional because it appeared in all ten articles. Move 14 Step 1 (Interpreting results), Move 14 Step 2 (Comparing results with or referring to literature) were found in all RAs from the international journals. Thus, the results were not only presented but were also clarified and commented on. In addition, the frequencies of occurrence of Move 16 (Evaluating the study) and Move 17 (Deduction from the research) of the international corpus were comparatively higher than those of the local corpus. None of the RAs included the limitations of the study (Move 16 Step 1).

For the formulaic sequence identification, there was no FS identified in the pilot study. This might be due to the fact that the criterion for selecting the FSs was on the basis of appearing in at least ten percent in the different texts (3 out of 30 in each corpus). Presumably, such criterion was the cause of the complete absence of FS in a small number of RAs (10 RAs) in the pilot study.

As a result of what occurred in the pilot study, it was decided that for the main study four points are needed to be taken into consideration. First, new steps/moves would probably be found. For example, a new step used to describe research

instruments was discovered in the Methods section. This particular new step should be an important step in Methods sections for RAs in the field of Applied Linguistics. Therefore, in the main study, with a large number of RAs to be analyzed, the researcher should pay close attention to the emerging steps/moves. Second, move identification is likely to be subjective. To enhance the reliability of the move analysis, in the main study, a coder should be invited to assist with this particular analysis. Accordingly, in order to ensure the reliability of the findings, an inter-coder and an expert were included in the main study. Third, a small number of the RAs analyzed affected the formulaic sequences identified in the two corpora. Thus, in order to get a large number of formulaic sequences from each move/step, a larger corpora was needed. The last point, which needs to be focused on in the main study, is the reliability of the two main identification procedures (move analysis and formulaic identification). Therefore, apart from the invited coder, an expert native speaker should also be asked to verify the formulaic sequences found in both sets of data.

This chapter contains a description of the research methodology used in the present study. A move analysis was conducted based on three different move models (Swales, 2004; Lim, 2006; Yang and Allison, 2003). Formulaic sequences were analyzed based on their frequency of occurrence which should be at least three times in the different RAs. The reliability of both the move analysis and the formulaic sequence identification were conducted by experienced experts.

CHAPTER 4

RESULTS

This chapter presents the results of the study in relation to a move analysis and the identification of formulaic sequences. The presentation of the results is in accordance with the research questions proposed in Chapter 1 which purport to answer the questions with regard to two main areas:

- 1) the rhetorical moves in the two sampled datasets and
- 2) the formulaic sequences in each move/step in the two datasets

4.1 Rhetorical Moves in the Two Corpora

Research Question One: How is the rhetorical move pattern for each section of applied linguistics research articles published in international journals similar to or different from those published in Thai journals?

To answer the first question, research articles in the two corpora are analyzed to find the rhetorical move structure using the frameworks stated as in Chapter 3. The results concerning the occurrence and frequency of each move in each section, and the move structure associated with their sequences and cyclical patterns are presented. Three main linguistic features including tense, voice, and personal pronouns, which appear frequently, are also mentioned. The results of this study are presented in order from the Introduction to the Conclusion sections. Examples drawn from both corpora are also necessary for a clear picture of the results of each section. To achieve this, the

citation of each example will be replaced by (R) and it will not be contingent upon the number of references. The distinct lexical clues provided by the key words in each move/step boundary are printed in bold. At the end of each example, the RA number from which the example is taken is shown in parentheses, for example, (T1) refers to RA number 1 from the Thai corpus and (I1) means RA number 1 from the international corpus. These modifications will be applied to every text segment exemplified in this thesis.

4.1.1 The Introduction Section

4.1.1.1 The Frequency of Each Move and Step

The rhetorical moves/steps with their frequencies in the RAs in the two datasets are shown in Table 4.1. Then the function and its realizations which characterize each move/step are also illustrated afterwards. Each move is compared to the proposed Swales' (2004) model to determine whether and in what way the Introduction sections of both corpora conform to or are different from the model.

Table 4.1 Frequency of Moves and Steps Found in Research Article Introduction Sections of the Two Corpora

Moves/Steps	Frequency	
	Thai Corpus (N=30)	International Corpus (N=30)
M1: Establishing a territory (citation required) via topic generalizations of increasing specificity	29 (96.66%)	30(100%)
M2: Establishing a niche (citations possible) via:	24 (80%)	30 (100%)
S 1A: Indicating a gap, or	24	29
S 1B: Adding to what is known	2	4
S 2: Presenting positive justification	6	2
M 3: Presenting the present work via:	30 (100%)	30 (100%)
S 1: Announcing present research descriptively and /or purposively	29	28
S 2: Presenting research questions or hypotheses	13	22
S 3: Definitional clarifications	3	4
S 4: Summarizing methods	4	6
S 5: Announcing principal outcomes	-	-
S 6: Stating the value of the present research	8	3
S 7: Outlining the structure of the paper	1	3

Note 1. N= refers to the total number of analyzed RAs in this study

2. % refers to the frequency of occurrence of a move

As can be seen from Table 4.1, the frequency of occurrence of three moves based on proposed the model was 96.66%, 80%, and 100% in the Thai corpus. For the international corpus, all three moves appeared at a frequency of 100%. It is clear that the two sets of the Introduction sections exhibit some similarities and differences in the employment of moves and steps. A noticeable difference was found in the use of Move 2 in the Thai Introduction sections, which appeared less frequently than those in the international Introduction sections. Also, it was observed that to

realize Move 2 and Move 3, only one or two steps was/were used prominently. In order to visualize the characteristics of each rhetorical move/step found in the Introduction sections in each corpus, the objective and realizations of each move/steps are shown.

Move 1: Establishing a territory

The function of Move 1 is to introduce the topic of the study and this move can be realized via topic generalizations of increasing specificity. A review of previous literature is often found in order to strengthen the writers' claim or to assure the reader that the article addresses a topic that is worth investigating and to show that the field is well established. As shown in Table 4.1, the frequency of occurrence of Move 1 was 100% in the international corpus and 96.66% in the Thai corpus. Thus, this move was a conventional move in both sets of data. To realize Move 1, present simple tense, past tense and present perfect tense were commonly used. The first person pronoun such as 'I' and 'we' were used to identify the role of the author in some Introduction sections. Also some linguistic signals were employed in the move/step boundaries in the form of evaluative adjectives/verbs such as 'increasing', 'important', 'accepted', 'interest', 'favored'. Move 1 was virtually found to open the section in both corpora except for four RAs (two from each corpus) which opened the section with Move 3. The realizations of Move1 are illustrated in the following examples.

Examples:

1) *In addition to the use of computers for educational purposes, the Internet as a tool of mass global communication **has become increasingly commonplace and important** in daily life. (T3)*

2) *It has been generally accepted that input is an essential element for the acquisition of both first (L1) and second (L2) languages, and language learning cannot take place without input.* (T4)

3) *The present popular trend, which has lasted for over 20 years, has favored the use of authentic texts for all levels of L2 learners* (R). (I1)

4) *Since Truscott published his 1996 article, “The case against grammar correction in L2 writing classes,” debate about whether and how to give L2 students feedback on their written grammatical error has been of considerable interest to research and classroom practitioners* (R). (I8)

Move 2: Establishing a niche

Move 2 aims to point out the limitations or weaknesses in the existing literature that need to be investigated. Based on the results presented in Table 4.1, Step 1A (Indicating a gap) was the dominant step found in both corpora. Step 2 was utilized less frequently in both corpora. Due to the number of its occurrences, Move 2 was considered to be conventional in both datasets, accounting for 80% in the Thai corpus and 100% in the international corpus.

Move 2 Step 1A: Indicating a gap

The function of this step is to indicate a gap in previous research. Generally, to demonstrate a gap, the writer builds up a demand for the current contribution. As to its frequency, Move 2 Step 1A was the most frequent step in realizing Move 2 (occurring in 24 Thai Introduction sections and 29 international Introduction sections). The lexical words used to identify Move 2 Step 1 were some negative devices (relatively little, only a small, no prior study) and contradiction connectors (however, despite, but, although). Both present simple tense and present

perfect tense were used in this step. The realizations of Move 2, Step 1A of the two corpora are illustrated in the two excerpts below.

Examples:

1) *In the Thai context, relatively little research has been conducted compared with research in other areas of language teaching and learning.*(T9)

2) *To date, only a small number of students have examined input-based methods of teaching L2 pragmatics.* (I6)

Move 2 Step 1B: Adding to what is known

The function of this step is to state the expected direction of research which needs to be investigated. It was found that only four international Introduction sections and two Thai Introduction sections contained a clearly demarcated Move 2 Step 1 B. The realizations of this step are illustrated in the form of the present simple tense and past tense.

Examples:

1) *Consequently, it would be beneficial if more studies were conducted in English educational discourse.* (T13)

2) *Further research on the processing of the main verb versus reduced RC ambiguity in L2 learners with different materials is therefore necessary to better understand how L2 learners process this ambiguity.* (I16)

Move 2 Step 2: Presenting positive justification

The aim of this step is to allow the authors to maintain the need for their research or explicitly provide positive reasons for conducting the study reported. This step was optional because it occurred only in 6 Thai Introduction sections and 2

international Introduction sections. To express this step, the present simple tense is commonly used. The examples of this step are presented as follows.

Examples:

1) *The relationships, if found, **can provide significant explanations** of students success or failure in taking computer-based reading comprehension tests.* (T12)

2) *Process logs, or more generically, diaries (R), **seem to be an ideal tool for tapping into the writer's own perspective, that is, obtaining an intraview (R) of their writing process.*** (I14)

Move 3: Presenting the present work

According to Swales' (2004) model, Move 3 serves to describe the present research being conducted and can be accomplished through seven steps. However, in each corpus investigated here, this move was accomplished in only six steps. That is to say, Step 5 (Announcing principal outcomes) was omitted from both datasets. The occurrence of Move 3 was considered as conventional in both corpora (100% in both two datasets).

Move 3, Step 1 (Announcing present research)

This step details the objectives of the research. Move 3 Step 1 was the most frequent step in both sets of Introduction sections, conforming to the claim made by Swales (2004) that it is a substantial and frequent choice in realizing Move 3. Both past and present simple tenses were usually found. The first person pronoun 'we' was used quite frequently in the international corpus to state the author(s)' objective(s) in conducting their research. However, it was used in only one Thai Introduction section. This step was marked by some linguistic signals, such as *aim, goal, objective, purpose, and examine*. The two examples below are realizations of Move 3 Step 1.

Examples:

1) *This study aims to explore the extent to which hedging was used by Thai and native English language authors in research articles in academic journals printed in Thailand.* (T13)

2) *The study attempted to examine the relationship between students' level of computer anxiety and their choices of feedback method (i.e., online or face-to-face feedback, or both) in the revision process, as well as the resulting improvement in their essay writing. In addition, we attempted to determine the potential value of these forms of feedback in improving student essay writing.* (I3)

Move 3, Step 2 (Presenting research questions or hypotheses)

The function of this step is to state the research questions or hypotheses. Move 3 Step 2 was quite frequent in the international corpus, while it was given only average use in the Thai corpus. However, this step was the second most frequent step in both corpora. Both past and present simple tense were predominantly used to address this step. Certain signals such as research questions, hypotheses were markedly employed to introduce this step as seen in the examples below. First the personal pronoun 'we', functioning as a subject of the sentences, was also found in the international corpus.

Examples:

1) *This study sets two hypotheses after studying LNG 104 which emphasizes self-directed learning through teachers' consultation; ...*(T23)

2) *The following research questions guided this exploratory study:...*
(I7)

3) *We focus on the following research questions:*

1. *To what extent do nonnative English listeners from different L1 backgrounds share a ...*(I17)

Move 3, Step 3 (Definitional clarification)

This step describes the details of some specific key terms used in the research reported. To realize Move 3 Step 3, the present simple tense was usually employed. With its low frequency, this step is considered as optional.

Examples:

1) *English reading abilities refer to the ability to understand what one reads.* (T20)

2) *As used here, it refers to the extent to which the acoustic-phonetic content of the message is recognizable by a listener.* (I15)

Move 3, Step 4 (Summarizing Methods)

The function of this step is to state the methods used in the research. Move 3 Step 4 is one of the optional steps used to realize Move 3. It occurred infrequently in the two corpora. Verbs denoting this step include *employ or use*. The present simple tense was commonly used and the personal pronoun ‘we’ was occasionally found, especially in the international corpus.

Examples:

1) *This study employs Creese and Martin’s (2003) ‘multilingual classroom ecology’ perspective to explore the key issues of individual inter-relationships, interactions and ideologies within classroom where linguistic diversity exists.* (T14)

2) *In the present study, we use the same utterances evaluated in Derwing and Munro (1997) but present them to three groups of nonnative listeners for transcription and rating.* (I17)

Move 3, Step 6 (Stating the value of the present research)

This step is employed by authors to point out the merits of the study in relation to the study's applications or implications. Present simple statements regarding the usefulness of the study's findings were always found and key words used to signal this step included *help, value, important, and useful*.

Examples:

1) *The findings of the study could help encourage language teachers to better understand their students with speaking anxiety and inspire language teachers and people involved to help reduce their students' speaking anxiety.* (T9)

2) *It is hoped that this study will be of some value for pedagogical purpose.* (I19)

Move 3, Step 7 (Outlining the structure of the paper)

This step functions to describe the structure of the content of the rest of the research article, in order to tell the readers what to expect in the research reported. First person pronoun 'I' was sometimes used in this step. Both present and future simple tenses were also used in this step.

Examples:

1) *This paper is organized as follows. In Section 2, I explain my corpus data and relevant information about the data. In section 3, I provide a short socio-historical background of the Salem witchcraft trials before I proceed to a detailed discussion of the concept of evaluation.* (T15)

2) *Previous monolingual and bilingual research on syntactic ambiguities, in general, and main verb versus reduced RC ambiguity, in particular, will first be reviewed. Then these structures will be compared in English and in German and implications of crosslinguistic differences will be examined. Finally, the results of the present study as well as their implications for L1 and L2 processing research will be discussed.* (I16)

4.1.1.2 Move Structure of Introduction Section from the Two Corpora

The observations about move structure can be made with reference to the order of move pattern or move sequences, and move cyclicity. There are both similarities and differences in the move structure of RAs from both sets of data. Based on the analysis, it was found a variety of move structures were employed in Introduction sections. However, only a move structure that used by at least three different Introduction sections are shown in Table 4.2. This is because such structures are the preferred pattern used by authors from each corpus. On the other hand, the remaining move structures, which did not fit the criteria, were excluded from the table since they did not represent the use of a move structure in the Introduction section. Note that this criterion (appearing in at least three different RAs) applies to the remaining sections (Methods, Results, Discussion, and Conclusion).

Table 4.2 The Frequent Move Structures of the Introduction Section in the Two Corpora

The Move Structures	Thai corpus		International corpus	
	No. of Articles	%	No. of Articles	%
M1-M2-M3	10	33.33	6	20
M1-M2-M3-M1-M2-M3	1	3.33	7	23.33
M1-M2-M3-M1-M3	3	6.66	3	10
M1-M2-M1-M2-M3	3	10	-	-

As shown in Table 4.2, an archetype M1-M2-M3 pattern was the most preferred structure for ordering the moves in Introduction sections in the Thai corpus. However, this pattern was the second most frequent move used in the international corpus. It was found that the most favored move structure of the international corpus was the recycling (M1-M2-M3-M1-M2-M3) pattern. Conversely, this particular structure was found only in one Thai Introduction section. The third most frequent move ordering pattern employed in Introduction sections of both corpora was M1-M2-M3-M1-M3 pattern. It was found in three Introduction sections from each corpus. The least preferred structure that was found in the present study was the M1-M2-M1-M2-M3 pattern, however, this structure was found only in the Thai corpus. In addition to the chronological model (M1-M2-M3), the other three move patterns presented in Table 4.2 are considered to conform to Swales' move pattern. This is because they contained all three moves (M1, M2, and M3) although some of these moves recur in the sequences. In addition, there was another pattern of move structure (M1-M2-M1-M3) which was also considered to conform to Swales' model. However, such a pattern was employed in only two international Introduction sections.

On the other hand, there were some move patterns that were considered as deviating from the pattern, such as M1-M3-M1-M3; M1-M2-M3-M1 patterns. This is due to the fact that they either omitted a/two move(s) in the move structure or they began the structure with Move 2 or Move 3 instead of M 1 and/or ending with Move 1 or Move 2 rather than Move 3. Based on the analysis, the Thai Introduction sections were constructed in various move structures more than the international Introduction sections (13 in the former and 4 in the latter).

Most Introduction sections from the two corpora opened with Move 1. At the same time, Move 3 was the ending move in most Introduction sections from both corpora. However, there were three authors (one from the Thai corpus and two from the international corpus) who began their Introduction sections with Move 3 (Presenting the present work). Of these, the two particular move structures of the international corpus were M3-M2-M1-M2-M3-M1-M3 and M3-M1-M2-M3. It was found that these two move sequences contained all three moves (M1, M2, and M3) proposed in the Swales' model, but they were in a different move order (not a straightforward sequence), whereas the sequence of M3-M1-M3-M1 (Move 2 was omitted in the sequences) was an unusual move sequence used in the Thai corpus.

In regard to move cyclicity, both sets of data showed a cyclical nature. The recycling pattern was in the form of one or two moves which appeared repeatedly in the move sequence, for example, in the M1-M2-M1-M2-M3 structure. In this case, Move 1 and Move 2 were intervening moves. Besides the archetypal M1-M2-M3 pattern, other move patterns which were considered as following Swales CARS model showed a cyclical nature. Compared to two other Moves (M2 and M3), Move 1 was found to be the most cyclical move in both two datasets.

In sum, all three moves in both sets of data were conventional moves. The prototype move structure ordered linearly (M1-M2-M3) was the most preferred move structure found in the Thai corpus, while the recycling move pattern was the favored structure found in most international Introduction sections. The international Introduction sections were more likely to conform closely to the proposed model than those of the Thai Introduction sections. This is because there were less deviating move structures than those in the Thai Introduction sections. Move 1 was the most cyclical move in both datasets.

4.1.2 The Methods Section

4.1.2.1 The Frequency of Each Move and Step

The analysis of the Methods sections is based on Lim's (2006) model. The findings concerning the frequency of occurrence of rhetorical moves/steps of RAs from both two corpora are presented in Table 4.3.

Table 4.3 Frequency of Moves and Steps Found in the Methods Sections of the Two Corpora

Moves/Steps	Frequency	
	Thai Corpus (N=30)	International Corpus (N=30)
M4: Describing data collection procedure(s)	29 (96.66%)	30 (100%)
S1: Describing the sample	29	30
S2: Recounting steps in data collection	-	3
S3: Justifying the data collection procedure (s)	-	2
M5: Delineating procedure(s) for measuring variables	26 (86.66%)	25 (83.33%)
S1: Presenting an overview of the design	5	7
S2: Describing research instrument	20	18
S3: Explaining method(s) of measuring variables	20	22
S4: Justifying the method(s) of measuring variables	4	8
M6: Elucidating data analysis procedure (s)	25 (83.33%)	21 (70%)
S1: Recounting data analysis procedure(s)	25	21
S2: Justifying the data analysis procedure(s)	8	10
S3: Previewing results	1	1

Note 1. N= refers to the total number of analyzed RAs in this study
2. % refers to the frequency of occurrence of a move

The results presented in Table 4.3 indicated that all three moves proposed in Lim's (2006) model were found in both corpora. There were both similarities and differences in relation to the move occurrences. Marked differences were found in the presence of Move 4 Step 2 (Recounting step in data collection) and Move 4 Step 3 (Justifying the data collection procedure). There were no Thai Methods sections containing these steps, but the former step appeared in 3 and the latter occurred in 2 of the international Methods sections. Another noticeable difference was in the use of Move 5 Step 4 (Justifying the methods of measuring

variables). The frequency of this step in the international corpus was twice as high as that in the Methods sections in the Thai corpus (Thai: 4 and international: 8). As presented in Table 4.3, each move was realized by one or two prominent step(s). The characteristics of each move/step include its function, prominent linguistic features and its realizations which are illustrated as follows.

Move 4: Describing data collection procedure(s)

This move provides some detailed information relevant to the characteristics of a sample. The function of Move 4 also includes both describing and evaluating the processes of data collection. Based on Lim's (2006) model, Move 4 can be realized by three steps: Describing the sample, recounting steps in the data collection, and justifying the data collection procedures. The findings of the current study demonstrated that Move 4 was the most frequent move, at a frequency of 96.66% (Thai corpus) and 100% (international corpus).

Move 4 Step 1: Describing the sample

The function of this step is to describe the sample of the research conducted. This also covers other relevant aspects such as location, size, characteristics of the sample and sampling techniques or criteria for selecting samples. Only Step 1 (Describing the sample) was frequent step in both corpora. It was found in all Methods sections from both corpora except for one Thai Methods section (T19). The past tense was used extensively to realize this step. The linguistic indicators included the sampled adjuncts (e.g. participants, subjects, sample and data), sources of data (e.g. drawn from, taken from, selected from), and verbs (e.g. was/were, consisted). The realizations of this step are shown in the following examples.

Examples:

1) *The subjects of the main study were 134 first-year undergraduate students (20% of the target population, which was 670). (T1)*

2) *There were 218 student participants who ranged in age from 18 to 21 years old. (I3)*

3) *The short texts accompanying full articles in the scientific journal Nature were taken for study due to the importance of abstracts as a whole and specifically for the prestigious standing of the journal. (I10)*

Move 4 Step 2: Recounting steps in data collection

This step describes the process or stage while collecting data. Based on the analysis, only three international Methods sections contained Move 4 Step 2. It was entirely omitted in the Thai corpus. Time-relationship adjuncts such as *first*, *next*, *then*, and *after* were frequently used to realize this step. To describe the process of data collection, the first personal pronoun 'I' was sometimes used to show the author's role. Like Move 1 Step 1, the past simple tense was the preferred tense used to realize this step.

Example:

1) *Thus, our research team **first** decided on three year-groups in the Spanish educational system with 6, 9, and 12 years of instruction in English. We **then** proceeded to select particular participants from among the students in those year-groups by assessing L2 proficiency precisely with a standardized test, the Oxford Placement Test (R), which consists of two different sections that involve grammar, listening, and reading. (I2)*

2) *After Yuan had completed his laboratory research and just before he began writing, I sent Yuan a process log guide sheet (see Appendix).* (I14)

Move 4 Step 3: Justifying the data collection procedures

The aim of this step is to evaluate the process of data collection. It indicates the reasons for selecting a sample. In Lim's (2006) study, this step was quite frequent and always coexists with Move 4 Step 2. However, in the present study, Move 4 Step 3 was found only in two international Methods sections. Positive connotations that highlight the advantages over earlier studies were the key linguistic indicators used to realize this step.

Example:

1) *We ran an ANOVA test on the three sets of results, which showed that the differences between the groups were highly significant, $F(2, 18) = 397.227$, $p < .111$.*(I2)

Move 5: Delineating procedure(s) for measuring variables

The function of this move is to explain how measurements of variables are made. Move 5 can be realized via four steps, including presenting an overview of the design, describing the research instruments, explaining the method(s) of measuring variables, and justifying the method(s) of measuring the variables. As reflected in Table 4.3, in both corpora, the frequency of this move was over 80% and it was the second most frequent move. Therefore, this move was considered as a conventional move. The proportion of the frequency of this step occurring in the two sets of data was quite similar.

Move 5 Step 1: Presenting an overview of the design

This step aims to describe the design of the study. The predominant lexical signals used to identify and guide the reader to the research design included *designed, used, and applied*. This step was considered to be an optional step since it occurred less than 60 % in both corpora. The realizations of Move 5 Step 1 are shown as follows.

Examples:

1) *A pretest and posttest experimental **design** with two experiment groups and one control group **was used** in this study to collect data on sixteen contents. (T28)*

2) *The study employed a pretest-posttest **design** to identify the impact of negative feedback and modified output produced in response to negative feedback on EFL learner's question development. (I18)*

Move 5 Step 2: Describing the research instruments

This step is used for the first time in the present study. Its function is to describe the details of the research instruments or materials used in the research articles. The frequency of this additional step was quite high, as it was found in 20 Thai Methods sections and 18 international Methods sections. With such the high frequency found in each corpus, it was important step in this particular field. This step was signaled by the subheading such as 'Instruments', 'Materials', which was then followed by the detailed information of the tools in the subsequent sentences or paragraphs. In addition, lexical items denoting the realizations of Move 5 Step 2 included *was/were, constructed, used, instruments, materials, and test*. Also, it was noticeable that the past simple passive form was used.

Examples:

1) *Three sets of tests were constructed to answer the research objectives and statistically tested and verified by reading experts. (T6)*

2) *The criteria test materials include 64 sentences. Half of them involved the use of plural nouns and the other half were related to.... Each sentence had... (I23)*

Move 5 Step 3: Explaining method(s) of measuring variables

The function of this step is to describe the approaches used in measuring variables and defining variables. The frequency of Move 5 Step 3 was relatively high in both datasets. The procedural verbs used to indicate this particular step were always in the past passive voice as it appeared in the ‘subject-predicator-adverbial’ structure. The realizations that characterize Move 5 Step 3 are given as follows.

Examples:

1) *The subjects’ refusal production was measured using the oral production tests, which were the timed speaking tests conducted in a language laboratory. (T10)*

2) *Students performance in English was measured by two objective tests: the Cambridge Young Learners’ English Test (CYLE) and the Test of English at Seoul City Elementary Schools (or Seoul Teukbyeolsi Chodeung Yeongeo Deukgipyonga, STCYD).(I25)*

Move 5 Step 4: Justifying the method(s) of measuring variables

The communicative function of this step is to justify the degree of acceptability of the research design. The citations of previous studies were always

found. Based on its frequency as shown in Table 4.3, it occurred less than 60 % in each corpus. As a result, Move 5 Step 4 was considered as an optional step. Modal verbs were likely to be employed in this step. The realizations of this step are shown in the examples below.

Examples:

*1) This study, however, not only employed semi-structured interviews, but also English speaking logs, and classroom observations to illustrate the extent to which methodological triangulation **could potentially strengthen** both validity and reliability of the study to conform the emerging findings. (T14)*

*2) Because the percentage of unknown words in a text is likely to influence learning (R), using sentences in which all of the running words were likely to be known **would provide a more accurate assessment** of the learning conditions. (I13)*

Move 6: Elucidating data analysis procedure(s)

The function of this move is to describe the data analysis by referring some statistical techniques. Move 6 can be realized through three steps: Recounting data analysis procedure(s), Justifying the data analysis procedure(s), and Previewing results. This move normally appears under the subheading related to the word ‘analysis’. In Table 4.3, Methods sections in the Thai corpus that contained this move were slightly higher than those in the international corpus, 25 and 21, respectively. The function and realizations of each step are demonstrated below.

Move 6 Step 1: Recounting data analysis procedure(s)

This step describes the procedures used for data analysis. Of three steps, Move 6 Step 1 was the most preferred option used to realize Move 6 in both

datasets (Thai: 25 and international: 21). From the findings, it was found this step occurred whenever Move 6 appeared. The salient lexical items used to indicate this step were some time-relationship adjuncts (e.g. first, second, then, and finally). It was noticeable that these lexical signals were in the past form of the passive voice.

Examples:

*1) In order to analyze hedging in the RAs collected, abstract, quotations, tables, diagrams, transcribed dialogues, and examples **were first** excluded from the RAs. Each RA **was then** read thoroughly and marked for its communicative purpose in four sections: I, M, R, D. (T13)*

*2) The essays **were first analyzed** in terms of how writers chose to frame their responses to the open-ended topics. (I7)*

Move 6 Step 2: Justifying the data analysis procedure(s)

This step provides the rationale for selecting certain analysis procedures in order to ensure that the data have been analyzed in appropriate ways. Following previous seminal analysis frameworks is one of the choices to gain credibility in analyzing data. Move 6 Step 2 was less frequent, appearing only in 8 Thai Methods sections and 10 international Methods sections. Some positive statements used to demonstrate dependability, accuracy, and aptness are used such as ‘*useful, appropriate*’.

Examples:

*1) These levels **are useful as** they provided a convenient benchmark for determining frequency of use that enabled me to make comparison of the participants’ responses. (T26)*

2) As for the levels of directness, **this study adopted the Cross-cultural Speech Act Realization Project (CCSARP) scheme (R) on the role of conventionality in indirectness and analyzed all the acts of suggestion into nine suggestion strategies as follow:** (I19)

Move 6 Step 3: Previewing result

This step presents the preliminary results that can be further interpreted to produce specific findings. Linguistic indicators used to realize Move 6 Step 3 were illustrative verbs (e.g. show, illustrate) and predicator-adverbial combinations (e.g. will be reported below). From Table 4.3, this step was considered as optional since it appeared only in one each of the two corpora.

Examples:

1) *The percentage of errors from the four medical schools was calculated and **illustrated in bar graphs** (Figure 1).* (T16)

2) *In actuality, however, the results for the Chinese speakers and the non-Chinese speakers **were almost identical, as will be reported below.*** (I9)

4.1.2.2 Move Structure of Methods Section from the Two Corpora

Table 4.4 The Frequent Move Structures of the Methods Section in the Two Corpora

The Move Structures	Thai corpus		International corpus	
	No. of Articles	%	No. of Articles	%
M4-M5-M6	11	36.66	10	33.33
M4-M5	2	6.66	8	26.66
M4-M6	3	10	5	16.66
M5-M4-M5-M6	2	6.66	2	6.66

As shown in Table 4.4, the linear pattern (M4-M5-M6) was found in 11(36.66%) Thai Methods sections and 10 (33.33%) international Methods sections. Besides the linear ordering pattern (M4-M5-M6), there was one international Methods section (I17) that contained a move pattern of M4-M5-M4-M5-M6, which closely resembled the prototype structure. That is, it began the structure with Move 4 and ended with Move 6. If Move 4 and Move 5 did not reoccur in the sequence, this particular structure would have conformed closely to the archetype model.

Based on the results in Table 4.4, there were three patterns (M4-M5; M4-M6; M5-M4-M5-M6) which were considered as deviating move structures but they were employed quite somewhat frequently in both corpora. Of these, the structure of M4-M5 was the most preferred pattern used by international authors (26.66%), conversely, it was used only in two Thai Methods sections (6.66%). Besides 22 Methods sections (11 from each corpus), the remaining Methods sections were identified as deviating patterns. Such unusual move structures were either complex in order or incomplete in structure. Thus, the Methods sections in both corpora were likely to vary in their construction.

In regard to move cycle, Move 5 (Delineating procedures for the measuring variables) was found to be the most cyclical; it appeared whenever a cyclical structure was identified. Move 4 was repeated in two different move structures of the international Methods sections and one Thai Methods section. Move 6 was a non-cyclical move. The repetition of Move 5 in the sequence was M5S2-M4S1-M5S3, it was used to open the section by describing the research design (M 5 Step 1) which was then followed by stating the research sample (Move 4 Step 1). After that, Move 5 was repeated by describing the methods of measuring the variables

(Move 5 Step 3). In addition, Move 5 sometimes appeared after Move 6 as the last move in the move structure as shown in the case of I2 (M4-M5-M6-M5).

In brief, the analysis of the Methods section shows that the three moves proposed by Lim (2006) occurred in the present study. The appearance of moves/steps of both corpora was quite similar but somewhat different from Lim's findings. Although there were several move structures which were different from proposed the model, the chronological move pattern (M4-M5-M6) was still the preferred structure in both corpora. Within each move, only one or two steps are frequent step(s). Move 4 was the most frequent move. Move 5 was the most cyclical move, while Move 6 is the only move that shows a non-cyclical pattern. The past simple tense in the passive voice was the most frequent form used to realize the Methods section in the present study.

4.1.3 The Results Section

4.1.3.1 The Frequency of Each Move and Step

The analysis of the Results section is based on Yang and Allison's (2003) model. Table 4.5 below provides the rhetorical moves in terms of the frequency of occurrence of each move/step from both two datasets.

Table 4.5 Frequency of Moves and Steps Found in the Results Sections of the Two Corpora

Moves/Steps	Frequency	
	Thai Corpus (N=30)	International Corpus (N=30)
M7: Preparatory information	28 (93.33%)	25 (83.33%)
M8: Reporting results	30 (100%)	30 (100%)
M9: Commenting on results	20 (66.66%)	19 (63.33%)
S1: Interpreting results	18	17
S2: Comparing results with literature	7	8
S3: Evaluating results	-	-
S4: Accounting for results	7	3
M10: Summarizing results	9 (30%)	8 (26.66%)

Note 1. N= refers to the total number of analyzed RAs in this study

2. % refers to the frequency of occurrence of a move

As reflected in Table 4.5, four rhetorical moves were found in the Results sections of RAs in both corpora, including Move 7 (Preparatory information), Move 8 (Reporting results), Move 9 (Commenting on results), and Move 10 (Summarizing results). The most frequent move was Move 8, occurring at a frequency of 100% in both sets of data. Therefore, it was an conventional move. The second most frequent move was Move 7 which appeared at a frequency of 93.33% and 83.33% in the Thai and the international corpora respectively. On the basis of its frequency of occurrence, Move 7 was considered as conventional. Move 9 (Commenting on results) was the third most frequent move occurring at a frequency of 66.66% (in the Thai corpus) and 63.33% (in the international corpus), and it was realized by three different constituent steps: Interpreting results, Comparing results with literature, and Accounting for results. Step 1 (Interpreting results) was the salient

step for achieving this move. The other two steps were less frequent. Move 10 (Summarizing results) was optional since it occurred only 30 % and 26.66 % in the Thai and the international corpora, respectively. The characteristics of each move/step with their realizations and some distinct linguistic features to indicate the move/step boundaries are presented as follows.

Move 7: Preparatory information

This move functions as a reminder and connector between sections. It provides relevant information for the presentation of results. It was found that the authors of the Results sections in both corpora used this move to restate research questions, the aims and purposes of their study. Based on the results presented in Table 4.5, this move was considered conventional. Some key words used to identify this move include ‘*research question, aims, objectives, purposes, summarize, present*’. These key words were commonly used in the form of the present simple tense or future tense.

Examples:

- 1) *This section **presents** answers to the four research questions.* (T5)
- 2) *The results of this study **will be presented** in three main sections having to do with the...* (I27)

Move 8: Reporting results

The aim of this move is to display the results of the study which was conducted. The results are normally presented with relevant evidence, such as statistics and examples. In Table 4.5, Move 8 occurred in all Results sections in both corpora, which was consistent with Yang and Allison’s (2003) study. The lexical indicators used to identify this move were some inanimate nouns (tables, figures,

paragraphs) or some reporting verbs such *observe, report, show, reveal*, etc. To realize Move 8, the past simple tense and the passive voice were commonly used. The realizations of Move 8 are demonstrated in the examples below.

Examples:

1) *Results from the rating scale for the pre-test production **showed** that EG was more confident in their pre-test production than PG and CG. (T10)*

2) *From the subjects' comments, though many of the subjects **were satisfied with** the software program, some said they confronted problems. (L24)*

3) *Inspection of the B and t values and their signs **in Table 3 revealed** that a significant difference existed for Contrasts 1, 4, 5, 6, and 7. (I3)*

4) *For Argumentation essays, the overall structure in both languages **was found to** consist of a position at the beginning and end, with supporting reasons (pro-reasons) in the body. (I7)*

Move 9: Commenting on results

The main purpose of this move is to establish the meaning and significance of the research results in relation to the relevant field. This move allows the authors to express subjectively their ideas regarding their results. In Yang and Allison's (2003) study, the 'Reporting results' move and the 'Commenting on results' move were obligatory. However, in the present study, only the former move appeared to be a conventional move, while the latter was categorized as conventional. Based on the analysis, there were three steps used to realize Move 9, including Interpreting results (Step 1), Comparing results with literature (Step 2), and Accounting for results (Step 4). This means that 'Evaluating results (Step 3)' as identified in Yang and

Allison's (2003) model was missing in the present study. The present simple tense was commonly used in this move.

Move 9 Step 1: Interpreting results

This step allows authors to make claims or generalizations based on the results of a study. The frequency of Move 9 Step 1 was relatively high in both corpora, appearing at a frequency of 90% in the Thai corpus and 89 % in the international corpus. This is similar to that found in Yang and Allison's (2003) study in which Move 9 Step 1 occurred extensively. This step was realized by tentative statements or modal verbs such as '*suggest, indicate, interpret, appear, might, may, would*'. In addition, to interpret the result, the use of *it* in the grammatical subject position was also found frequently. For example, 'it' co-occurs with *that* or *to complement clauses* governed by either verbs or adjectives (e.g. *it can be interpreted that..., it is clear that..., it seems that..., it is important to...*). This step was usually signaled by the present simple form as shown in the following examples.

Examples:

1) *This finding **suggests that** EFL students' L1 **may** have positive effects on improving the quantity and quality of ideas generated for their writing when they used L 1 as a tool to search for difficult word choices, and organize their L2 texts.* (T25)

2) ***It can be interpreted that** the students think about their autonomy in language learning is not consistent with what they actually do.* (T21)

3) ***This would further indicate** a certain continuity between abstracts and headings (already observed by the steps present and their signaling in both text types).* (I10)

4) *From these findings, it seems that our writers choose to include other textual markers (i.e. logical markers, code glosses) which may play a more decisive role in the intended interpretation of the text. (I20)*

Move 9 Step 2: Comparing results with literature

Move 9 Step 2 aims to compare the findings of a study to the outcomes of previous research studies. The frequency of this step showed marked differences from that in Yang and Allison's (2003) study. In their study, its frequency was greater than that of other three steps. However, in the present study, its frequency was low. This step was found only in 7 Thai Results sections and 8 international Results sections. Words denoting Move 9 Step 2 included *in contrast with, similar to, agree with, support, and confirm*. Usually, this step was realized through the use of the present simple tense.

Examples:

1) *This is in contrast with the findings of Swales (1990), where native authors tended to employ hedging in the I section more frequently than in the R section. (T13)*

2) *On that score, this study agrees with Banerjee and Carrell (1998) who observe that non native speakers tend to resemble the native speakers at the level of directness in making suggestions. (I19)*

Move 9 Step 4: Accounting for results

This step allows authors to explain or give reasons for differences or unexpected findings. The occurrence of Move 9 Step 4 was less frequent in both sets of data (Thai: 7 and International: 3). Consequently, it was considered as optional. This result agrees with Yang and Allison's (2003) findings, which found that this step

was less frequent than that of the other three options. The lexical clues used to clarify or explain the distinctive results of a study were some possibility statements, such as *might result from*, *might be due to*, and *it is possible*.

Examples:

1) This **might result from** a style of learning which was more academic-oriented. (T7)

2) Language-specific effects **might be due to** different repair strategies resulting from the language used, either English or German, or they might be due to different repair strategies, resulting from the fact that the subject either is speaking her or his first language or his or her second language.

Move 10: Summarizing results

The function of this move is to present the main results of a study. This move was infrequent, appearing only at a frequency of 30% in the Thai corpus and 26.66 % in the international corpus. In a study carried out by Yang and Allison (2003), the frequency of this step was comparatively less as it occurred in only 7 out of 40 (17.5%) Results sections. Some concluding or summarizing words such as *in summary*, *thus*, *in sum*, *it is concluded*, *in brief*, and *overall* were the key words to indicate this move.

Examples:

1) **In brief**, an epistemic model is the most used device to express hedging in RAs of both Thai and native authors. However, the number of hedges occurring in the RAs written by Thai authors was noticeably less than in those by native authors. Interestingly, the R section written by Thai authors seemed to contain

more hedging than the I section. This is opposite to native authors whose hedges were found in the I section more frequently than the R section. (T13)

2) **In sum**, while there are clear limitations to solely depending upon the comparison of correlation coefficients between the groups, as far as the current correlation analysis is concerned, the students in the treatment group (and those who had higher proficiency in particular) appear to have become capable of self-assessing their performance more accurately compared to their counterparts. (I 25)

4.1.3.2 Move Structure of Results Section from the Two Corpora

Table 4.6 The Frequent Move Structures of the Results Section in the Two Corpora

The Move Structures	Thai corpus		International corpus	
	No. of Articles	%	No. of Articles	%
M7-M8-M7-M8	3	10	1	3.33

In both datasets, there was no move structure that was organized in chronological order (M7-M8-M9-M10). They were interrupted by a/some move(s). Only two move structures were shared in the RAs from the two corpora. The first move structure was shown in Table 4.6 which was used in four different Results sections. Another move pattern was a repetition of Move 7 and Move 8 (M7-M8-M7-M8-M7-M8-M7-M8) which occurred in two Results sections (one each from the two corpora). Besides these two move structures, other move structures of the Results sections of the two sets of data were constructed in a variety patterns. In other words,

the Results sections from both corpora were highly variable in terms of their move patterns.

It was found that most Results sections opened with Move 7 (Preparing results), which appeared in twenty-four Thai Results sections and twenty international Results sections. However, it was also found that some Results sections which opened the section with Move 8 (Reporting results) or Move 9 (Commenting results). That is to say, 5 Thai Results sections and 10 international Results sections began the move structure with Move 8 and one Thai Results section opened the move structure with Move 9. This supports the claim made by Yang and Allison's (2003) that Move 8 or Move 9 can possibly occur at the beginning of the move structure. Move 10 (Summarizing results) might possibly be used as the ending move; however, only 6 (out of 9) Thai and 4 (out of 8) international corpora closed the section with this move.

It was found that most Results sections from both corpora were highly cyclical. Move 8 was found to be the most cyclical move, while Move 10 was the least cyclical move. This agrees with that found in Yang and Allison's (2003) study, in which Move 8 was the most repeated move. Also, 'Comparing results with literature' was the most cyclical step in Yang and Allison's (2003) study. However, such a step recurred in only four Results sections (two each from both corpora).

In brief, there were four rhetorical moves in the Results section of the two corpora, including Move 7 (Preparatory information), Move 8 (Reporting results), Move 9 (Commenting on results), and Move 10 (Summarizing results). Move 8 played a significant role in this section. It appeared in all RAs in both corpora and it was the most cyclical move. From both sets of data, there were no Results sections

that were constructed in straightforward pattern (M7-M8-M9-M10), that is, the move structure that was shared by some of Results sections in both corpora was only a sequence of a repetition of Move 7 and Move 8.

4.1.4 The Discussion Section

4.1.4.1 The Frequency of Each Move and Step

The analysis of the Discussion sections of both corpora in the present study is based on Yang and Allison's (2003) model. The model consists of seven moves. A comparison of the occurrences of each move/step will be made with the two corpora and with that of the proposed model, which will determine whether and in what way the Discussion sections in the two datasets conform to or differ from the model. The frequency of each move/step is presented in Table 4.7.

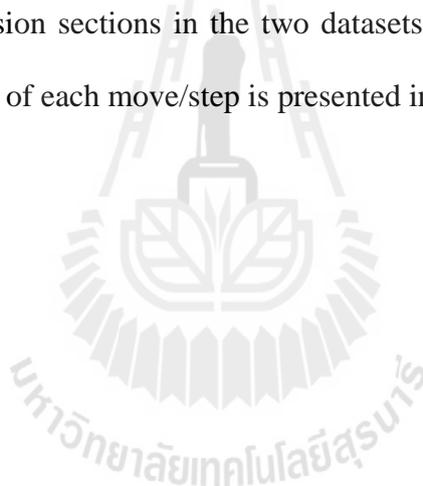


Table 4.7 Frequency of Moves and Steps Found in the Discussion Sections of the Two Corpora

Moves/Steps	Frequency	
	Thai Journals (N=30)	International Journals (N=30)
M11: Background information	13 (46.66%)	15 (50%)
M12: Reporting results	26 (86.66%)	28 (93.33%)
M13: Summarizing results	7 (23.33%)	7 (23.33%)
M14: Commenting on results	29 (96.66%)	30 (100%)
S1: Interpreting results	22	29
S2: Comparing results with literature	22	27
S3: Accounting for results	15	21
S4: Evaluating results	1	-
M15: Summarizing the study	4 (13.33%)	-
M 16: Evaluating the study	5 (16.66%)	10 (33.33%)
S1: Indicating limitations	3	5
S2: Indicating significance/advantage	1	3
S3: Evaluating methodology	2	3
M 17: Deductions from the research	15 (50%)	10 (33.33%)
S1: Making suggestions	8	4
S2: Recommending further research	6	7
S3: Drawing pedagogic implications	8	3

Note 1. N= refers to the total number of analyzed RAs in this study

2. % refers to the frequency of occurrence of a move

Table 4.7 shows the occurrence of rhetorical moves from both datasets. The most frequent move of both datasets was Move 14 (Commenting on results), which was then followed by Move 12 (Reporting results). The frequent occurrence of Move 14 in the present study confirms Yang and Allison's (2003) findings that in the Discussion section, 'Commenting results' was the most substantial and frequent move. The remaining five moves, namely Move 11 (Background information), Move

13 (Summarizing results), Move 15 (Summarizing the study), Move 16 (Evaluating the study), and Move 17 (Deductions from the research) were infrequent, and they were optional in the two corpora. This also agrees with Yang and Allison's (2003) observation that these five moves appeared in with low frequency. The function of each move/step found in the present study with their realizations is detailed below.

Move 11: Background information

This move is used by authors to prepare readers for the report or discussion of the results that follow. It therefore contains some main statements such as research questions, the aims and purposes of a study, the theoretical background or established knowledge and the study's research methodology. Move 11 occurred moderately in both corpora. To realize this move, both present and past simple tenses in the form of active or passive voices were used.

Examples:

- 1) *The following sections presents the discussion based on the three research questions.* (T1)
- 2) *This study was set up to collect empirical evidence of the purported problem-solving nature of the L2 formulation process.* (I2)

Move 12: Reporting results

The function of this move is to present the results of the study. Based on the analysis, Move 12 was the second most frequent move in both corpora. It always co-occurred with Move 14 (Commenting on results). This means the results presented in this section are not only reported, but also commented on. Most Discussion sections in both corpora contain Move 12. To indicate this move, some linguistic signals or expressions associated with numerical values, reporting verbs,

and statements about upcoming outcomes involving graphs, figures, examples, and tables were extensively used. The past simple tense was the most preferred tense, while the present simple tense was also found but to a lesser degree.

Examples:

1) ***From the example, it is found that both of High and Low Exposure Groups do not seem to know the expected stress pattern of the word ‘fascinating’ since the percentage of this expected pattern is lower (27%) in High Exposure Group and 0% in Low Exposure Group.*** (T19)

2) ***Further examination of the results in Table 3 revealed no evidence for Eysenck and Calvo’s (1992) processing efficiency theory.*** (I3)

Move 13: Summarizing results

The function of this move is to sum up the results. This move was infrequent in the two datasets (7 from each corpus). The linguistic clues used to identify this move were summarized verbs/nouns/phrases, such as *to sum up, to summarize, in summary, and in brief*. Both the past and the present simple tenses were used to demarcate this move.

Examples:

1) ***To sum up, the height and tenseness qualities of American English vowels were the areas of perceptual confusion for Standard Thai speakers.*** (T5)

2) ***In summary, the effects of L1 background and experience with a particular type of accent were relatively minor factors in the ability to understand the L2 speech.*** (I17)

Move 14: Commenting on results

The objective of this move is to establish the meaning and significance of the research results in relation to the relevant field. Move 14 is considered as a central move in which the results of the study are commented on by means of four different choices, including Interpreting results, Comparing results with literature, Accounting for results, and Evaluating results. Yang and Allison (2003) pointed out that this move was an obligatory move and might occur repeatedly in the Discussion sections. Similarly, the results of the present study demonstrated that Move 14 was a conventional move in both sets of data, accounting for 100% in the international corpus and 96.66 % in the Thai corpus. Only one Thai Discussion section omitted this move. Based on its occurrence, Move 14 was the most frequent move in both corpora. Of the four steps used to realize Move 14, Step 1 (Interpreting results) and Step 2 (Comparing results with literature) were relatively frequent. The characteristics of each step and its realizations are shown below.

Move 14 Step 1: Interpreting results

This is the step where the authors make claims or generalizations based on the results of the study. Move 14 Step 1 was found in nearly all of the international corpus (29 out of 30) and was also quite high in the Thai corpus (22 out of 29). This means that authors from the international corpus not only present results but also expound their ideas on the results accordingly. To interpret the results, the authors preferred using hedging devices such as *seem*, *suggest*, *indicate*, *appear* and modal verbs: *may*, *might*, *would*, *could*, and *likely to*. These linguistics signals were usually employed in the form of the present simple tense either in active or the passive voices.

The first person pronoun (we) was sometimes found to present the author(s)'s comments as shown in Example 3 below.

Examples:

1) *This suggests that the test takers did not take full advantage of the remaining facilitative features, like the dictionary, the thesaurus or the Self-reflective Reminder Questions.* (T11)

2) *In view of the results reported above, it can be tentatively suggested that there are differences in the structural organization of RA introductions in second language acquisition research and second language writing research.* (I 11)

3) *However, we would suggest that a measurement of the effect of particular types of feedback on a single grouping of several error categories is not helpful.* (I8)

Move 14 Step 2: Comparing results with literature

This step allows the authors to compare their study's findings with those of previous works. Move 14 Step 2 was one of the preferred options to comment on results. Its frequency was relatively high in both sets of data, which was considered as a conventional step (Thai: 22 and international: 27). To realize this step, some distinct linguistic features were found, particularly in the forms of 'be' plus some adjectives (e.g. *be consistent with, be similar to*) or certain words or phrases such as *agree with, reported in, run counter to, supported those of*. Usually, these distinct linguistic features coexisted with citations. Present simple tense was used extensively. The first person pronoun 'I' was also found in the Thai corpus, as shown in Example 1 below.

Examples:

1) *As a result, I certainly agree with Kaplan (1998) pointing out that teaching grammar in a writing class may not be enough for the...* (T25)

2) *This finding is similar to that of Major et al. (2002), in which it was concluded that...* (I17)

Move 14 Step 3: Accounting for results

In this step, the authors provide further explanation or give the reasons for the observed differences in the findings or unexpected outcomes. The frequency of Move 14 Step 3 in the international corpus was higher than that in the Thai corpus (international: 21 and Thai: 15). The rational explanations were indicated by some words or phrases such as *because, possible explanation for, it is possible, may be caused from, can be explained by*. The present simple tense in the passive form was used prevalently. The first person singular pronoun (I) was sometimes found in the international corpus.

Examples:

1) *This can be explained by the Thai students' cultural background. Because the participants would have participated in the preparation program before coming to the U.S., they most likely were familiar with academic texts and could use that knowledge to assist their reading of the Academic Text condition.* (T26)

2) *A possible explanation for this difference could be linked to the way in which different communities view and construct their argumentation.* (I20)

3) *At this point, I would like to raise another possibility, namely the avoidance of ellipsis may also be due to the ...*(I19)

Move 14 Step 4: Evaluating results

This is the step where authors evaluate their results by stating the strengths and weaknesses of the results. With regard to its frequency, Move 14 Step 4 was considered as optional in both datasets. In Yang and Allison's (2003) study, this step was the least frequent step. Similarly, in the current study, only one Thai Discussion sections contained this step.

Example:

*1) Despite the two low levels found in this study, which were due to the limitations of the subjects' proficiency, **this information is useful for the institution.***

(T1)

Move 15: Summarizing the study

The function of this move is to sum up the main points of the overall study. Move 15 was an optional move in the present study because it occurred only in 4 Thai Discussion sections. The key words used in this move were similar to those found in Move 13. However, some differences were observed. For example, summary or conclusive words or phrases, such as *in sum*, *in conclusion* were commonly followed by particular statements relating to overall results, while those in Move 3 were followed by specific results.

Examples:

*1) **In sum**, hedging in academic writing is commonly and frequently found in native authors' RAs, especially in the D and I sections whereas hedging is mostly found in the D and R sections of Thai authors' RAs. (I13)*

2) *To conclude, this present study investigation,* which sought to test the effectiveness of a pedagogical intervention in promoting listening development through consciousness-raising theory and the use of computer-assisted program which was newly introduced to English teaching in this university, found some obvious implications mentioned below. (T28)*

Move 16: Evaluating the study

The objective of this move is to evaluate the overall study by pointing out the limitations, indicating the contributions or evaluating the methodology. Based on the analysis, this move occurred with notably different frequencies. That is to say, this move appeared in 5 Thai Discussion sections, while it was found in 10 international Discussion sections. Both the present and the past simple tenses were used to express this move.

Move 16 Step 1: Indicating limitations

The objective of this step is to describe the limitations of the research conducted. Of the three steps, Move 16 Step 1 was the most frequent step in both datasets. This step commonly coexisted with Move 7 Step 1 (Making suggestions) or Move 7 Step 2 (Recommending further study). Six out of eight (3 from each corpus) occurred concomitantly. The present simple tense was the preferred tense used to demarcate this communicative unit. The realizations with the linguistic signals used to identify this step are shown as follows.

* NB: The mistake in the excerpt is the author's own.

Examples:

1) *The finding is relatively obscure when considering the descriptive statistics (the means and standard deviations) of the three variables of the three groups of students which are more or less the same.* (T12)

2) *It should be noted, however, that this is an exploratory study, and that the size of the corpus is quite small, being limited to 10 RA introductions from each subfield.* (I11)

Move 16 Step 2: Indicating significance/ advantage

The function of this step is to allow the authors to point out the strengths of the study which may be possible for further applications or implications. Its occurrence was relatively rare, being found only in one Thai Discussion section. The present simple tense relating to the significance of the research, such as *value*, *benefit*, *advantage*, *essential* was used. The realizations of this step are shown in the following examples.

Examples:

1) *Recognising the significance of the social interactions Thai students experienced in their daily lives offers valuable insights into the interrelationship between the informal social interactions and formal language learning that enhanced Thai students' confidence in classroom participation.* (T14)

2) *The significance of the present study lies in the fact that it was able to compare the effectiveness of narrow reading and reading plus vocabulary-enhancement activities on the types of lexical knowledge acquisition and retention in a single study by using a more careful control (see discussion in (R)) and stringent assessment standard (R).* (I22)

Move 16 Step 3: Evaluating methodology

This step is one of the choices in realizing Move 16 where authors justify research methodology concerning its strengths or weaknesses. Only 2 Thai and 3 international Discussion sections contained this rhetorical step. The lexical items used as a clue to identify this step were words relating to *design, model, approach*, which were in the form of tentative statements.

Examples:

*1) According to the finding which indicated that **the design of the program should be more creative to match learner age and preference**, this issue had been raised significantly. (T7)*

*2) **This model, however, seems less capable of explaining L2 learners' insensitivity to the number of errors involved in the present study, such as "several of the board member."** (I23)*

Move 17: Deductions from the research

This is the move where authors draw inferences about the results by suggesting what can be done to solve the problems identified by the research, pointing out the line of further study or drawing pedagogical implications. Discussion sections from the Thai corpus tended to use this move more frequently than those from the international corpus (15 and 10 in the Thai and international corpora respectively). It was the third most frequent move in the Thai corpus. To realize this move, the present simple tense and modal verbs were commonly found.

Move 17 Step 1: Making suggestions

This step allows authors to highlight what the research contributes to the existing knowledge in the field. Also, the authors provide some guidelines

resulting from the research findings for the reader in order to solve the problems identified by the research. Words such as *recommend*, *suggest*, modal verbs were used frequently in this step.

Examples:

1) *Moreover, **it would be highly recommended that**, if possible, the university supports teachers to develop more self-access grammar materials, preferably in the university websites.* (T23)

2) *Although language proficiency might play a role here, **it must be remembered, too, that it is not necessarily an advantage to hear speech from...***(I17)

Move 17 Step 2: Recommending further research

This step states some possible areas for future studies. It was found that Move 17 Step 2 was an optional step in both two datasets, occurring in only 6 and 7 Discussion sections in the Thai and international corpora, respectively. As for its frequency, it was contrary to that found in Yang and Allison's (2003) study, which was comparatively high. This step is signaled by words/phrases such as 'further studies/research', 'future studies/research', 'more studies are needed'.

Examples:

1) *In addition, since there should be other predictors that account for the remaining unexplained portion of the variation in the CBT scores of all groups, **more studies are needed** to explore other potential independent variables.* (T12)

2) ***Further research is necessary** to identify the interactional contexts that push learners to produce modified output in the absence of negative feedback and to determine whether self-initiated modified output is also predictive of ESL question development.* (I18)

Move 17 Step 3: Drawing pedagogical implication

This step allows authors to state the pedagogical significance of the study or indicate the necessity for pedagogic changes. Although the frequency of occurrence of Move 17 Step 3 was relatively low in both corpora, the frequency in the Thai corpus was more than twice that found in the international corpus (Thai: 8 and international: 3). The reason for the use of this step in the Thai corpus may be due to the fact that there is a need to enhance Thai students' English proficiency. Research findings may serve this particular need. Therefore, Thai authors are likely to generalize their findings in order to develop their pedagogy. Certain key words relating to the application of the results to learning and teaching contexts are commonly used to signal address this step.

Examples:

- 1) *The findings of this study suggest a number of pedagogical implications, most of which rest on the teachers' accountability. First of all, the students' L1 rhetorical conventions were helpful for paragraph writing. (T25)*
- 2) *These findings also have practical implications for EFL vocabulary instruction. (I22)*

4.1.4.2 Move Structure of the Discussion Section from the Two Corpora

Table 4.8 The Frequent Move Structures of the Discussion Section in the Two Corpora

The Move Structures	Thai corpus		International corpus	
	No. of Articles	%	No. of Articles	%
M12-M14-M12-M14	1	3.33	5	16.66
M12-M14	3	10	-	-

Based on the analysis, there was no straightforward linear structure (M11-M12-M13-M14-M15-M16-M17) which appeared in both sets of data. Only two move structures were used in some Discussion sections (see Table 4.8). The limited typical move structure shared among the Discussion sections indicates that the organization of the Discussion section of both corpora was rather diverse. In other words, the Discussion sections of both sets of data were constructed from a variety of different move structures.

It was found that most Discussion sections in both datasets showed a cyclical pattern (86.66 %: international corpus and 76.66 %: Thai corpus). It was found that Move 14 (Commenting on results) and Move 12 (Reporting results) were the most cyclical moves in both corpora. This is consistent with Yang and Allison's (2003) findings, which reported that Move 14 was the most cyclical move. Move 13 (Summarizing results), Move 15 (Summarizing the study), and Move 16 (Evaluating the study) were non-cyclical moves in the Thai corpus, while only Move 13 was a stable move in the international corpus. Move 17 was also found to be of a recycling

nature, particularly in the Thai Discussion sections. It always recurred in the sequences with either Move 14 or Move 16.

In a nutshell, seven moves in the proposed model were found in the current study. Move 14 (Commenting on results) was the most frequent move in both corpora, while the second most frequent move was Move 12 (Reporting results). Besides these two moves, the remaining five moves were considered as optional. There was no linear type of move structure found in any Discussion section of the two sets of data. Move 14 was the most cyclical move in both corpora.

4.1.5 The Conclusion Section

4.1.5.1 The Frequency of Each Move and Step

The analysis of the Conclusion section is based on Yang and Allison (2003). Their move model consists of three major moves. The rhetorical moves with their frequency of occurrence are presented in Table 4.9.

Table 4.9 Frequency of Moves and Steps Found in the Conclusion Section in the Two Corpora

Moves/Steps	Frequency	
	Thai Corpus (N=24)	International Corpus (N=30)
M18: Summarizing the study	20 (83.33%)	28 (93.33%)
M19: Evaluating the study	5 (20.83%)	25 (83.33%)
S1: Indicating significance/advantage	3	12
S2: Indicating limitations	1	15
S3: Evaluating methodology	2	8
M20: Deductions from the research	10 (41.66%)	26 (86.66%)
S1: Recommending further research	5	22
S2: Drawing pedagogic implication	7	11

Note 1. N= refers to the total number of analyzed RAs in this study

2. % refers to the frequency of occurrence of a move

Based on the analysis, three moves were found and their frequencies of occurrence were different. With regard to its frequency, Move 18 (Summarizing the study) was a conventional move in both datasets, occurring at a frequency of 83.33 % in the Thai corpus and 93.33 % in the international corpus. A marked difference was found between the frequency of Move 19 and Move 20. The results showed that the frequency of Move 19 (Evaluating the results) of the international corpus was more than three times higher than that of the Thai corpus (international: 80 % and Thai: 20.83 %). Also, the frequency of Move 20 (Deductions from the research) of the international corpus was twice that of the Thai corpus (international: 86.66 % and Thai: 41.66%). Because of their frequencies, these two moves were considered as optional in the Thai corpus, while they were considered as conventional in the

international corpus. Each move and step together with their realizations is illustrated as follows.

Move 18: Summarizing the study

The primary aim of this move is to summarize the research by highlighting the findings. The occurrences of the move, in the present study, complied with Yang and Allison's (2003) findings which found a higher frequency of the summarizing move than for the other two moves. The frequency of this move was over 80 % in each corpus; this therefore it is considered as a conventional move. To realize this move, restating the research objectives and/or reviewing results briefly were usually found. The lexical signals which were used to signal a conclusion were in the form of the present or the past simple statements were in this move.

Examples:

1) *This present study is an attempt to provide alternative insights on language anxiety from a student perspective. **The study found two major** tactics of anxiety reduction initiated by English Major students at Rajabhat University. (T9)*

2) *In order to contribute to the need for further research on the value of providing corrective feedback to L2 writers (R), **the present study investigated** the extent to which different types of feedback on three targeted error categories helped L2 writing improve the accuracy of their use in new pieces of writing. **It found that** the combination of full, explicit written feedback and one-to-one conference feedback enabled them to use the past simple tense and the definite article with significantly greater accuracy in new pieces of writing than was the case with their use of prepositions. (I8)*

Move 19: Evaluating the study

This is the move where authors justify the study using three available options, including ‘Indicating significance/advantage’, ‘Indicating limitations’, and ‘Evaluating methodology’. The frequency of occurrence of this move was noticeably different between the two sets of data: the frequency of the Thai corpus was a little over 20 %, while in the international corpus was 80 %.

Move 19 Step 1: Indicating significance/ advantages

The functions of this step are to state the importance or the usefulness of the study in terms of the study’s applications or implications. Statements in the present simple tense were commonly used to indicate the contributions of the study. Prominent words used to signal this step include *provide*, *improvement*, *noteworthy*, and *useful*.

Examples:

1) *Moreover, the investigation of test takers’ strategies in doing the WBCT **provided information of** how students employed their knowledge in doing the test. This can lead to **the improvement in** language learning and teaching. (T1)*

2) *Because little to no research has specifically investigated the effect of different direct feedback options on improved accuracy, **the findings of the present study are noteworthy**. (I8)*

Move 19 Step 2: Indicating limitations

The communicative function of this step is to state the weak points of the study. The drawbacks indicated in a study may affect part or all of the research results. In the frequency of this step there appeared to be a striking difference between

the two corpora. It was found in only one Thai Conclusion section, conversely, it was found in fifteen international Conclusion sections.

Examples:

1) *However, caveats are in order. First, despite efforts in making the two corpora equal in terms of size and representativeness, the corpora are somewhat disparate due to, for example, the absence of specialized journal in Thai, the instability of Thai journals, and the small number of article written in Thai.* (T17)

2) *Notwithstanding the positive effects of pre-university level writing experience in L1 and L2, the findings for this small-scale study **should be viewed cautiously**. Because the sample size was small, the study was in a specific context, and it dealt with a particular group of students, all with very little L1 and L2 university writing experience, the findings cannot be generalized beyond such a group.* (I7)

Move 19 Step 3: Evaluating methodology

This is the step where authors state the strengths and weaknesses of the research methodology. As shown in Table 4.9, Move 19 Step 3 was less frequent in both datasets (2 in the Thai corpus and 8 in the international corpus). To express this step, modal verbs in the passive form were commonly used. The two examples below are realizations of this step.

Examples:

1) *Given that this writing test makes use of computerized tools that are easily available in many educational institutions (MS Word Processor), with some adjustments (such as increasing time allotment or decreasing the number of drafts required, etc.) the T-CBWT **could initially be administered** as a formative test.* (T11)

2) *This method can be easily adapted to test other linguistic structures, such as past tense, articles, and word orders, by using sentences with different types of errors.* (I23)

Move 20: Deductions from the research

The purpose of this move is to state, with respect to the overall study, what the research contributes to existing knowledge in the field. Two options are used to realize this move, namely 'Recommending further research', and 'Drawing pedagogical implication'. Compared to the international corpus, the occurrence of this move in the Thai corpus was relatively less frequent. The frequency of the international corpus was more than twice that of the Thai corpus.

Move 20 Step 1: Recommending further research

The communicative function of this step is to provide some practical guidelines for future research studies, which can be useful for prospective researchers. As reflected in Table 4.9, each corpus showed marked differences in its frequency. For example, 5 out of 10 (20 %) Thai Conclusion sections contained this step; conversely, it occurred in 22 out of 26 (84.62 %) of the international Conclusion sections. Words/Phrases clues for identifying this step were some modal verbs or adjectival phrases such as 'further studies/research', 'future studies/research', 'more studies are needed'.

Examples:

1) *Further studies should focus on investigating efficiency of the speaking anxiety reduction according to students' perspective since language teachers can reinforce the students' speaking improvement.* (T9)

2) *Further research, therefore, should control for the independent contribution of L2 proficiency and writing ability so that more warranted statements about formulation processes can be made.* (I2)

Move 20 Step 2: Drawing pedagogical implications

This is the step where the authors offer some useful applications for language teaching and learning. In Yang and Allison's (2003) study, the frequency of this step was relatively high. However, its frequency in the two sets of data was considered as optional. To realize Move 20 Step 2, the present simple tense was usually used. Certain words, such as *implication, pedagogy, application, help, yield* and modal verbs were extensively used.

Examples:

1) *The findings from the vocabulary test yield some implications for EAP/ESP pedagogy.* (T8)

2) *The findings of the present study may have some implication for EAP writing pedagogy.* (I11)

4.1.5.2 Move Structure of the Conclusion Section from the Two Corpora

Table 4.10 The Frequent Move Structures of the Conclusion Section in the Two Corpora

The Move Structures	Thai corpus		International corpus	
	No. of Articles	%	No. of Articles	%
M18-M20	7	29.16	3	10
M18-M19	4	16.66	3	10
M18-M19-M20	-	-	7	23.33

As shown in Table 4.10, three moves structures were shared by some of the Conclusion sections with different degrees of frequency. The M18-M9-M20 pattern was found only in the international corpus, at a frequency of 23.33%. This is in line with Yang and Allison's (2003) study that the three moves were organized in a linear structure. However, such a straightforward pattern did not apply to any of the Thai Conclusion sections. The other two move structures that were shared by both corpora were M18-M19 and M18-M20 patterns. In Table 4.10, it can be seen that the Thai Conclusion sections were likely to be constructed using the M18-M20 structure.

Besides the strict chronological move patterns, there were other move patterns containing three major moves, but an/some intervening move(s) were also found in the international corpus (e.g. M18-M20-M19-M20 and M18-M19-M20-M19-M20). Based on the move structures found in both datasets, it can be said that the structures of international Conclusion sections was conformed more to the proposed model than those of the Thai Conclusion sections. However, with the smaller size of the Thai corpus (only 24 Conclusion sections), this may be one of the possible reasons for the frequency of the move structures in the Thai Conclusion sections.

The results revealed that there were no recycling moves in the Thai corpus. This may be affected by the limited use of Move 19 and Move 20. For the international corpus, a cyclical nature was found in the form of the repetition of Move 19 and Move 20 in the move sequences. Each of these two moves was found to either recurred solely in the sequences (e.g. M18-M19-M20-M19) or coexisted in the sequences (e.g. M18-M19-M20-M19-M20-M19-M20) as found in the following cases: I22, I26, and I27. That is to say, two moves (Move 19 Step 2 and Move 20 Step

1) occurred alternatively in the sequence (e.g. limitation-recommend further study-limitation-recommend further study). This means the authors preferred to focus point by point rather than to present the overall drawbacks in a paragraph and then state the directions for future research in another paragraph.

In conclusion section, three moves proposed in Yang and Allison's (2003) model were found in both corpora. Move 18 was the prominent move in the two datasets, which was followed by Move 20 and Move 19, respectively. The frequency of each move in the Thai corpus was relatively less than in the international corpus, especially the frequency of Move 19 (Evaluating the study). The linear pattern of the move structure (M18-M19-M20) was found only in the international corpus. The cycling of move is found only in the international corpus and Move 20 (Deductions from the research) was the most cyclical move.

4.1.6 Distinct Contrastive Findings between the Two Corpora

Based on the analysis, the marked differences in terms of rhetorical moves found between the two corpora can be summarized as follows:

1. The frequency of Move 2 (Establishing a niche) was slightly lower than that in the international corpus (Thai corpus: 80% versus international corpus: 100%).
2. The most frequent move structure of the Thai corpus was the M1-M2-M3 pattern, while the recycling structure (M1-M2-M3-M1-M2-M3) was the preferred pattern employed in the international corpus.
3. Move 4 Step 2 (Recounting steps in data collection) and Move 4 Step 3 (Justifying the data collection procedures) were not found in the Thai corpus.

4. The frequency of occurrence of Move 5 Step 4 (Justifying the methods of measuring variables) in the international corpus was twice more than that of the Thai corpus.
5. Move 15 (Summarizing the study) was found only in the Thai corpus, while it was omitted in the international corpus.
6. In the international corpus, the frequency of Move 19 (Evaluating the study) in the international corpus was four times higher than that in the Thai corpus, and the frequency of Move 20 (Deductions from the research) was more than three times higher than that in the Thai corpus.

These discrepancies will be discussed in detail in the Discussion chapter.

4.2 Formulaic Sequences in Each Move Found from the Two Corpora

In response to the second question: What formulaic sequences are typically found in each move of research articles in the two corpora? , this section contains formulaic sequences identified from the two sets of data. The selected formulaic sequences in the present study are co-occurring expressions which appear in at least three different RAs in a corpus (see Chapter 3). Lists of formulaic sequences drawn from their contexts in the two corpora are presented in the following tables. Note that the parenthetical citations appearing in the original RAs are replaced by generic (R), which is not contingent upon the number of references.

4.2.1 Introduction

Table 4.11 List of Formulaic Sequences and Their Contexts in the Introduction

Section

Introduction Section			
Moves	Steps	Thai Corpus	International Corpus
Move 1: Establishing a territory		<p>There (there) are many There are many theorists interested in... There are many ways to... There are many reasons why...</p> <p>A (a) number of (R) has conducted a number of... A number of studies have been conducted to... ...particularly, a number of...</p> <p>has been (a/widely) has been widely investigated... has been widely accepted... has been widely used in... has been a vital... has been a topic of great... there has been a controversy against the...</p> <p>studies have confirmed Many studies have confirmed the... The recent studies have confirmed... Many ESL/EFL studies have confirmed the...</p> <p>play an important role play an important role in this study plays an important role in language teaching ... are believed to play an important role...</p> <p>have found that Researchers have found that... (R) have found that... Researchers have found that...</p>	<p>an important role in playing an important role in... play an important role in... play an important role in the...</p> <p>the role of the role of learning strategies has gained... there has been increased interest in the role of... there has been considerable debate about the role of voice in...</p> <p>Research (research) on the Research on the development of... this review of research on the... particularly in research on the role of...</p> <p>pointed out by As pointed out by... As has been pointed out by many researchers... As pointed out by many researchers... As rightly pointed out by... As succinctly pointed out by...</p> <p>A (a) number of studies (have) An increasing number of studies have also been investigating whether... A number of studies have explored... number of studies have already explored the... Indeed , a number of studies have reported such benefits of... A number of studies (R) have sought to assess the... Recently, a number of studies reported...</p>

Table 4.11 List of Formulaic Sequences and Their Contexts in the Introduction Section (Cont.)

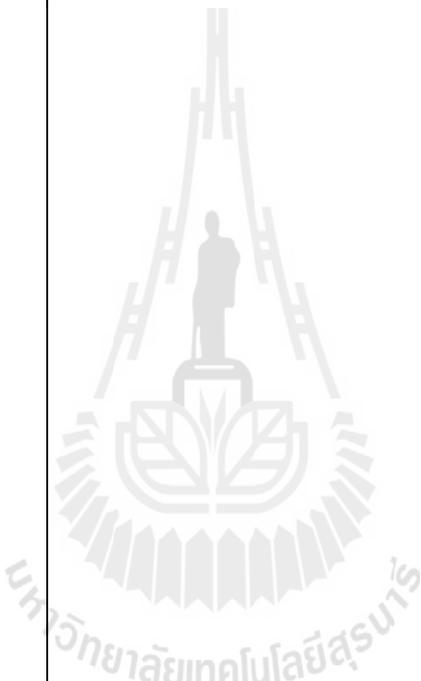
Introduction Section			
Moves	Steps	Thai Corpus	International Corpus
Move 1: Establishing a territory			<p>Several (several) studies have Several studies have examined the... several studies have shown... several studies have been carried out to determine...</p> <p>there has been interest in the there has been a growing interest in the study of... there has been a growing interest in the... there has been increased interest in the role of...</p> <p>...attention to the... drew researchers attention to the... drew attention to the concept of... draw learners attention to the...</p> <p>It has been It has been suggested that.... It has been observed that.... It has been widely accepted</p> <p>that... It has been repeatedly shown that... It has been reported that... It has been established, for instance, that,....</p>
Move 2: Establishing a niche	Step1A: Indicating a gap		<p>little research has been done very little research has been done on... little research has been done to determine the... little research has been done within the...</p>

Table 4.11 List of Formulaic Sequences and Their Contexts in the Introduction Section (Cont.)

Introduction Section			
Moves	Steps	Thai Corpus	International Corpus
Move 2: Establishing a niche	Step1A: Indicating a gap	-	few studies have Only a few studies have attempted to directly investigate... few studies have yielded... few studies have investigated this...
Move 3: Presenting present work	Step 1: Announcing present work	<p>objectives of the The main objectives of the study were... The specific objectives of the study were to... The two main objectives of the study were as follows...</p> <p>purpose of this study is to The main purpose of this study is to investigate how... The primary purpose of this study is to examine the... the main purpose of this study is to explore whether...</p> <p>study aims to The study aims to examine... The present study aims to shed light on how... This present study aims to investigate how... This study aims to investigate the...</p> <p>to investigate the This study, thus, aims to investigate the relationships among the... It is deemed to investigate the... ...to investigate the frequencies of... ...to investigate the relationships between the use of...</p>	<p>The (the) present/current study The present study addresses the ... The present study was designed specifically to... The present study attempted to... The present study builds on... The present study aims at... The present study therefore aims to... The present study thus examines the... The present study examined a... The present study was an attempt to... The present study focuses on... Hence the present study aims to investigate... Hence the present study intends to shed light on... Thus the present study confined itself to... The purpose of the present study is to build on... In the present study, we wish to investigate... The present study attempts to explore... The present study constitutes an attempt to explore... The present study also tests... The current study explores the... The current study builds on... The current study taps into... The aim of the current study is therefore to... In the current study, the researcher wished to... Hence, the current study allows for the...</p>

Table 4.11 List of Formulaic Sequences and Their Contexts in the Introduction Section (Cont.)

Introduction Section			
Moves	Steps	Thai Corpus	International Corpus
Move 3: Presenting present work	Step 1: Announcing present work	-	<p>The (the) present/current study... (cont.) The current study investigates the... The current study will shed some light on the... The aim of the current study was to examine...</p> <p>In this study In this study, we are concerned with... In this study, we are focusing particularly on... In this study, we investigate how... In this study, we report...</p> <p>The (the) aim of The aim of the present paper is to... The aim of the current study is therefore to explore... The present study had the aim of gaining... The aim of the current study was to examine the...</p>
Move 3: Presenting present work	Step 2: Presenting research questions or hypothesis	-	<p>The (the) following research questions... The following research questions guided this exploratory study:... The following research questions were addressed in the study... The following research questions were addressed... We focus on the following research questions...</p>

4.2.2 Methods Section

Table 4.12 List of Formulaic Sequences and Their Contexts in the Methods Section

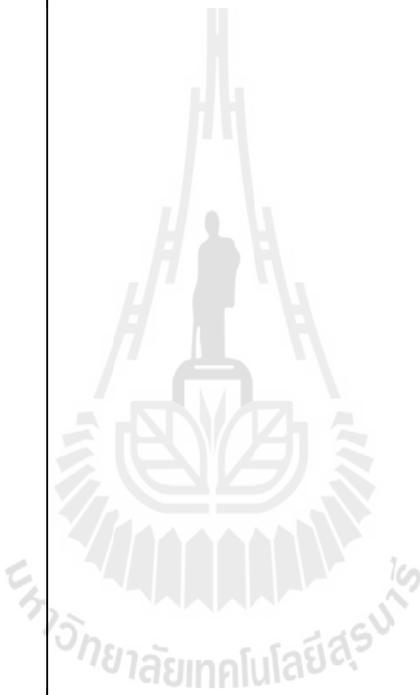
Methods Section			
Moves	Steps	Thai Corpus	International Corpus
Move 4: Describing data collection procedures	Step 1: Describing the sample	<p>The subjects were The subjects were mixed-ability students. The subjects were from... The subjects were ...</p> 	<p>A total of A total of 52 participants were involved in the study. A total of 105 texts were taken from... A total of 50 performances per...</p> <p>The participants were The participants were a random sample of... The participants were controlled for... The participants were assigned to...</p> <p>The participants in The participants in this study were..(number of participants).. The participants in this study were..(number of participants).. were..(number of participants)..</p> <p>Participated in the/this Altogether 52 learners participated in the project. Forty listeners participated in the current study. One hundred and eighty-eight subjects from...participated in the study. Four groups of...participated in this study. Altogether, students from...participated in this study. Three groups of subjects participated in this study.</p>

Table 4.12 List of Formulaic Sequences and Their Contexts in the Methods Section (Cont.)

Methods Section			
Moves	Steps	Thai Corpus	International Corpus
Move 5: Delineating procedures for measuring variables	Step 2: Describing research instruments	<p>The research instruments... The research instruments consisted of the... I then used it as one of the research instruments. The research instruments consisted of two listening tests...</p> <p>The questionnaire was The questionnaire was in ... The questionnaire was written in... The second part of the questionnaire was open-ended...</p> <p>The test consisted of The test consisted of ninety-two... The test consisted of 10 single complicated... The test consisted of 50 questions including... The test consisted of four parts with...</p>	<p>used in the The five test tasks used in the present study were of... Two versions of the booklet used in the... A list of the instruments used in the present study.</p>
Move 5: Delineating procedures for measuring variables	Step 3: Explaining the method of measuring variables	<p>was/were asked to Each pair of students was asked to take turns telling... Each participant was asked to complete the... Each student was asked to read... They were asked to spend no more than... 46 students were asked to engage in each of the... The students were asked to rate their ability in... Three specialists were asked to examine the... were asked to return it in the...</p>	<p>were instructed to Three treatment groups were instructed to pay attention to... They were instructed to read as quickly as possible... The teachers were instructed to explain to the students in the... Each pair were instructed to agree on only... Participants were instructed to read the...</p> <p>were required to Participants were required to listen to...</p>

Table 4.12 List of Formulaic Sequences and Their Contexts in the Methods Section (Cont.)

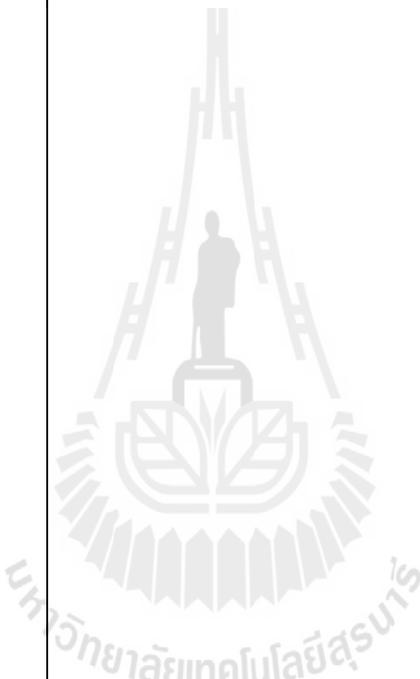
Methods Section			
Moves	Steps	Thai Corpus	International Corpus
Move 5: Delineating procedures for measuring variables	Step 3: Explaining the method of measuring variables	<p>administered to the Both instruments were administered to the... The WBCT was administered to the subjects in the... The T-CBWT (posttest)was administered to the...</p> 	<p>The students were required to answer reading comprehension... The learners were required to write the...</p> <p>were encouraged to They were encouraged to do their best... The teachers were encouraged to take notes regarding the... They were encouraged to ask the experimenter for the... They were not permitted to use their dictionary and were encouraged to guess if...</p> <p>were presented in All the verbs were presented in the past tense forms. The sentences were presented in a... Their sentences were presented in the... Utterances were presented in a different random order...</p> <p>were administered in Two types of self-assessments were administered in this study. Test components were administered in the following... The oral production tests were administered in a...</p> <p>were told that Children were told that students wanted to... They were told that they were to answer questions about... They were told that they could take the...</p> <p>In the first In the first part of the data collection session, the... In the first worksheet , each sentence in the... In the first activity, the...</p>

Table 4.12 List of Formulaic Sequences and Their Contexts in the Methods Section (Cont.)

Methods Section			
Moves	Steps	Thai Corpus	International Corpus
Move 5: Delineating procedures for measuring variables	Step4: Justifying the methods of measuring variables	-	<p>was based on The administration of the tasks was based on the belief that... The decision to include... was based on findings in... TE formats used in this study was based on their frequency in... Reading Task 2 was based on a short interview with...</p>
Move 6: Elucidating data analysis procedures	Step1: Relating data analysis procedures	<p>The data were The data were analyzed to answer the three research questions. The data were analyzed in two steps for each of the... After the data were collected, analyzed and presented,...</p> <p>were carried out Range of score for each variable were carried out... Comparisons of mean scores from the test were carried out using... Statistical measures of ... were carried out individually and</p> <p>was used to A t-test was used to investigate the differences between... The t-test was used to determine if there is any difference between... The Wilcoxon Signed Ranks Test was used to compare the main... Percentage was used to present the... Relevant information was used to supplement the findings from ... Open coding was used to take the data...</p>	<p>The data were All the data were examined first for the... The data were analyzed a second time after a... The data were compared using the...</p> <p>was carried out The phonological analysis was carried out by... Segmentation was carried out in our corpus by considering both... Scoring of the transcriptions was carried out using the...</p> <p>were identified as The following 13 words were identified as... The following features were identified as ... Pause group boundaries were identified as...</p>

Table 4.12 List of Formulaic Sequences and Their Contexts in the Methods Section (Cont.)

Methods Section			
Moves	Steps	Thai Corpus	International Corpus
Move 6: Elucidating data analysis procedures	Step1: Relating data analysis procedures	<p>by using the Then, percentage was calculated by using the... The level of ...were determined from percentages by using the following... An acoustic method is also applied in this study by using the...</p> <p>to examine the Open coding was used to take the data obtained apart and to examine the... To examine the frequency of strategies used by... A Pearson correlation coefficient was used to examine the relationships between... The Pearson Product-Moment correlation was also utilized to examine the relationships between...</p>	

4.2.3 Results Section

Table 4.13 List of Formulaic Sequences and Their Contexts in the Results Section

Results Section			
Moves	Steps	Thai Corpus	International Corpus
Move 7: Preparatory information		<p>are presented in The results are presented in the following table 2. Ability group are presented in Table... Since all examples that are presented in this study are...</p>	<p>are presented in Table The results are presented in Table 7. Object questions are presented in Table... Immediate posttest are presented in Table...</p> <p>are shown in Table Combination are shown in Table... Suggestion strategy are shown in Table...</p>

Table 4.13 List of Formulaic Sequences and Their Contexts in the Results Section (Cont.)

Results Section			
Moves	Steps	Thai Corpus	International Corpus
Move 7: Preparatory information			<p>are shown in Table (cont.) The hands-on experience items are shown in Table...</p> <p>are summarized in Table The results are summarized in Table... The results are summarized in Table... L1 and L2 are summarized in Table...</p>
Move 8: Reporting results		<p>were significantly higher than Scores from the post-test were significantly higher than the scores from the... The results revealed that... were significantly higher than the... Explicitness scores of ... were significantly higher than those of the...</p> <p>The results revealed that The results revealed that the posttest mean scores of... The results revealed that all... The results revealed that two pairs of means were... The results revealed that their skills in...</p> <p>The results showed that The results showed that there were no significant... The results showed that the generalizability... The results showed that individual factors were...</p> <p>The results of the The results of the repeated measures MANOVA on ... The results of the TOEIC test were not consistent with... The results of the two-way analysis of variance revealed ...</p>	<p>(The) results show that The results show that the correlation between... The results show that the... The results show that both groups demonstrated... Results show that at the posttest there were...</p> <p>The results for The results for this sample indicate that... The results for the higher level learners, Table 5 shows... The results for the following three measures showed a...</p> <p>The results of (the) The results of the ANOVA analysis of the... The results of the repeated-measures ANOVA for... The results of the descriptive statistics...revealed that... The results of the logistic regression indicated that... The results of the ANOVA were parallel to... The results of the global test indicate that... The results of the discourse analysis for accuracy were... The results of a two-way repeated-measures ANOVA of...showed...</p>

Table 4.13 List of Formulaic Sequences and Their Contexts in the Results Section (Cont.)

Results Section			
Moves	Steps	Thai Corpus	International Corpus
Move 8: Reporting results		<p>Results indicated that... Results indicate that the two groups are significantly different. The results indicate that their skills in... The results indicate that, in order to...</p> <p>...no significant difference... There is no significant difference at .05 level. ...no significant difference between... ...no significant difference from the... ...no significant difference while the...</p> <p>(As) shown in Table As shown in Table 1, most.. As shown in Table 5, the students showed... However, the ANOVA result did not reveal any significant difference between ... as shown in Table 10. Data are shown in Table 5 and... Lexical items shown in Table 3 show that... The Kruskal-Wallis H test as shown in Table 2.1 revealed results of...</p> <p>found that the It was found that the students from... They found that the grammatical rules helped... It is found that the percentage of the... It was found that the PI group committed more significantly errors for...</p>	<p>There was a... There was a significant effect for... There was a nonsignificant effect of... There was a decrease of 44.80% in... There was a significant difference between the...</p> <p>There was no... There was no difference in the number of... There was no incidence that the... There was no significant effect for... There was no difference in the number of...</p> <p>The difference was (not)... The difference was greater for... The difference was not significant; however, a... The difference was significant...</p> <p>There was also There was also no correlation between... There was also a gain of... There was also a significant main effect for...</p> <p>was not significant Time was not significant... Received feedback was not significant... The difference was not significant...</p>

Table 4.13 List of Formulaic Sequences and Their Contexts in the Results Section (Cont.)

Results Section			
Moves	Steps	Thai Corpus	International Corpus
Move 8: Reporting results		<p>As can be seen (in) As can be seen in Figure 4, the... As can be seen in Table 3, the... As can be seen in Table 1,... As can be seen , the ... As can be seen Table 7, all of the...</p>	<p>As shown in As shown in the figure,... As shown in Example... As shown in Fig. 4, for ... To be employed by the subjects as shown in the... In fact, as shown in Figure 1 the participants... As shown in Table 2, more... As shown in Table 3, the ... As shown in Table 1 , regarding... As shown in Table 2 , 9 of 15 learners in the...</p> <p>revealed a significant ...revealed a significant interaction effect between... ...revealed a significant difference for... ...revealed a significant difference in all three experimental...</p> <p>revealed that the ...revealed that the instructed group... ...revealed that the null hypothesis of... ...revealed that the 12 texts chosen shared similar types of... ...revealed that the listeners did rely on some....</p> <p>differences were found Significant differences were found in specific categories of... The differences were found to be significant... significant differences were found across levels for...</p> <p>As illustrated in As illustrated in Heading A,... As illustrated in the English essay written by... As illustrated in Table...</p>

Table 4.13 List of Formulaic Sequences and Their Contexts in the Results Section (Cont.)

Results Section			
Moves	Steps	Thai Corpus	International Corpus
Move 8: Reporting results			<p>indicated that the 74.2% indicated that the course counted toward a... L also indicated that the ... Results indicated that the overall syntactic complexity of... Test of standardized residual indicated that the two cells of...</p> <p>can be seen (in) It can be seen that in using the... It can be seen that while... This effect can be seen in Figure... As can be seen in Tables 2 and 3, the... can be seen in his learning from the literature ...</p> <p>statistically significant differences There were no statistically significant differences among... Findings display statistically significant differences... Statistically significant differences in...</p>
Move 9: Commenting on Results	Step 1: Interpreting results	<p>It can be It can be interpreted that the... It can be seen that in addition to the... It can be said that...</p>	<p>results suggest that These results suggest that the... These results suggest that the majority of... The results suggest that NSs are...</p> <p>it seems that It seems that these teacher educators felt the... It seems that there is little emphasis on... It seems that good performers most probably benefit more ... It seems that our writers choose to...</p>

4.2.4 Discussion Section

Table 4.14 List of Formulaic Sequences and Their Contexts in the Discussion

Section

Discussion Section			
Moves	Steps	Thai Corpus	International Corpus
Move 11: Background in formation			<p>This study was This study was set up to collect empirical evidence of... This study was designed to gain insights into... Another purpose of this study was to investigate the...</p> <p>The present study (was) In the present study, we investigated... The aim of the present study was to investigate the... The present study was among the... The second goal of the present study was to identify...</p>
Move 12: Reporting results		<p>found in the It was also found in the current study that... These tense errors were found in the... ...found in the study indicate that...</p> <p>the results of The results of the study reveal that... The results of the measurement were... The results of the investigation demonstrated that... The results of this study were opposite to the assumption.</p> <p>show that the These results show that the... The findings show that the relationship between... The results show that the non-native group tends to...</p>	<p>The results of the More important, however, are the results of the... The results of the analysis revealed that... The results of the current study indicate that...</p>

Table 4.14 List of Formulaic Sequences and Their Contexts in the Discussion Section (Cont.)

Discussion Section			
Moves	Steps	Thai Corpus	International Corpus
Move 12: Reporting results		<p>It was found that Moreover, it was found that the... From the findings, it was found that... It was found that the ... did become much longer than the...</p>	
Move 14: Commenting on results	Step1: Interpreting results	<p>It is (very) likely that the It is likely that the language anxiety reduction could be... It is likely that the WBCT can differentiate the... It is very likely that the scope of the study being ...</p> <p>it is possible that It is possible that ESL students are... It is possible that students speaking anxiety might stem from... It is possible that the subjects in this study have...</p> <p>It may be It may be very difficult for students to... It may be fortunate that previous researchers did... It may be understood that the interpretation of...</p> <p>This suggests that This suggests that the students can... This suggests that enlarging the repertoire for... This suggests that test takers did not...</p>	<p>This suggests that This suggests that in second language acquisition... This suggests that in order for readers to... This suggests that the time reduction has not...</p> <p>It seems that It seems that previews and reviews are not... It seems that variation in the... It seems that, as ... It seems that the listeners did not... It seems that the use of...</p> <p>It thus seems It thus seems that among ... It thus seems likely that all of the... It thus seems likely that our...</p> <p>seem to be Results seem to be increasingly... Similar occasion, ...would seem to be the most plausible of the... It would seem to be easier, more effortless, and more... These forms seem to be used to... The learners seem to be sensitive to the difference between...</p> <p>It is possible (that) It is possible that the poor quality of... It is possible that these thought-bubbles indicated that... It is possible that the... It is possible an indication of... It is possible , then , that the...</p>

Table 4.14 List of Formulaic Sequences and Their Contexts in the Discussion Section (Cont.)

Discussion Section			
Moves	Steps	Thai Corpus	International Corpus
Move 14: Commenting on results	Step1: Interpreting results		<p>might have been might have been more... might have been the underlying reason for... might have been perceived by some students as... might have been equivalent to that of the...</p> <p>indicated that the indicated that the addition in the ... indicated that the ... had a slightly... indicated that the main verb will take a...</p>
	Step2: Comparing results with literature	<p>The results of Unlike the results of the ..(R),... According to the results of ..(R)..s' study Similar to the results of ...(R).. 's study</p> <p>are/is consistent with The results are consistent with...(R)... The results are consistent with those of ..(R).... The results are consistent with ..(R)'s study This finding is consistent with the study by several researchers. This is consistent with ..(R)'s.. findings This finding is consistent with ..(R)'s finding that...</p>	<p>(is) in line with This result is in line with..(R)'s... This finding is in line with previous studies that... The present findings are not in line with some recent research on... They are in line with results found in studies conducted in... This observation goes in line with the...</p> <p>the findings from Based on this, ...,together with the findings from previous research, shows that ... The findings from these studies and the present study offer... It has resonated well with the findings from L1 research that...</p>

Table 4.14 List of Formulaic Sequences and Their Contexts in the Discussion Section (Cont.)

Discussion Section			
Moves	Steps	Thai Corpus	International Corpus
Move 14: Commenting on results	Step2: Comparing results with literature	<p>be similar to The results are similar to the findings of... This present study was similar to (R) in that... The findings about ... were similar to the findings of...</p>	-
	Step3: Accounting for results	<p>be explained by the This can be explained by the ... This process may be explained by the nature of... This phenomenon can be explained by the ... which is... The fact that ... could be explained by the fact that...</p> <p>(might) be due to It might be due to the ... It might be due to the ... of... This might be due to ... of... This could be due to the fact that the... The two languages can be due to the scope of...</p>	<p>reasons for the There are two possible reasons for the effectiveness of... A few factors which may explain the reasons for the... There may be three reasons for the difference in results</p> <p>Explanation(s) for this/the A possible explanation for this difference could be linked to... One possible explanation for this finding is that the... Reference to ..., gave some explanation for this... An alternative explanation for the...could be a... In looking for other explanations for this finding, it is...</p>

Table 4.14 List of Formulaic Sequences and Their Contexts in the Discussion Section (Cont.)

Discussion Section			
Moves	Steps	Thai Corpus	International Corpus
Move 14: Commenting on results	Step3: Accounting for results		<p>be due to This may be due to the fact that the... This might partly be due to differences in... This would be due to an effect of... This may be due to the fact that these... I would like to raise another possibility, namely the avoidance of...may also be due to the ...</p> <p>can (not) be explained in term of Although this effect can be explained in terms of ... Treatment period can be explained in terms of ... RA introductions cannot be explained in terms of...</p>

4.2.5 Conclusion Section

Table 4.15 List of Formulaic Sequences and Their Contexts in the Conclusion Section

Conclusion Section			
Moves	Steps	Thai Corpus	International Corpus
Move 18: Summarizing the study		<p>findings from the The findings from the test reveal that ... The findings from the study indicate the differences in... Findings from the experiment revealed the effectiveness of...</p>	<p>The results of (the) The results of the present study clearly show that... The results of the study show that there is a certain degree of... The results of this study suggest that... The results of the present study indicate that...</p>

Table 4.15 List of Formulaic Sequences and Their Contexts in the Conclusion Section (Cont.)

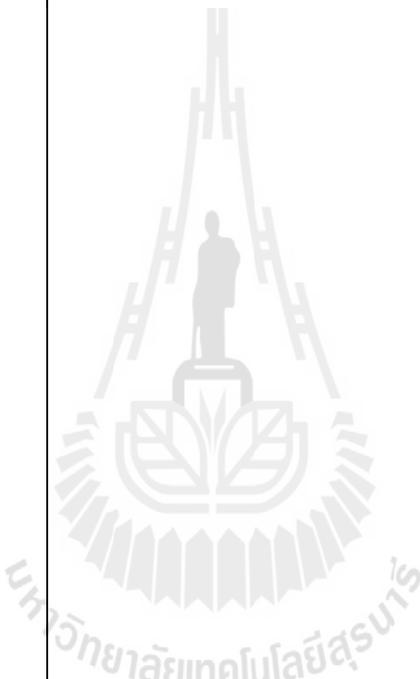
Conclusion Section			
Moves	Steps	Thai Corpus	International Corpus
Move 18: Summarizing the study			<p>The present study The present study investigated a number of features of... The present study examined the relative effects of... The results of the present study clearly show that... The aim of the present study was to determine whether the use of... The aim of the present study was to explore the degree of... The present study investigated the extent to which... The findings of the present study also suggest that... The present study presented evidence showing that... The present study demonstrated that the... The results of the present study indicate that...</p> <p>The findings of The findings of the present study have pointed to the... The findings of the present study also suggest that... The findings of the study confirmed that the... The findings of this study corroborated previous research that... The findings of this study indicate that despite the... The findings of this study show that...</p>

Table 4.15 List of Formulaic Sequences and Their Contexts in the Conclusion Section (Cont.)

Conclusion Section			
Moves	Steps	Thai Corpus	International Corpus
Move20: Deduction from the research	Step1: Recommen ding for further research		<p>More work is needed to More work is needed to develop a... More work is needed to pay attention to the effectiveness of the... Much more work is needed to explore the wide range of possible...</p> <p>Future research should Future research should also focus on comparing ... Future research should seek to investigate the... Future research should also control for... Future research should engage a larger number of participants in...</p> <p>need to be Further research would need to be undertaken to see if this finding... These questions need to be explored in future studies. These findings need to be replicated in other work involving...</p>

From the list of formulaic sequences presented above (Table 4.11-4.15), the number of formulaic sequences identified from the international corpus was comparatively higher than those found in the Thai corpus. There were some marked observations in relation to the presence of formulaic sequences in each section of the datasets. Firstly, altogether, the number of FSs identified from the Thai corpus was 46, while it was 75 in the international corpus. These FSs with their contexts can be used as a practical guide for teaching writing RAs in tertiary education. Secondly, authors from both corpora preferred different FSs when realizing particular moves/steps, for example, *'the present/current study'* (used to realize Move 3 Step 1:

Announcing present work) was the most frequent FS used in several RA Introduction sections in the international corpus although it did not occur in the Thai corpus. Thirdly, '*the subjects were*' was the only one FS found in Move 4 Step 1 (Describing the sample), while there were four FSs in realizing Move 4 (Describing data collection procedures). Interestingly, it was found that when referring to the sample used in the research, the international authors preferred to use the word 'participants' while the Thai authors used the word 'subjects'. This is a marked difference found in the two corpora. Fourthly, to realize Move 14 Step 2 (Comparing results with literature), Thai authors preferred to use a particular FS (are/is consistent with). On the other hand, when realizing this step, 'is in line with' was an FS frequently used by international authors. Lastly, there were two FSs (*the results of* and *the present study*) occurring in different moves, but they function differently. That is to say, in the Results section, the '*the results of*' was used to introduce Move 8 (Reporting results), while it was used to realize Move 14 Step 2 (Comparing results with literature) in the Discussion section. Another FS, the '*the present study*', was found in the Introduction section to indicate Move 3 Step 1 (Announcing present work), while it occurred in the Conclusion section to realize Move 18 (Summarizing results).

This chapter contains the results based on the analysis of the RAs from the two corpora. The results are divided into two main phases according to the research questions. The results in the first phase are derived from the move analysis, while in the second phase they are from the identification of the formulaic sequences. With regard to move analysis phase, there are both similarities and differences in terms of move occurrences, move sequences, and move cyclicity of the rhetorical moves/steps of RAs in the two sets of data. The formulaic sequences identified in both corpora

were quite different in terms of both their number and form. In addition, it is expected that the formulaic sequences with their contexts which are listed in the present study might be helpful for non-native writers to use as a template in writing research articles. Some main points from the results presented in the Results chapter will be discussed in Chapter 5.



CHAPTER 5

DISCUSSION

This chapter contains a discussion of the results concerning the rhetorical moves and formulaic sequences presented in chapter four. The discussion will be made in the light of the research questions proposed in chapter one and in relation to previous research studies. The first part will discuss the similarities and differences relating to move occurrences and move structures between the two sets of data. The second part deals with the distinct formulaic sequences identified in each research article section.

5.1 Move Analysis

This part contains the discussion related to the occurrence of rhetorical moves/steps, move structures, and certain distinctive linguistic features used in particular moves/steps. The discussion of these prominent points will be made in an order.

5.1.1 Introduction Section

5.1.1.1 Move Occurrence and Move Structure

The Introduction sections of both corpora generally conformed to Swales' (2004) move model. All three moves were found in the Introduction sections of the two corpora. In both sets of data, based on their frequencies, all three moves

were conventional moves. The most interesting findings observed in the Introduction section are as follows.

Move 1 (Establishing a territory) displays very slight fluctuations between the two sets of Introduction sections. It showed a high frequency of occurrence in both sets of data. The results are consistent with those of Jalilifar (2010), who compared English RA Introduction sections in the field of Applied Linguistics published in two different contexts (Iranian and international contexts). He found that there were no significant differences found in the occurrence of Move 1 and its frequency in the two corpora was quite high. Not only research articles in Applied Linguistics, but also the civil engineering research article Introduction sections analyzed by Kanoksilapatham (2011) confirmed a frequent occurrence of Move 1. This indicates that this move is common in both soft and hard science research articles.

A noticeable difference between the two corpora in the present study is observed in Move 2, where researchers try to establish a niche. This move occurred with a frequency of eighty percent in the Thai corpus and with one hundred percent of the international corpus. Although the frequency in the Thai corpus was slightly lower than that in the international corpus, such a figure (80 %) was relatively higher than that found in previous research (e.g. Ahmad, 1997; Jogthong, 2001; Hirano, 2009; Loi, 2010; Mahazari and Maftoon, 2007; Jalilifar, 2010; Taylor and Chen, 1991). These authors found a limited use of Move 2 and they reported that non-native speakers were not inclined to identify gaps and to comment on other works. This may lead to the absence or less frequent use of Move 2. These scholars believed that factors affecting the appearance of this move include socio-cultural aspects, cultural

linguistics and the research environment. To some extent, these explanations may be the reason for the omission of Move 2 in some Thai Introduction sections in the present study.

According to Swales' model, Move 2 can be manifested through two steps: 'Indicating a gap' or 'Adding to what is known' (Step1) and 'Presenting positive justification' (Step2). In the present study, gap signaling is the most prominent step. Such an appearance is congruent with some previous studies (e.g. Del Saz-Rubio, 2011; Kanoksilapatham, 2011; Pho, 2008; Samraj, 2002; Shi and Wannaruk, 2010). For example, Kanoksilapatham (2011) and Shi and Wannaruk (2010), who analyzed hard science RA Introduction sections, found that only 'indicating a gap' was used to realize Move 2 in their corpus.

The methods used to establish a niche is one of the interesting points for discussion here. Instead of commenting on a specific gap in the existing literature, most authors in the present study merely pointed out to limited (or nonexistent) research or the insufficiency of research in the area of study. Consider the following excerpt for example.

Example:

1) In the Thai context, relatively little research has been conducted compared with research in other areas of language teaching and learning. Through the extensive review of research work on language anxiety studies available in Thailand, a small number of research works pertaining to speaking skill and communication have been found (R). (T9)

This evidence supports previous studies (e.g. Ahmad, 1997; Hirano; 2009; Jogthong, 2001; Kanoksilapatham, 2007) that most non-native writers tended to

indicate the gap by stating the absence of such study in their context. Presumably, argumentative skills, critical comments, and evaluation in other works are seen as unduly harsh by some cultures, such as Thai culture.

Move 3 was found in all RA Introduction sections in both corpora (100%). This means that announcing the present work is an important move in the Introduction section. However, this finding runs counter to those conducted by some analysts (e.g. Ahmed, 1997; Duszak, 1994). They found that Move 3 was stated implicitly in their study. For example, Duszak noted that Polish RA Introduction sections tended to provide less information about the present research.

The results in this study showed that the appearance of steps used to realize Move 3 in both corpora was quite similar. That is to say, six steps existed in the two corpora. Only one step (Step 5: Announcing principal outcome) proposed by Swales (2004) was not found in either set of Introduction sections. Among five steps which occurred in the two corpora, Step 1 (Announcing present research) was the most frequent step used to realize Move 3. The preferred use of Step 1 is similar to the findings of previous research (e.g. Isik Tas, 2008; Jalilifar, 2010; Jogthong, 2001). These studies pointed out that announcing research work was an important step in their studies.

Interestingly, Move 3 Step 2 (Presenting research questions or hypothesis) was far less frequent in the Thai corpus (13 out of 30) than those in the international corpus (22 out of 30). This implies that some local writers might not be aware of the importance of Step 2 or that they prefer using Step 1 to announce the present study instead of Step 2. Although Swales (2004) has labeled Step 2 as optional, it was found extensively in the international corpus. This evidence supports

Pho's (2008) findings that the appearance of Step 2 was at a frequency of 90% in the English applied linguistic RAs. With a greater frequency of the occurrence of Step 1 and Step 2 in the RAs from the international corpus, this implies that both steps are preferred steps in English applied linguistics research articles. Therefore, stating research questions should be included when writing applied linguistic RAs for publication in well-established international journals.

Another interesting point to discuss here is the absence of one step which is labeled as Move 3 Step 5 (Announcing principal outcome) in Swales' (2004) model. In fact, it is possible to ignore this step since it is classified by Swales (2004) as optional. However, this step occurred in the previous research studies in various degrees. For example, in the field of computer sciences, the frequency of this step was over 70 % (e.g. Antony, 1999; Posteguillo, 1999; Shehzad, 2005). When analyzing engineering RAs, Kanoksilapatham (2011) found that the frequency of this step was 45 %. In an agricultural discipline, it was found at a frequency of 3.6% (Del Saz-Rubio, 2011). In addition, it was found that this step was not used by non-native writers regardless of their field. For instance, this step was omitted in educational psychology RAs written by Chinese authors (Loi, 2010) and biochemistry RAs written by Thai authors (Kanoksilapatham, 2007). These two studies which analyzed Introduction sections in different fields obtained the same results. Based on the findings of these studies, it can be noted that apart from some factors, such as writing styles, rhetorical preference, and experience in publishing RAs that affect the structure of RA writing, the standard practices used within specific disciplines or discourse communities are also important. In this regard, Kanoksilapatham (2007) believed that the expectations and size of scientific communities and national policy

to promote research were the factors for this discrepancy, while Nwogu (1997) assumed that the authors preferred to keep the findings in the Results section. To some extent, the absence of Step 5 in this present study and those of similar previous studies is evidence of a raising awareness in RA writing in relation to native and non-native speakers.

In relation to move structure, the majority of RA Introduction sections in both corpora begin their Introduction sections with Move 1 (Establishing a territory). But except for three RA Introduction sections (one and two in the Thai and the international corpora respectively), which began the structure with Move 3 (Presenting the present work) and one Thai Introduction section (T2) which had only Move 3 in the sequence, while the rest of the Introduction sections in the two datasets opened the section with Move 1. The ordering pattern (M1-M2-M3) of CARS model was a prominent move structure in both datasets. This finding is consistent with previous studies (e.g. Del Saz-Rubio, 2011; Isik Tas, 2010; Ozturk, 2007; Shi and Wannaruk, 2010) which reported that the ordering of M1-M2-M3 pattern was the predominant pattern in their corpus. However, compared to previous studies, the occurrence of this pattern in the current study was relatively low (10 or 33.33% in the Thai corpus and 6 or 20% in the international corpus). Unlike the findings in past research studies, for example, Del Saz-Rubio reported that this archetypal move pattern (M1-M2-M3) was found at a frequency of 46% and 55 % in Kanoksilapatham's (2011) study.

In some comparative studies, for example, Loi (2010) found that the linear ordering pattern (M1-M2-M3) appeared in a higher percentage in an English corpus than those in Chinese corpora (English -55 % and Chinese- 40%). Also, there

were no local articles which followed this prototype pattern in Hirano's (2009) study. The results of these studies indicate that international English RAs tend to be constructed in a more chronological pattern than local RA Introduction sections. These results were different from the results of the present study, such as pattern (M1-M2-M3) occurred in the Thai corpus more than the international corpus. In a study conducted by Im-O-Cha et al. (2004), analyzing RA Introduction sections from two different languages and linguistics journals, they found that the Thai corpus showed more frequent use of the move ordering pattern (M1-M2-M3) than those of the international corpus. It can be seen that the findings of Im-O-Cha et al. (2004) and the present study are similar with respect to the linear pattern which is more frequent in the local corpus than that in the international corpus. In this regard, it seems that most Thai authors are aware of the standard conventional rhetorical structure of Introduction sections whether they write in Thai or English, but they sometimes prefer to create their own style which Watkhaolam (2005) describes as 'a Thai English variety' (p.145). The presence of deviating move structures (which occurred in nearly 50% of the entire corpus) is clear evidence of this claim. It can also be seen that the structure of English RAs written by Thai writers is not only influenced by both internal factors (e.g. English language proficiency, writing and publishing experience) and external factors (e.g. cultural and social elements, discourse communities, and journals' publication criteria), but that the process of nativization and acculturation (Watkhaolam) also shapes the structure of English RAs.

In addition, another interesting aspect observed in both Im-O-Cha et al.'s (2004) study and the present study is the frequent use of the cyclical move ordering patterns in the international corpus. That is to say, the M1-M2-M3 pattern is

interrupted by one, two or three move(s) in the sequence (e.g. M1-M2-M3-M1-M2-M3; M1-M2-M3-M1-M3). Without the intervening move (s), they would strictly conform to the CARS move structure (Ozturk, 2007). From this finding, it can be suggested that the authors from the international corpus follow the Swales' model but they prefer various cycling move patterns. They are likely to organize their Introduction section by restating some moves (Move 1 and Move 3), which is one of the ways to strengthen a research study. This is because they place great importance on the detailed description of their own research and the presentation of the field to which their findings bear relevance (Arvay and Tanko, 2004).

The findings revealed that both sets of Introduction sections exhibited a cyclical order of moves. Move 1 was the most frequent cyclical move. The reoccurrence of Move 1 in the structure implies that English RA Introduction sections in applied linguistics prefer describing or establishing a territory for the reader. This is confirmed by some researchers (e.g. Ozturk, 2007; Park, 2004), who state that research articles in an established field tended to provide more theoretical background to facilitate reading about the issues investigated. This may be the reason why Move 1 was used extensively in both data sets.

5.1.1.2 Additional Discussion of the Introduction Section

There are three interesting aspects in the Introduction section which need to be discussed: additional communicative functions, linguistic features, and the modification of the move model used in the present study. Firstly, the results of the present study support Swales' (1990) statement that the occurrence of steps is likely to be discipline-dependent. Based on the analysis, there were some potential steps in Move 1 and Move 3. For example, under Move 1, 'relating literature to the present

study' 'presenting theoretical basis', and 'presenting rationale of the study' were found. For Move 3, there were 'stating the samples of the study' 'describing scope and limitations', and 'signaling to the next section'. Although some of them occurred in only a few of the Introduction sections in both corpora, they are a clear evidence of the rhetorical differences of Introduction sections published in different contexts. For example, in the Thai corpus, 'presenting rationale of the study' was found in five Introduction sections. Presumably, these Introduction sections are part of the authors' dissertations or they may follow the same pattern as in their dissertations. Conversely, such potential steps did not appear in any international Introduction sections.

Moreover, it was found that there was one potential step (relating literature to the present study) shared by six Introduction sections (20%). It was found in three each of the two corpora. Although its occurrence did not reach 50%, which would be considered as a new step in the current study, it was a distinct rhetorical function embedded in Move 1. Its function is to link between the knowledge, theories, and approach being reviewed to the research conducted. It appeared when the author tried to inform the readers how relevant theories, knowledge, and the approach being reviewed was involved in the research investigated. Consider the following excerpts, for example.

Examples:

1) *Consciousness theoretically equals to awareness, consisting of three levels: perceiving, noticing, and understanding. Consciousness-raising **in this study is an attempt to increase** the ability to consciously perceive and notice information in order to turn it into knowledge which is called understanding or learning. (T28)*

2) (R) explained that two types of input-based approaches, structured input and consciousness-raising, can be best used in teaching grammar. The adaptability of both approaches to the teaching of L2 pragmatics **will be examined thoroughly in the present study**. (I6)

As shown in the examples above, the theory or approach related to the study was stated in the first sentence of each example. Afterwards, a statement relating to a selected approach being integrated in the study was stated in the second sentence. Having related the literature to the study, the authors then moved to establish a territory again. This new potential step is an evidence of rhetorical structural organization of research articles in the two sets of data. In the researcher's view, it is possible that the results obtained from a larger number of corpora should be sufficiently significant for validation of this phenomenon. However, such occurrence will be, to a certain extent, valuable for pedagogical implications.

Secondly, the linguistic features used to realize each move are also important for better understanding of the rhetorical move structure of research article Introduction sections. Similar to some previous studies (e.g. Isik Tas, 2010; Jogthong, 2001), the present simple tense was commonly used in Move 1. Additionally, the present perfect tense and past simple tense were also found. The personal pronoun 'we' was found more quite frequently in the international corpus than in that of the Thai corpus. The use of 'we' in Move 1 and Move 3 is likely to be different. That is, the use of 'we' in Move 1 was to include the readers to the topic generalization, while 'we' in Move 3 showed the intention of the author to inform the readers of a particular point as can be seen in examples 1 and 2, respectively.

Examples:

1) *Assessments have two key aspects that we must consider.* (I25)

2) *Therefore, we performed a study to evaluate the writing skills of these first-year medical students in writing a paragraph in English and identified their errors in order to develop guidelines for correction and improvement of their writing skills.* (T16)

It was found that the authors from the international corpus had the tendency to use ‘we’ to refer to their presence in their writing. For example, there were two cases where the author used ‘we’ to introduce his/her work although each Introduction section was written by only one author. Conventionally, it is possible to use ‘we’ in such situation; however, it was found that none of the Thai Introduction sections employed this particular feature. Consider the following examples.

Examples:

1) *In this study, we are concerned with individual bilingualism, and as (R) point out, there is no simple definition of individual bilingualism because many dimensions need to be considered.* (I21)

2) *In the present study, we wish to investigate if TE formats have differential effects in L2 by answering the following research question :...* (I29)

The last point to be discussed here was the modification of move model used in the present study. Based on data analysis in the present study, it is found that between Step 1A (Indicating a gap) and Step 1B (Adding to what is known) of Move 2 should be added the ‘and’ condition. This is because it is anticipated that more than one choice of the step could be used at a particular place. As reflected in the case of T27, where both types of communicative functions

(Indicating a gap and Adding to what is known) coexisted to realize Move 2 as shown below.

Example:

Move-step

[M2S1A] *While these studies yield valuable findings-overviews of strategies used by the participants—**they do not reveal exactly how the participants employed these strategies.***

[M2S1B] *In my view, **it is essential to systematically investigate how Thai undergraduate students use communication strategies.***

Therefore, in order to make the model more accountable for the specific discourse of applied linguistics RAs, ‘*or/and*’ is used in the modified model. The developed model, which is based on the results of the move analysis, is demonstrated in Table 6.1 in the Conclusion chapter of this thesis.

5.1.2 Methods Section

5.1.2.1 Move Occurrence and Move Structure

Three moves proposed by Lim (2006) were found in the two sets of data. However, compared to Lim’s (2006) study and previous works, there were both similarities and differences in terms of frequency of the step occurrences. For instance, the occurrence of Move 4 Step 1 (Describing the sample) was relatively high in both sets of data, especially in the international corpus, occurring at a rate of one hundred percent. Lim (2006) also found the frequent use of such a step (also occurred at 100%). Furthermore, in a study carried out by Peacock (2011), the text unit describing subjects or material labeled as a ‘subjects/materials’ move showed a high

frequency. This indicates that Move 4 Step 1 is extremely important for the Methods section.

The remaining two steps (Step 2: Recounting step in data collection and Step 3: Justifying the data collection procedure) of Move 4 were infrequent in both datasets. However, in the Business Management Methods sections analyzed by Lim (2006), Step 2 was the preferred step occurring at a frequency of 75%. On the contrary, it was found only in a few Methods sections (10%) in the international corpus and it was omitted altogether in the Thai corpus. Step 3 was found in 50% of the entire corpus in Lim's (2006) study, while it occurred only in two international Methods sections in the present study. It can be seen that the authors from both sets of data in the present study are likely to provide only the specific characteristics of samples used in their study without stating the procedures of data collection and justifying the selected samples. Based on the findings of Lim's (2006) and the present study, it is clear that although the Methods sections are from the social science, the ways to describe data collection procedure were strikingly different. This confirms the disciplinary variation in the rhetorical structure of RAs as stated in the literature (e.g. Brett, 1994; Samraj, 2002; Swale and Feak, 2004).

The second move to be discussed here is Move 5. The findings showed some noteworthy differences between the two sets of the data and those in Lim's (2006) study. It was found that a new preferred step which is labeled as 'Describing research instruments' occurred frequently in both sets of data. Its function is used to describe the characteristics, usage, and validation of research instrument(s) used in the study. As the frequency of this new step was over 50% in each corpus, it was accordingly considered as one of the steps used to realize Move 5 in the present study.

In Lim's (2006) model, the employment of research instrument(s) was stated implicitly. Such a communicative function was embedded in the step labeled as 'Explaining methods of measuring variables'. However, in the present study, the instrumental details were stated separately under a specific subheading such as 'Instruments', or 'Materials'. In a study conducted by Pho's (2008), focusing on RAs in the field of Applied Linguistics, 'Describing research instruments' was one of the specific steps in the data collection procedure. This implies that such step is a preferred choice and has its own separate subheading in the section in the applied linguistic RAs. From the findings, it is evidence which confirms the literature on the disciplinary differences affecting discursal communication.

Another point concerning Move 5, which is worth discussing, is the occurrence of justification steps (Move 5 Step 4: Justifying the method of measuring variables and Move 6 Step 2: Justifying the data analysis procedure). Lim (2006) found that Move 5 Step 2 was an obligatory choice in his corpus, occurring in all Methods sections. However, its occurrence in both sets of data in this study was less frequent and is considered as an optional step (occurring in 4 Thai Methods sections and 8 international Methods sections). This finding is in contrast with Pho's (2008) study, which compares RAs in two interdisciplinary fields (Applied Linguistics and Education Technology). Pho (2008) found that this step was an important step, occurring at a frequency of 80% and that it was found only in applied linguistics papers (but omitted in education technology papers). This finding suggests there are rhetorical variations within the same discipline. However, for the present study, although the frequency of this step in both sets of data was considered as optional, it seems that the international authors tended to give it greater importance than the Thai

authors, as it occurred twice as often. If we look further to another justification step (Move 6 Step 2: Justifying the data analysis procedure), its frequency was greater (occurring in 8 Thai Methods sections and 10 international Methods sections). This finding runs counter to that found in Pho's (2008) study where the frequency of this particular step was less than 50% in both corpora. Thus, it can be said that the authors, especially Thai authors, from both corpora tend to ignore the evaluation of the procedures used in their studies.

It was found that although the chronological move pattern (M4-M5-M6) was the most frequent structure used in both sets of data (36.66% in the Thai corpus and 33.33% in the international corpus), over half of the Methods sections in both sets of data used a variety of structures. Most of these deviant structures are organized either in an incomplete move structure (e.g. M4-M5; M4-M6) or an unusual ordering pattern (e.g. M5-M4-M5-M6; M4-M5-M6-M5). From this it can be concluded that the Methods sections from both sets of data are deviant in terms of move structure.

Regarding cyclical structure, it was found that Move 5 (Delineating procedures for measuring variables) was the most cyclical move in both datasets. This lends support to the claim made by some previous studies (e.g. Kanoksilapatham, 2003; Peacock, 2011; Swales, 1990; Weissburg and Buker, 1990) that a move concerning the methodological processes in manipulating the variables was repeated in the Methods section. In his study, Lim (2006) also found that most cyclical move in business management Methods section was Move 2 (similar to Move 5 in the present study). The recycling of Move 5 in the present study was because of the author preference to place Move 5 Step 2 (Describing research instruments) as an initial

move in the section with a description of the samples used in a subsequent paragraph (Move 4 Step 1). Stating the procedural methods in manipulating the variables (Move 5 Step 3) followed afterwards. Similarly, 'Experimental procedure' was the most cyclical move in the biochemistry Methods sections analyzed by Kanoksilapatham (2003). Although the move was named differently, its function was similar to that of Move 5 in the present study. This is because the main purpose of this move was to detail the measuring or dealing with the variables of the study. In addition, Kanoksilapatham (2003) revealed that 'Material use' and 'Experimental procedure' moves were likely to be interwoven and recursive in the move sequences.

The last interesting point to be discussed here is the occurrence of Move 5 (Delineating procedures for measuring variables) and Move 6 (Elucidating data analysis procedure) in one subheading as seen in five Methods sections (T6, T10, T14, I8, I15). For example, in T10, these two moves were described under the subheading of 'Data collection and analysis', as shown in the examples below.

Example:

[M5S3] *Then, 10 % of the students' response were randomly rescored by a native speaker to establish the inter-rater reliability ($r = .99$).*

[M6S1] *Results from the test were then analyzed using one factor analysis of variance (ANOVA) with Post hoc Tukey analyses. (T10)*

5.1.2.2 Additional Discussion of the Methods Section

The use of a section title or subsection heading is another interesting point to be considered. A claim made by Swales and Feak (2004) is that Methods sections are very variable, and even the term 'Methods' is not always used. The variation largely depends on how much information and explanation they contain,

ranging on a continuum from being very condensed to elaborately extended. In the present study, the use of section headings included 'Methodology', 'Research Methodology', 'Method', 'The present study', 'Material and Methods', 'Data and method of analysis', and 'Study description'. This observation is in line with those found in Brett's (1994) study. He found that the labeling of sections and the macro-structure of sociology RAs was not standard like that found in the hard sciences. Mur-Dueñas (2007) also confirmed the diverse use of section or sub-section headings in business management Methods sections. In the researcher's view, the headings or subheadings used in the Methods sections were quite subjective, depending on the authors' decisions.

5.1.3 Results Section

5.1.3.1 Move Occurrence and Move Structure

Based on the analysis, only four moves identified by Yang and Allison (2003) occurred in both datasets. The other two moves labeled in their model (Evaluating the study and Deductions from the research) did not occur. The findings showed that Move 8 (Reporting results) was a conventional move in both corpora, occurring at a frequency of one hundred percent. This is similar to the results of previous studies (e.g. Kanoksilapatham, 2005, 2007; Thompson, 1993; Williams, 1999). In addition, Move 8 usually coexisted with Move 7 (Preparatory information) or Move 9 (Commenting on results). There are only a few cases where Move 8 occurs independently in the section without any comments (e.g. I1, I9). In such cases, the authors preferred to place long comments on the results in the subsequent section (Discussion section). With respect to their co-occurrence, it was found that more than half of the Results from each corpus were constructed so that Move 8 was preceded

by Move 7. Due to the fact that the function of Move 7 is to direct the readers to particular results, most authors are likely to prepare the readers by providing the relevant background to the following results. On the other hand, it is possible to see Move 8 being presented concomitantly with Move 9. However, the frequency of Move 9 of each corpus was not as high as those found in previous studies (e.g. Lim, 2012; Yang and Allison, 2003). In Lim's study, it was found that 84.5% of the applied linguistics Results sections contained a move with comments. For the present study, this particular move occurred at a frequency of 66.66% and 63.33% in the Thai and international corpora, respectively.

The method used to comment on the results is worth mentioning here. Most authors from both sets of corpora preferred to comment after each significant result had been stated, which Weissberg and Buker (1990) called an 'alternating pattern'. The 'sequential pattern', which is one of the two comment patterns proposed by Weissberg and Buker, was also found in some Results sections, but at a low frequency. This means the authors prefer giving a short comment after each individual result rather than adding the comments at the end of the section or after all the results have been reported. Unlike Brett's (1994) findings, the Comment move was used for a set of results rather than for individual results. The evidence here supports the claim made in the previous literature that there is disciplinary variation in terms of the organization of rhetorical moves.

The most striking difference of the two corpora is found in the use of Move 9 Step 2 (Comparing results with literature). This step was the most frequent step in Yang and Allison's (2003) study, however, it was optional in the current study, occurring in only 7 (23.33%) Thai Results sections and 8 (26.66%) in international

Results sections. Unlike the findings of Shi (2010) who analyzed agricultural Results sections, this particular step was found at a frequency of 40 % in the entire corpus. However, with regard to the occurrence of this step, Brett (1994) noted that if this step did not appear in the Results section, it would occur in the Discussion section. Confirming Brett's suggestion, when looking closely at the Discussion section, the frequency of Move 14 Step 2 (Comparing results with literature) was relatively high in both sets of data (Thai: 22 and international: 27).

The occurrence of Move 9 Step 4 (Accounting for results) was frequent in Yang and Allison's (2003) study. However, it was found to be comparatively low in both corpora in the present study, more particularly in the international corpus. Only 3 international Results sections contained this step. For the same reason as mentioned in the case of Move 9 Step 2 the authors prefer to make comments by accounting for specific results in the Discussion section rather than in the Results section. As expected, it was found that the frequency of occurrence of this step (Accounting for results) in the Discussion section of both sets of data (Thai: 15 and international: 21) vastly outnumbered those in the Results sections. As Yang and Alison (2003) pointed out, the main purpose of the Results section is to present the study's results, it is possible that the frequency of Move 9 (Commenting on results) in the Results section was comparatively less than that in the Discussion section.

5.1.3.2 Additional Discussion of the Results Section

It was found that interactive resources such as 'see figure', 'provided in table', 'noted above' or endophoric markers (defined by Hyland and Tse, 2004) were used in the Results sections. Such lexical devices were also found in a typical move (called Referring to graphic presentation move) in Pramoolsook's (2007) study. These

markers are used to guide the reader to the particular findings. The past simple tense in an active form was common in the Results sections in both corpora. The first person singular pronoun 'I' was found in one Thai Results section as seen in the example below, while it did not occur at all in the international corpus. However, this self-mention marker did not occur in the hard science Results sections in some previous studies (e.g. Kuo, 1999; Li & Ge, 2009).

Example:

1) *Remarkably, at the later place of distribution, I also found that filled pauses occurred before their concomitant phenomenon, unfilled pauses, ...* (T2)

Normally, the first person pronoun 'I' would not occur in Move 8 (Reporting results). This is because the primary aim of this move is to show the study's results. However, if the attitude markers or personal pronouns occur in order to express the authors' ideas in Results section, they should appear in Move 9 (Commenting results) rather than in Move 8. This is because the function of Move 9 is to allow the author to express his/her opinions or arguments.

However, according to Brett (1994) and Thompson (1993), the use of first-person pronouns in the Results sections is one of the strategies used for persuading and seeking approval for publication. As found in Martínez's (2005) study, the use of a first-person plural pronoun 'we' in Results sections by native writers was more than six times higher than that in papers written by non-native writers. With this notion, it can be inferred that it is possible to use first-person pronouns in Results section but they should only be used for appropriate moves/steps.

5.1.4 Discussion Section

5.1.4.1 Move Occurrence and Move Structure

The frequency of move occurrences in both corpora is quite similar. Move 14 (Commenting on results) was the most frequent move in both datasets. This may be due to the fact that the main function of the Discussion section of RAs is to comment on the results by interpreting, accounting, and comparing them with previous work (Yang and Allison, 2003). Evidence for this can be seen in the Results section mentioned above, where some authors preferred not to give any comments in the Results section, but placed them in the Discussion section instead. In the field of biochemistry, Kanoksilapatham (2005) also found that the ‘Consolidating results’ move occurred with a frequency of 100% in the corpus. Although the terms used to label this move in Kanoksilapatham’s model is different, its function resembles that of Move 14. The occurrence of Move 12 (Reporting results) was also frequent in both corpora occurring at slightly lower frequency than Move 14 in the two corpora. This agrees with Yang and Allison’s (2003) findings which found that this move was a frequent move. The findings of previous studies (e.g. Holmes, 1997; Swales, 1990) reported that the ‘Statement of results’ move (comparable to reporting results in the present study) was a common move. With the high use of these two moves, it can be said that Move 12 and Move 14 are substantial rhetorical moves for applied linguistics RAs.

Move 17 (Deduction from the research) is an important move in the Thai Discussions section. Its frequency in the Thai corpus was far greater than in that of the international corpus, occurring at a frequency of 50% in the former and 33.33% in the latter. Also, this move was the third most frequent move in the Thai corpus. In

the researcher's view, it may be affected by an awareness of the importance and necessity of research article publication. This is due to the fact that members of educational communities as well as students at advanced levels are required to write and publish research articles. In order to improve their chances of being published, stating the value of the research conducted and the practical implications for pedagogy or the community are likely to be found in the Thai RAs. Evidently, Thai authors tend to place considerable emphasis on the usefulness of their study not only in the Discussion section, but also in the Introduction section as can be seen in the use of Move 3 Step 6 (Stating the value of the present research), which showed a greater frequency than in the international corpus. In addition, English is the most studied foreign language in Thailand. A variety of topics concerning English language learning and teaching are being investigated in the field of Applied Linguistics. Therefore, it is possible that the findings of RAs that can contribute to English language pedagogy are stated in the Discussion sections of RAs. Likewise, some practical suggestions based on the research findings are usually made in the Discussion section in order to guide or encourage Thai writers to conduct future research more effectively. These may be the reasons why Move 17 is more prominent in the Thai corpus.

The frequency of the three steps used to realize Move 17 (Deduction from the research) in the international corpus was quite interesting. The frequency of Step 2 (Recommending further research) outnumbered (7 out of 10 or 70 %) that of the other two steps. The employment of such a step in previous research studies varied in its frequency. For example, in the hard sciences, its frequency was 53.33% in a biochemistry corpus (Kanoksilapatham, 2005) and 46.15 % in a subsequent study

(Kanoksilapatham, 2007). It was 58.82 % in the computer science Discussion sections identified by Posteguillo (1999). For the Medical Discussion section analyzed by ElMalik and Nesi (2008), this step appeared at a frequency of 40 % in the English corpus and 10 % in the Sudanese corpus. On the other hand, in the soft sciences such as applied linguistics, Amirian et al. (2008) observed that such a step was found in 70% of the English corpus and 85 % of the Persian corpus. In Language & Linguistics field, it occurred at a frequent of 73% in the native corpus and 38% in the non-native corpus (Peacock, 2002). Previous research findings indicate that the authors in the social sciences are likely to recommend the potential research directions more than those in the hard sciences. This reflects the existence of disciplinary variations.

It was found that Move 12 (Reporting results) was used to open most Thai Discussion sections (14 out of 30) but Move 11 was the favorite initial move in most international Discussion sections (13 out of 30 Discussions). The frequency of Move 12 as an opening move was also found in a study conducted by Holmes (1997). He observed that the 'Statement of Results' was the most preferred move used to open the Discussion sections. Swales and Feak (2004) noted that there were many ways to open a Discussion sections. In their study, they found there were nine different options in opening natural history article Discussions sections. One of the favored ways was 'Presenting main results'. For the closing move, the most frequent choices for the Thai corpus were Move 17 (Deductions from the research) and Move 14 (Commenting on results), which ended 12 Thai Discussion sections and 11 Discussion sections respectively. In the international corpus, Move 14 was the most frequent option to end the section. It is noticeable that Thai authors showed a strong tendency to select Move 17 as the closing move. This is in line with the observation

made by Holmes (1997) who found that recommendations and generalization moves were often selected to close the discussion sections of social science RAs.

The position of Move 11 (Background information) and Move 14 (Commenting on results) in the move structure is also an interesting point. It was found that after opening the section with Move 11, the second move unit in the sequence was Move 14 (e.g. T5, T9, T17, T26, I3). The examples of such move sequences were M11-M14-M15, M11-M14-M12-M14-M13-M14 patterns. Generally, in such cases, Move 12 (Reporting results) should intervene between Move 11 and Move 14 in the sequence; that is, a brief result should be stated before commenting on the results, as shown most examples of move sequences, where Move 12 was followed by Move 14. Such a peculiar ordering pattern appeared in five Thai Discussion sections and one international Discussion section. Consider the following examples. Note that 'S' in the bracket refers to sentence number, for example, 'S1' means sentence 1.

Example	Move-step	
1	M11	[S1] <i>This section discusses one empirical reason why the tenseness quality of the AE vowels was the hard to identify.</i>
	M14S2	[S2] <i>Like (R), this study found that the vowel lengthening rule in English caused the confusion of the tenseness perception.</i> (T5)
2	M11	[S1] <i>The results obtained by means of the descriptive statistics and the multiple regression analyses are synthesized and interpreted for each research question, accompanied by limitations of the present study and implications for future research.</i> <i>Research Question 1</i>

[S2] *Are students' levels of computer anxiety related to the feedback methods that they select during the revision stage of an essay writing assignment?*

M14S2 [S3] *The results of this study were consistent with previous research showing that highly computer anxious individuals report a greater tendency toward exhibiting behaviors associated with avoiding computers if circumstances permit (R). (I3)*

To illustrate the example above, in example 1, sentence 1 is identified as Move 11 and sentence 2 is labeled as Move 14 Step 2. Likewise, in example 2, the first two sentences are demarcated as Move 11, while sentence 3 is Move 14 Step 2. This means that after providing background information, the author prefers to comment on the results by making comparisons with the previous literature instead of providing a concise result before commenting on it. However, such case was also found in Holmes' (1997) study. Within three disciplines (history, political science, and sociology), two political science Discussion sections were organized in this manner. It is possible therefore that the authors presuppose that the reader clearly understands the results of the stud. Accordingly, it may be unnecessary to restate Move 12.

The two sets of Discussion sections mostly showed a cyclical structure. That is to say, they were characterized by the recurrence of one or more move(s). This findings support a study carried out by Peacock (2002) who found the move cycle of Language & Linguistics Discussion sections was somewhat higher than the other six disciplines, especially in the Discussion sections written by non-native writers. The recycling moves in both corpora were Move 12 and Move 14. These two important

moves were repeated in many move sequences, for example, M12-M14-M11-M12-M14; M11-M12-M14-M12-M14-M17. These sequences imply the methods of organizing the Discussion section as pointed out by Li & Ge (2009), that is, rather than presenting the overall findings (deduction), the authors preferred to use induction to develop their Discussion sections. Induction methods means writers may first state the specific findings and then derive some principles from these particular findings. This indicates that most Discussion sections from both sets of data tended to be constructed in a series of results followed by comments.

It was found that ‘Reporting results-Comparing with literature’ was the preferred cyclical pattern found in both corpora. After the authors present their individual results, they add a comment in the form of either ‘Interpreting the results’ (Move 14 Step 1) or ‘Comparing to previous studies’ (Move 14 Step 2) as shown in the following example which was taken from I29.

Example:

- [M12] *The results of analysis revealed that...*
- [M14 Step 2] *However, studies on the use of ...showed that...*
- [M12] *The results also show that the number of ...*
- [M14 Step 2] *Although we cannot..., it should be noted that **they are in line with** results found in studies conducted in...*

In a study conducted by Posteguillo (1999), the preferred cyclical pattern found in computer science was ‘the structure of result’ move alternated with ‘deduction’ or ‘recommendation’ moves. The cyclicity of Move 14 (Commenting on results) in the present study may be due to the fact that applied linguistics is an established field where much previous research has been carried out. Consequently,

more previous works are likely to be referred to. This may be a reason why it is different from the computer science Discussion sections in Posteguillo's study, since computer sciences is a new and dynamic field.

5.1.4.2 Additional Discussion of the Discussion Section

In both corpora, Move 11 (Background information), Move 14 (Commenting on results) and Move 17 (Deduction from research) usually occurred in the form of the present simple tense, while Move 12 (Reporting results) and Move 13 (Summarizing results) were likely to use the past simple tense. The linguistic features used in Move 14 (Commenting on results) is an interesting point to discuss here. For example, it was found that the linguistic signals used as the key words in identifying Move 14 Step 1 (Interpreting results) included hedging devices, which are such as some lexical verbs (e.g. suggest, indicate, appear, imply, seem, tend) and modal verbs. However, the most frequent hedging devices in the Thai corpus was *suggest*, followed by *indicate* and then *tend*. In the international corpus, *seem* was ranked the first, while *suggest* and *indicate* were the second and the third respectively.

To comment on the results, the first person pronouns both 'I' and 'we' were found in some Discussion sections in both datasets. However, the use of such two words in the Thai corpus is interesting as shown in the case of T25, where 'I' was used in realizing Move 14 (Commenting on results). It was used in the sense of the author's attitudes in commenting on a particular approach being used in the literature as shown in the following example.

Example:

1) *Some researchers like (R) suggest that ESL students need more experience and practice with rhetorical conventions, vocabulary, grammatical*

structures, the print code , and reading and writing in general. I agree with this holistic suggestion; however, emphasis on some particular aspects like grammar might have negative effects. (T25)

Based on the example above, the author shows her attitude towards one of the approaches mentioned in the literature. This evidently runs counter to the claim made by Hyland (2002), who pointed out that non-native authors tend to use personal pronouns in non-controversial contributions, but not in attitudinal statements. Writing styles should be one of the reasons to explain this particular case.

There is a striking difference in the use of ‘we’ in commenting on results in the two corpora. ‘We’ was found in nearly half of the international Discussion sections; however, it was used in only three of the Thai Discussion sections. In previous research, compared to other sections (Introduction, Methods, Results), first-person plural pronoun ‘we’ was used extensively in the Discussion section (Martínez, 2005). Also, the personal pronoun, ‘we’ was used pervasively in medical Discussion sections (Li and Ge, 2009). They suggested that the use of the personal pronoun in research studies can be viewed in two different ways. First, the frequent use of the plural form of the first person pronoun may increase the sense of reliability of the RAs. This is because more than one person endorsed the accuracy, quality and meaning of the results. Second, the use of the personal pronoun can be viewed in the sense of including the expected readers and disciplines, which may help shorten the distance between researchers and readers and stress solidarity with readers. Regarding this suggestion, it can be seen that only a few Thai writers try to gain credibility by using ‘we’ when making comments. This may be affected by an individuals’ writing style or limitations in their use of the English language.

The position of the section headings in the Thai corpus is worth mentioning here. There are three Thai RAs (T5, T24, and T28) which placed the Conclusion section before the Discussion section. This may be the results of both the authors' styles in written presentation or the flexibility of the journal's publication criterion. For example, regulations on the publication of some Thai peer-reviewed journals do not seem to be so strict as those found in more renowned international journals. The switching of such positions of these two main sections has not been found in RAs published in well-known international journals.

5.1.5 Conclusion Section

5.1.5.1 Move Occurrence and Move Structure

Move 18 (Summarizing the study) was the dominant move in both sets of data. However, in a study carried out by Moritz et al. (2008), 'Summarizing the study' was the least frequent move in their study. The most noticeable difference between the two corpora was the frequency of Move 19 (Evaluating the study) and Move 20 (Deduction from the research). The frequency of Move 19 and Move 20 of the international corpus were higher than those of the Thai corpus, particularly the frequency of Move 19 which was four times higher. This implies that Thai authors prefer not to evaluate their study either in the Discussion section or the Conclusion section.

The high frequency of Move 19 (Evaluating the study) and Move 20 (Deduction from the study) in the international corpus may be due to the overlapping nature of moves in the Discussion and Conclusion sections as pointed out by Yang and Allison (2003). They stated that the same communicative function may appear across the last three sections (Results, Discussion, and Conclusion), for example,

Discussion section can cross over to the Conclusion section in terms of ‘Summarizing the study’, ‘Evaluating the study’, and ‘Deductions from the study’. This is because the “Results, Discussion, and Conclusion sections of applied linguistics RAs differ in terms of primary communicative purposes” (Yang and Allison, 2003, p. 380). This may be the reason why Move 19 and Move 20 were frequent in international Conclusion sections but they were optional in the Discussion section. It is possible that the authors may opt to evaluate and deduce their study in the Conclusion section rather than in the Discussion section. However, such instances did not apply to the Thai corpus. This is because the occurrence of Move 19 was still infrequent in the Thai Conclusion section.

In addition, with the two steps used to realize Move 20, the frequency of Step 1 (Recommending for further research) was two times higher than that of Step 2 (Drawing pedagogic implication) in the international corpus. Unlike Yang and Allison’s (2003) findings, the frequency of these two steps appeared inversely, that is, Step 2 outnumbered Step 1.

There is a noticeable distinction between the two corpora in relation to the move structures observed. Namely, there is no chronological M18-M19-M20 pattern in the Thai corpus, while it was found in seven international Conclusion sections. Most Thai Conclusion sections showed an incomplete move structure, by omitting one or two moves in the sequences. It was found that only one Thai Conclusion contained all three moves (M18, M19, and M20) but they were not arranged in a linear order. This was different from the move structure of the Conclusion sections in Yang and Allison’s (2003) study, most of which were in a

straightforward pattern. This indicates that the move structure of the Thai Conclusion sections deviated more than that of the international Conclusion sections.

The most marked distinctiveness between the proposed model (Yang and Allison's (2003) model) and the present study was the cyclicity of Move 18 (Summarizing the results). Yang and Allison found that Move 18 was the most cyclical move; however, it was reiterated only in one international Conclusion section in the present study. Most international authors are likely to provide only a short paragraph on the main point of the findings. Then it is followed by statements concerning the evaluation and deductions from the study at greater length. Therefore, it is possible to find recycling move structures where Move 19 (Evaluating the study) and Move 20 (Deduction from the research) coexist in the sequence (e.g. M18-M19-M20-M19-M20; M18-M20-M19-M20). One of the patterns showing these two moves together was in the form of indicating limitation (Move 19 Step 2) and presenting possible research directions for further studies (Move 20 Step 1). These two steps were displayed alternately rather than each of them being described in a separate paragraph.

5.1.5.2 Additional Discussion of Conclusion Section

There were three distinct and interesting features which need to be further discussed with regard to the Conclusion sections. Firstly, it was found that the use of 'we' was found in Move 19 and Move 20 in the international corpus, while it did not appear in any of the Thai corpus. The occurrence of 'we' plus modal verbs (would, might, can) was common in the international corpus in addressing Move 20 Step 2 (Drawing pedagogical implications). As we know, personal pronouns are usually found when writers make claims or share their ideas. Partly, a limited use of

'we' in the Thai corpus may be because of both a limited number of Conclusion sections (Thai: 24, international: 30) and the limited frequency of occurrence of Move 19 and Move 20. Thai authors preferred to finish their Conclusion sections with a summary of the findings, without justifying or commenting on their studies. This may have an effect on the occurrence of the first-person pronoun ('we'). It is possible that there may be some factors affecting Thai writers when writing in English as stated by some scholars (e.g. Jogthong, 2001; Kanoksilapatham, 2007; Trakulkasemsuk and Pingkarawat, 2010). They believe that writing practices in Thai culture may affect the use of argumentative and evaluative skills, because of the specific characteristics of Thai society, such as communication norms, modesty and humility which may, to some extent, have an influence on L2 writing. In the Thai context, for example, commenting on their achievements may seem impolite or boasting. This means that persona characteristics of Thai people may sometimes have an influence on their English writing, such as, explicit mention or self-mention may be culturally difficult for Thai writers. This is in line with the findings of Martínez's (2005) study, which found that the use of 'we' in English RAs written by Spanish writers was comparatively less than that in RAs produced by native writers. However, she also found that whenever Spanish writers use pronouns, they preferred non-subjective forms of pronoun such as 'us' or 'our'. This is due to the fact that the use of first person pronoun sounds egocentric and pompous in a Spanish context.

Secondly, the Conclusion sections from both corpora contained a new communicative function (Making suggestions), which occurred in one Thai Conclusion section and three international Conclusion sections. In fact, 'Making Suggestions' was one of the steps used to realize Move 17 in the Discussion section.

However, when looking back to the Discussion section of the four RAs, it did not appear in any of the sections. It may be possible that instead of providing suggestions in the Discussion section, the authors decided to place it in the Conclusion section. Also, it may result from the overlapping nature of these two sections (Yang and Allison, 2003). However, due to the fact that its frequency does not reach 50%, it has not been labeled as a new step in the present study.

Finally, another difference between the two corpora is the writing style of the opening of the sections. To realize move 18 (Summarizing the study), more than half (15 out of 28 or 53.57%) of the international authors preferred giving background information before providing the main findings; conversely, less than half (7 out of 20 or 35%) of the Thai authors presented such information. It can therefore be said that most Thai authors prefer opening the Conclusion section with a summary of the main findings without restating the background information of the study. Two examples below are evidence for the presence (Example 1) and absence (Example 2) of background in opening to open the sections.

Examples:

1) *This present study is an attempt to provide alternative insights on language anxiety from a student perspective. The study found two major tactics of anxiety reduction initiated by English Major students at Rajabhat University. (T9)*

2) *Most students understood the story in the passage they had read, and understood what they were asked to write but they had problems with the format of paragraph writing. They wrote an opinion paragraph with no introduction, no topic sentence, and no transitional words. (T16)*

5.2 Formulaic Sequences

As previously mentioned, a move is a functional not a formal unit (Swales, 2004) and it is flexible in the use of language expressions. The previous studies concerning formulaic sequences mainly focused on the use of formulaic sequences used in writing or speaking or the acquisition of formulaic sequences (e.g. Biber, 2009; Cortes, 2004, 2006; Ellis, Simpson-Vlach, and Maynard, 2008; Hyland, 2008a, 2008b; Jiang and Nekrasova, 2007;). To the researcher's knowledge, research identifying formulaic sequences which are linked to the communicative function of texts has been very scarce. Although two research studies (e.g. Durrant and Mathews-Aydinli, 2010; Hüttner, 2010) have investigated this area, they were small in scale, examining only formulaic sequences used in a particular rhetorical move.

According to Wray (2002), in order to better understand the type of information, text analysis should start from semantic functions and work towards deriving a range of recurrent forms associated with those functions (Wray, 2002). The second aim of the present study is to explore the frequent formulaic sequences used in each move/step of the two sets of data. The similarities and differences regarding formulaic sequences identified in each section of the two corpora are in the following subsection.

5.2.1 Distinct Formulaic Sequences in Each Section

5.2.1.1 Introduction Section

In the international corpus, the formulaic sequences were selected from four moves (Move 1, Move 2 Step 1A, Move 3 Step1 and Move 3 Step 2), while those found in the Thai corpus were from two moves (Move 1 and Move 3 Step 1). A number of formulaic sequences identified in Move 1 (Establishing a territory) of the

two corpora was not very different. In both sets of data, claiming the centrality and making topic generalization are the functions of the formulaic sequences identified from Move 1. These formulaic sequences in their contexts are for example, *'there has been a growing interest in the study of'*, *'drew attention to the concept of'* and *'there has been increased interest in the role of'*. In addition, the formulaic sequences in relation to confirmation of the area investigated by citing previous research authors or literature is also found in both corpora, for example, *pointed out by*, and *have found that*. These formulaic sequences occurred together with a list of citations. As noted by Swales (1990), there are both integral and non-integral reporting citations being used in referring to previous research works. In the international corpus, both integral and non-integral reporting citations were employed. Conversely, in the Thai corpus, only the non-integral type was employed.

In announcing present work (Move 3 Step 1), 'The present/current study' was a frequent formulaic sequence, occurring in 90% of the RAs in the international corpus. However, this formulaic sequence was not employed in the Thai corpus. It seems that the Thai authors preferred to use various grammatical modifiers to introduce their research aims. In other words, there was no frequent linguistic expression, which was used to announce the present work, used by the Thai authors. By contrast, the international authors prefer employing particular patterns in introducing their research aims, as evidenced by a long list of formulaic sequences with their contexts.

5.2.1.2 Methods Section

Formulaic sequences were found in the three moves in the Methods section. However, a number of formulaic sequences identified in both datasets are

somewhat different. The formulaic sequences found in Move 4 Step 1 (Describing the sample) were functioned to frame the number or sample characteristics (e.g. *The participant were, A total of*). Only one formulaic sequence appeared in the Thai corpus, while there were four formulaic sequences in the international corpus. It was noticeable that the authors in the international corpus preferred to use '*participants*' instead of '*subjects*' in mentioning the sample of the study. Although '*participants*' was used to refer to the sample of the study in the Thai corpus, it was not as frequent as in the international corpus. This indicates a preference for word choice.

In the international corpus, the number of FSs identified from Move 5 Step 3 (Explaining the methods of measuring variables) was higher than that of the Thai corpus (Thai corpus: 2 FSs, international corpus: 7 FSs). Most of them were in the form of passive verb-preposition combinations (e.g. *were instructed to, were administered to, were encouraged to*). The FSs in the international corpus were diverse in number from which it can be inferred that it is a question of style when of explaining the measuring processes. In fact, they tend to explain step by step. '*In the first*' pattern was another distinct formulaic sequence which was used to realize Move 5 Step 3 and was found only in the international corpus. This formulaic sequence was markedly different from others because it is a bundle functioning to indicate a temporal relationship. Also, it was used as a transitional expression to introduce steps taken at different stages in the process of measuring variables. It is noticeable that although the frequency of occurrence of Move 5 Step 3 was quite high in both corpora, only two formulaic sequences were identified from the Thai corpus. From these finding, it can be inferred that the language use or word choice for describing the measurement of variables in the Thai RAs were often different, which then

resulted in a lack of FSs. Linguistic variations and written presentation are two important points which make RAs written by Thai writers quite different from those written in international RAs. A unique style or Thainess in English, which results from the process of contextualization (Chutisilp, 1984 quoted in Watkhaolarm, 2005), may, to a certain extent, be the reason for this phenomena. The distinction between the two corpora in relation to the employment of FSs may be important for EFL/ESL teachers who want to raise students' awareness of, not only rhetorical move, but also formulaic sequences employed in rhetorical communication.

5.2.1.3 Results Section

The formulaic sequences were collected from only three moves, including Move 7 (Preparatory information), Move 8 (Reporting results), and Move 9 Step 1 (Interpreting results). Only one FS (*are presented in*) was identified from Move 7 in the Thai corpus. Although words such as 'shown', 'summarized' which were the key words of FSs (*are presented in, are shown in, are summarized in*) identified in the international corpus, they were infrequent in the Thai corpus. In addition, the structure 'are...in' of FSs found in Move 7 is consistent with the suggestion made by Renouf and Sinclair (1991), who stated that there was a discontinuous pattern of formulaic sequences, which the function words occur as a fixed elements co-occurring with variable lexical. In other word, only the content words (such as presented, shown, summarized) are varied in the '*are ...in Table*' structure.

The formulaic sequences identified in Move 9 Step 1(Interpreting results) is worth pointing out. The formulaic sequences, which consisted of tentative verbs (*suggest, seem*) were employed in the international corpus. In the Thai corpus,

only the extraposed *it* construction (*It can be*) in the passive form was found. Extraposed *it* construction in the present study is based on the definition of Kanoksilapatham (2003) who refers to “the use of *it* in the grammatical subject position, followed by *that* or *to* complement clauses governed by either verbs or adjectives”, p. 62. The use of such a feature (extraposed *it* construction) supports the suggestion made by Rodman (1991) that among other linguistic devices, extraposed *it* was commonly used to express authors’ comments.

5.2.1.4 Discussion Section

Formulaic sequences were found in five communication functions, including Move 11 (Background information), Move 12 (Reporting results), Move 14 Step 1 (Interpreting results), Move 14 Step 2 (Comparing results with literature), and Move 14 Step 3 (Accounting for results). Of these five rhetorical communications, the FSs selected from two moves (Move 11 and Move 14 Step 2) will be discussed. Firstly, although the frequency of occurrence of Move 11 of the two corpora was quite similar, the FSs were drawn from the international corpus only. In addition, the two FSs identified from the international corpus were in the form of the past simple tense although both present and past simple tenses are used extensively in Move 11. Compared to the formulaic sequences which appeared in Move 7 (Preparatory information) of the Results section, all the formulaic sequences were in the present simple tense and the passive form. This observation reveals a distinct difference between the two sections that needs to be taken into consideration in the writing of these two sections. In the researcher’s view, the present simple tense should be the most appropriate option because the function of these moves is to allow the author to describe factual details of the background information to the study.

Secondly, for Move 14 Step 2 (Comparing results with literature), there were four and five formulaic sequences identified in the international and Thai corpus respectively. The ‘*are/is consistent with*’ bundle was a preferred formulaic sequence in the Thai corpus, occurring in six Thai Discussion sections. Although the co-occurrence of the two words (consistent + with) was found in the international corpus, they were in only two international Discussion sections and do not correspond to the criteria stipulated in the present study. These two cases are shown in the examples below.

Examples:

1) *Although the explanation provided ... , the current study’s results are **consistent with** results in (R) which...*(I6)

2) *The results of this study were **consistent with** previous research showing that highly computeranxious individuals...* (I3)

Thirdly, ‘*(is) in line with*’ was a formulaic sequence appearing in five different Discussion sections to realize Move 14 Step 2; however, it did not occur in the Thai corpus. This shows that different formulaic sequences are used or preferred by different authors in different published contexts.

Fourthly, the use of ‘*the results of*’ in the Discussion section is another issue to be considered here. This FS occurred not only in the Discussion section but also in the Results section for the presentation of results. However, in the Discussion section, the use of ‘*the results of*’ was different from that in the Results section. In the Results section, such a FS was used to introduce the results (Move 8), while in the Discussion section, it was used to realize Move 14 Step 2 (Comparing results with literature). This can be said that the same formulaic sequence has different functions

occurring in different moves. This finding was also observed in Shi's (2010) study. She found that there were 14 lexical bundles which had more than one function and were employed in different rhetorical moves.

Lastly, there are three combination word patterns which were found in the two corpora (e.g. 'reported by ..(R)..', '...those of..(R)..', and 'According to..(R)..'). The patterns consist of two main words plus reference(s). In other words, it is a variable slot in which the author(s)' name (citation) is used to complete the sequence. The 'reported by ..(R)..' structure occurred in 4 international Discussion sections, while '...those of..(R)..' pattern was found in 3 Thai Discussion sections. The last sequence, 'According to..(R)..', appeared in 5 Thai Discussion sections and 3 international Discussion sections. These co-occurring word patterns are not considered as FS because they did not meet the criteria of the present study. Their patterns in the contexts can be used as a practical template for learner writers when commenting on the results. These patterns with their contexts are listed as follows.

- 1) reported by (R)
 - Those reported by ..(R).. in a seminal study...
 - The studies reported by ..(R).. indicate that...
 - Findings reported by ... (R)... suggest that...
 - Findings were reported by ..(R)...
- 2) those of (R)
 - are slightly different from those of... (R)..
 - are very close to those of ..(R)..
 - are consistent with those of..(R)
- 3) According to (R)
 - According to ..(R), the...
 - According to ..(R), there are two sources of...
 - According to ..(R), such a decline in perception is due to...

5.2.1.5 Conclusion Section

The Thai corpus contains less formulaic sequences than that of the international corpus. Although the frequency of occurrence of Move 18 (Summarizing the study) in the Thai corpus was 10 percent smaller than that of the international corpus, only one formulaic sequence was found in the Thai corpus. In the international corpus, three formulaic sequences were taken from this move. Each of the three formulaic sequences found in the international corpus was shared by several Conclusion sections. By comparison, in the Thai corpus, only three Thai Conclusion sections shared the same sequence of '*findings from the*'.

Three formulaic sequences were collected from Move 20 Step 1 (Recommendations for further research) of the international corpus, including '*More work is needed to*', '*Future research should*', '*need to be*'. On the contrary, in the five Thai Conclusion sections that contained Move 20 Step 1, no formulaic sequence was identified. Although there were some key words used to signal the move, including '*additional study*', '*for other researchers*', '*further research*'; however, their appearance did not correspond to the criteria used in the present study. Furthermore, they were infrequent. From the findings, there are only a limited number of formulaic sequences found in both corpora, particularly in the Thai corpus. With a larger corpus, the number of formulaic sequences may increase.

In sum, a text analysis, which focuses on both semantic functions and recurrent sequences, which are used to fulfill particular communicative functions, is necessary for gaining a better understanding of text genre. Identifying move and formulaic sequences in English applied linguistics research articles in the present study derives not only from a detailed knowledge of the rhetorical moves employed in

the traditional sections of RAs in the two corpora, but also from the knowledge of what formulaic sequences are most appropriate for those functions. In this chapter, certain aspects related to the frequency of move occurrences, move structures, linguistic features, and formulaic sequences are discussed in order to provide greater insight into the structure of English applied linguistics RAs published in different contexts. An in-depth knowledge of formulaic sequences which link linguistic features and convey functional content gained from the present research may help novice researchers or ESL/EFL learners write RAs in the field of Applied Linguistics more appropriately and effectively.



CHAPTER 6

CONCLUSION

This chapter includes the summary of the findings in relation to the move analyses and the identification of the formulaic sequences. The pedagogical implications contributed by the study and some suggestions for further research are also offered.

6.1 Summary of the Findings

Two main goals of the present study are to identify the rhetorical moves and the formulaic sequences of English research articles in the field of Applied Linguistics published in Thailand and internationally. The findings of the two analyses are summarized in the following two subsections.

6.1.1 Move Analysis

The number of rhetorical moves identified in each corpus is different. There were 19 moves in the international corpus and 20 moves in the Thai corpus. The twenty moves in the Thai corpus include 3 for the Introduction section, 3 for the Methods section, 4 for Results section, 7 for the Discussion section and 3 for the Conclusion section. With regard to the international corpus, the rhetorical moves were similar to those of the Thai corpus, except for only one move in the Discussion section which was missing (Move 15: Summarizing the results). Each move had its own steps, which were similar or different from those in the proposed model.

In the Introduction section, all three moves proposed by Swales were found in both corpora. The occurrence of steps used to realize Move 2 and Move 3 of the two corpora was quite similar. Only one step (Move 3 Step 5: Announcing principle outcomes) proposed by Swales (2004) did not appear in the two datasets. In both sets of data, all three moves were conventional. The chronological M1-M2-M3 pattern was the most frequent structure to appear in the Thai corpus, while the recycling of this pattern (M1-M2-M3-M1-M2-M3) favored in the international corpus.

The three major moves proposed by Lim (2006) were successfully applied in the Methods sections of the research articles in both sets of the data. Each move was realized by steps with a different number of occurrences. To achieve Move 4 (Describing data collection procedures), Step 1(Describing the sample) was the most frequent step in both sets of data. A new step was found in Move 5 (Move 5 Step 2: Describing research instruments). The occurrence of this new step was relatively high, occurring at a frequency of 66.66% and 60% in the Thai corpus and the international corpus, respectively. From the analysis, there were no optional moves in either of two datasets. The existence of each move and its steps in the two corpora were quite similar in the Methods sections. The linear ordering pattern (M4-M5-M6) was the preferred structure employed in the Methods sections in both corpora. It was found that the Methods sections in both sets of data were likely to be in the past passive verb form.

Based on Yang and Allison's (2003) study, six moves were identified in the Results sections. However, only four moves of their study occurred in both sets of data. The remaining two moves ('Evaluating the study' and 'Deductions from the research') were missing in both corpora. Due to the fact that the main purpose of the

Result section is to present the results of the study, Move 8 (Reporting results) was found to be the most frequent and cyclical move in both sets of data. To realize Move 8, the use of the past simple tense was common. The first personal pronoun 'we' was also found but only in the international corpus. The second most frequent move in both sets of data was Move 7 (Preparatory information). From the findings, there was no straightforward move pattern (M7-M8-M9-M10) occurring in both datasets, but it was found that the move structure of M7-M8, which was a recycled structure, was shared by some of the Results sections in both corpora.

The findings show that the Discussion sections in the Thai corpus conformed to the proposed model in terms of the presence of the moves as stipulated by Yang and Allison (2003). Seven moves identified in Yang and Allison's model were found in the Thai corpus. However, only six moves were found in the international corpus, and Move 5 (Summarizing the study) was omitted. In relation to move structure, there was no linear ordering pattern found in any of the Discussion sections. Some noticeable differences between the two corpora were the use of Move 11 (Background information), Move 16 (Evaluating the study) and Move 17 (Deductions from the research). The international authors preferred providing background information (Move 11) before presenting results and evaluating their results which was different from the Thai authors. Also, the international authors appear to evaluate their study (Move 16) more than the Thai authors; conversely, the Thai authors tend to generalize their study (Move 17) to academic communities more than the international authors. The most cyclical move in both datasets was Move 14. The first personal pronouns 'I' and 'we' were noticeable in Move 14, and the present simple tense was the preferred verb form in interpreting the results.

In Conclusion section, among three moves identified in the proposed model, Move 18 (Summarizing the study) was the most frequent move in the two datasets. The other two moves (Move 19 and Move 20) showed striking differences in terms of move occurrence. Move 19 (Evaluating the study) and Move 20 (Deductions from the research) in the Conclusion sections in the Thai corpus appeared less frequently than those in the international corpus. Compared to the international authors, only a small number of the Thai authors tried to justify their studies or generalize the study's findings. It was also found that there was no a linear move pattern (M18-M19-M20) in the Thai corpus; conversely, such a linear pattern was found in seven of the international Conclusion sections. As a result of these findings, it can be concluded that the Thai Conclusion sections are far less similar to the proposed model than the international Conclusion sections. The present simple verb tense was the preferred tense in the Conclusion sections. Table 6.1 presents the rhetorical moves and their steps found in the present study based on the analysis of 60 English applied linguistics research articles from the two datasets.

Table 6.1 Rhetorical Moves of the RAs in the Two Corpora

Section	Rhetorical Moves	
	Thai corpus	International Corpus
Introduction	<p>Move 1: Establishing a territory (citation required) via Topic generalizations of increasing specificity **</p> <p>Move 2: Establishing a niche (citations possible) via ** Step 1A: Indicating a gap, or/and Step 1B: Adding to what is known Step 2: Presenting positive justification</p> <p>Move 3: Presenting the present work via: ** Step 1: Announcing present research descriptively and /or purposively Step 2: Presenting research questions or hypotheses Step 3: Definitional clarifications Step 4: Summarizing methods Step 5: Stating the value of the present research Step 6: Outlining the structure of the paper</p>	<p>Move 1 :Establishing a territory (citation required) via Topic generalizations of increasing specificity **</p> <p>Move 2: Establishing a niche (citations possible) via: ** Step 1A: Indicating a gap, or/and Step 1B: Adding to what is known Step 2: Presenting positive justification</p> <p>Move 3: Presenting the present work via: ** Step 1: Announcing present research descriptively and /or purposively Step 2: Presenting research questions or hypotheses Step 3: Definitional clarifications Step 4: Summarizing methods Step 5: Stating the value of the present research Step 6: Outlining the structure of the paper</p>
Methods	<p>Move 4: Describing data collection procedure(s)** Step 1: Describing the sample</p> <p>Move 5: Delineating procedure(s) for measuring variables ** Step 1: Presenting an overview of the design Step 2: Describing research instruments Step 3: Explaining method(s) of measuring variables Step 4: Justifying the method(s) of measuring variables</p> <p>Move 6: Elucidating data analysis procedure (s) ** Step 1: Recounting data analysis procedure(s) Step 2: Justifying the data analysis procedure(s) Step 3: Previewing results</p>	<p>Move 4: Describing data collection procedure(s) ** Step 1: Describing the sample Step 2: Recounting steps in data collection Step 3: Justifying the data collection procedure (s)</p> <p>Move 5: Delineating procedure(s) for measuring variables ** Step 1: Presenting an overview of the design Step 2: Describing research instruments Step 3: Explaining method(s) of measuring variables Step 4: Justifying the method(s) of measuring variables</p> <p>Move 6: Elucidating data analysis procedure (s) * Step 1: Recounting data analysis procedure(s) Step 2: Justifying the data analysis procedure(s) Step 3: Previewing results</p>

Remark: ** = conventional, * = optional

Table 6.1 Rhetorical Moves of the RAs in the Two Corpora (Cont.)

Section	Rhetorical Moves	
	Thai corpus	International Corpus
Results	Move 7: Preparatory information ** Move 8: Reporting results ** Move 9: Commenting on results * Step 1: Interpreting results Step 2: Comparing results with literature Step 3: Accounting for results Move 10: Summarizing results*	Move 7: Preparatory information ** Move 8: Reporting results ** Move 9: Commenting on results * Step 1: Interpreting results Step 2: Comparing results with literature Step 3: Accounting for results Move 10: Summarizing results*
Discussion	Move 11: Background information * Move 12: Reporting results ** Move 13: Summarizing results * Move 14: commenting on results ** Step 1: Interpreting results Step 2: Comparing results with literature Step 3: Accounting for results Step 4: Evaluating results Move 15: Summarizing the study* Move 16: Evaluating the study* Step 1: Indicating limitations Step 2: Indicating significance/advantages Step 3: Evaluating methodology Move 17: Deductions from the research * Step 1: Making suggestions Step 2: Recommending further research Step 3: Drawing pedagogic implications	Move 11: Background information * Move 12: Reporting results ** Move 13: Summarizing results * Move 14: commenting on results ** Step 1: Interpreting results Step 2: Comparing results with literature Step 3: Accounting for results Move 15: Evaluating the study * Step 1: Indicating limitations Step 2: Indicating significance/advantages Step 3: Evaluating methodology Move 16: Deductions from the research * Step 1: Making suggestions Step 2: Recommending further research Step 3: Drawing pedagogic implications
Conclusion	Move 18: Summarizing the study ** Move 19: Evaluating the study * Step 1: Indicating significance/advantages Step 2: Indicating limitations Step 3: Evaluating methodology Move 20: Deductions from the research * Step 1: Recommending further research Step 2: Drawing pedagogic implications	Move 17: Summarizing the study ** Move 18: Evaluating the study ** Step 1: Indicating significance/advantages Step 2: Indicating limitations Step 3: Evaluating methodology Move 19: Deductions from the research ** Step 1: Recommending further research Step 2: Drawing pedagogic implications

Remark: ** = conventional, * = optional

6.1.2 Formulaic Sequences

A formulaic sequence as defined in the present study is a sequence of 3 or more word combination and it is a key expression in each move/step. Also, each formulaic sequence must occur in at least 3 research articles. Based on the analysis, there were certain formulaic sequences found in each corpus. In the Introduction section, the formulaic sequences appeared in all three moves of the international corpus; however, the selected formulaic sequences were found in only two moves of the Thai corpus. For example, Move 2 of the Thai corpus did not show any formulaic sequence. As for Move 3, the formulaic sequences taken from the international corpus were mainly from two different steps (Step 1: Announcing present work and Step 2: Presenting research questions or hypotheses), whereas those identified from the Thai corpus were from Step 2 only. Two formulaic sequences, '*The present study*' and '*the current study*', were found frequently in realizing Move 3 Step 1 in the international corpus. The former sequence was used in 18 Introduction sections and the latter was employed in 9 Introduction sections. However, this pattern was not the favored form for the Thai authors.

Although there were formulaic sequences taken from the three moves in the Methods sections, a number of the formulaic sequences taken from each corpus were different. It was found that the international corpus showed a greater number of formulaic sequences than the Thai corpus. However, the Thai authors seem to favor certain formulaic sequences which are used to describe the procedures of data analysis (Move 6 Step 1); five different formulaic sequences were identified from such a step. Most of the formulaic sequences identified in the two corpora were in the past tense verb form.

In the Results sections, the formulaic sequences were taken from three moves (Move 7, Move 8, and Move 9). It was found that the international corpus contains more formulaic sequences than the Thai corpus. This can be seen in the case of Move 8, where the number of formulaic sequences identified in the international corpus nearly doubled the number in the Thai corpus. Although Move 8 was found in all Results sections in both corpora, the Thai corpus contained less formulaic sequences than the international corpus. Three formulaic sequences taken from Move 7 of the international corpus were in the same form, but different in verb usage (*are presented in Table, are shown in Table, are summarized in Table*). It was found that only one of these three formulaic sequences (*are presented in*) was employed in the Thai corpus. By comparison, the number of formulaic sequences identified from the Thai corpus was quite small. Most selected formulaic sequences in both sets of data were in the present simple verb tense.

The formulaic sequences identified in the Discussion sections of the international corpus were from three moves (Move 11, Move 12, and Move 14), while in the Thai corpus formulaic sequences were found only in Move 12, Move 14. Although the occurrence of Move 11 (Background information) of both corpora was almost the same, there was no such formulaic sequence found in the Thai corpus. A large number of formulaic sequences in the Discussion sections were from Move 14. The formulaic sequences identified from this move were from three steps, including Step 1: Interpreting results, Step 2: Comparing results with literature, and Step 3: Accounting for results. A number of formulaic sequences which were identified from Move 12 in the two corpora were somewhat different; the Thai corpus showed a greater number of formulaic sequences than the international corpus. Only a '*the*

results of bundle was found in the international corpus. For the Conclusion section, formulaic sequences were found in two moves (Move 18 and Move 20 Step 1) in the international corpus, but in only one move (Move 18) in the Thai corpus. Surprisingly, the bundle '*The present study*' was the most frequent formulaic sequence, which was found in ten international Conclusion sections, while this expression did not appear in any of the Thai Conclusion sections.

6.2 Implications for the Present Study

The analyses of the moves and the formulaic sequences in the present study have pedagogical implications concerning English academic writing, particularly for non-native speakers.

Firstly, as known, academic work in all fields is influenced by its own genre and writing conventions which constrain both choice of content and style. Therefore, preparing students for academic writing is now very important. Learners need to be made aware of the conventions set by the discourse community when writing papers. This is because in order to accomplish competent academic writing, learners should be encouraged and instructed to take note of the structural complexities and relationships which occur in the functions and language usage in an academic context.

Secondly, the formulaic sequences identified which are based on their generic moves in the present study could be made more pedagogically useful and could be used as a template for writing research articles (Durrant and Mathews-Aydinli, 2010). This is due to the fact that learners need to understand what functions they need to express, what forms can be most appropriately used to fulfill those functions, and what variations those forms permit when they are integrated into specific contexts.

Formulaic sequences which conventionally realize rhetorical moves/steps reflect common practice in individual disciplines and published contexts. Therefore, applying typical recurrent word sequences which occur in renowned international journal articles should enable inexperienced non-native writers to write their academic articles more efficaciously.

Thirdly, the comparison of rhetorical move structure and formulaic sequences in the present study may provide insights into how English RAs written by Thai writers published in Thailand are similar or different from those published in international journals. This may enable learners to be aware of the discrepancies of lexical patterns and the salient linguistic features typically identified in particular communicative functions. In addition, the study of both the macro-level of the genre structures and the micro-level of formulaic language in the present study should help students to be aware of local norms and practices used in specific disciplines and contexts. All this rhetorical and lexical knowledge should facilitate students' English language learning, especially when reading journal articles written by authors from different backgrounds. More specifically, the rhetorical organization of leading international RAs will provide a practical guide for inexperienced non-native writers who want to publish their research articles not only in local journals but also in well-known and respected international journals.

Finally, apart from raising students' awareness the rhetorical moves/steps and the formulaic sequences as stated above, concrete activities adopting the findings of the present study should be employed in classrooms, especially in EFL contexts. There are some practical strategies that can be employed in putting the findings into practice. For example, first, teachers can develop students' abilities to organize their

written tasks by presenting them with the rhetorical moves/steps used in the two corpora; the teacher can focus on both the differences and the similarities which were found in the two sets of data. By using authentic texts, students will be able to see how different groups of writers in different discourse communities organize their RAs. Teachers should encourage students to find the reasons for some of striking differences in terms of the occurrence of particular moves/step, such as in the Conclusion section (where the frequency of Move 19 (Evaluating the study) and Move 20 (Deduction from the research) were used less often than in the Thai corpus). This means there may be some issues such as writing styles, world Englishes, nativization and acculturation, as suggested by some scholars (e.g. Bhatia, 2009; Bolton, 2004; Dissanayake, 2009; Huang, 2011), which could account for these differences. These potential factors should further be discussed with students in class. Another concrete activity, which will assist students to comprehend fully the move sequence or move structure (e.g. move structure of RA Introduction section) is to employ certain exercises, for example, the teacher may ask students to reorder scrambled sentences into an appropriate order to form an Introduction section.

Second, teacher should direct students' attention to the conventional and optional moves/steps. This is due to the fact that the conventional moves/steps are the most frequently used. This means they are important and that they should be included when writing research articles in this particular field. On the other hand, students may or may not use the optional moves/steps in their papers. This is because they are not the preferred communicative function used by all the members of a particular discourse community. To emphasize this issue, teachers may select some applied linguistics RAs that are published in local journals and those published in

international journals and then ask students to identify and compare the most frequent rhetorical moves (or conventional moves/steps) in each section of the RAs. Additionally, focusing on RAs in other fields is possible; for example, teachers may select RAs from related fields or interdisciplinary fields. With this activity, students will learn how RAs in different fields are conventionally constructed. In so doing, students will recognize rhetorical structural moves and formulaic language that can be used to realize individual moves/steps in RAs from other disciplines. Students also are able to acquire the conventional and optional moves of RAs in different fields. It is believed that in this way students will be helped to broaden their knowledge of the variations in different disciplines.

Third, in relation to linguistic features such as tense, voice, personal pronouns, and hedging devices, teachers should highlight their usage. Students should be made aware of the usage of these linguistic features in realizing each rhetorical move/step by doing some exercises in which they are asked to indicate an appropriate usage of the specific linguistic features in individual moves. Also, students should be encouraged to undertake some activities such as collecting English RAs with complete IMRDC formats written by a particular local (e.g. Thai) author who publishes their papers in both contexts (local and international journals). Then students can be asked to compare and contrast the two sets of data and discuss the usage of certain linguistic features (such as the use of pronouns) which are used in the RAs published in different contexts. By means of this activity, students will see whether there are any differences or similarities in the use of certain linguistic features in RAs written by a particular author but published in different contexts.

Fourth, concerning the usage of typical formulaic sequences, teachers may organize exercises according to the use of formulaic sequences within their contexts, and then ask students to examine whether a particular formulaic sequence can be used in different moves/steps with a different function and in different sections of RAs. Teachers may also ask students to expand a collection of formulaic sequences by using some concordance programs. Since formulaic sequences reflect the common practice of frequent and actual language usage in individual genres and disciplines, the collection of formulaic sequences can thus be used to facilitate the writing of RAs. These are some examples which L2 teachers can use in their writing classes. The researcher is confident that by integrating these methods, students will acquire with a fuller understanding of both genres and linguistics.

6.3 Suggestions for Further Research

Although the present study provides useful information concerning the rhetorical moves and formulaic sequences used in English RAs in the field of Applied Linguistics published in different contexts, some unresolved issues have emerged from the present research study which still need to be addressed. The following suggestions may serve as guidelines for further research.

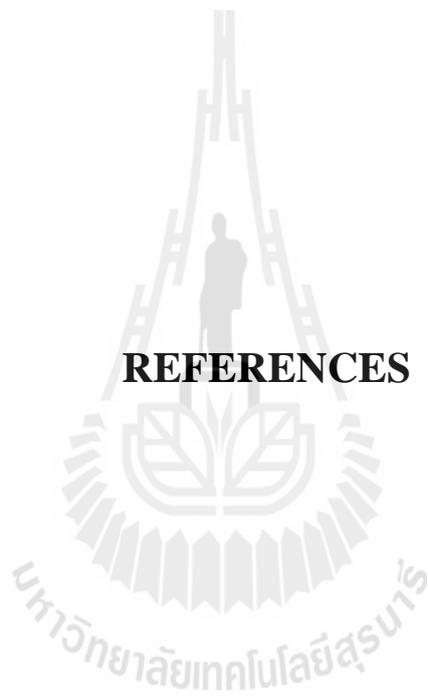
First, there is a need to compare the entire rhetorical move structure and the formulaic sequences of research articles written by the same non-native writers, but published in both local and international journals. It would be interesting to see the differences or similarities in the rhetorical organization and the formulaic language commonly used in their articles. From such a comparison, we may obtain explicit evidence on the factors that might influence and contribute to the various rhetorical

strategies adopted by a particular person when writing and publishing in different published contexts.

Second, future research may need to expand the size of the corpora to be as large as possible in order to increase its representativeness. Also, with a larger corpora, the number of identified formulaic sequences would be increased, which will be useful for learners to adopt when writing their research articles. As a result, learners will have a greater choice in selecting and using certain styles and formulaic language from a large number of formulaic expressions. With a full understanding of the rhetorical structure and the correct use of the most frequently occurring formulaic sequences in an appropriate context, learners should be able write their research articles more easily and appropriately.

Lastly, the authors' backgrounds were beyond the scope of this present study. Therefore, further studies should take personal factors and other relevant variables into account, including educational background, writing and publishing experience, native speaker involvement, and culture. These are all possible factors that may have an effect on the writing of research articles. As already noted in the literature, it is widely accepted that there are many other variables (e.g. culture, writing experience, writing styles, linguistic background) that have an influence on the writing of academic texts and affect their discourse patterns (Im-O-Cha et. al, 2004; Taylor and Cheng, 1991; Valero-Garces, 1996).

REFERENCES



REFERENCES

- Ahmad, U. K. (1997). Research article introductions in Malay: Cyclical rhetorical in an emerging research community. In A. Daszak (ed.). **Culture and styles of academic discourse** (pp.237-304). New York: Mouton de Gruyter.
- Amirian, Z., Kassaian, Z., and Tavakoli, M. (2008). Genre analysis: an investigation of the discussion sections of applied linguistics research articles. **The Asian ESP Journal**. 4(1): 39-63.
- Anthony, L. (1999). Writing research article introductions in software engineering: how accurate is a standard model? **IEEE Transactions on Professional Communication**. 42 (1): 38-46.
- Arvay, A., and Tanko, G. (2004). A contrastive analysis of English and Hungarian theoretical research article introductions. **IRAL**. 42: 71-100.
- Basturkmen, H. (2009). Commenting on results in published research articles and masters dissertations in language teaching. **Journal of English for Academic Purposes**. 8 (4): 241-251.
- Belcher, D. (2007). Seeking acceptance in an English-only research world. **Journal of Second Language Writing**. 16: 1-22.
- Bhatia, V. K. (1993). **Analysing genre: language use in professional settings**. New York: Longman Publishing.
- Bhatia, V. K. (2002). Applied genre analysis: a multi-perspective model. **IBERICA**. 4: 3-19.

- Bhatia, V. K. (2009). Genres and styles in world Englishes. In B.B. Kachru, Y. Kachru, and C. L. Nelson (eds.). **The handbook of world Englishes** (pp.389-401). Oxford: Wiley-Blackwell.
- Biber, D. (2009). A corpus-driven approach to formulaic language in English: multi-word patterns in speech and writing. **International Journal of Corpus Linguistics**. 14 (3): 275-311.
- Biber, D., and Barbieri, F. (2007). Lexical bundles in university spoken and written registers. **English for Specific Purposes**, 26, 263-286.
- Biber, D. Connor, U., and Upton, T. A. (eds.). (2007). **Discourse on the Move: using corpus analysis to describe discourse structure**. Amsterdam: John Benjamins Publishing Company.
- Biber, D., Johansson, S., Leech, G., Conrad, S., and Finegan, E. (1999). **Longman grammar of spoken and written English**. London: Pearson Education.
- Bolton, K. (2004). World Englishes. In A. Davies and C. Elder (eds). **The handbook of Applied Linguistics** (pp. 367-395). Oxford: Blackwell Publishing.
- Boonyasaquan, S. (2005a). An analysis of collocational violations in translation. Manusat Paritat: **Journal of Humanities**. 27 (2): 79-91.
- Boonyasaquan, S. (2005b). The lexical approach: an emphasis on collocations. Manusat Paritat: **Journal of Humanities**. 28 (1): 98-108.
- Borg, E. (2003). Key concepts in ELT: Discourse community. **ELT Journals**.57 (4): 398-400.
- Brett, P. (1994). A genre analysis of the results section of sociology articles. **English for Specific Purposes**. 22: 365-385.

- Bruce, I. (2008). Cognitive genre structures in Methods sections of research articles: a corpus study. **Journal of English for Academic Purposes**. 1: 38-54.
- Bruce, I. (2009). Results sections in sociology and organic chemistry articles: a genre analysis. **English for Specific Purposes**. 28: 105-124.
- Bunton, D. (2005). The structure of PhD conclusion chapters. **Journal of English for Specific Purposes**. 4: 207-224.
- Cahyono, B. Y. (2001). Research studies in second language writing and in contrastive rhetoric. **K@ta Journal** [on-line serial]. Available: <http://puslit2.petra.ac.id/ejournal/index.php/ing/article/view/15472/15464>
- Canagarajah, S. (2002). Multilingual writers and the academic community: Towards a critical relationship. **Journal of English for Academic Purposes**. 1: 29-44.
- Cargill, M., and O'Connor, P. (2006). Developing Chinese scientists' skills for publishing in English: evaluating collaborating colleague workshops based on genre analysis. **Journal of English for Academic Purposes**. 5: 207-221.
- Chakorn, O. (2005). Analysis of lexico-grammatical errors of Thai business people in their English business correspondence. **Nida Language and Communication Journal**. 10 (10): 70-94.
- Chakorn, O. (2008). Rhetorical appealed in Thai Annual Reports: an investigation of the authority's language in the executive letter during Asia's economic crisis. In **Proceedings of the 2008 Association for Business Communication Annual Convention** [on-line]. Available: <http://businesscommunication.org/wp-content/uploads/2011/04/Ora-OngChakorn.pdf>.

- Chang, C-F., and Kuo, C-H. (2011). A corpus-based approach to online materials development for writing research articles. **English for Specific Purposes**. 30: 222-234.
- Charles, M. (2006). Phraseological patterns in reporting clauses used in citation: a corpus-based study of theses in two disciplines. **English for Specific Purposes**. 25: 310-331.
- Charoenchatri, C. (2007). Genre analysis of newsgroup movie reviews on www.Imdb.com. **Humanities Journal**. 14 (2): 113-125.
- Chen, Y-H., and Baker, P. (2010). Lexical bundles in L1 and L2 academic writing. **Language Learning & Technology**. 14 (2): 30-49.
- Coffin, C. (2001). Theoretical approach to written English-a TESOL perspective. In A. Burns and C. Coffin (eds.). **Analysing English in a global context: A reader** (pp. 93-122). New York: Macquarie University Press.
- Connor, U. (1996). **Contrastive rhetoric: cross-cultural aspects of second language writing**. Cambridge, UK: Cambridge University Press.
- Connor, U. (2002). New direction in contrastive rhetoric. **TESOL Quarterly**. 36 (4): 493-510.
- Connor, U. (2003). Changing currents in contrastive rhetoric: implications for teaching and research. In B. Kroll (ed.). **Exploring the dynamics of second language writing** (pp.218-241). Cambridge: Cambridge University Press.
- Connor, U., and Mauranen, A. (1999). Linguistic analysis of grant proposals: European Union research grants. **English for Specific Purposes**. 18 (1): 47-62.

- Connor, U., Upton, T. A., and Kanoksilpatham, B. (2007). Introduction to move analysis. In D., Biber.; U., Connor., and T., A. Upton (eds.). **Discourse on the move: Using corpus analysis to describe discourse structure** (pp.23-41). Amsterdam: John Benjamins Publishing Company.
- Cortes, V. (2004). Lexical bundles in published and student disciplinary writing: Examples from history and biology. **English for Specific Purposes**. 23: 397-423.
- Cortes, V. (2006). Teaching lexical bundles in the disciplines: An example from a writing intensive history class. **Linguistics and Education**. 17: 391-409.
- Crookes, G. (1986). Towards a validated analysis of scientific text structure. **Applied Linguistics**. 7 (1): 57-70.
- Del Saz-Rubio, M. M. (2011). A pragmatic approach to the macro-structure and metadiscoursal features of research article introductions in the field of Agricultural Sciences. **English for Specific Purposes**. 30 (3): 258-271.
- Dissanakake, W. (2009). Cultural studies and discursive constructions of world Englishes. In B.B. Kachru, Y. Kachru, and C. L. Nelson (eds.). **The handbook of world Englishes** (pp.545-565). Oxford: Wiley-Blackwell.
- Dudley-Evans, T. (1994). Genre analysis: an approach to text analysis for ESP. In M. Coulthard (ed.). **Advances in Written Text Analysis** (pp. 219-228). London: Routledge.
- Dudley-Evans, T., and St John, M. J. (1998). **Developments in ESP: A multi-disciplinary approach**. Cambridge: Cambridge University Press.

- Durrant, P., and Mathews-Aydinli, J. (2011). A function-first approach to identifying formulaic language in academic writing. **English for Specific Purposes**. 30 (1): 58-72.
- Duszak, A. (1994). Academic discourse and intellectual styles. **Journal of Pragmatics**. 21 (3): 291-313.
- Ellis, N.C., Simpson-Vlach, R., and Maynard, C. (2008). Formulaic language in native and second language speakers: Psycholinguistic, Corpus Linguistics, and TESOL. **TESOL Quarterly**. 42 (3). 375-396.
- El Malik, A. T. and Nesi, H. (2008). Publishing research in a second language: the use of Sudanese contributors to international medical journals. **Journal of English for Specific Purposes**, 7: 87-96.
- Fallahi, M. M., and Erzi, M. (2003). Genre analysis in language teaching an investigation of the structure of the discussion of language-teaching-journal articles. **IJAL**. 6 (1): 69-81.
- Fakhri, A. (2004). Rhetorical properties of Arabic article research Introductions. **Journal of Pragmatics**. 36: 1119-1138.
- Fakhri, A. (2009). Rhetorical variation in Arabic academic discourse: Humanities versus Law. **Journal of Pragmatics**. 41: 306-324.
- Flowerdew, J. (1993). An educational, or process, approach to the teaching of professional genres. **ELT Journal**. 47 (4): 305-317.
- Flowerdew, J. (1999). Writing for scholarly publication in English: The case of Hong Kong. **Journal of Second Language Writing**. 8 (2): 123-145.
- Flowerdew, J. (2001). Attitudes of journal editors to nonnative speaker contributions. **TESOL Quarterly**. 35 (1): 121-150.

- Flowerdew, L. (2000). Using a genre-based framework to teach organizational structure in academic writing. **ELT Journal**. 54(4): 369-378.
- Hallek, G. B., and Connor, U. M. (2006). Rhetorical moves in TESOL conference proposals. **Journal of English of Academic Purposes**. 5: 70-86.
- Harwood, N. (2005). 'I hoped to counteract the memory problem, but I made no impact whatsoever': discussing methods in computing science using I. **English for Specific Purposes**. 24: 243-267.
- Hirano, E. (2009). Research article introductions in English for specific purposes: a comparison between Brazilian Portuguese and English. **English for Specific Purposes**. 28: 240-250.
- Holmes, R. (1997). Genre analysis, and the social sciences: an investigation of the structure of research article discussion sections in three disciplines. **English for Specific Purposes**. 16 (4): 321-337.
- Hopkins, A., and Dudley-Evans, T. (1988). A genre- based investigation of the discussion sections in articles and dissertations. **English for Specific Purposes**. 7: 113-121.
- Hsu, J-Y (2008). Role of the multiword lexical units in current EFL/ESL contexts. **US-China Foreign Language** [on-line serial]. Available: <http://www.linguist.org.cn/doc/uc200807/uc20080706.pdf>
- Huang, J. C. (2010). Publishing and learning writing for publication English: perspectives of NNES PhD students in science. **Journal of English of Academic Purposes**. 9 (1): 33-44.

- Huang, J. C. (2011). Socializing NNES novice scholars into disciplinary discourse communities: A research writing course. Ph.D. Dissertation, State University of New York at Buffalo.
- Hüttner, J. (2005). Formulaic language and genre analysis: The case of student academic papers. **Views [on-line serial]. Available:** https://anglistik.univie.ac.at/fileadmin/user_upload/dep_anglist/weitere_Uploads/Views/Views0501ALL.pdf#page=3
- Hüttner, J. (2010). Purpose-built corpora and student writing. **Journal of Writing Research**. 2 (2): 197-218.
- Hyland, K. (1994). Hedging in academic writing and EAP textbooks. **English for Specific Purposes**. 13: 239-256.
- Hyland, K. (1996). Writing without conviction? Hedging in science research articles. **Applied Linguistics**. 17: 433-454.
- Hyland, K. (2002). Authority and invisibility: Authorial identity in academic writing. **Journal of Pragmatics**. 34: 1091-1112.
- Hyland, K. (2003). Genre-based pedagogies: a social response to process. **Journal of Second Language Writing**. 12: 17-29.
- Hyland, K. (2007). Genre pedagogy: language, literacy, and L2 writing instruction. **Journal of Second Language Writing**. 16: 148-164.
- Hyland, K. (2008a). As can be seen: Lexical bundles and disciplinary variation. **English for Specific Purposes**. 27: 4-21.
- Hyland, K. (2008b). Academic clusters: text patterning in published and postgraduate writing. **International Journal of Applied Linguistics**. 18 (1): 41-62.

- Hyland, K., and Tse, P. 2004. "Metadiscourse in Academic Writing: A Reappraisal". **Applied Linguistics**. 25(2): 156-177.
- Hyon, S. (1996). Genre in three traditions: implications for ESP. **TESOL Quarterly**, 30 (4): 693-716.
- Im-O-Cha, P., Kittidhaworn, P., Broughton, M. M., and Panproegsa, S. (2004). A comparative study of the structures of language and linguistics journal research articles introductions written in Thai and in English. **Journal of Language and Linguistics**. 22 (2): 46-57.
- Isik Tas, E. (2008). **A corpus-based analysis of genre-specific discourse of research: the PhD thesis and the research article in ELT**. Ph.D. Dissertation, Middle East Technical University.
- Isik Tas, E. (2010). Telling ELT tales out of school: "in this paper I will discuss..."current trends in academic writing. **Procedia Social and Behavioral Sciences**. 3: 121-126.
- Jalilifar, A. (2010). Research article introductions: sub-disciplinary variations in Applied Linguistics. **The Journal of Teaching Language Skills**, 2 (2): 29-55.
- Jiang, N., and Nekrasova, M. T. (2007). The processing of formulaic sequences by second language speakers. **The Modern Language Journal**. 91(3): 433-445.
- Jogthong, C. (2001). **Research article introductions in Thai: genre analysis of academic writing**. Ph. D. Dissertation, West Virginia University, West Virginia.
- Johns, A. M. (2002) (ed.). **Genre in the classroom: Multiple perspectives**. Mahwah NJ: Lawrence Erlbaum.

- Kanoksilapatham, B. (2003). **A corpus-based investigation of scientific research articles: Linking move analysis and multidimensional analysis**. Ph.D. Dissertation, Georgetown University, Washington, DC.
- Kanoksilapatham, B. (2004). Corpus analysis and its applications in ELT. **Journal of English Studies**. 2: 16-27.
- Kanoksilapatham, B. (2005). Rhetorical structure of biochemistry research articles. **English for Specific Purposes**. 24: 269-292.
- Kanoksilapatham, B. (2007). Writing scientific research articles in Thai and English: similarities and difficulties. **Silpakorn University International Journal**. 7: 172-203.
- Kanoksilapatham, B. (2011). Civil engineering research article Introductions: textual structure and linguistic characterization. **Asian ESP Journal** , 7(2) [on-line serial]. Available: <http://www.asian-esp-journal.com/Vol7-2-Kanoksilapatham.pdf>
- Kaplan, R. (1966). Cultural thought pattern in intercultural education. **Language Learning**. 16 (1): 1-20.
- Killingsworth, M. J. (1992). Discourse communities: Local and global. **Rhetoric Review**. 11 (1): 110-122.
- Kongpetch, H. (2006). Using a genre-based approach to teach writing to Thai students: a case study. **Prospect**. 21 (2): 3-33.
- Kubota, R. (1998). An investigation of L1-L2 transfer in writing among Japanese university students: implications for contrastive rhetoric. **Journal of Second Language Writing**. 7: 69-100.

- Kuo, C. (1999). The use of personal pronouns: Role relationships in scientific journal articles. **English for Specific Purposes**. 18 (2): 121-138.
- Kwan, B.S.C. (2005). **A genre analysis of literature review in doctoral theses**. Ph.D. Dissertation, City University of Hong Kong.
- Leki, I. (1991). Twenty-five years of contrastive rhetoric: text analysis and writing pedagogues. **TESOL Quarterly**. 25 (1): 123-143.
- Li, J., and Schmitt, N. (2009). Lexical phrases in academic writing: a longitudinal case study. **Journal of Second Language Writing**. 18 (2): 85-102.
- Li, L., and Ge, G. (2009). Genre analysis: structural and linguistic evaluation of the English medium-medical research article (1985-2004). **English for Specific Purposes**. 28 (2): 93-104.
- Li, Y. (2006). A doctoral student of physics writing for publication: a sociopolitically-oriented case study. **English for Specific Purposes**. 25 (4): 456-478.
- Lim, J. M. H. (2006). Method sections of management research articles: A pedagogically motivated qualitative study. **English for Specific Purposes**. 25: 282-309.
- Lim, J. M. H. (2010). Commenting on results in applied linguistics and education: A comparative genre-based investigation. **Journal of English for Academic Purposes**. 9: 280-294.
- Lin, B. (2006). Genre-based teaching and Vygotskian principles in EFL: the case of a university writing course. **Asian EFL Journal** [on-line serial]. Available: http://www.asian-efl-journal.com/Sept_06_bl.php

- Loi, C. K. (2010). Research article introductions in Chinese and English: a comparative genre-based study. **Journal of English for Academic Purposes**. 9: 267-279.
- Loi, C. K., and Evans, M.S. (2010). Cultural differences in organization of research articles introduction form the field of educational psychology: English and Chinese. **Journal of Pragmatics**. 24: 2814-2825.
- Lores, R. (2004). On RA sbstracts: from rhetorical structure to thematic organization. **English for Specific Purposes**. 23: 280-302.
- Mahzari, A. and Maftoon, P. (2007). A contrastive study of the introduction section of English and Persian medical research articles. **Iranian Journal of Language Studies (IJLS)**, 1 (3): 201-214.
- Marco, M. J. L. (2000). Collocational frameworks in medical research papers: genre-based study. **English for Specific Purposes**. 19: 63-86.
- Martínez, I. A. (2003). Aspects of theme in the method and discussion sections of biology journal articles in English. **Journal of English for Academic Purposes**. 2: 103-123.
- Martínez, I. A. (2005). Native and non-native writers' use of first person pronouns in the different sections of biology research articles in English. **Journal of Second Language Writing**. 14: 174-190.
- Moore, T. (2002). Knowledge and agency: a study of 'metaphenomenal discourse' in textbooks from three disciplines. **English for Specific Purposes**. 21: 347-366.
- Moritz, M. E., Meurer, J. L., and Dellagnelo, A. K. (2008). **Conclusions as components of research articles across Portuguese as a native language,**

- English as a native language and English as a second language: A contrastive genre study** [on-line]. Available: <http://revistas.pucsp.br/index.Php/esp/article/download/9194/4522>
- Mur-Dueñas, P. (2007). **A cross-cultural analysis of the generic structure of business management research articles: The methods section** [on-line]. Available: http://www.ual.es/odisea/Odisea08_Mur.pdf
- Mur-Dueñas, P. (2012). A corpus-based analysis of two crucial steps in Business Management research articles: The creation of a research space and the statement of limitations. **Nordic Journal of English Studies** 11 (1) [on-line serial]. Available: <http://ojs.uu.se/ojs/index.php/njes/article/viewFile/1037/905>, 55-78.
- Nakai, S., and Rojjanaprapayon, R. (2001). “deadly threat” rhetorical analysis of newspaper articles on HIV/AIDS epidemic in Thailand. **Nida Language and Communication Journal**. 5(5): 47-62.
- Nattinger, J. R., and DeCarrio, J.S. (1992). **Lexical phrases and language teaching**. Oxford: Oxford University Press.
- Nwogu, K. N. (1991). Structure of science popularizations: a genre-analysis approach to the schema of popularized medical texts. **English for Specific Purposes**. 10 (2): 111-123.
- Nwogu, K. N.(1997). The medical research paper: structure and functions. **English for Specific Purposes**. 16 (2): 119-138.
- Oneplee, J. (2008). **Genre analysis of scientific abstract: a comparative study of science and natural journals**. Master’s thesis, Mahidol University, Thailand.

- Ozturk, I. (2007). The textual organization of research article introductions in applied linguistics: variability within a single discipline. **English for Specific Purposes**. 26: 25-38.
- Pang, W. (2010). Lexical bundles and the construction of an academic voice: a pedagogical perspective. **Asian EFL Journal**. 47: 30-42.
- Park, S. (2004). Rhetorical strategies in English research article introductions written by NS and NNS. **Studies in Modern Grammar**, 38. [on-line]. Available: from http://scholar.googleusercontent.com/scholar?q=cache:PZ-gBQ6mb8oJ:scholar.google.com/&hl=th&as_sdt=0&scioldt=0
- Pawley, A., and Syder, F. H. (1983). 'Two puzzles for linguistic theory: nativelike selection and nativelike fluency'. In J. C. Richards and R. W. Schmidt (eds.). **Language and communication**. New York: Longman.
- Peacock, M. (2002). Communicative moves in the discussion section of research articles. **System**. 30: 479-497.
- Peacock, M. (2011). The structure of the Methods section in research articles across eight disciplines. **Asian ESP Journal**, 7 (2), 97-124.
- Phanthama, P. (2000). **The organization and the linguistic features of the abstracts of medical journals**. Master's thesis, Mahidol university, Thailand.
- Pho, P. D. (2008). **How can learning about the structure of research articles help international students** [on-line]. Available: http://www.isana.org.au/files/2008%20Conference%20Proceedings/paper_Dzung.pdf
- Pho, P. D. (2009). Linguistic realizations of rhetorical structure: a corpus-based study of research articles in applied linguistics and educational technology. In

S. T. Gries, S., Wulff, & M., Davies (eds.). **Corpus-linguistic applications: Current studies, new directions**. Rodopi: Amsterdam.

Pogner, K-H. (2005). **Discourse communities and communities of practice: On the social context of text and knowledge production**. Paper presented at 21st EGOS colloquium June 30- July 2, 2005 [on-line]. Available: <http://openarchive.cbs.dk/bitstream/handle/10398/7320/discourse%20communities.pdf?sequence=1>

Posteguillo, S. (1999). The schematic structure of computer science research articles. **English for Specific Purposes**. 18 (2): 139-160.

Pramoolsook, I. (2007). Genre Transfer from dissertation to research article: Biotechnology and Environmental Engineering in a Thai university context. Ph.D. Dissertation, University of Warwick, UK.

Pramoolsook I. (2008). A multi-layered discourse community: Defining Biotechnology and Environmental Engineering discourse communities at SUT. **Suranaree University of Social Science**. 2 (1).85-97.

Promsin, P. (2006). An analysis of move and modality in English engineering abstract. **NIDA Language and Communication Journal**. 11: 43-61.

Pupipat, A. (1998). **Scientific writing and publishing in English in Thailand: The perception of Thai scientists and editors**. Ph.D. Dissertation, Columbia University, New York.

Rasmeenin, C. (2006). **A structural move analysis of MA thesis discussion sections in applied linguistics**. Master's thesis, Mahidol University, Thailand.

- Renouf, A., and Sinclair, J.M. 1991. "Collocational frameworks in English". In K. Aijmer & B. Altenberg (Eds.). **English Corpus Linguistics** (pp. 128-143). London: Longman.
- Reppen, R. (2010). **Using Corpora in language classroom**. New York: Cambridge University Press.
- Rodman, L. (1991). Anticipatory it in scientific discourse. **Journal of Technical Writing and Communication**. 21(1): 17-27.
- Salager-Meyer, F. (1994). Hedges and textual communicative function in medical English written discourse. **English for Specific Purposes**. 13 (2): 149-170.
- Samraj, B. (2002). Introductions in research articles: variations across disciplines. **English for Specific Purposes**. 21: 1-17.
- Samraj, B. (2005). An exploration of genre set: research article abstracts and introductions in two disciplines. **English for Specific Purposes**. 24 (2): 141-156.
- Scott, M., and Tribble, C. (2006). **Textual patterns**. Amsterdam/Philadelphia: John Benjamin Publishing Company.
- Shehzad, W. (2005). **Corpus-based genre analysis: computer science research article introductions**. Ph.D. Dissertation, National University of Modern Languages Islamabad.
- Shohamy, E., Gordon, C. M., and Kraemer, R. (1992). The effect of raters' background and training on the reliability of direct writing tests. **The Modern Language Journals**. 76: 27-33.
- Shi, H. (2010). Lexical bundles and moves in agricultural science research articles. MA. Thesis, Suranaree University of Technology.

- Shi, H., and Wannaruk, A. (2010, April). **Rhetorical moves of agricultural science research articles**. Paper presented at the meeting of the 3rd LIROD language in the realm of social dynamics: Asia on the move through the eyes of humanities, School of Humanities, University of the Thai Chamber of Commerce, Thailand.
- Simpson-Vlach, R., and Ellis, N. C. (2010). An academic formulas list: new methods in phraseology research. **Applied Linguistics**. 31 (4): 487-512.
- Smith, E. L. (1982). **Writer-reader interactiveness in four genres in scientific**. Ph.D. dissertation, The University of Michigan, Ann Arbor.
- Soler, V. (2007). Writing titles in science: an exploratory study. **English for Specific Purposes**. 26: 90-102.
- Swales, J. M. (1988). Discourse communities, genres and English as an international language. **World Englishes**. 7 (2): 211-220.
- Swales, J. M. (1981). **Aspects of article Introductions**. Birmingham, UK: University of Aston, Language Studies Unit.
- Swales, J. M. (1990). **Genre analysis: English in academic and research settings**. Cambridge: Cambridge University Press.
- Swales, J. M. (2004). **Research genres: explorations and applications**. Cambridge: Cambridge University Press.
- Swales, J. M., and Feak, C. B. (2004). **Academic writing for graduate students: essential tasks and skills** (2nd ed.). Michigan: The University of Michigan Press.
- Tardy, C. M. (2005). "It's like a story". Rhetorical knowledge development in advanced academic literacy. **Journal of English for Academic Purposes**. 4 (4): 325-338.

- Taylor, G., and Chen, T. (1991). Linguistic, cultural, and subcultural issues in contrastive discourse analysis: Anglo-American and Chinese scientific texts. **Applied Linguistics**. 12: 319-336.
- Thomas, S., and Hawes, T. P. (1994). Reporting verbs in medical journal articles. **English for Specific Purposes**. 13: 129-148.
- Thompson, D. K. (1993). Arguing for experimental 'fact' in science: a study of research article results sections in Biochemistry. **Written Communication**. 10(1): 106-128.
- Thompson, S. (1994). Frameworks and contexts: a genre-based approach to analyzing lecture introductions. **English for Specific Purposes**. 13 (2): 171-186.
- Thompson, G., and Yiyun, Y. (1991). Evaluation in reporting verbs used in academic paper. **Applied Linguistics**. 12(4): 365-382.
- Thongrin, S. (2000). Growth L2 writing: A case study of an ESL student writers. **Thai TESOL Bulletin**. 13(2): 35-46.
- Trakulkasemsuk, W. and Pingkarawat, N. (2010). A comparative analysis of English feature articles in magazine published in Thailand and Britain: Linguistics aspects. In R. Facchinetti, D. Crytal, and B. Seidlhofer (eds). **Linguistic insights: Studies in language and communication**. Bern: Peter Lang.
- Valero-Garces, C. (1996). Contrastive ESP rhetoric: metatext in Spanish-English economics texts. **English for Specific Purposes**. 16 (4): 279-294.
- Vassileva, I. (1997). Hedging in English and Bulgarian academic writing. In A. Duszak (ed.). **Culture and styles of academic discourse** (pp. 203-223). Berlin: Mouton de Gruyter.

- Vongvanit, T. (2001). **An investigation of the organization and linguistic features of one genre: research article abstracts in the field of English language learning and teaching**. Master's thesis, Mahidol University, Thailand.
- Watkhaolarm, P. (2005). Think in Thai, write in English: Thainess in Thai English literature. **World Englishes**. 24 (2): 145-158
- Ward, J. (1999). How large a vocabulary do EAP engineering students need? **Reading in a Foreign Language**. 12 (2): 309-324.
- Ward, J. (2009). A basic engineering English word list for less proficient foundation engineering undergraduates. **English for Specific Purposes**. 28: 170-180.
- Wasuntarasophit, S. (2009). Electrical engineering students' knowledge of technical and academic vocabulary. **Humanities and Social Sciences**. 26 (1): 98-109.
- Weigle, S. C. (2002). **Assessing writing**. Cambridge: Cambridge University Press.
- Weissberg, R., and Buker, S. (1990). **Writing up research: experimental research report writing for students of English**. Englewood Cliffs, NJ: Prentice Hall Regents.
- Williams, I. A. (1999). Results sections of medical research articles: analysis of rhetorical categories for pedagogical purposes. **English for Specific Purposes**. 18 (4): 347-366.
- Wray, A. (2000). Formulaic sequences in second language teaching: principle and practice. **Applied Linguistics**. 21 (4): 463-489.
- Wray, A. (2002). **Formulaic language and the lexicon**. New York: Cambridge University Press.
- Wray, A., and Perkins, M. R. (2000). The functions of formulaic language: an integrated model. **Language & Communication**. 20: 1-28.

- Yakhontova, T. (2006). Cultural and disciplinary variation in academic discourse: the issue of influencing factors. **Journal of English for Academic Purposes**. 5: 153-167.
- Yang, R., and Allison, D. (2003). Research articles in applied linguistics: moving from results to conclusions. **English for Specific Purposes**. 22: 365-385.
- Yang, R., and Allison, D. (2004). Research articles in applied linguistics: structure from a functional perspective. **English for Specific Purposes**. 23: 264-279.
- Yu, X. (2009). A formal criterion for identifying lexical phrases: implication from a classroom experiment. **System**. 37: 689-699.
- Zhu, W. (2004). Faculty views on the importance of writing, the nature of academic writing, and teaching and responding to writing in the disciplines. **Journal of Second Language Writing**. 13 (1): 29-48.





APPENDICES

APPENDIX A

THE CODING PROTOCOL USED IN THE PRESENT STUDY

Introduction section

M1: Establishing a territory (citation required) via Topic generalizations of increasing specificity

M2: Establishing a niche (citations possible) via:

S 1A: Indicating a gap, or

S 1B: Adding to what is known

S 2: Presenting positive justification

M 3: Presenting the present work via:

S 1: Announcing present research descriptively and /or purposively

S 2: Presenting research questions or hypotheses

S 3: Definitional clarifications

S 4: Summarizing methods

S 5: Announcing principal outcomes

S 6: Stating the value of the present research

S 7: Outlining the structure of the paper

Method section

M 4: Describing data collection procedure(s)

S 1: Describing the sample

S 2: Recounting steps in data collection

S 3: Justifying the data collection procedure(s)

M5: Delineating procedure(s) for measuring variables

S 1: Presenting an overview of the design

S 2: Explaining method (s) of measuring variables

S3: Justifying the method(s) of measuring variables

M6: Elucidating data analysis procedure (s)

S 1: Relating (or 'recounting') data analysis procedure(s)

S2: Justifying the data analysis procedure(s)

S3: Previewing results

Result section

M7: Preparatory information

M8: Reporting results

M9: Commenting on results

S 1: Interpreting results

S2: Comparing results with literature

S3: Evaluating results

S 4: Accounting for results

M10: Summarizing results

M11: Evaluating the study

S1: Indicating limitations

S2: Indicating significance/ advantage

M 12: Deductions from the research

S1: Recommending further research

Discussion section

M13: Background information

M14: Reporting results

M15: Summarizing results

M16: Commenting on results

S1: Interpreting results

S 2: Comparing results with literature

S3: Accounting for results

S4: Evaluating results

M17: Summarizing the study

M18: Evaluating the study

S1: Indicating limitations

S 2: Indicating significance/advantage

S3: Evaluating methodology

M 19: Deductions from the research

S1: Making suggestions

S2: Recommending further research

S3: Drawing pedagogic implication

Conclusion section

M20: Summarizing the study

M21: Evaluating the study

S1: Indicating significance/advantage

S2: Indicating limitations

S3: Evaluating methodology

M22: Deductions from the research

S1: Recommending further research

S2: Drawing pedagogic implication



APPENDIX B

LIST OF RESEARCH ARTICLES USED FOR THE ANALYSES

1. The International Corpus

- I1 Crossley, S. A., McChathy, P. M., Louwarse, M. M., and McNamara, D.S. (2007). A linguistic analysis of simplified and authentic texts. **The Modern Language Journal**. 91 (1): 15-30
- I2 De Larios, J. R., Mancho, R. M., and Murphy, L. (2006). Generating text in native and foreign language writing: a temporal analysis of problem-solving formulation processes. **The Modern Language Journal**. 90 (1): 100-114.
- I3 Matsumura, S., and Hann, G. (2004). Computer anxiety and students' preferred feedback methods in EFL writing. **The Modern Language Journal**. 88 (3): 403-415.
- I4 Lee, J. (2009). A subject-object asymmetry in the comprehension of wh-questions by Korean learners of English. **Applied Linguistics**. 31 (1): 136-155.
- I5 Iwashita, N., Brown, N., McNamara, T., and O'Hagan, S. (2008). Assessed level of second language speaking proficiency. How distinct?. **Applied Linguistics**. 29 (1): 24-49.
- I6 Takimoto, M. (2007). The effect of input-based tasks on the development of the learners' pragmatic proficiency. **Applied Linguistics**. 30 (1): 1-25.

- I7 Kobayashi, H. Rinnert, C. (2008). Task response and text construction across L1 and L2 writing. **Journal of Second Language Writing**. 17 (1): 7-29.
- I8 Bitchener, J., Young, S., and Cameron, D. (2005). The effect of different types of corrective feedback on ESL student writing. **Journal of Second Language Writing**. 14 (3): 191-205.
- I9 Helms-Park, R., and Stapleton, P. (2003). Questioning the importance of individualized voice in undergraduate L2 argumentative writing: an empirical study with pedagogical implications. **Journal of Second Language Writing**. 12 (3): 245-265.
- I10 Ayers, G. (2008). The evolutionary nature of genre: an investigation of short texts accompanying research articles in the scientific journal *Nature*. **English for Specific Purposes**. 27: 22-41.
- I11 Ozturk, I. (2007). Textual organization of research article introductions in applied linguistics: variability in a single discipline. **English for Specific Purposes**. 26: 25-38.
- I12 Peterlin, P. (2005). Text-organising metatext in research articles: an English-Slovene contrastive analysis. **English for Specific Purposes**. 24 (3): 307-319.
- I13 Webb, S., and Kagimoto, E. (2009). The effects of vocabulary learning on collocation and meaning. **TESOL Quarterly**. 43 (1): 55-77.
- I14 Li, Y. (2007). Apprentice scholarly writing in a community of practice: an intraview of an NNES graduate student writing a research article. **TESOL Quarterly**. 41 (1): 55-79.
- I15 Field, J. (2005). Intelligibility and the listener: the role of lexical stress. **TESOL Quarterly**. 39 (3): 399-423.

- I16 Rah, A., and Adone, D. (2010). Processing of the reduced relative clause versus main verb ambiguity in L2 learners at different proficiency levels. **Studies in Second Language Acquisition**. 32 (1): 79-109.
- I17 Munro, M. J., Derwing, T. M., and Morton, S. L. (2006). The mutual intelligibility of L2 speech. **Studies in Second Language Acquisition**. 28 (1): 11-131.
- I18 McDonough, K. (2005). Identifying the impact of negative feedback and learners' responses on ESL question development. **Studies in Second Language Acquisition**. 27 (1): 79-103.
- I19 Li, E. S. (2010). Making suggestions: A contrastive study of young Hong Kong and Australian students. **Journal of Pragmatics**. 42: 598-616.
- I20 Defouz-Milne, E. (2008). The pragmatic role of textual and interpersonal metadiscourse markers in the construction and attainment of persuasion: A cross-linguistic study of newspaper discourse. **Journal of Pragmatics**. 40: 95-113.
- I21 Rieger, C. L. (2003). Repetitions as self-repair strategies in English and German conversations. **Journal of Pragmatics**. 35 (1): 47-69.
- I22 Min, H. (2008). EFL vocabulary acquisition and retention: reading plus vocabulary enhancement activities and narrow reading. **Language Learning**. 58(1): 73-115.
- I23 Jiang, N. (2007). Selective integration of linguistic knowledge in adult second language learning. **Language Learning**. 57 (1): 1-33.

- I24 Nikolov, M. (2006). Test-taking strategies of 12- and 13-year-old Hungarian learners of EFL: why whales have migraines. **Language Learning**. 56 (1): 1-51.
- I25 Butler, Y. G., and Lee, J. (2010). The effects of self-assessment among young learners of English. **Language Testing**. 27 (1): 5-31.
- I26 Yamada, K. (2009). Lexical patterns in L2 textual gist identification assessment. **Language Testing**. 26(1): 101-122.
- I27 Brown, J. D., and Bailey, K. M. (2008). Language testing courses: what are they in 2007? **Language Testing**. 25(3): 349-383.
- I28 Knoch, U., and Elder, C. (2010). Validity and fairness implications of varying time conditions on a diagnostic test of academic English writing proficiency. **System**. 38 (1): 63-74.
- I29 Simard, D. (2009). Differential effects of textual enhancement formats on intake. **System**. 37 (1): 124-135.
- I30 Zielinski, B. (2008). The listener: no longer the silent partner in reduced intelligibility. **System**. 36 (1): 69-84.

2. The Thai Corpus

- T1 Kammasorn, N., and Prapphol, K. (2008). Web-based C-test as an English placement test for Thai students. **The Journal**. 4 (2): 75-90
- T2 Chaimanee, N. (2005). Interactive pauses in native and non-native Thai conversation. **The Journal**. 1: 17-29.
- T3 Kaneungpain, S., Broaghton, M. M., Kittidhaworn, P., and Hancock, W. (2005). A study of the main features of English used by Thai recreational users of web boards. **The Journal**. 1(2): 93-111.

- T4 Padgate, W. (2010). Input enhancement and the acquisition of English prepositions of Thai graduate students. **Journal of Humanities Naresuan University**. 7 (3): 47-62.
- T5 Kallayanamit, S. (2010). Perception of American English vowels by standard Thai native speakers. **Journal of Humanities Naresuan University**. 7 (3): 63-98
- T6 Kirin, W., and Wasanasomsithi, P. (2010). A comparative study of reading ability and motivation of undergraduates when engaged in high and low amounts of extensive reading. **Journal of Humanities Naresuan University**. 7 (special issue): 85-97.
- T7 Sojisirikul, P. (2010). Student attitudes towards websites used as supplements in language teaching. **Humanities and Social Sciences**. 27 (1): 107-122.
- T8 Wasuntarasophit, S., and Ward, J. (2009). Electrical engineering students' knowledge of technical and academic vocabulary. **Humanities and Social Sciences**. 26 (1): 98-109.
- T9 Tasee, P., and Intaraprasert, C. (2009). English major students and reduction of their speaking anxiety. **Humanities and Social Sciences**. 26 (2): 40-68.
- T10 Nipaspong, P. (2008). The effects of corrective feedback techniques on EFL learners' pragmatic production and confidence. **PASAA**. 42: 55-77.
- T11 Arya, T., and Prapphal, K. (2007). A test taker-centered computer-based writing test: meeting half way in the assessment of writing. **PASAA**. 41:1-32.
- T12 Kiratibodee, P. (2006). Thai University students' variables as the predictors of computer-based test performance. **PASAA**. 38: 23-43.

- T13 Sukhanindr, M. (2009). Hedging in research articles about English language teaching written by Thai and native speakers of English. **Humanities Journal**. 16 (2): 109-120.
- T14 Nomnian, S. (2009). Examining the impact of social interactions on Thai students' classroom participation in a pre-sessional EAP course in a British University. **Humanities Journal**. 16 (1): 64-75.
- T15 Chaemsaitong, K. (2010). Challenging works and disalignment in the historical courtroom: a case of the Salem Witchcraft trials. **Humanities Journal**. 17 (2): 109-138.
- T16 Sattayatham, A., and Ratanapinyowong, P. (2008). Analysis of errors in paragraph writing in English by first year medical students from the four medical schools at Mahidol university. **Silpakorn University International Journal**. 8: 17-38.
- T17 Kanoksilapatham, B. (2007). Writing scientific research articles in Thai and English: similarities and differences. **Silpakorn University International Journal**. 7: 172-203.
- T18 Boonkit, K. (2002). Listening strategies for 'real world' English on television. **Silpakorn University International Journal**. 2 (2): 65-96.
- T19 Limsangkass, S. (2010). An interlanguage study of English intonation of Thai students speaking Pattani Malay as their mother tongue: focusing on tonality. **Journal of Humanities & Social Sciences**. 6 (2): 1-20.
- T20 Yimwilai, S. (2008). English reading abilities and problems of English-major students in Srinakharinwirot University. **Journal of Humanities & Social Sciences**. 4(2): 130-148.

- T21 Wirdyakarun, P. (2007). Using portfolio assessment in course evaluation. **PASAA**. 41: 49-70.
- T22 Sojisirikul, P. (2008). Student attitudes towards the target language as a means of communication. **KMUTT Research and Development Journal**. 31 (1):18-29.
- T23 Sojisirikul, P., and Intratat, C. (2008). Initial step to autonomous learning a case study from the self-evaluation of KMUTT students. **KMUTT Research and Development Journal**. 31 (1): 31-46.
- T24 Intratat, C. (2004). Evaluation of CALL materials for EFL students at KMUTT, Thailand. **KMUTT Research and Development Journal**. 27 (4): 411-426.
- T25 Thongrin, S. (2009). Collaboration for Liberation: using TEMET to enhance EFL students' writing skills. **Journal of English Studies**. 4: 32-91.
- T26 Chomphuchart, N. (2007). A cognitive-based study of Thai EFL graduate students' reading strategies use. **Journal of English Studies**. 3: 50-84.
- T27 Pornpibul, N. (2005). Quantitative and qualitative views of EFL learners' strategies: a focus on communication strategies. **Journal of English Studies**. 2: 64-87.
- T28 Sa-ngiamwibool, A. (2008). The effects of consciousness-raising instruction on EFL learners' listening achievement through innovative computer-assisted instruction. **Nida Development Journal**. 48(2): 65-94.
- T29 Chalaysap, N. (2007). Models of EFL Thai readers' reading process: evidence from Thai graduate students' translation. **Nida Development Journal**. 47 (2): 83-201.

- T30 Piamai, C. (2006). Learning strategies and student performance on a computer-based English listening test. **PASAA**. 38: 7-19.



CURRICULUM VITAE

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