A STRUCTURAL MOVE ANALYSIS OF MA THESIS DISCUSSION SECTIONS IN APPLIED LINGUISTICS

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A STRUCTURAL MOVE ANALYSIS OF MA THESIS DISCUSSION SECTIONS IN APPLIED LINGUISTICS

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ABSTRACT

This research is a descriptive study of the structural or communicative moves in MA thesis discussion sections. A corpus of the move analysis includes nine discussion sections in applied linguistics written by Thai graduate students. The move model used for the analysis of the corpus was based on an analysis of published research articles in applied linguistics by Yang and Allison (2003). The corpus was compiled by interviewing five thesis supervisors.

Comparison in terms of move presence and frequency between the thesis discussion corpus and published research article discussions in Yang and Allison's study (2003) indicates that their primary communicative purposes differ. While the primary communicative purpose of the thesis discussion corpus was to report results, that of the published articles was to comment on research results. Regarding the use of move, every discussion in the corpus has 5 rhetorical functions: 'Stating background information', 'Reporting results', 'Summarizing results', 'Commenting on results' and 'Deductions from the research'. Similar to previous studies (such as Peng, 1987; Hopkins & Dudley-Evans, 1988; Kanoksilapatham, 2005) the thesis samples also displayed cyclical patterning. The analysis of distinct lexicogrammatical signals of individual moves in the corpus indicates the results that generally conformed to those of previous studies (such as Swales, 1990; Brett, 1994).

Findings of the study which provide insights into the improvement of graduate student writing skills as well as the pedagogical implications and further study are presented.

KEY WORDS: GENRE ANALYSIS/ MOVE ANALYSIS/ DISCUSSION SECTION/ RESEARCH WRITING/ THESIS WRITING

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การวิเคราะห์ Move ในบทอภิปรายผลของวิทยานิพนธ์ระดับปริญญาโทในสาขาวิชาภาษาศาสตร์ประยุกต์

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บทคัดย่อ

งานศึกษาวิเคราะห์ Move ในบทอภิปรายผลของวิทยานิพนธ์ระดับปริญญาโทนี้เป็นงานวิจัยเชิงบรรยาย กลุ่มตัวอย่างที่นำมาวิเคราะห์คือบทอภิปรายผลของวิทยานิพนธ์ระดับปริญญาโท จำนวน 9 บท ที่เขียนโดยนักศึกษาชาวไทย เครื่องมือที่ใช้ในการวิเคราะห์กลุ่มตัวอย่างคือ Move Model ของ Yang & Allison (2003) ซึ่งเป็น Model ที่สร้างขึ้นจากการวิเคราะห์บทความงานวิจัยที่ตีพิมพ์ในวารสารวิชาการสาขาภาษาศาสตร์ประยุกต์ สำหรับกลุ่มตัวอย่างของงานวิจัยนี้ได้มาจากการสัมภาษณ์คณะกรรมการควบคุมวิทยานิพนธ์ 5 คน

การเปรียบเทียบระหว่างบทอภิปรายผลกลุ่มตัวอย่างกับบทอภิปรายผลในบทความวิจัยทางวิชาการที่ตีพิมพ์ในการศึกษาของ Yang & Allison (2003) ชี้ให้เห็นว่าจุดประสงค์หลักในการสื่อสารแตกต่างกัน กล่าวคือในขณะที่จุดประสงค์หลักในบทอภิปรายผลของวิทยานิพนธ์เน้นการรายงานผลการวิจัย จุดประสงค์หลักในบทอภิปรายผลของบทความวิจัยทางวิชาการที่ตีพิมพ์เน้นการวิจารณ์ผลการวิจัยบทอภิปรายผล การวิเคราะห์ยังชี้ให้เห็นอีกว่าบทอภิปรายผลที่เขียนโดยนักศึกษาไทยประกอบด้วย Move 5 Move เป็นข้อความที่ให้ข้อมูลภูมิหลังงานวิจัย, รายงานผลสิ่งที่พบจากการวิจัย, ย่อความผลการวิจัย, วิเคราะห์ผลการวิจัยและผลสรุปที่ได้จากงานวิจัย สำหรับผลการศึกษาที่เกี่ยวข้องกับ การวิเคราะห์ Move Cycle พบว่า บทอภิปรายผลของวิทยานิพนธ์มีใน Move Cycle เช่นเดียวกันกับที่พบในการศึกษา ของนักวิจัยอื่นๆ (เช่น Peng, 1987; Hopkins & Dudley-Evans, 1988; Kanoksilapatham, 2005) นอกจากนี้ การวิเคราะห์คำศัพท์และโครงสร้างทางไวยากรณ์ ชี้ให้เห็นว่าบทอภิปรายผลของกลุ่มตัวอย่างวิทยานิพนธ์ ใช้คำศัพท์และโครงร่างทางไวยากรณ์ที่คล้ายคลึงกันกับผลที่ได้จากงานวิจัยก่อนหน้านี้ (เช่น Swales, 1990; Brett, 1994)

ผลที่ได้จากงานวิจัยนี้สามารถนำไปใช้เป็นข้อมูลสำหรับการปรับปรุงการเขียนวิทยานิพนธ์ เพื่อให้ได้มาตรฐานใกล้เคียงกับงานเขียนที่เป็นที่ยอมรับเพื่อตีพิมพ์ในวารสารระดับนานาชาติต่อไป และเป็นข้อมูลที่จะนำไปใช้กับการเรียนการสอน และการวิจัยในอนาคต

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CHAPTER I
INTRODUCTION

1.1 Rationale

Students often claim that the discussion section in a thesis is a difficult section to write. This claim is also generally supported in books about and studies of academic, research and thesis writing (Wilkinson, 1991; Swales & Feak, 1994; Swales & Feak, 2003). Among authors of books on academic writing, Swales and Feak commented that giving general suggestions on how to write Discussions is neither easy nor productive because "The problem is that Discussions vary considerably depending on a number of factors" (1994, p. 195). One of the two factors relating to such a variation that Swales and Feak (1994) pointed out is the different types of research questions or problem statements that each study attempts to answer. One study's research questions may require description of a particular phenomenon. Another study's research questions are oriented towards finding solutions to a problem. These different types of questions require research writers to focus on different parts of the research such as the results section or the research methods section or the related literature in order to support their answers. The other factor is the position of the discussion section. The discussion section follows the results section. By the time that the readers reach the discussion, the researcher can assume that his or her audience have read and understood all the preceding sections (Swales & Feak, 1994). It may appear to some discussion writers that they can start their discussion by answering the research questions. In contrast, other discussion writers may want to start by summarizing results, or highlighting the main results. It seems, then, that "this section is less uniformly structured than the others" (Sereebenjapol, 2003, p. 3).

The variations in Discussions noted by Swales and Feak (1994) are found to appear in a number of discussion sections in master's level theses written for Mahidol University that the present researcher read during the preliminary survey prior to

conducting this study. For example, computer science theses were found to have combined discussion and conclusion sections, whereas all of the applied analytical and inorganic chemistry theses were found to have separate discussion and conclusion sections. In addition to such a variation in the functions and organization of the discussion section, the length was also found to vary. From the preliminary survey, the discussion was found to range from three to approximately thirty pages long. It appears, then, that there are a number of variations, between the two fields: computer science, and applied analytical and inorganic chemistry, and within the same field of study – applied analytical and inorganic chemistry -- in the functions and organization as well as expectations of what this section does.

These examples illustrate how a discussion section in a MA thesis could be written up on the basis of a number of choices. This lack of uniformity could affect the quality of thesis, particularly in a Thai educational context because failing to properly discuss their study could negatively affect the reliability, validity and quality of theses. It is in this part that a researcher can show and emphasize the significance of his or her work (Huckin & Olsen, 1991). Discussion writers need to be informed of the communicative purposes and functions that this section serves. They need to be aware that a discussion section is considered to be the most valuable part of a research paper (Markman, Markman & Waddell, 1994). The choices and freedom of this section, however, may cause problems for thesis writers. They may choose to focus on one element such as the results and findings of their study and neglect other elements such as the contexts of their study or the interpretations of their results. Their discussion may, therefore, fail to show the significance of their study.

The major aim of this study is to explore and describe how the thesis discussion sections are written up by a group of Thai graduate students in an applied linguistic program. A genre analysis approach was employed to analyze texts taken from the thesis discussion sections. The approach was employed because it can explain how thesis discussions are organized and written to achieve their communicative purposes and provide a set of pedagogically useful implications for teaching and learning (Hopkins & Dudley-Evans, 1988).

A framework proposed by Yang and Allison (2003) was used to analyze the data. This move framework was developed based on their previous studies that

examined published research articles in applied linguistics. A detailed description of this framework is included in Chapters Two and Three.

The next section describes specific aims and lists research questions for this study.

1.2 Purpose

The study aims to describe the discussion sections of MA theses using a genre analysis framework. These theses are written by Thai graduate students in the Applied Linguistics program at the Faculty of Science, Mahidol University. With the application of genre analysis approach, this research study focuses on "how writers conventionally sequence material to achieve particular purposes. This includes the identification of particular types of schema and how they are realized linguistically" (Richards & Schmidt, 2002, p. 224). The framework employed was developed by Yang and Allison (2003). In addition to attempting to describe how the written texts were organized to achieve their communicative purposes by examining the moves of the discussion section, the present researcher also explored the applicability of the move framework developed by Yang and Allison (2003). In other words, the moves found in the corpus of sample texts analyzed in this study were compared to the analyzed research articles in applied linguistics published in internationally recognized journals by Yang and Allison (2003). Accordingly, the research questions are as follows:

1. To what extent are the moves in the discussion section of the theses written by Thai graduate students in the MA in Applied Linguistics program at the Faculty of Science, Mahidol University similar to and different from those in published research articles studied by Yang and Allison (2003)?
2. What is/are the obligatory or key moves?
3. Do the thesis writers cycle their moves? In general, how many cycles of moves do they employ in this section? Which moves are parts of the cycles?

4. Can the seven-move model (Yang & Allison, 2003) explain the differences and similarities between particularly short discussion sections and particularly long discussions in the corpus?
5. What linguistic features signal individual moves?

1.3 Significance

In relation to the research questions posed, results of the study are expected to provide some insights into how thesis discussion sections are generally written up and how the move analysis framework proposed by Yang and Allison (2003) is compatible with the analysis of the discussion sections written by a particular group of Thai graduate students.

It is expected that the results of this study may be used as follows:

1. The understanding of how the graduate students actually write up their discussion sections can reflect the degree to which students understand and are able to apply the writing theories from their required academic writing course to write academic papers and theses. This may be helpful for teachers in many ways such as whether to review or revise in order to update an ad hoc course or a thesis workshop and their thesis guidelines for the students.
2. The comparison of moves in the sample thesis texts with those found in published research articles by previous researchers, Yang and Allison (2003), could help both graduate students and teachers in this particular program to become aware of the standard for their thesis writing. As part of the graduate requirements, students are required to later write an academic article to be published in journals in applied linguistics or related fields. Knowing how well these graduate students write compared to other professional researchers could help the students and teachers judge and improve on the standard of their own writing.
3. The detailed analysis of linguistic features will help the understanding of such aspects of language as moves and communicative functions, and may be beneficial for students, teachers, and researchers. They can apply the knowledge not only for the improvement of their writing but also for

further research if they choose to explore written English language for different purposes.

4. The findings may be useful as a comprehension aid for inexperienced readers of particularly long texts, such as theses and dissertations, and shorter texts, such as research articles, with respect to overall text structure, linguistic features and organization.

1.4 Scope and Limitations

This research has the following limitations:

1. Only samples of MA thesis discussion sections or chapters written by Thai graduate students in the Applied Linguistics program at the Faculty of Science, Mahidol University are used in this study. As a result, theses published by different authors, in other faculties, or other universities, if used as a sample, may yield different findings. The thesis discussion sections in applied linguistics are chosen because the thesis discussions have been found to be less structured than other sections; therefore, they are difficult to write. Further, thesis discussion sections in applied linguistics which are written by non-native speakers of English have not yet been studied. Lastly, the researcher's background knowledge of the field can aid in the identification of moves
2. The move model used in this study is based on the concept of genre analysis developed by John Swales' study of academic research article introductions (1990). The move framework employed in this study is based on the genre analysis approach, or, the analysis of 'moves'. There are a number of approaches that can be used to analyze written texts, the systemic functional linguistics approach, the notional/functional approach, or the traditional rhetoric approach, for example. The aim of this study, however, is not to describe and account for all the functions of the language in all contexts. The aim is to explore, describe and explain how a discussion section in a thesis is constructed and achieves its communicative purposes with the focus on providing pedagogically useful suggestions for teaching and learning.

3. The classification of moves in the thesis discussion sections was made by a trained native speaker of English who has an MA in Applied Linguistics and the researcher in this study. Move identification errors were initially minimized as follows. Firstly, by selecting the texts that the raters are familiar with so the comprehension of the texts and background knowledge would help in the accurate and reliable classification of moves (Dudley-Evans, 1994). Secondly, by selecting only the discussion sections of the theses in the same discipline of applied linguistics, the writing conventions and expectations are likely to be uniform which, in turn, can aid in the classification of moves. Lastly, instead of calculating intercoder agreement of the move analysis, in the final process of the analysis, the two coders worked out together to reach a 100% agreement on the categorization of steps and moves.

1.5 Basic Assumptions

1. The graduate students whose theses were selected wrote the theses by themselves. The role of their advisors was only to advise.
2. All thesis discussions selected in this study have been judged to be well-written by their major supervisors.
3. The overall quality of every thesis selected in this study is deemed to be acceptable by its major advisor who rated the discussion section of the thesis as outstanding.

1.6 Definition of Terms

The following terms are defined as follows:

Corpus is defined, in this study, as a collection of all sampled thesis discussion sections recommended by five thesis advisors.

Discussion is defined as the section or chapter that follows the ‘Results’ or ‘Findings’ chapter and precedes the ‘conclusion’ chapter. Discussions include sections entitled “discussion”, “results and discussion”, “discussion and conclusions”, “discussion and

implications" or other variations. Discussion is conventionally the section where authors answer research questions, and/or compare the results of the study to previous research, and/or explain the findings, and/or make generalizations based on the results, and/or point to the study's limitations, and/or recommend areas of further research, and/or raise questions for future study.

Genre, in this study, is defined as:

> a socially constructed concept to describe a set of texts that are perceived to perform similar functions. Texts belonging to a genre are conventionalized, to differing degrees, in terms of sequencing, of layout, of phraseology, and there are expectations of, and constraints on, the structure and linguistic expression of such texts. These expectations can vary from one disciplinary community to another. The forms that the texts take can also vary, depending on the range and diversity of purposes that exponents of the genre are asked to serve (Thompson, 2001, pp. 33-34).

Genre Analysis is "[the study of] how writers conventionally sequence material to achieve particular purposes. This includes the identification of particular types of schema and how they are realized linguistically" (Richards & Schmidt, 2002, p. 224). Dudley-Evans (1994), one of the researchers in this field, has analyzed the thesis discussions in biology. He has found that the discussion consists of three parts: Introduction-Evaluation-Conclusion. Within each part, he has identified moves and functions. In the Introduction, for example, an author may begin by giving background information, such as, the aims and purposes of the study, the summary of main findings, related theories and previous studies, and the research methods used, in order to prepare readers for the next part. The linguistic items used in Introductions include 'aims', 'purposes', 'results', and 'findings'.

Metatext "includes explicit (and not explicit) references to the text managing acts such as the writing process or the reading process" (Rahman, 2004, p. 40). There are

two categories of metatext in this study: ‘reference to discourse entities’ and ‘reference to discourse acts’. The first category “comprises references to the entire text,… , to individual section,… , and to tables and figures. As the text is the only entity that the reader can refer to, such references have mainly organizing function” (Rahman, 2004, p. 40). The second category includes:

> adverbs of place, such as ‘above’, ‘below’, ‘under’, are in this category. The adverb, here, is also included in this category if it referred internally to the paper. Without exception, the adverb, ‘here’, can be replaced by ‘in this paper’. Most often, these adverbs followed verbs, such as ‘discussed’, ‘shown’, ‘described’, ‘outlined’… This class of metatext also includes expressions containing verbs, usually of illocution type, with temporal adverbs, such as ‘earlier’, ‘previously’, and nouns naming discourse acts. (Rahman, 2004, pp. 41-42)

Move is “a unit [of text] that relates both to the writer’s purpose and to the content that s/he wishes to communicate” (Dudley-Evans & St. John, 1998, p. 89). In Dudley-Evans’ study (1994), he has presented a nine-move model for analyzing discussion sections. The first move in his model is an information move in which the writer provides his or her readers with the theory, related previous studies, the aim of the study, and the research methods relevant to the present research in order to prepare the readers for the following discussion of results. For example, “A total of 54 summaries written by the 27 participants were analyzed based on the following two criteria: (1) in what order the information from the source text was reorganized, (2) use of information derived from inferential process” (Yamada, 2002, p. 148). This example is classified as Move 1: Information Move because it provides readers with the research methods “A total of 54 summaries… by the 27 participants… based on the following criteria …” (Yamada, 2002, p. 148).

Step is “a lower level text unit than the move that provides a detailed perspective on the options open to the writer in setting out the moves” (Dudley-Evans & St. John,

1998, p. 89). In Yang and Allison's study (2003), they presented a seven-move model for analyzing research article's discussion sections. The last move is Move 7: Deductions from the research, which consists of three steps: (1) Making suggestions, (2) Recommending further research, and (3) Drawing pedagogic implications. For example, "[Although further investigation using the present framework would be needed in order to verify its wider descriptive adequacy and its pedagogic utility, we are already confident that it is worth exploring with teachers and students.] [Academic reading and writing courses for EFL postgraduates and novice teachers in applied linguistics could draw attention to the kind of flexibility involved in these stages of research article structure and encourage students to discuss the rationales behind this flexibility, as well as the adequacy or otherwise of our and others' attempts to describe it]" (Yang & Allison, 2003, p. 381). Both sentences are classified as Move 7: Deductions from the research. The first sentence is then further classified as Step 2 in Move 7: Recommending further research because of its explicit linguistic signal 'further investigation'. The second sentence is further classified as Step 3 in Move 7: Drawing pedagogic implications because 'academic reading and writing courses for EFL postgraduates and novice teachers in applied linguistics could draw attention to' precedes a teaching suggestion.

Section is a distinct part or a component of a chapter. In this study, it refers to a section in the discussion chapter. It can be recognized by a heading or subheading, sometimes preceded by numerical values.

Research articles are reports of empirical research published in academic journals.

This chapter describes the rationale and the purposes of the study. Then, the significance of the study, and its scope and limitations basic as well as the study's assumptions were presented. Lastly, the definitions of key term were given. Related literature is reviewed in the next chapter.

CHAPTER II
LITERATURE REVIEW

To place this present study in context, theoretical foundations and the related literature are reviewed in this chapter. First, this chapter includes the review of the definitions of a discussion section in research articles and theses, and the concepts and definitions of genre and genre analysis in ESP. Next, a number of structural frameworks or models for discussion sections in research articles and theses based on the genre analysis in ESP are presented and reviewed. Finally, recurring patterns of moves or cycles in discussion sections are introduced and discussed.

2.1 Definition of Discussion Sections of Research Articles and Theses

This subsection is based on a review of a number of research reports and/or papers and thesis and/or dissertation guidebooks as well as the thesis regulation handbook issued by the Faculty of Graduate Studies of Mahidol University. It aims to briefly describe a number of defining characteristics of the discussion section so as to provide the scope for this study at the outset.

Discussion sections can be defined in a number of ways. The simplest way to define a discussion is by its position which follows a Results section. Another way to define a Discussion is by its functions, that is, by examining what this section uniquely contributes to the overall rhetorical organization of research articles and theses. It has been found that discussions usually begin by restating and answering the study's research questions (Huckin & Olsen, 1991; Wilkinson, 1991; Swales & Feak, 1994) or by stating a summary of selected findings (Meyer, 1982). Another way to begin a discussion is to highlight and generalize a study's key findings (Swales & Feak, 2003). Following the highlights and generalizations are the comparisons of results in the particular study with previous studies and the explanation of any discrepancies between the current and previous studies (Lester, 1984; Hubbuch, 1985; Roth, 1986; Faculty of Graduate Studies of Mahidol University, n.d.). In addition, an

explanation on the limitations of the study and suggestions with respect to the study's research design or methods may be included (Hubbuch, 1985; Weissberg & Buker, 1990; Huckin & Olsen, 1991; Wilkinson, 1991; Swales & Feak, 1994; Gall, Borg & Gall, 1996). Discussion sections are found to finally include recommendations, solutions or practical applications based on the study as well as suggestions or directions for further research (Huckin & Olsen, 1991; Swales & Feak, 1994; Booth, Colomb & Williams, 1995; Swales & Feak 2003).

According to Mahidol Thesis Guidelines, thesis discussion sections can be defined by their position which follows the Results sections. The purposes of the discussion section are to compare and contrast the results of a study with related previous studies, to explain unexpected outcomes, to make recommendations for further research as well as to provide practical suggestions or implications that a study has found (Mahidol thesis Guidelines, n.d.)

In this subsection, the scope of details to be covered in the discussion sections and the functions of discussion sections were briefly described. In the next section, the concepts of genre in three main areas of research are reviewed in order to provide background on the different target learner groups, scopes and settings in which that each of the three types of genre analysis, was developed.

2.2 Genre

In order to understand the concept of genre and its scope, Hyon (1996) suggests that it is crucial to study how this concept has developed independently in three main research areas: North American New Rhetoric studies, Australian systemic functional linguistics, and English for Specific Purposes (ESP).

In the North American New Rhetoric studies, the target learners are novice professionals and native English-speaking university students in various disciplines. The dominant methodology of this school is ethnographic research because this type of research can explain how the interaction between participants and settings or contexts affects the linguistic choices of a particular discourse community. Its research focuses on the social context in which the genre is used and relatively less on the forms of language (See Miller (1984) and Bazerman (2000) for further discussion of North American New Rhetoric genre).

In Australian systemic functional linguistics, the target learners are pre-university students and adult immigrants. The genre theory of this school is heavily based on the theory of Systemic Functional Linguistics developed by Michael Halliday (Hyon, 1996) which focuses on language as a tool in communication. In Systemic Functional Linguistics, the study of language needs to include not only the language - text and form - but also the context or social setting as well as the function. Australian systemic functional linguistics research focuses on the functions of language, schematic structures, lexicogrammatical features, contexts and purposes (Hyon, 1996; Richards & Schmidt, 2002).

In ESP genre study, the target learners are non-native students of English in university settings. They are learners in English for Academic Purposes (EAP), one of the main branches of ESP, who comprise non-native students in university settings. This genre research focuses on the texts and forms of written assignments, such as research articles and theses that these students are required to read and write. John M. Swales, a genre scholar, defines a genre as "comprising a class of communicative events, the members of which share some set 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). Thus, ESP research focuses on both oral and written discourse with an emphasis on describing the communicative purposes, forms and organization patterns, and relatively less than the two previous schools on the social settings in which the genre is used (Swales, 1990; Hyon, 1996).

The term 'genre' used in this study falls into the ESP context. It is defined as a group or corpus of texts that share a set of communicative purposes which are the primary criteria for genre classification. The present study adopted the concept of ESP genre study because it concentrates on uncovering a set of communicative purposes and its sequence conventionally found in written texts such as theses. The data used in this study are the Discussion sections taken from a group of MA theses written in English by Thai graduate students in an applied linguistics program. The MA theses were written as part of the Masters in Applied Linguistics program at the Faculty of Science, Mahidol University.

In the next subsection, related theories and studies in ESP genre analysis are reviewed.

2.3 Genre Analysis in ESP

Genre analysis is the study of a group or corpus of either written or oral texts that share a set of communicative purposes and functions. Research studies in ESP genre analysis offer two types of analysis.

The first type examines lexicogrammatical features of texts (Hyon, 1996; Thompson, 2001). In contrast, the second type concerns the identification of rhetorical structure or a structural move analysis of texts. The second types of genre analysis is also referred to by researchers such as Hyon (1996) as 'structural move analysis' and Nwogu (1997) as "the identification of schematic units or moves" (p. 122).

Research studies which investigate surface features of texts are dealt with first and research studying the identification of rhetorical structure next.

There are a number of research studies at the surface level which focus on lexicogrammatical features or surface features of speech and writing. Linguistic features that have been the focus of this level of analysis include epistemic modality or hedges (Hyland, 1994, 1996) such as modal verbs (would, will, could, may, might), lexical verbs (seem, appear, suggest, indicate, assume, believe), adverbials (probably, possibly, apparently, unlikely), nouns (assumption, claim, evidence), and adjectives (probable, possible, clear, reasonable), a number of function words such as 'just' (Lindemann & Mauranen, 2001) and 'it' (Hewings & Hewings, 2002), reporting verbs (Thomas & Hawes, 1994), citation analysis (Thompson, 2001), and passive voice (Tarone, Dwyer, Gillette & Icke, 1998).

To analyze genre at the lexicogrammatical level, researchers, first, select a genre. Next, they choose one linguistic feature they want to study. The feature should be a distinct characteristic of the genre. Next, a computerized corpus of the genre is created either by scanning hardcopy texts or converting electronic texts into a file extension compatible with the concordance software that researchers will use to process the texts. This step can be omitted if a corpus is not too large to manage by hand. All samples of the target linguistic feature present in a corpus are obtained. Next, a classification of the linguistic feature is presented. A comparison in terms of

frequency in each category and subcategory, if available, is presented and explained. For example, Thomas and Hawes (1994) studied the use of reporting verbs in eleven medical research articles. They found that the reporting verbs in their corpus can be divided into three main categories. The first is a group of verbs called "verbs referring to real-world or experimental activities" (1994, p. 133). Their examples include 'examined', 'found', and 'showed'. The second group is "discourse verbs" (p. 137). Their examples include 'proposed', 'hypothesized', and 'reported'. The third group is "cognition verbs" (p. 144). Their examples include 'believed', 'considered', and 'regarded'.

Unlike the analysis of surface features, the second type or move-based research studies focus on the descriptions of different sections of research articles' move structure. Most empirical research articles are found to be typically divided into four main sections: introductions, methods, results, and discussions or an "IMRD" format (Hill, Soppelsa & West, 1982; Swales, 1990; Nwogu, 1997; Posteguillo, 1999, Kanoksilapatham, 2005). One of the early studies of the structural organization of research articles was conducted by Hill, Soppelsa and West (1982). They found that, apart from generally comprising four main sections: introduction-methods-results-discussion (later referred to as "IMRD"), research articles have three main parts similar to other types of writing in the western tradition: the beginning (the introduction), the middle (the procedure – method and results), and the ending (the discussion).

Based on their findings, the researchers (Hill, Soppelsa & West, 1982) proposed that research article macrostructure is similar to a shape of an hourglass, that is, it is wide at the top and narrower in the middle and spread out or is wide at the bottom. At the beginning of a research article (the introduction section) the scope of a study is general, whereas in the middle, the scope of a study (the methods and results sections) is specific, and at the end of a research article (the discussion section), the scope is more general. Further, they have demonstrated that each section of an empirical research article can be analyzed and described functionally. They remarked that in a research article introduction, writers announce their present study by providing the context within which the current study is situated in order to create 'a research gap' which their study will attempt to 'fill' or answer. In the second section –

Methods – authors chronologically describe how the data in a study is selected, collected, and analyzed so that other researchers can replicate the study. The results section, likewise, describes or reports a study's findings (Hill, Soppelsa & West, 1982). In the discussion section, the researchers (Hill, Soppelsa & West, 1982) further explained that the discussion section has a number of functions. It is the section in which the study's research questions are answered and explained. Results of the study are compared to previous studies. Unexpected results are explained. The study's limitations are given in order to suggest further research areas. It should be noted, however, that only one research article in psychology was used as a sample in their study.

In later studies, analyses (Nwogu, 1997; Kanoksilapatham, 2005) at the first level or rhetorical move structure level have revealed that each section of a research article has different functions and communicative purposes. In a study of research articles in biochemistry, Kanoksilapatham (2005) has found research articles in her corpus follow the IMRD format. Each section had distinct functions and purposes. For example, the function of research article introductions is to convince the academic community or readers that the current research is worth investigating, to place the research within a wider context through a review of previous literature, and to introduce or outline the current research. The function of research article methods sections, on the other hand, is to recount and detail materials, procedures and equipment used in the study.

In short, ESP genre analysis offers two types of text analysis: the first type which deals with the lexicogrammatical level of texts, and the second level which deals with the rhetorical or schematic structure of texts.

The following subsection specifically describes models for structural move analysis.

2.4 Genre Analysis in ESP: Structural Move Analysis Models

In this subsection, three key terms are defined to clarify the underlying concepts of structural move analysis: moves, steps, and obligatory or key moves. Then, the procedure for structural move analysis is explained. Next, the issue of rater reliability or coder agreement is explained and discussed. Finally, the different move

models, based on a number of studies on research article discussions in different disciplines and master's level dissertation discussions, proposed by Peng (1987), Hopkins and Dudley-Evans (1988), Dudley-Evans (1994), Nwogu (1997), Yang and Allison (2003), and Kanoksilapatham (2005) are compared and reviewed.

2.4.1) Definitions of Moves, Steps and Obligatory Moves

> First, the term 'move' or 'schematic unit' refers to:
>
> … a defined and bounded communicative act that is designed to achieve one main communicative objective. Because it is a functional category the length of a move can range from a single finite clause to several paragraphs (Swales & Feak, 2003, p. 35).

For example, the following text, as shown in Table 2.1, is taken from the Results section of Yang and Allison's article (2003, pp. 375-376) with the lexical clues italicized. In addition to identifying these two sentences as a Move 2: 'Reporting results' based on content, lexical signals can also aid in the identification of move. In the first sentence (S1), '*Table 4*' signals that a number of results are being reported. Also in the first and second sentences (S1-S2), there are other lexical clues: *'is the most frequent'*, *'occur'*, and *'occurs'* which signal that results of the study are being reported. In the third sentence (S3), '*These Moves match the corresponding Moves'* signals that there is a comparison between results being reported.

Table 2.1: A Sample Move Analysis (Move 2: 'Reporting Results') from the Results Section in an Applied Linguistics Research Article (Yang & Allison, 2003, pp. 375-376)

Move 2: 'Reporting results'	[(S1) As can be seen in *Table 4*,'Commenting on results' *is the most frequent* and obligatory Move, and can *occur* repeatedly in a Discussion section, while 'Reporting results' and 'Summarizing results' together *occur* less often. (S2) 'Reporting results' *occurs* in all Discussion sections but one, so it can be considered as quasi-obligatory. (S3) *These Moves match the corresponding Moves* in the Results sections except for the position of 'Summarizing results' (see *Table 3*).]

Second, the term 'step' or '(constituent) element' refers to "a lower level text unit than the move provides a detailed perspective on the options open to the writer in setting out the moves" (Dudley-Evans & St. John, 1998, p. 89).

For example, the following text, as shown in Table 2.2, is taken from the Introduction section of Yang and Allison (2003, p. 365-366) with its lexical clues italicized. Apart from identifying a move based on its function, the identification of steps or rhetorical options within a move are also needed. In the following example, all three sentences are identified as Move 1: 'Establishing a territory' because they share the same function of laying a foundation for presenting the current study in a context.

From the excerpt, lexical clues in the first sentence: *'central'* and *'have received extensive attention'* aid in the identification of both the textual boundary of that step and the identification of Step A: 'Claiming centrality'. In this step, the authors claimed that the topic they were going to present was a 'central' issue because it *'received extensive attention'*. Move 1 Step C: 'Reviewing items of previous literature', on the other hand, was realized by the second and third sentences through the reference to previous studies. The explicit lexical clues are the numerous citations in the example.

Table 2.2: A Sample Move Analysis (Move 1: 'Establishing a Territory') from the Introduction Section in an Applied Linguistics Research Article (Yang & Allison, 2003, pp. 365-366)

Move 1: 'Establishing a territory' – Step A: 'Claiming centrality' Move 1: 'Establishing a territory' – Step C: 'Reviewing items of previous literature'	"[(S1) Research articles (RAs), the *central* genre of knowledge production, *have received extensive attention* in genre analysis (e.g. Bazerman, 1988; Berkenkotter & Huckin, 1995; Brett, 1994; Holmes, 1997; Hopkins & Dudley-Evans, 1988; Swales, 1981, 1990).] [(S2) Most studies have focused on analysis of the text product, describing organizational patterning (examples below), particular text features such as uses of hedging, modality, and reporting verbs *(Hyland, 1996; Salager -Meyer, 1992; Thompson & Ye, 1991)*, or aspects of clause structure and discourse function in the systemic functional tradition *(Gosden 1992, 1993; MacDonald, 1994; McKenna, 1997).* (S3) Some investigators have been oriented more towards institutional contexts that the RA genre has evolved in and towards behaviour of genre users, especially in the field of science *(Bazerman, 1988; Berkenkotter & Huckin, 1995; Rymer, 1988).*]

Third, the term 'obligatory or key move' refers to a particular move, generally the most frequent move, or a communicative purpose that is characteristic of a section. For example, in an analysis of the discussion sections in MSc theses in biology, Dudley-Evans (1994) found that Move 2: 'Statement of Result' is the most frequent move, and thus obligatory, in the Discussion section. However, in a later study, Yang and Allison (2003) found that the most frequent and, therefore, obligatory move in the Discussion sections of research articles in applied linguistics is Move 4: 'Commenting on results', which has four steps: (A) 'Interpreting results', (B) 'Comparing results with literature', (C) 'Accounting for results', and (D) 'Evaluating results'. The reason that these two studies have not come up with the same results is

because the two studies have employed different move models (Yang & Allison, 2003).

2.4.2) Structural Move Analysis Procedure

In a study of genre analysis at the first level or move structure level, a corpus of a target genre is created. Next, researchers can select a move model, adapt an existing move model or develop a move model based on an analysis of texts in the corpus. If there is more than one coder, issues concerning inter-rater/coder reliability/agreement should be discussed which include training of the raters/coders, and the identification and clarification of move and step definitions (see section 4.1 and 4.2 for a full detail). The identification of moves and steps can generally be made based on content and linguistic signals. The coders, then, independently work on parts of the corpus or the whole corpus. The identified moves from the coders are, then, counted. Statistical procedures for inter-coder agreement are calculated. The level of inter-coder agreement is reported and established, and the results of the move identification are presented (Crookes, 1986).

2.4.3) Interrater Reliability/ Intercoder Agreement

One of the studies of move analysis was conducted to validate a move model for research article introduction sections by a use of a group of raters or coders. Crookes (1986) undertook a study to validate Swales' (1990) move model for empirical research article introductions by establishing the model's level of interrater reliability/intercoder agreement. He asserted that for a system or a model that claims to be generated and established by the identification and recording of the characteristics of a group of texts of the same genre (moves and steps), it is important for researchers dealing with content or text analysis to acknowledge that intercoder agreement is a critical component of their study. If a system or model is sufficiently descriptive of all the distinct characteristics and salient functions of a group of texts, a group of trained individuals or coders/raters should, then, be able to code a group of texts at an acceptably high level of agreement.

In a case of low level of intercoder agreement, however, a system or model may not be the only problematic factor. Crookes (1986) pointed out that it may be due to one or a combination of the following reasons. First, the framework or move model used in the study may not adequately account for all the functions and purposes of all

the texts in a corpus. Second, the coders may not be sufficiently trained. Third, some texts in the corpus may not fit or conform to the framework. Fourth, the descriptions of move and step and/or definitions within the framework may not be explicitly inadequate. Fifth, boundaries of moves and steps in the corpus cannot be consistently and unanimously identified and agreed. Sixth, lexicogrammatical signals used in the move and step identification may be misleading and/or unclear.

After identification of the aforementioned explanations for a low level of inter-coder agreement in his study of research article introductions in ESP, Crookes (1986), then, revised the move and step framework he used. Key changes that were made included additions to move definitions, modifications of the degree of generality of move 1, and the omission of the previous model's restrictions on the co-occurrence and sequence of moves 1, 2, 3 and 4. New raters were trained and new introductions were coded. A new and sufficiently high level of inter-coder agreement was achieved.

The aims and purposes, as well as the current study's research questions, however, did not set out to validate Yang and Allison's (2003) model. Rather, the research was exploratory in nature, attempting to describe, using this move model as an instrument to investigate, how a group of MA theses was written when compared to the published texts described by Yang and Allison (2003). As a result, instead of calculating and establishing the level of inter-coder agreement, a series of steps, as described in Chapter 3, Section 3.3 Data analysis procedure, was taken to deal with disagreements between the two coders, in order to come up with results that were both descriptive and pedagogically-oriented.

2.4.4) Comparison of Yang and Allison's (2003) Move Model and Other Related Models for Discussions

Regarded as a prototype, Swales' (1990) move model for introductions has been developed and expanded to include other sections of research articles and texts in other genres. Of particular relevance to the current study are the different move models, derived from a number of studies on research article discussions and master's level dissertation discussions, proposed by Peng (1987), Hopkins and Dudley-Evans (1988), Dudley-Evans (1994), Nwogu (1997), Yang and Allison (2003), and Kanoksilapatham (2005) which are compared and reviewed.

Yang and Allison's (2003) move model for Discussions is used as a frame of reference for comparing and contrasting with other move models. This is to provide an underlying rationale for the selection of Yang and Allison's (2003) model in the present study. Their study, based on an analysis of different sections of 20 research articles in applied linguistics, proposed four different move models for Results, Discussion, Conclusion, and Pedagogical implications sections (Yang and Allison, 2003). Their move model for discussion sections was based on an analysis of eight research article discussion sections in applied linguistics (see Yang and Allison (2003) for details). The model which consists of seven moves and ten steps is reviewed below.

Move 1: Background Information prepares readers for the upcoming discussion of results by restating research questions, aims and purposes of a study, theoretical background or established knowledge, and/or the study's research methodology. This move is somewhat similar to 'Information' in Peng's move model (1987), 'Background information' in Hopkins and Dudley-Evans' (1988) model 'Information Move' in Dudley-Evans' (1994) move model, Step A: 'Describing established knowledge' in a 'Contextualizing the study' move and Step A: 'Restating methodology, (purposes, research questions, hypotheses restated, and procedures) in a 'Consolidating results' move in Kanoksilapatham's (2005) move model. As for Nwogu's (1997) model, there is no comparable move related to the function of providing background information.

In Peng's move model, an 'Information' move allows authors to present relevant facts in order to prepare readers for the authors' arguments. This move includes six types or options: 1) information relating to previous research, 2) theoretical background, 3) theoretical development based on authors' data, 4) information that guides readers through the section (referred to later as metatext), 5) information concerning the study's methodology, and 6) information that specifies or indicates certain data or factors are not available or not being studied. In Hopkins and Dudley-Evans' (1988) model, 'Background information' is a somewhat similar move based on its title. However, the two authors did not offer any definition or description. In Dudley-Evans' (1994) move model, an 'Information Move', allows authors to present background information concerning theory, aims and purposes of the study,

previous studies, and methodology that are needed in order to prepare readers for a discussion of the results. In Nwogu's (1997) model, there is no comparable move related to the function of providing background information. There are two steps in Kanoksilapatham's (2005) move model which have been found to be somewhat similar to 'Background information'. These two steps are in two different moves, Step A: 'Describing established knowledge' in a 'Contextualizing the study' move and Step A: 'Restating methodology, (purposes, research questions, hypotheses restated, and procedures) in a 'Consolidating results' move. Kanoksilapatham (2005) specified the function of the 'Contextualizing the study' move and its Step A: 'Describing established knowledge' as giving a detailed account of the current study by placing the study in the context of the discipline's established knowledge.

It can be concluded that the function and communicative purpose of this move 'Background information' is to present relevant information including a study's goals, aims, purposes, research questions, problem statements, theoretical background, related previous studies, research methodology, and metatext in order prepare readers for the discussion of results. As a result, there is no step in this move as authors can achieve this function of 'stating the background information' by selecting and stating which aspects of the research he or she considers relevant the following discussion of results

The use of metatext seems to be relatively neglected by most previous studies on research articles. There are only two studies (Peng, 1987; Swales, 1990) that have acknowledged the use of metatext. It is a segment or part of a text which does not add any information about the subject being discussed, instead it only exists to inform readers of how a chapter or a section is organized, and to guide readers' attention to a graph, a table, or another section (see a definition of metatext on page 7). In her corpus of research articles in chemical engineering, Peng (1987) included the use of metatext in the 'Information' move – Step D: "information that focuses the reader's attention on a particular point" (Peng, 1987, p. 92). It is surprising to note at this point that after reviewing a number of genre-based studies on research articles in different disciplines and one study on dissertation discussion sections that there was no mention of the use of metatext, except that of Peng's (1987). Swales' (1990) also

indicated that the far greater use of metatext in dissertations may be a distinguishing characteristic of this research-process genre.

In general, it appears that other authors' descriptions of this move overlap that of Yang and Allison's (2003) 'Background information'. Distinct lexicogrammatical features of Move 1s include 'aims of the study' 'purposes of the study' 'research questions', for example. Distinct lexicogrammatical features of metatext include 'according to Table 5' which guides readers' attention to Table 5, 'as can be seen in Figure 6' which guides readers' attention to Figure 6, '(see example below)' which inform readers that an example is presented below, 'The next section, a number of move models and their definitions of moves and steps are described and compared.' which informs readers of the types of information that will be included in the next section.

Move 2: Reporting Results is employed to present the results of a study, "normally with relevant evidence such as statistics and examples" (Yang & Allison, 2003, p. 382). This move appears to be very broadly defined by Yang and Allison (2003), it is comparable to 'Statement of results', 'Observation', and 'Expected outcome' in Peng's (1987) move model, 'Statement of results', and '(Un)expected outcome' in Hopkins and Dudley-Evans' (1988) model, 'Statement of results', 'Finding' and '(Un)expected outcome' moves in Dudley-Evans' (1994) move model, 'States a specific outcome' step in an 'Explaining specific research outcome' move in Nwogu's (1997) model, and Step B 'Stating selected findings' in a 'Consolidating results' move in Kanoksilapatham's (2005) move model

It seems that Yang and Allison's (2003) 'Reporting results' is not as descriptive as Peng's (1987), Hopkins and Dudley-Evans' (1988), and Dudley-Evans' (1994) moves. In Peng's model (1987), there are three moves for reporting results: 'Statement of results', 'Observation', and 'Expected outcome' with two steps: 1) positive results which are expected, and 2) negative results if they differ from previous theory or research. Her 'Statement of results' includes tables, graphs, and statements that authors find necessary for their arguments. Second, 'Observation' "includes all comments on physically visible effects e.g. that a discrepancy exists between two sets of results or that a piece of equipment exhibits instability or that physical changes are seen taking place during an experiment as conditions change,

etc." (Peng, 1987, p. 89). Lastly, 'Expected outcome' seems to include an element of comment whether the results were expected or not. In Hopkins and Dudley-Evans' (1988) model, a set of approximately comparable moves is 'Statement of results', and '(Un)expected outcome'. The two authors, however, did not give any definition or examples for the first move. (Un)expected outcome is defined similarly to Peng's 'Expected outcome' which includes a comment on the expectedness or unexpectedness of those results. In Dudley-Evans' (1994) move model, 'Statement of results', 'Finding' and '(Un)expected outcome' moves seem to be roughly comparable to Yang and Allison's (2003) 'Reporting results'. His 'Statement of results' is numerical, graphic or textual, including graphs, tables and statements which refer to graphs or tables. This move frequently occurs as a first move in a cycle. His 'Finding' has the same function as 'Statement of results' but is an account of an experiment. '(Un)expected outcome' allows writers to comment whether the results are expected or not. Nwogu's (1997) 'States a specific outcome' step in an 'Explaining specific research outcome' move seems to be somewhat similar to 'Reporting results'. The step "restates the main observations made in the study" (p. 132). Likewise, Step B 'Stating selected findings' in a 'Consolidating results' move in Kanoksilapatham's (2005) move model is somewhat comparable to 'Reporting results'. The titles of both steps indicate that writers select only a few key findings to report in discussion sections.

It can be concluded that 'Reporting results' allows authors to select and restate some key findings in a study as well as to include comments on the expectedness or unexpectedness of those results. Typical signals for 'Reporting results' move include numerical values, graphs, tables, figures, reporting verbs, the use of past simple tense, and sections of texts with examples. Unlike other models including Peng's (1987), Hopkins and Dudley-Evans' (1988), and Dudley-Evans' (1994) that finely separate the function of 'reporting results' and of 'commenting on the expectedness or unexpectedness of results', Yang and Allison's (2003) include these two functions into one 'Reporting results' move. The difference may be a result of the focus of these three studies, Peng's (1987), Hopkins and Dudley-Evans' (1988), and Dudley-Evans' (1994), which deal with discussion sections only but more than one sections in Nwogu's (1997), Yang and Allison's (2003), and Kanoksilapatham's (2005).

Distinct lexicogrammatical features of Move 2 include statements in past tense, ‘result(s)’, ‘finding(s)’, ‘graphs’, ‘tables’, ‘figures’, ‘for example’ and numerical values.

Move 3: Summarizing Results “presents integrated results on the basis of a number of specific results” (Yang & Allison, 2003, p. 382). There is no comparable move in the other studies. Yang and Allison (2003) provided a very brief definition of this move. The categorization of Move 3, as a result, relies heavily on close reading as well as the identification of distinct lexical signals such as ‘to sum up’, ‘in sum’, ‘in summary’, and ‘to summarize’. Unlike the titles of previous moves, the title of this move does not convey the typical functional nature of the model.

Move 4: Commenting on Results allows authors to “establish the meaning and significance of the research results in relation to the relevant field” (Yang & Allison, 2003, p. 382). This move can be realized by one or a combination of four rhetorical options or steps: Step A: Interpreting results, Step B: Comparing results with literature, Step C: Accounting for results, Step D: Evaluating results. It should be noted that Yang and Allison (2003) provided only examples of the four steps in this move, therefore, the following comparison of these four steps in Move 4 ‘Commenting on results’ with moves and steps in other models is based on a table which compares Yang and Allison’s (2003) move model and Hopkins and Dudley-Evans’s (1988) move model (see Yang & Allison, 2003, p. 378 for detail) and the interpretations of the researcher.

Move 4 -- Step A: Interpreting Results seems to be comparable to ‘Hypotheses’ in Peng’s model (1987), ‘Hypothesis’ in Hopkins and Dudley-Evans’ move model (1988), ‘Claim’ in Dudley-Evans’ (1994) move model, ‘Interpreting the outcome’ step in ‘Explaining specific research outcome’ in Nwogu’s (1997) and Step ‘Making overt claims or generalizations in the ‘Consolidating results’ move in Kanoksilapatham’s (2005) move model.

‘Interpreting results’ includes ‘Hypothesis’, in which the writer makes a more general claim arising from his experimental results” (Yang & Allison, 2003, p. 378). Yang and Allison’s example of this step is “These results suggest, first, that some significant changes take place between time one and time two and, second, that the knowledge which underlies L2 processing is in some way different to the knowledge

which underlies the processing of L1 (APP3)" (Yang & Allison, 2003, p. 382). A somewhat comparable move in Dudley-Evans' (1994) model is 'Claim'. In Nwogu's model (1997), 'Interpreting the outcome' step in 'Explaining specific research outcome' seems to be comparable to 'Interpreting results' as they both share the same function of interpreting. Nwogu (1997) did not specifically provide a definition for this step but he explained the function of the move 'Explaining specific research outcome' that "it restates the main observations made in the study, indicates their significance, interprets and justifies them by reference to procedures adopted in the study" (Nwogu, 1997, p. 132). In Kanoksilapatham's (2005) model, the Step 'Making overt claims or generalizations in the 'Consolidating results' move which "highlights the strengths of the study and defends their research successes" (p. 16) appears to be fairly similar to 'Interpreting results' step. Therefore, Step A 'Interpreting results' allows authors to make hypotheses, deductions, claims, interpretations, and generalizations based on their results.

Move 4 – Step A's explicit lexical features include the use of modals and hedging devices to mitigate the strength of the claims made.

Move 4 -- Step B: Comparing Results with Literature appears to be somewhat comparable to the 'Comparison' move in Peng's model, 'Reference to previous research (Comparison)' and 'Reference to previous research (Support)' moves in Hopkins and Dudley-Evans' (1988) move model, 'Reference to previous research' in Dudley-Evans' model (1994), Nwogu's (1997) Step 'Contrasting present and previous outcomes' in 'Explaining specific research outcome' and 'Referring to previous literature' step in the 'Consolidating results' move in Kanoksilapatham's move model (2005).

In Peng's (1987) description of 'Comparison', she further classified it into three more steps according to the sources of previous literature: 1.) theoretical calculations, 2.) data from previous study, and 3.) a second set of results from the present author. It seems clear, then, that Peng's (1987) 'Comparison' move is more detailed than Yang and Allison's (2003) 'Comparing results with literature' step. The two moves: 'Reference to previous research (Comparison)' and 'Reference to previous research (Support)' moves in Hopkins and Dudley-Evans' (1988) move model appear to be similar to 'Comparing results with literature'. In 'Reference to

previous research (Comparison)', writers compare and contrast their results with previous literature. In 'Reference to previous research (Support)', on the other hand, writers refer to, cite or quote previous studies in order to verify their claims, hypotheses or deductions. 'Reference to previous research' in Dudley-Evans' model (1994) is roughly equivalent to Yang and Allison's (2003) 'Comparing results with literature'. Dudley-Evans (1994) described the functions of this move as comparison or support of one's own claims or explanations. Nwogu's (1997) Step 'Contrasting present and previous outcomes' in 'Explaining specific research outcome' seems to be fairly similar to 'Comparing results with literature'. He stated that "the observations may also be contrasted with similar ones made in related studies" (p. 132). The 'Referring to previous literature' step in the 'Consolidating results' move in Kanoksilapatham's move model (2005) is fairly similar to Yang and Allison's (2003) 'Comparing results with literature' step. She stated that this step "contextualizes the findings within the relevant research conventions by comparing or contrasting the current findings with those generated by another study" (Kanoksilapatham, 2005, p. 17).

Yang and Allison's (2003) Step: 'Comparing results with literature' is more specific than other researchers' moves or steps as it only focuses on 'commenting results' by 'comparing (and contrasting) the results with literature'. 'Comparing results with literature' can be identified by the use of citations and/or lexical signals such as 'accord with' 'agree' 'be consistent with', 'support', 'confirm', 'in contrast to', 'is not consistent with' and 'contrary to'.

Move 4 -- Step C: Accounting for Results allows authors to give an explanation for results. The step seems to be similar to 'Explanation' in Peng's (1987) model, 'Explanation of unsatisfactory results' and 'Exemplification' moves in Hopkins and Dudley-Evans' model (1988), 'Explanation' in Dudley-Evans' model (1994), and 'Explaining differences in findings' step and 'Exemplifying' step in the 'Consolidating results' move in Kanoksilapatham's move model (2005). It appears that there is no comparable move or step in Nwogu's study (1997).

Peng reported that this move usually follows her 'Expected outcome' move provided that the outcome is unexpected or unusual in order to clarify the result. 'Explanation of unsatisfactory results' and 'Exemplification' moves in Hopkins and

Dudley-Evans' model (1988) appear to be somewhat comparable to 'Accounting for results'. Like Peng's (1987) 'Explanation' move, Hopkins and Dudley-Evans' (1988) 'Explanation of unsatisfactory results' move allows writers to offer reasons for unexpected outcomes or outcomes that are inconsistent with previous studies. Writers, then, can substantiate their explanations with examples or 'Exemplification' move. 'Explanation' in Dudley-Evans' model (1994) seems to be equivalent to 'Accounting for results'. 'Explanation' offers reasons for surprising results or those that differ from the previous literature. The step 'Explaining differences in findings' and 'Exemplifying' in the 'Consolidating results' move in Kanoksilapatham's move model (2005) appear to be somewhat comparable to 'Accounting for results'. In general, it appears, then, that the other authors', namely, Peng (1987), Hopkins and Dudley-Evans (1988), Dudley-Evans (1994), and Kanoksilapatham (2005), choice of titles for this function of giving explanation for unexpected and different results is more descriptive than Yang and Allison's (2003) 'Accounting for results'.

The third step 'Accounting for results' provides an explanation or justification for unexpected results. The step gives authors an additional choice in order to comment on results, in addition to the two previous steps, 'Interpreting results' and 'Comparing results with literature', in giving a commentary on results. Move 4 – Step C's lexicogrammatical signals include 'a possible explanation for', 'because', 'due to', or the use of cause and effect discourse connectors, the use of modals and hedging devices, and tentative statements.

Move 4 -- Step D: Evaluating Results, according to Yang and Allison (2003), includes the 'Deduction' move in Hopkins and Dudley-Evans' (1988) model "in which the writer gives a claim about the generalizability of the particular results (Yang & Allison, 2003, p. 378). Yang and Allison (2003) gave an example: "Of course, the results are rather speculative and based on a small sample… (ESP2)" (p. 382). It seems that 'Evaluating results' is somewhat comparable to 'Deduction' in Hopkins and Dudley-Evans' (1988), 'Limitation' in Dudley-Evans' (1994) model, 'Indicating limitations of the outcomes' step in the 'Explaining specific research outcome' move in Nwogu's (1997) model, and 'Limitations about the findings' in the 'Stating limitations of the present study' move in Kanoksilapatham's (2005) model. It seems that there is no comparable move in Peng's (1987) study.

'Limitation' in Dudley-Evans' (1994) model appears to have a broader scope than that of Yang and Allison's (2003) 'Evaluating results' because he defined this move as indicating caveats about a study's findings, methodology, as well as claims. A somewhat comparable step is 'Indicating limitations of the outcomes' step in the 'Explaining specific research outcome' move in Nwogu's (1997) model. The step 'Limitations about the findings' in the 'Stating limitations of the present study' move in Kanoksilapatham's (2005) model seems to somewhat similar to Yang and Allison's (2003) 'Evaluating results'. Overall, it can be concluded that other researchers are more specific in the description of the functions of their moves and steps than Yang and Allison (2003) as reflected by the term 'limitation' that most researchers used whereas, Yang and Allison's (2003) 'evaluating' can be interpreted as having either a positive or negative denotation.

This last step, 'Evaluating results', allows authors to make a judgment on the findings of their study. As previously stated, the choice of title 'Evaluating results' by Yang and Allison (2003) is more inclusive than 'Limitations' which is preferred by other researchers. Authors can and do have a choice of positively and negatively assessing their own findings in an objective manner.

Distinctive lexical items for Move 4 – Step D include the use of modals, 'negative' words such as 'limited', 'to be confined to', 'a small sample', 'a few samples' and hedging devices.

Move 5: Summarizing the Study is used "to provide a brief account of the main points from the perspective of the overall study" (Yang & Allison, 2003, p. 382). Yang and Allison (2003) gave an example of this move: "In summary, the research presented in this paper offers a contrastive textlinguistics study of rhetorical differences between texts… (ESP2)" (p. 382). It appears that there is no comparable move in the other studies. It seems that the title of this move is, similar to Move 3 'Summarizing results', less functionally focused than other moves and steps in Yang and Allison's (2003) model, therefore, it is likely that recognizing this move can be problematic.

The identification of Move 5, then, heavily relies on explicit lexical items such as 'The study reports…', 'The study examines…', 'This paper describes…', and 'The study analyzes…'.

Move 6: Evaluating the Study allows Discussion writers to "evaluate the overall study by pointing out the limitations, indicating the contributions or evaluating the methodology" (Yang & Allison, 2003, p. 382). The scope of this move is obviously broader than the Step: 'Evaluating results' in the 'Commenting on results' move, as there are three rhetorical options: Step A: Indicating limitations, Step B: Indicating significance/ advantage, Step C: Evaluating methodology, available to authors to realize to this function. It should be noted that Yang and Allison (2003) provided only examples of the three steps in this move, therefore, the following comparison of these three steps in Move 6 'Evaluating the study' with moves and steps in other models is based on a table which compares Yang and Allison's (2003) move model and Hopkins and Dudley-Evans's (1988) move model (see Yang & Allison, 2003, p. 378 for detail) and the interpretations of the researcher.

Move 6 -- Step A: Indicating Limitations, Yang and Allison (2003) gave an example of this step: "The present study has raised a number of interesting differences, but a larger corpus is needed to establish how far they can be generalized…(ESP2)" (p. 383). The step is somewhat comparable to Peng's (1987) 'Recommendation' move, 'Justification' move in Hopkins and Dudley-Evans' move model (1988), 'Limitation' move in Dudley-Evans' model (1994), 'Indicating limitations of outcomes' in Nwogu's model (1997), and 'Limitations about the findings', 'Limitations about the methodology' and 'Limitations about the claims made' steps in the 'Stating limitations of the present study' move in Kanoksilapatham's model (2005).

Peng's (1987) 'Limitation' indicates a need for further study to substantiate the findings of a study and the 'Information' move: "information that certain data is not available or that certain factors were not investigated" (p. 92). The scope of the 'Justification' move in Hopkins and Dudley-Evans' move model (1988) seems to overlap with Yang and Allison's (2003) 'Indicating limitations'. 'Justification' allows authors to give reasons for the need for further research. The 'Limitation' move in Dudley-Evans' model (1994) seems to be fairly similar to Yang and Allison's (2003) 'Indicating limitations'. He pointed out that caveats about a study's findings, methodology, and claims are indicated, whereas 'Indicating limitations of outcomes' in Nwogu's model (1997) is only concerned with a study's results. The last three steps

from Kanoksilapatham's model (2005): 'Limitations about the findings', 'Limitations about the methodology' and 'Limitations about the claims made' in the 'Stating limitations of the present study' move can be said to be the most comprehensive in terms of pointing out limitations in a study, and they are also identical to Dudley-Evans' (1994) 'limitations' move. It is also worth mentioning that the choice of titles seems to split three ways among these researchers: 'evaluating' denotes a possibility of being judged positively or negatively. 'Limitation', on the other hand, only conveys a negative meaning, whereas 'justification' and 'further suggestions' are rather positive. The first step 'Indicating limitations' in Yang and Allison's model (2003) allows authors to express caution concerning a study's methodology, findings, claims and/or generalizations.

Move 6 – Step A's explicit lexical signals include 'limitation(s)', 'caveat', 'caution', and 'weakness'.

Move 6 -- Step B: Indicating Significance/Advantage highlights the importance of a study's findings. Yang and Allison (2003) gave an example of this step: "What is new in our study is that links we try to find with school performance, and the within family dynamics of the accommodation process, … (APP7)" (p. 383). The step appears to encompass Nwogu's model (1997) 'Indicating significance of the outcome' and may overlap with Kanoksilapatham's model (2005) 'Presenting generalization claims, deductions, or research gaps in 'Contextualizing the study' move. There is no comparable step in Peng's (1987), Hopkins and Dudley-Evans (1988), and Dudley-Evans' (1994).

Move 6 – Step B's distinct lexical signals may include the use of 'positive' words such as 'important', 'new', 'groundbreaking', and 'pioneering', for example.

Move 6 -- Step C: Evaluating Methodology allows authors to judge the strengths and weaknesses of the methods or procedure used in a study. Yang and Allison (2003) gave an example of this step: "…She performed extremely well in the experiment (as well as in the Japanese course), but it is questionable whether her experimental data represent the strategy she would employ outside of the laboratory… (APP10)" (p. 383). The preceding example shows that it is 'questionable' whether, based on the research method of collecting data in an experimental setting, the behavior of the participant is consistent in both settings: in an experiment setting and

real-life setting. It is possible that the research method can only elicit the behavior in the experimental setting but may not be generalized to real-life environments. The step seems to be a component of Dudley-Evans' (1994) 'Limitation' move and also fairly similar to the Step 'Limitations about the methodology' in the 'Stating limitations of the present study' move in Kanoksilapatham's move model (2005). The function of this step seems to overlap Move 6 – Step A: Indicating limitation of Yang and Allison's (2003) model. There is no comparable step in Peng's (1987), Hopkins and Dudley-Evans' (1988).

Move 6 – Step C's distinct lexicogrammatical signals include 'limitation(s)' 'evaluation', 'the analysis of data', and the use of unreal conditionals.

Move 7: Deductions from the Research "extends beyond the results by suggesting what can be done to solve the problems identified by the research, pointing out the line of further research or drawing pedagogic implications" (Yang & Allison 2003, p. 383). This move can be realized by a step or a series of steps: Step A: Making suggestions, Step B: Recommending further research, and Step C: Drawing pedagogic implications. It should be noted that Yang and Allison (2003) provided only examples of the three steps in this move; therefore, the following comparison of these three steps in Move 7 'Deductions from the research' with moves and steps in other models is based on a table which compares Yang and Allison's (2003) move model and Hopkins and Dudley-Evans's (1988) move model (see Yang & Allison, 2003, p. 378 for detail) and the interpretations of the researcher.

Move 7 -- Step A: Making Suggestions "extends beyond the results by suggesting what can be done to solve the problems identified by the research" (Yang & Allison, 2003, p. 383). Comparisons between and among different move models is perhaps speculative due to the brief and circular definition. Yang and Allison (2003) gave an example of this step: "Where such complex methods are used it may be better for the writer to provide a full and specific description of… (APP9)" (p. 383). It appears to be somewhat comparable to 'Deductions' in Peng's model (1987), 'Deduction' in Hopkins and Dudley-Evans' model (1988), 'Claim' in Dudley-Evans' model (1994), 'Stating research conclusions' in Nwogu's model (1997) which he described as providing "a conclusion and indicate implications of the research" (p.

124), and the 'Presenting generalizations, claims, deductions, or research gaps' step in 'Contextualizing the study' move in Kanoksilapatham's model (2005).

Move 7 – Step A's lexical signals include 'suggest', 'suggestion', 'recommend', and 'recommendation'.

Move 7 -- Step B: Recommending Further Research, that is, **"**pointing out the line of further research" (Yang & Allison, 2003, p. 383) is fairly similar to the first step 'Further work' and second step 'Methodology' in the 'Recommendations' move in Peng's model (1987), The 'Recommendation' move in Hopkins and Dudley-Evans' (1988) move model, Dudley-Evans' (1994) 'Recommendation', Step 'Promoting further research' in the 'Stating research conclusions' move in Nwogu's (1997) model, 'Suggesting further research' move in Kanoksilapatham's (2005) model.

Peng's (1987) 'Further work' and 'Methodology' steps in the 'Recommendations' move indicate that further research is suggested in order to substantiate the current study's findings. Her second step is to advise other researchers that the use of certain techniques can improve the accuracy of a study's findings. The 'Recommendation' move in Hopkins and Dudley-Evans' (1988) move model seems to be equivalent to Yang and Allison's (2003) 'Recommending further research' step. Hopkins and Dudley-Evans' (1988) 'Recommendation' allows authors to "make suggestions for future work" (p. 118). Dudley-Evans' (1994) 'Recommendation' is somewhat comparable to Yang and Allison's model (2003) and nearly equivalent to Peng's (1987) 'Recommendations'. Dudley-Evans (1994) described his move as making suggestions for further research directions and research methodology. The Step 'Promoting further research' in the 'Stating research conclusions' move in Nwogu's (1997) model seems to be similar to Yang and Allison's (2003) 'Recommending further research'. Nwogu stated that this move calls for future research as a part of a conclusion of a study. 'Suggesting further research' move in Kanoksilapatham's (2005) model seems to be similar to Yang and Allison's (2003) 'Recommending further research'. This move "allows the scientists to advocate the need to offer recommendations for future research by pinpointing particular research questions to be addressed or improvements in their research methodology" (Kanoksilapatham, 2005, p. 18). On the whole, it seems that this

function can be achieved by: 1.) suggesting further research so that a new study can substantiate findings of the current study, 2.) suggesting a new or improved methodology, and 3.) suggesting new directions or research questions for future research.

The function of this Step B 'Recommending further research' can be found in all models reviewed. The step 'Recommending further research' offers advice for researchers directions or areas of a study that the authors feel worthy of further investigation and/or suggests another methodology for future studies. Move 7 – Step B's explicit lexical signals include 'further study', 'future study', 'further research', 'recommendation(s)', and 'directions for further research' and/or 'study'.

Move 7 -- Step C: Drawing Pedagogic Implications allows researchers to provide practical suggestions for teaching and learning. There is no comparable step in the other studies. It seems, however, that if the Yang and Allison's (2003) move framework is used to analyze research articles in other disciplines, the function of Step A in Move 7 can adequately capture a study's applications and/or solutions and/or implications. The last step 'Drawing pedagogic implications' gives concrete or practical advice related to teaching. There is no comparable step in other studies.

Explicit lexical signals include 'teaching or pedagogic suggestions', 'pedagogical recommendations', and 'teaching implications'.

In this section, different move models for research article discussions from Peng (1987), Hopkins and Dudley-Evans (1988), Dudley-Evans (1994), Nwogu (1997), Kanoksilapatham (2005) were compared to Yang and Allison's move model (2003). On the whole, it can be concluded that Yang and Allison's model (2003) is the most comprehensive though not ideally descriptive among the reviewed move models. It is the only model that is based on analyses of research articles in applied linguistics. The comparison of move models also shows that there are differences, noticeably through the use of different titles of move of the relatively identical function, in these models which possibly result from analyses of research article discussions in different disciplines.

In the next section, some related issues concerning recurring patterns of moves or move cycles, with respect to their importance, their components and their identification are reviewed.

2.5 Recurring Patterns or Move Cycles

Previous studies on research article introductions (Crookes, 1986; Peng, 1987; Swales, 1990) found that Introductions tend to be linear. The Methods sections are also linear; the procedure is described chronologically (Weissberg & Buker, 1990). The repeated use of move cycles or recursion differentiates the discussion from the other sections of empirical research articles.

It seems, then, that writing a discussion section requires not only a greater repertoire of skills such as reporting, commenting, reasoning and persuading as evidenced by the section' many functions but also an understanding of its recursive dimension through the use of move cycles. The understanding of move cycles can aid in the organization of this section. The use of the move cycle can help writers to include necessary communicative purposes in their discussion of results and organize in an orderly or logical order, thus adding plausibility to authors' claims or arguments as well as a study's results (Dudley-Evans, 1994).

In order to persuasively and convincingly answer the research questions that a study has initially set out to answer, authors need to select and sequence both objective results and interpretations of or comments on results. Shorter cycles or low level move cycles, comprising two to four moves, such as 'Statement of results' → 'Comparison', are used to validate the results of a study. A move cycle such as 'Statement of results' → 'Comparison' → 'Deduction', can be used to first report the results of the study, then to compare and contrast the results with previous studies in order to support them. Next, the authors can make a claim or deduction based on the results. Whereas, a high-level move cycle is a recurring pattern or move cycle which answers a study's research questions. For example, the communicative purpose of the function of 'Reference to previous research move (Comparison)' in Hopkins and Dudley-Evans' (1988) eleven-move model may be used to support the validity of results and convince readers that the results of a study were consistent or agreed with previous research. Then, authors may use the 'Deduction' move in order to suggest a low level claim based on a particular result. Next, they may use 'Reference to previous research (Support) move' so that they can cite or quote previous studies to substantiate their claim or deduction. Then, they may make a higher level claim based on the results of the study or use the 'Hypothesis' move to answer the study's

research question. Next, they may point out a new area of research or use the 'Recommendation' move (Hopkins & Dudley-Evans, 1988).

It can be then concluded that authors' decisions on the use of high or low level cycles affects how parts of the discussion section function as well as their communicative purposes. Failure to use any move cycles may cause difficulties when writing discussion sections. Excessive use of short or low level move cycles may prevent authors from making effective and persuasive general knowledge claims that answer a study's research questions as well (see Appendix A for an example of excessive use of short cycles in a thesis discussion section). In the next two sections, moves that typically constitute a move cycle in discussions are described and the identification of move cycles is explained.

2.5.1) Components of a Move Cycle

Apart from the identification of the rhetorical structure of discussion sections, another related issue concerning the importance of cycles in discussion sections has been addressed in the preceding section. In a structural move analysis study by Peng (1987) of ten research article introduction sections and discussion sections in chemical engineering, she found that, unlike moves in introduction sections which generally occur linearly starting with Move 1, Move 2 and Move 3, certain moves in discussion sections tend to co-occur and re-occur, and that these recurring patterns or cycles can be found throughout the discussion sections. The lowest number of moves in a cycle is two moves and in rare cases can be as many as eight moves (Peng, 1987; Hopkins & Dudley-Evans, 1988).

Peng (1987) classified move cycles into two levels: a high level cycle which answers research questions and a low level cycle which forwards authors' claims or hypotheses or provides interpretations of results. Using the terms in her eleven-move model, four of the most common low level cycles are:

1. 'Statement of results' +
   'Comparison'

2. 'Statement of results' +
   'Comparison' +
   'Deduction'

3. ‘Statement of results’ +
   ‘Comparison’ +
   ‘Explanation’

4. ‘Statement of results’ +
   ‘Comparison’ +
   ‘Expected outcome’

Apart from a large number of move cycles that begin with ‘Statement of results’, Peng (1987) also reported that there were instances of move cycles beginning with ‘Hypothesis’ → ‘Statement of results’ → ‘Comparison’ → ‘Deduction’. She states that authors who select this cycle do so because of unexpected or surprising results.

More recent related studies on move cycles (Hopkins & Dudley-Evans, 1988; Dudley-Evans, 1994; Holmes, 1997; Peacock, 2002; Yang & Allison, 2003; Kanoksilapatham, 2005) also support the findings of Peng’s (1987) study. In sum, a move cycle may begin with, using Peng’s terms, an ‘Information move’, and/or ‘Statement of results’, or ‘Hypothesis’ and then end with ‘Comparison’ and/or ‘Deduction’ and/or ‘Explanation’. Longer cycles are a result of a combination of shorter move cycles which usually end with ‘Deduction’ or ‘Recommendation’ and/or ‘Deduction’ or ‘Justification’ and ‘Deduction’.

In general, it can be concluded that the discussion sections of research articles and dissertations both report and comment on results. They also display discursive characteristics and use repeated move cycles. In the next section, previous research concerning the process of identification of move cycles are reviewed. Then, a definition of move cycles for this study is proposed.

2.5.2 Identification of Move Cycles

A cycle may be identified by the position of the ‘Statement of results’ move which is generally found at the beginning of most move cycles (Hopkins & Dudley-Evans, 1988). However, other moves have also been found to occur at the beginning of cycles in other studies. In Peng’s study (1987), for example, she observed that apart from ‘Information’ and ‘Statement of results’, ‘Observation’, ‘Comparison’,

‘Deduction’, and ‘Hypothesis’ also occur at the beginning of cycles. Likewise, in Holmes’ study (1997) on research article discussions in History, Political Science, and Sociology, he found ‘Background information’, ‘Statement of results’, ‘(Un)expected outcome’, ‘Reference to previous research’, and ‘Generalization’ to mark the beginning of a cycle. It can then be concluded that the identification of a move cycle, from a functional perspective, can be achieved by first classifying a segment of texts where two specific functions co-occur: reporting and commenting. For most cycles, the reporting move occurs first and is then followed by commenting moves. In a cycle, one result may be commented on again and again from different angles and the previous commenting moves may also be commented on, for example, a cycle may consist of:

‘Statement of results’ (reporting move) +
‘Comparison’ (commenting move) +
‘Explanation’ (commenting move) +
‘Exemplification’ (reporting move) +
‘Deduction’ (commenting move) +
‘Comparison’ (commenting move) +
‘Hypothesis’ (commenting move) +
‘Recommendation’ (commenting move) (Hopkins & Dudley-Evans, 1988, p. 118).

In this study, a move cycle is functionally defined as a co-occurrence of at least one reporting move and one commenting move under the same topic. A cycle can then consist of at least two moves: one reporting move and one commenting move.

In this chapter, the definitions of research article and thesis discussion sections were presented. Then, the definitions of genre were reviewed. The move and step models proposed by a number of researchers were compared and contrasted. Then, the importance of recurrent patterns of moves or move cycles for discussion sections, the components of move cycles and their identification were reviewed. In the next chapter, the study’s research methodology is presented and discussed.

CHAPTER III
METHODS

In this chapter, the thesis corpus is described. Then, the framework for text analysis and the data analysis procedures are discussed. Finally the validity and reliability of the study are explained.

3.1 Samples and Sampling Procedures

The data used in this study are the Discussion sections taken from MA theses written in English by Thai graduate students in an applied linguistics program. The MA theses were written as a requirement of the Masters in Applied Linguistics program at the Faculty of Science, Mahidol University.

In order to select the thesis samples, the following procedure was carried out. Firstly, five current faculty members in the Applied Linguistics program at the Faculty of Science, Mahidol University who have supervised the MA graduate students were interviewed. They were given a short explanation of the objectives and methods of this study. Then, they were asked to suggest two theses with well-written discussions.

The interview of key informants (Gall, Borg, & Gall, 1996) or in this study, thesis advisors, was chosen as a sampling procedure because the graduate student advisors are in a better position than other faculty members to judge the quality of the theses they have supervised. The advisors have been involved from the beginning of the writing process: choosing topics, developing ideas, drafting and editing, and finally approving the end products or theses. There is also another reason that this method has been chosen over other research methods, such as selecting the most current theses (all the theses that were published in the academic year 2003) as samples. It was found that there were eight theses published in 2003; four of which were supervised by the same supervisor. Having half of the corpus supervised by the same advisor would in some way skew the results of this study.

This study chose to analyze only thesis discussion sections because of these following reasons: first, students often claim that the discussion section in a thesis is a difficult section to write; second, authors of books on academic writing such as Swales and Feak (1994) asserted that giving general suggestions on how to write Discussions is neither easy nor productive because "The problem is that Discussions vary considerably depending on a number of factors" (1994, p. 195); thirdly, the rather unique cyclical structure of this section (Peng, 1987; Hopkins & Dudley-Evans, 1988) might be pedagogical useful to study because the cyclical organization may have been one of the reasons that students find discussions are difficult to write and might also be one of the contributing factors of the variations in this section.

In addition to interviewing a group of five MA thesis supervisors, the criteria for selection of the sample texts included the quality of the texts. The Discussion sections in sampled theses should be written by competent non-native speakers of English as samples because these texts are regarded as good models to replicate. Such samples are also authentic. As a result, other students who explore this study may feel that the level of writing they aim for is realistic and attainable (Flowerdew, 2000). The discipline in which the texts were written was also taken into consideration because a number of previous studies (Swales, 1990; Holmes, 1997; Nwogu, 1997) using the structural move analysis framework have confirmed that "disciplinary variation can have discernible influences on rhetorical structure and language use" (Kanoksilapatham, 2005, p. 271). The corpus in this study was, then, selected from the same discipline: applied linguistics. As well, the format of the texts was regarded as a part of the criteria for the sampling procedure. The selected theses should share an identical format recommended by the Faculty of Graduate Studies, Mahidol University. That is, they are all composed of introduction-literature review-methodology-results-discussion-conclusion. There were two theses in the samples that used different headings for the Discussion, the first one was "Comparative Study" and the second one was "Discussion and Implications" but they can be identified as Discussion sections because they were preceded by Result sections and followed by Conclusion sections.

With the criteria set for sampling procedures, ten thesis discussions were obtained. The word count of the ten Discussions is in a range of approximately 2,000

words to 10,000 words, making up a corpus of the ten M.A. thesis discussions of roughly 52,000 words. Each Discussion was then assigned a random number from 1 to 10, for example, D1, D2, D3, and D10.

3.2 Instrument

This study used the move analysis model developed by Yang and Allison (2003) to analyze the thesis corpus. Although Yang and Allison (2003) developed their models based on an analysis of research article Results, Discussion, Conclusion and other closing sections, only the move and step model for Discussions was used. This move model comprises seven moves and ten steps. The selection of Yang and Allison's move model over other frameworks (for example, Peng, 1987; Hopkins & Dudley-Evans, 1988; Kanoksilapatham, 2005) is due to the reasons that follows.

First, Holmes (1997), Nwogu (1997), and Kanoksilapatham (2005) have pointed out that disciplinary variations in terms of communicative purposes and language use do exist. Yang and Allison's (2003) model for discussions was consequently selected as a theoretical framework because the model was developed and based on the analysis of research article discussions in applied linguistics (see Section 2.4: Genre analysis in ESP: Structural move analysis models).

In addition to the relevance of discipline, Yang and Allison's (2003) model was found to overlap and has a wide coverage of move details of other previously developed models as reviewed in Chapter 2. Based on how each model was developed, each of them needs adjustment when used for later research studies.

A comparison of move analysis models for research article Discussions proposed by Peng (1987), Hopkins and Dudley-Evans (1988), Holmes (1997) and Yang & Allison, (2003) shows that Peng's (1987), and Hopkins and Dudley-Evans' (1988) share similar moves. In Holmes' study (1997), although he adopted Hopkins and Dudley-Evans' (1988) move framework for research articles in three social science disciplines, he found that it was necessary to add one more move: Move 8: Outlining parallel or Subsequent developments which is the most frequent move and only occurs in history research articles. Similarly, Yang and Allison's study (2003) of research articles in applied linguistics also came up with a new step: Drawing pedagogic implications. Finally, among related move models available, so far, only

Yang and Allison's (2003) model has included a step: 'Drawing pedagogical implications'. This step was added to the model when Yang and Allison (2003) found that a number of research articles in applied linguistics have a separate subsection entitled 'Pedagogic implications' or other variations. This step also occurs in other sections, including, Conclusions. Even though this step is not the most frequently employed step, its use in Discussions and Conclusions indicates that at least one of the objectives of research in applied linguistics is the research applications to teaching.

Examples of the moves and steps together with the linguistic features which help in the move and step identification are given below. Apart from the linguistic features such as lexical items, tenses, citations and hedging devices, the identification of moves and steps can be made not only by close readings but also by contextual clues such as headings and subheadings.

Move 1: Background Information

This move allows authors to restate their study's research questions, aims, objectives, theories and procedural information. The scope of this move was also expanded to include a distinct feature that frequently occurs throughout discussions: metatext. Metatext allows authors to inform readers of how a section is organized and which data is to be included and discussed. Examples of Move 1 are as follows:

(1) "The purpose of the present study was to capture the rhetorical structure commonly followed in biochemistry research articles" (Kanoksilapatham, 2005, p. 286).

In the above example, the purpose of the study is restated. The lexical signals are 'The purpose of the present study'.

(2) "The Methods section, as opposed to other sections, receives relatively scant attention and thus there has been no clear model for the section (e.g., Nwogu in medicine, 1997; Weissberg & Buker, 1990; Wood in chemistry, 1982)" (Kanoksilapatham, 2005, p. 287).

In this example, a number of previous studies are cited. The lexical signal is the use of citations.

(3) "In the first half of the chapter, the research questions are restated, and the main findings of the study are summarized, in terms of how they relate to the research questions. The implications of the findings, both for pedagogy and for further research, are then discussed" (Thompson, 2001, p. 187).

In this example of metatextual Move 1, the author tells readers how the chapter is organized and which topics are included.

Move 2: Reporting Results

This move is employed to present the results of a study. It is typically signaled by the use of reporting verbs and the use of the past tense. This move is different from Move 3: Summarizing results, in that Move 2: 'Reporting results' presents examples, numerical values, graphs, tables, or observations as well as comments on the expectedness and unexpectedness of outcomes. Examples of Move 2 are as follows:

(4) "As evidence for this we have noted the use of phrases such as 'It is true that…' and 'It is a fact that …'; the use of 'must' and 'have to' as in 'It must be emphasized…' and 'It has to be realized…'; and the selection of adjectives such as 'necessary', 'crucial', 'essential' when suggesting the implications of findings" (Hewings & Hewings, 2002, p. 381).

In this example, the authors give some examples of their findings.

(5) "Move 14 is present in 48 Discussions or 80% of the entire corpus and is deemed conventional in this biochemistry corpus" (Kanoksilapatham, 2005, p. 285).

In this example, the author reported the results of the study concerning the occurrence of Move 14 in the corpus.

(6) "As can be seen in Table 4, 'Commenting on results' is the most frequent and obligatory Move, and can occur repeatedly in a Discussion section,

while ‘Reporting results’ and ‘Summarizing results’ together occur less often” (Yang & Allison, 2003, p. 375).

This shows that the writers report the frequency of these three Moves, ‘Commenting on results’, ‘Reporting results’ and ‘Summarizing results’, in their corpus.

Move 3: Summarizing Results

This move is employed to provide a summary of results, but unlike Move 2, it does not deal with one particular result or factor. The identification of this move was almost always based on close reading. An example is as follows:

(7) “A move analysis approach was found to be applicable to the Discussion sections of these papers. The patterns of organization in this section appear to be less predictable than those in the Introductions” (Peng, 1987, p. 112).

In this example, the author reports the results of move analysis in her corpus of research article Introductions and Discussions in chemical engineering. She finds that the research article Discussions are ‘less predictable’ than the research article Introductions.

Move 4: Commenting on Results

This move differs from Move 2: Reporting results in that Move 4 presents authors’ subjective judgments about the results, their interpretations of a study, and compares the present study with previous related literature. This move can be realized by one or a combination of the following four steps. Examples of each of the four steps are as follows:

Step A: Interpreting results

(8) “Authors who used this *combined section heading* [Results and Discussion] *must presumably have made* a conscious choice to signal the section content in this way” (Yang & Allison, 2003, p. 375).

This shows that, apart from the use of hedging device ‘must presumably have made’, the two authors make a claim based on the finding of the deliberate use of ‘combined section heading’ to inform readers of the communicative purposes of the section.

Step B: Comparing results with literature

(9) "While the occurrence and recycling of the most frequent Moves in the Discussion sections in this corpus *is consistent with the findings of previous studies (Hopkins & Dudley-Evans, 1988; Peng, 1987), some important differences* exist in the framework of analysis and over the issue of whether there is any obligatory element" (Yang & Allison, 2003, p. 377).

The authors make a comparison between the results of the current study, based on the presence of these lexical signals: 'is consistent with the findings of previous studies' and those of previous studies and find that they are similar in the occurrences and recurring patterns of moves. However, the two authors also find that there are some differences in findings. The lexical signals are 'some important differences exist'.

Step C: Accounting for results

(10) "*This difference appears to result essentially from* the difference in the framework of analysis. 'Commenting on results' in our two-level (Move and Step) framework is a broadly conceived Move that can be realized through any one or more of a number of Steps, each of which corresponds to one of the more narrowly specified Moves in Hopkins and Dudley-Evans (1988)" (Yang & Allison, 2003, p. 377).

The two authors explain why the results of their study deviate from some previous studies. Notice the use of distinct lexical signals that combine hedging devices to signal degrees of tentativeness such as 'appears' and 'essentially', and a cause and effect verb 'result… from'.

Step D: Evaluating results

(11) "*For now, we can only repeat that our analysis did not reveal significant overall differences* in terms of Moves and Steps: the sections under both sets of headings report and comment on results" (Yang & Allison, 2003, p. 375).

This shows that, after a move analysis was conducted on the two groups of research articles, the first group using a combined heading of 'Results and Discussion' and the other group using a heading of 'Results' or 'Findings', no substantial difference was found.

Move 5: Summarizing the Study

This move allows authors to provide a summary of the study. Key lexicogrammatical signals include the use of present perfect tense together with words such as study and research.

(12) "(S1) *This study has reported* a systematic genre analysis of Results, Discussion, Conclusion and Pedagogic Implications sections in applied linguistic RAs, and has shown how these sections tend to relate to one another. (S2) The Results sections generally have a highly cyclic structure, and not only report results but also briefly comment on results; this appears to be a widespread practice in RAs across disciplines. (S3) The analysis of the Discussion provides fuller insight into the distinctive communicative purposes of the section in comparison to that of the Results section. (S4) The analysis of these four sections provides solid evidence that they can overlap, and explains why three of the four sections can function as the closing section of RAs (as seen in Table 1). (S5) Nevertheless, the sections differ in terms of their primary communicative purposes, and this generally motivates the use of different section headings" (Yang & Allison, 2003, p. 381).

Move 5 is generally extended over a long segment of text, as illustrated in the above example. This move can be found at the end of Discussions or as in the case of this example at the beginning of a Conclusion. In the first sentence (S1), the authors state the type of the study they conducted, genre analysis, on the samples, closing sections of research article in applied linguistics, and make a claim, notice the use of a hedging device 'tend' that these sections generally overlap. Next, in the following two sentences, S2-S3, the authors summarize the findings of the two sections, Results and Discussions, in order to support the previous claim. In the last two sentences, S4-S5, the authors make another claim that three of the four sections, Discussions, Conclusions and Pedagogic Implications, excluding Results, 'can function as the closing section' although these three sections have different 'primary communicative purposes'. Notice the use of a modal 'can' to indicate a degree of certainty.

(13) "(S1) *In sum, this analysis has suggested* a model of the communicative options used in the Results section of sociology articles. (S2) The Results section of sociology articles serves some of the roles of Discussion section of Science/Technology RAs, as indicated by the presence of similar communicative categories. (S3) This analysis has also shown that perhaps a more extensive range of communicative categories than those of Weissberg and Buker's (1990) model, which includes those extra categories discussed above as well as those more commonly associated with Discussions, ought to be offered to apprentice report writers, certainly to sociologists" (Brett, 1994, pp. 56-57).

This is another extensive example of Move 5. This move is found at the end of a discussion section. Distinct linguistic signals of Move 5, 'In sum', 'this analysis has suggested' and the use of present perfect tense are present in the example. It begins with a summary of what the study attempted to achieve, that is, a proposal of a new move model in the first sentence (S1). In the next sentence (S2), the author makes an unhedged claim that research article Results in sociology 'serves some of the roles of Discussion'. The next sentence (S3) points to a gap in the previous model and the author suggests that a new and more extensive model should be used.

Move 6: Evaluating the Study

This move allows authors to point out and judge the overall study in terms of its strengths, significance, weaknesses and limitations. This move can be made up of one or a combination of the following three steps. Examples of each of the three steps are as follows:

Step A: Indicating limitations

(14) "*However, the study is confined to* the analysis of RAs as genre product" (Yang & Allison, 2003, p. 381).

The authors state that the study only concentrated on the analysis of research articles. The lexical signal is 'is confined to'.

Step B: Indicating significance/advantage

(15) "(S1) *The study expands the application* of move analysis to biochemistry research articles *in their entirety, thus adding to the ever-evolving knowledge* of how writing in disciplines can be understood as having predictable and expected structures. (S2) *The knowledge gained from this study contributes to* an understanding of the discourse in research articles and reinforces how well move analysis gives an in-depth perspective on the formation of a distinctive section of a research article. (S3) The rhetorical organization delineated *in this study contributes to* demystifying academic writing, thus facilitating the entry of newcomers' to the highly selective academic discourse community of biochemistry researchers" (Kanoksilapatham, 2005, p. 288).

Distinct lexical signals are used throughout this long example of Move 6 – Step B. The common theme of these signals is the use of 'positive' verbs, that is, 'expands' 'adding' 'gained' and 'contributes'. The author explains the contributions that this research makes to 'writing in disciplines' in the first sentence, to 'an understanding of the discourse' in the second sentence and to 'demystifying academic writing…' in the third sentence.

Step C: Evaluating methodology

(16) "(S1) However, the proposed model capturing observable moves is only a means of marshalling ideas into an appropriately ordered text. (S2) This present study does not claim that the list of series of moves presented is exhaustive. (S3) Furthermore, the structure postulated exhibits rhetorical moves that incorporate various degrees of flexibility in their positions. (S4) Some rhetorical moves have more stable positions in the overall organization of biochemistry research articles, while others are less stable" (Kanoksilapatham, 2005, p. 288).

Evaluation of 'the proposed move model' is signaled by the use of negative expressions including 'only a means' and 'does not claim…is exhaustive'.

Move 7: Deductions from Research

This move allows authors to make suggestions in order to solve problems which may occur in the study or to suggest an area for further study or to provide implications for teaching. This move consists of one or a combination of the following three steps. An example of each step is as follows:

Step A: Making suggestions

(17) "Academic reading and writing courses for EFL postgraduates and novice teachers in applied linguistics *could draw attention to* the kind of flexibility involved in these stages of RA structure and encourage students to discuss the rationale behind this flexibility, as well as the adequacy or otherwise of our and other's attempts to describe it" (Yang & Allison, 2003, p. 381).

The authors make some specific suggestions concerning the flexibility in research article structure that should be included in writing and reading courses. The distinct lexicogrammatical signal is 'could draw attention to'.

Step B: Recommending further research

(18) "…, and it would be valuable for *further study* of this kind to proceed to interview RA authors to verify the analysis and elicit their perceptions of the section headings and functions" (Yang & Allison, 2003, p. 381).

The use of the distinct lexical signal in this example, 'further study', aids in identification. The authors recommend that new research should include the interview of research article writers.

Step C: Drawing pedagogic implications

(19) "We now turn to *teaching implications.* First, we would *suggest* that exploration by students…" (Hewings & Hewings, 2002, p. 381).

The use of distinct lexical signals in this example 'teaching implications' and 'suggest' aids in the step identification.

In this subsection, the scopes and descriptions of each move and step were defined. Examples with lexicogrammatical features highlighted were presented and

explained. In the next subsection, the data analysis procedure and some lexicogrammatical features which aid in identification of moves and steps are described.

3.3 Data Analysis Procedures

The ten thesis discussion sections were analyzed using the seven-move model for discussion sections (Yang & Allison, 2003). The moves were independently identified by two coders, including an independent coder who is a native speaker of English with an MA in applied linguistics and the researcher. Any classification disagreements were discussed in order to reach a hundred percent agreement. The discussion procedure was as follows:

1. Both coders looked at those pieces of text with conflicting identifications.
2. The coders discussed and decided whether the text segments were related to reporting results or commenting on results. Placing the conflicting moves in one of these two categories was almost always achieved by close reading instead of using of lexical signals as it was found that student writers tended to make use of unclear and/or imprecise wording.
3. If the text segments were in the first category, possible move assignment was then limited to one of these three moves: Move 1 ‘Background information’, or Move 2 ‘Reporting results’, or Move 3 ‘Summarizing results’. If the moves were agreed to be in the second category, possible move assignment was then limited to one of these four moves: Move 4 ‘Commenting on results, or Move 5 ‘Summarizing the study’, or Move 6 ‘Evaluating the study’, or Move 7 ‘Deductions from the research’.
4. Deciding which specific move or step to assign the text segment then required another close reading or, in many cases, repeating readings with reference to the context of the problematic segments, and/or (sub)section headings, and/or the thesis abstracts.
5. The coders agreed on the move or step to be assigned to the problematic text segment.

Because of the functional nature of a move, establishing its boundary can be problematic. A segment or bundle of text may have more than one function so the identification of a move is based on judging which function is the most salient. In most cases, a text segment must be closely read. Apart from close readings, linguistic features such as lexical items and citations can confirm the identification of moves and steps. These features and their examples are as follows:

1) Headings and subheadings: 'Discussion', 'Discussion of Finding One', and 'Conclusion' can signal a move or step.

   Examples:

   (a) The subheading "*(i) Individual moves: overall frequency*" signals that the following text is a report of results (Peacock, 2002, p. 486).

   (b) The subheading "*Patterns Formed by Combinations of the Categories*" signals that the following text is an observation recorded in the study (Brett, 1994, p. 55).

2) Citations in which the authors refer to previous studies in order to compare or support their findings are an explicit signal that the segment of text refers to previous research, Move 4: Commenting on results – Step B: Comparing results with literature.

   Example:

   (c) "This phenomenon *is in line with Connor and McCagg's (1983)* finding that the textual organization of paraphrases by ESL writers was affected by that of the source text" (Yamada, 2002, p. 149).

3) Use of reporting verbs, such as 'reveal', 'show' and 'find', can signal that a report of a finding is to follow, Move 2: Reporting results.

   Example:

   (d) "*The results above has revealed* [sic] that a total of twelve students used the cause-consequence or narrative pattern to organize their text in task 1" (Yamada, 2002, p. 149).

4) Tenses, particularly the past simple tense are used by authors to report a finding (Move 2: Reporting results).

   Example:

(e) “Initial analysis *showed that 41%* of RAs has two or more of these cycles (NS 42%, NNS 41%)” (Peacock, 2002, p. 488).

5) Hedging devices, such as ‘might’, ‘may’, ‘to a certain degree’, ‘to a certain extent’, ‘it is possible’, and ‘possibly’, are used to make a statement or claim with varying degrees of probability, Move 4: Commenting on results.

   Example:

   (f) “Dependence on this pattern *may* have enabled students to combine information in the source texts which they felt was relevant to them…” (Yamada, 2002, p. 151).

6) Discourse markers, such as ‘therefore’, ‘thus’, ‘in other words’, and ‘however’ signal the authors’ train of thoughts or signals a support or a reason or explanation of a result, Move 4: Commenting on results.

   Example:

   (g) “*Thus*, it is assumed that students who achieved such inference did so because it was relevant to them” (Yamada, 2002, p. 150).

7) Lexical items such as ‘result’ and ‘finding’ are used to report a finding.

   Example:

   (h) “This study has yielded two *results*” (Yamada, 2002, p. 152).

In addition to close readings and the use of linguistic features in move and step identification, the context in which a segment of text occurs can be used to crosscheck and confirm the identification.

The frequency of each move in each discussion was recorded in order to verify the extent to which a particular move is used. If a particular move occurs in every discussion, it would then be regarded as ‘obligatory’. The recurring patterns or the use of move cycles was totaled, averaged, and tabulated in order to identify general move sequences and patterns.

Table 3.1: Frequency Based Move Classification

Move classification	Frequency of occurrence (%)
'Obligatory'	100
'Conventional'	60-99
'Optional'	less than 60

The results of the move analysis of the sampled discussions were compared to Yang and Allison's seven-move model (2003), that is, to what extent are the moves in the discussion section of the theses written by Thai graduate students in the MA in Applied Linguistics program at the Faculty of Science, Mahidol University similar to and different from Yang and Allison's moves (2003).

3.4 Validity and Reliability

The issue of content validity was addressed in the selection of thesis samples as the corpus. The selected samples were MA level thesis discussion sections in the program of Applied Linguistics. A more detailed discussion of the corpus is discussed in Chapter 4, Section 4.2 Validity and Intercoder Agreement and Section 4.3 The Corpus.

The issue of reliability was addressed by having the move and step identifications done by a trained native speaker of English who has an MA in Applied Linguistics and the researcher in this study using Yang and Allison (2003)'s seven move model for research article discussion sections in applied linguistics. Differences in coding were handled through extensive discussions. A more detailed discussion of issues related to reliability or intercoder agreement is discussed in Chapter 4, Section 4.1 Intercoder Agreement and Section 4.2 Validity and Intercoder Agreement.

CHAPTER IV
RESULTS

In the previous chapter, the research methodology was described and discussed. In this chapter, three aspects of the research methodology are reviewed. First, issues concerning intercoder agreement are presented. Second, aspects related to the study's validity and intercoder agreement or reliability are discussed. Third, details related to the corpus of ten discussions are provided and discussed. In addition to the research methodology, results of the move and step identification, in terms of overall frequencies and positions are reported. Finally, the findings related to the research questions posed in Chapter I are presented and a table detailing some of lexicogrammatical features related to each move is shown.

4.1 Intercoder Agreement

There were two coders participating in the current study: one was a native speaker of English who is currently teaching English at university level, and the other was the researcher in this present study. The first coding was carried out independently. The results from the two coders were then compared side by side, and the frequency of the moves and steps was counted and compared. It was evident that satisfactory intercoder agreement was not initially achieved. Further examination of the coding results and discussions between the coders revealed that there were two types of problems with the coding practice.

First, there were difficulties in the coding because the descriptions of the moves and steps in the model were inadequate. It appeared that the descriptions were short, even circular in some cases and examples of each move and step as well as the characteristic lexicogrammatical features of these moves and steps were too vague to be consistently applied. For example, in Move 1 'Background information', the description given was that "this move is employed by authors to relate their discussion to the study by recapitulating main points such as research questions, aims

and purposes, theoretical or methodological information" (Yang & Allison, 2003, p. 382). This description was incomplete because quite a few text segments did not belong as they were pointers or metatext. Metatext allows authors to inform readers of how a section is organized and which data is to be included and discussed, for example, "This chapter presents a discussion of the findings and their implications." [D7] or "In this section, all Students' scores from two types of tests, VT and QPT, are discussed as background." [D6] Therefore, the definition of Move 1: 'Background information' was expanded to include a metatextual function (see Section 1.6 in Chapter I, pp. 7-8 for a detailed definition of metatext).

Second, there were problems with move and step identification of one thesis. This is because the identification of moves and steps, according to a large number of research studies, relies on, to a certain extent, the distinct use of lexicogrammatical features (Peng, 1987; Brett, 1994; Dudley-Evans, 1994; Holmes, 1997; Nwogu, 1997; Kanoksilapatham, 2005). The D1 was found to be written without much use of lexicogrammatical features. This caused difficulty in coding process. The coding agreement could not satisfactorily be reached. The D1 was finally dropped from the corpus. A decision to drop one discussion section in the corpus was agreed due to an unacceptably high number of coding disagreements. This will be further discussed in Section 4.3 The corpus.

In this study, issues concerning intercoder agreement were dealt with at a number of stages.

1. The coding of the corpus was carried out independently.
2. After the initial coding was completed, the results of the coding were compared side by side.
3. A discussion procedure for dealing with coding conflicts was established through a series of discussions and clarifications of the move and step definitions/functions/purposes.

    3.1 Intentionally, only three discussions were selected on the grounds that their lengths were evenly distributed: the first was the shortest discussion, the second one was of median length, and the last one was the longest. The length of the discussions was taken into account because one of the study's

objectives is to compare and contrast the identification of moves and steps of short and long Discussions using the same move model.

3.2 Both coders looked at the texts where there were coding disagreements.

3.3 They decided whether the moves were in either one of the two categories: (1) factual or (2) commentarial. This was done in order to minimize the initial choices the coders have to make at this stage. If the moves were in the first category, possible move assignment was then limited to one of three moves: Move 1 'Background information', or Move 2 'Reporting results', or Move 3 'Summarizing results'. If the moves were agreed to be in the second category, possible move assignment was then limited to one of four moves: Move 4 'Commenting on results, or Move 5 'Summarizing the study', or Move 6 'Evaluating the study', or Move 7 'Deductions from the research'. Placing the conflicting moves in one of the two categories was almost always achieved by close readings instead of relying on lexical signals as it was found that the student writers tended to make use of unclear and/or imprecise words.

3.4 Deciding which move or step to assign then required another close reading or, in many cases, repeated readings with reference to the context of problematic segments of text, and/or section headings, and/or the thesis abstracts.

3.5 During the discussions of coding disagreements in the three sampled thesis discussions, slight modifications and clarifications of the move and step scopes and definitions were made.

4. After the discussions of the sampled theses were completed and the coding had been agreed for the three discussions, the researcher went through the differences in coding and recoded all the coding disagreements in the remaining six discussion sections.

Details of the move and step identification, their frequencies and problematic areas are reported in the Move and Step identification section.

4.2 Validity of the Study

In this section, two interrelated aspects of validity of the study are explained: the corpus and the move model. Next, issues concerning intercoder agreement or reliability are discussed.

A number of structural move analysis research studies have reported that "disciplinary variations can have discernible influences on rhetorical structure and language use (e.g., Nwogu, 1997; Posteguillo, 1999; Swales, 1990; Thompson, 1993)" (Kanoksilapatham, 2005, p. 271). In order to lessen disciplinary variations, the MA thesis discussion section corpus of this study was selected from the same discipline, applied linguistics.

Earlier research conducted by Hopkins and Dudley-Evans (1988) has shown that communicative purposes and functions of discussion sections of different research-process genres are similar. They proposed a move model for discussion sections based on move analyses of MSc dissertations in biology and articles on irrigation and drainage. The results of this study also showed that both corpora displayed similarities in the communicative purpose and functions but there were differences in terms of move frequencies, move sequences and recurring patterns or move cycles. It can then be concluded that key communicative purposes and functions of these two process-research genres are similar.

The move model used in this study was proposed by Yang and Allison (2003). It was based on analyses of research article discussion sections in applied linguistics. Although these two research-process genres: theses and research articles, differ in terms of audience, length and depth of content (Hewings and Hewings, 2002), both theses and research articles can generally be divided into four main sections or have an Introduction-Methods-Results-Discussion format. Additionally, research articles have been used as model materials in research writing classes (Hewings and Hewings, 2002). The use of the move framework for research article discussion sections to analyze these dissertation discussion sections would, therefore, be applicable because the framework examines the texts' communicative purposes. In introduction sections, for example, one of the communicative purposes and functions of this section is to introduce a study by stating purpose(s), and/or describing procedures, and/or presenting findings (Kanoksilapatham, 2005).

4.3 The Corpus

To determine the extent to which the discussion moves of the theses written by Thai graduate students in the MA program in Applied Linguistics at Mahidol University are similar to and different from those in Yang and Allison's study (2003), five faculty members in the program who have been supervising a number of graduate students in the program were asked to provide a list of two well-written thesis discussion sections. There were several reasons for selecting only well-written discussion sections. Apart from the three reasons given in the previous chapter which are as follows: first, the level of writing of these non-native speakers of English was high but attainable; second, these samples were accessible; third, it was because they were within the same discipline, disciplinary differences, if they existed, were minimized so that the results of this study can be generalized. Another reason was that the published move models for research articles were based on published works in high-impact or highly-regarded journals by mostly native English speaking professional researchers and authors (Swales, 1990). If these models were applied to a simplified or learner English corpus, the level of written English in the target texts would be as high as possible in order to minimize the number of ambiguous text segments which could lead to coding disagreements.

The corpus in this study comprised ten discussions taken from ten MA theses. The ten discussions were assigned a random number from one to ten, for example, D1, D2, D3, D4 and D10. D1 was, later, dropped due to an unacceptably high level of coding disagreements as previously explained in detail. Bibliographical data and excerpts of thesis abstracts of D1 to D10 are shown in Appendices B to K. A full text of D1 and its coding results are shown in Appendix L. Table 4.1 details word counts of D2 to D10.

It was found that after the first coding of the corpus, there were three types of coding problems. First, there were a number of ambiguous text segments in which identification of their functions and/or purposes were not agreed. Second, there were cases in which the move boundaries were not agreed. Third, there were cases in which both the move identifications and boundaries were not agreed. It was also found that reliance on linguistic elements such as pointers or metatext, lexical signals and

discourse markers in the identification of moves proved to be highly problematic. Therefore, a discussion procedure was established to deal with coding disagreements.

Table 4.1: Word Count of the Nine Discussions

	D2	D3	D4	D5	D6	D7	D8	D9	D10	Average	Total
Word count	4,501	2,106	1,960	3,985	8,923	4,367	2,964	10,293	6,389	5,054	45,488

A decision to drop one of the discussions in the corpus was also made at this point due to an unacceptably high level of coding disagreements. Identification of text segments' functions/purposes was primarily based on lexicogrammatical features because "within the conventions of the genre studied it was the writer's communicative purpose that governs the choice at the grammatical and lexical levels" (Dudley-Evans, 1994, p. 219). It appeared, then, that the knowledge of how a thesis discussion section is constructed as well as what related lexicogrammatical features to be used to achieve its communicative purposes was needed for thesis writers.

The following examples were taken from D1. The first excerpt in Table 4.2 was found under the heading of "The Use of Clausal Substitution in English and Thai Short Stories". The second excerpt in Table 4.3 was found under the heading of "The Use of Verbal Ellipsis in English and Thai Short Stories". According to the coding results in both Tables, all three types of coding problems occurred: differing move and step assignments, boundary markings, and a combination of the preceding two types. It was also evident that both coders could not agree whether certain text segments were reporting or commenting moves. Given the sampling method in this study, it was unexpected to find that a writer's communicative purposes may not be a deciding factor in judging the quality of well-written thesis discussions. Nevertheless, the validity of this claim requires further investigation as it was based on the coding results of only one thesis discussion.

Table 4.2: Coding Results of D1

D1	Coder 1	Coder 2
In the example of the Thai text, sentence 57.) responds to the emphasizing question at the end of sentence 56). The English translation of ‘งั้น’ as ‘that's it’ is not a clausal substitution by literal meaning. But considering that the phrase substitutes for the whole phrase of sentence 56), it functions as clausal substitution, like 'so'.	4C “ “ “ “ “	2 1 “ 2 “ “
Despite the low frequency of the instance of clausal substitution, the cohesive device is found most as an immediate tie in both English and Thai short stories. However, more information is needed to support this finding.	4A “ 6A “	3 “ 6A “
The use of substitution in English and Thai still needs further study to define similarities and differences. As for this study, the text analysis reveals that Thai tends to have more alternatives of substitution items than English. More study in the difference of grammatical form or other linguistic natures which may affect the use of substitution in the two languages is needed.	7B 4A “ 7B “ “ “	6A 3 “ 6A “ “ “

Table 4.3: Coding Results of D1

D1	Coder 1	Coder 2
The cohesive patterns created by verbal ellipsis in English	2	3
and Thai short stories are very different. The instance of	"	1
verbal ellipsis in English short stories is mostly either an	"	"
immediate tie, or a tie with a distance not greater than 10	"	"
sentences. The cohesive device, therefore, is used to create a	2	4A
close pattern in English short stories. In Thai short stories,	"	1
verbal ellipsis is used to provide cohesive force covering a wide	"	"
area of text. Although the cohesive pattern is a close pattern,	"	2
like in English short stories, the close position results from the	"	"
connection of one cohesive tie to another cohesive tie,	"	"
stretching the cohesive force to a far item. Hence the cohesive	4A	2
force created by verbal ellipsis in Thai short stories covers a	"	"
wider area of text than it does in English short stories.	"	"

Next, results of the move and step identification, in terms of their frequencies, their positions are reported. Then, the findings related to the research questions posed in Chapter I are presented.

4.4 Move and Step Identification

In this subsection, the functions and purposes of each of the seven moves and their associated steps are presented with examples. Next, examples of problematic texts in each move are shown and commented upon. Then, a table detailing the frequency of each move in the nine discussions is presented. As well, the findings concerning the positions as well as the co-occurrences of each move and its associated steps are reported. Finally, a table detailing a number of the lexicogrammatical features commonly found in the realization of each move and step is presented.

4.4.1) Move 1: Background Information is used by authors to prepare readers for the report or discussion of results that follows. It was found that MA thesis writers

used this move to restate research questions, the aims and purposes of a study, theoretical background or established knowledge, and the study's research methodology prior to the discussion of their results. Examples 1-5 are shown below. Their linguistic signals are italicized, if present. At the end of each example, the discussion number from which the example was taken is shown in square brackets, for example: [D2] refers to Discussion Two in the corpus. (S1) (S2) (S3) (S4) and (S5) in the examples refer to sentence one, two, three, four and five respectively.

(1) "In this section, the flight attendants' opinions regarding the present BECAB course will be discussed based on the above Research Question Three, *'Are there any other practical suggestions concerning the Basic English Course for Flight Attendants; such as how the course should be conducted, the course duration, the teaching content, or the teaching methodology?'* and the results presented in Chapter IV." [D9]

In example 1, Move 1 is expressed by restating one of the study's research questions: 'Are there any other practical suggestions concerning…'.

(2) "When somebody e-mails the others, he/she must specify the e-mail address(s) of the recipient(s). However, Cc, Bcc, and Subject can be left blank. The heading sent via the e-mail system will automatically show the date and time of sending, sender's e-mail address (and name sometimes), and recipient(s)' e-mail address(s) (and name sometimes)." [D2]

In example 2, Move 1 is realized by stating background information about sending emails that requires its users to only type in email addresses.

(3) "In this study, the translation technique was assigned to the control group as the conventional technique used widely by the teachers who taught Nursing students at Mahidol University. Reciprocal teaching was assigned to the experimental group as a new technique. This technique differed from the teaching techniques to which they were accustomed." [D7]

In example 3, Move 1 is realized by stating background information about the methodology, 'the translation technique' and 'reciprocal teaching', and the groups of

participants, ‘the control group’ and ‘the experimental group’, in the study.

(4) “(S1) All policies are from the administration section of the Ministry of Education because the School is under the General Education Department. (S2) The School is allowed to teach students at secondary level. (S3) The Ministry of Education contracts only 52 teachers to look after and train 1,120 students. (S4) There are about 760 students at lower Mattayom Level and 320 students at upper Mattayom Level at the School. (S5) Because of the inadequate amount of teachers, the School has been allowed to provide only two programs of the study, science and arts, to the upper Mattayom students in each academic year. (S6) By the end of the last semester of every academic year, in February, Mattayom Suksa Three students, equivalent to the junior high school level in Britain and America, at the School and other schools in Chainat Province are asked what they want to study at the upper Mattayom level. (S7) The number of students who participate in the survey throughout the province is usually about 580 students each academic year. (S8) Eventually, 160 students are accepted for the science program at the School, and 160 students are accepted for the arts program.” [D6]

In example 4, Move 1 is realized by stating background information about the research setting in S1-S3 and S5 and its participants in S4 and S6-S8.

(5) “As the test of words in a natural context was developed by extracting the authentic texts with approximately 60-80 words in length without any modification in terms of language structure and information, it is certainly a difficult task for the students to guess the meanings of the tested words.” [D3]

In example 5, Move 1 is realized by restating the study’s methodology.

It should be noted that the description or function of this move was expanded to include metatext as it was found that there were many occurrences of pointers or metatext in the corpus. Pointers or metatext are used to inform readers about how the chapters or sections are organized and/or which aspects of the study are to be

presented. Metatextual segments of text are demonstrated by examples 6 and 7 with their linguistic signals italicized if present. Ambiguous realizations of Move 1 are shown in examples 8 and 9 below:

4.4.1.1) Metatextual Move 1

Below are two examples of metatextual Move 1 found in the corpus.

(6) "The ineffectiveness of the communicative approach in the Basic Signal Officers Course *is explained below*." [D10]

(7) "*In this section*, All Students' scores from two types of tests, VT and QPT, *are discussed as background*." [D6]

The function of examples 6 and 7 are different from the previous examples because there is no information relating to results or a discussion of the results. The function of these two segments of text is to inform readers of what to expect in the text.

4.4.1.2) Ambiguous Move 1

Ambiguous examples of Move 1 are shown below. The results of the initial coding and post discussion coding are reported and explained.

(8) "Standard English *as defined by* Strevens (1972) is a form of English which is constant and similar to the written English used by educated speakers in every country…" [D9]

Example 8 was identified by the first coder as Move 1: 'Background information' because it appeared that the function of this text segment was to provide an established definition which was necessary for a discussion of the preceding results. The second coder, on the other hand, found that this text segment was an explanation and/or clarification of the results that were presented earlier. Through discussion and close reading considering contexts, both coders agreed to re-assign this segment of text as Move 4 Step B: 'Comparing results with literature' because the function of the text segment was to explain and support the preceding Move 2 'Reporting results'.

(9) "Also, the students in this course were not willing to speak out in class, partly because of cultural values, and partly because of the emphasis in high schools on grammar-translation and entrance exams." [D10]

In example 9 the first coder identified this segment of text as Move 4 Step C 'Accounting for results' because, apart from the use of 'because' in the text segment, this segment of text immediately followed a Move 2 'Reporting results' and appeared to explain the result. The second coder, however, identified it as Move 2 'Reporting results' because, apart from the use of past tense, the text segment reported an observation made by the researcher. Through discussion and close reading considering contexts, both coders agreed to re-assign this segment of text as Move 1 'Background information' because this statement was given in order to inform readers about the characteristics of the study's participants.

In the following subsection, the findings concerning the presence and frequency of Move 1 are reported.

4.4.1.3) The Presence and Frequency of Move 1

As can be seen from Table 4.4, Move 1 occurred in every discussion in the corpus. It was the fourth most frequent move in the corpus occurring 110 times out of the total 788 moves or 14%. The frequency range of Move 1 was between 3 times in D5 to 27 times in D2 and D9. It was always used as an opening move in every discussion and often at the beginning of a section. Move 1 was most often found to precede as well as to follow Move 2: 'Reporting results'. It also preceded Move 4: 'Commenting on results'. It was used once as a closing move of the chapter whereas, the other eight Discussions opted for Move 7: 'Deductions from the research' as a closing move.

Table 4.4: Frequency and Percentages of Move 1s: 'Background Information' in the Nine Discussions

	D2	D3	D4	D5	D6	D7	D8	D9	D10	Total
Occurrences of Move 1	27	7	6	3	19	6	6	27	9	110
Percentage	35.5	14.6	13.4	6.1	10.9	7.6	6.8	19.7	10	14
Total number of moves	76	48	45	49	175	79	89	137	90	788

4.4.2) Move 2: Reporting results presents results in an objective manner, leaving all the commentary and interpretation of results to Move 4: Commenting on results**.** The realization of Move 2 is demonstrated in examples 10-14 with their linguistic signals italicized. Ambiguous realizations of Move 2 are shown in examples 13 and 14 below:

(10) "(S1) ***In the actual situation,*** *the majority of the students had* a 'high' opinion on the subelement 'teacher' of the main element 'teaching and learning process'. (S2) *Most of the students stated* that the teachers could prepare well for each teaching session, made opportunities for students to ask questions, and made the subjects interesting. (S3) ***In the expected situation,*** *most of them had* a 'high' opinion on most of the elements except the subelement '**teaching methods and activities',** indicating that the teachers should use both English and Thai as an instruction medium in the classroom." [D4]

In example 10, two different aspects of the results of the study 'in the actual situation' in S1-S2 and 'in the expected situation' in S3 concerning a group of the participants, 'the students', are being reported and compared.

(11) "Although the Arts Students *got lower marks* in the VT than the Science Students, the researcher found that the students in the top, middle and low groups of the two programs had the same range of marks in the QPT." [D6]

In example 11, the results of the two tests ‘VT’ and ‘QPT’ that the research participants, ‘Arts Students’, had done is being reported.

(12) “(S1) *As can be seen from the results chapter, more than 90%* of salutation forms are informal with a wide variety. (S2) *Hi, Hello and no salutation at all are employed in 82%* of all messages while there are some salutation forms that *found in less than ten messages out of 302.*” [D2]

Example 12 also displayed a distinct signal of this move through its use of numerical values, ‘90%’, ‘82%’, and ‘ten messages out of 302’. It should be noted that this example is reported in the present tense so the move identification of this text segment principally relied on close reading and lexical signals.

4.4.2.1) Ambiguous Move 2

Ambiguous examples of Move 2 are shown below. The results of the initial coding and post discussion coding are reported and explained.

(13) “It is impossible to satisfy every passenger's demand because there are many factors, involved such as the flight time, the nature of the passengers, inadequate supplies, technical problems with the aircraft, and communication between the flight attendants and the passengers.” [D9]

Example 13 proved to be problematic due to coding differences. The first coder assigned this segment of text Move 1 which immediately followed a Move 2 because there was a shift in tense use from past simple in the previous segment of text to present simple which indicated that this text segment was not part of the results. This excerpt also reads like general information or a general explanation of why passengers’ needs were not met. On the other hand, the second coder found that the example was a Move 2 which followed another Move 2 because the excerpt expanded on the previous Move 2 by pointing out the specific situations in which passengers’ complaints were dealt with. Through repeated close readings and discussion, both coders agreed that the example expanded on the previous text segment, therefore, was coded as a Move 2.

(14) "*The findings* of the research study clearly show the norm of language features used in the Thai web board. In general, these language features violate the standard written conventions taught in English language classrooms. For example, the carefree use of abbreviations, symbols, punctuation, and English-Thai code mixing are common. Apart from that, to capitalize or not to capitalize depends on individuals as if they were given a free hand to play with the language. These language features are not acceptable in certain contexts such as school, but they are expected in others, such as the Internet." [D2]

Example 14 was one of many cases that shows how difficult it was for the two coders to agree on whether this text segment was to be identified as Move 2 'Reporting results' as the first coder did, or Move 3 'Summarizing results' as the second coder did. Reliance on close readings and/or lexicogrammatical signals did not prove to be helpful. Nevertheless, by referring to the position of the segment of text and the heading, "Implications of the study", under which it occurred, a decision was made to code the example as a Move 3: 'Summarizing results'. In all nine discussions, the position of 'Implications of the study' or similar headings was in the last section of the discussions; therefore, it would be more appropriate to summarize the study's findings than to simply report the results.

4.3.2.2) The Presence and Frequency of Move 2

As can be seen from Table 4.5, Move 2: 'Reporting results' occurred in every discussion in the corpus. It was the most frequent move in the corpus occurring 265 times or 33.6% of the total 788 moves. The frequency range of Move 2 was from 8 times in D3 to 57 times in D5. Move 2 was most often found to precede Move 4: 'Commenting on results', and Move 7: 'Deductions from the research'. It was also found to precede Move 1: 'Background information' as well as to follow Move 1.

Table 4.5: Frequency and Percentages of Move 2s: 'Reporting Results' in the Nine Discussions

	D2	D3	D4	D5	D6	D7	D8	D9	D10	Total
Occurrences of Move 2	18	8	11	29	51	27	31	57	33	265
Percentage	23.7	16.7	24.5	59.2	29.1	34.2	34.8	41.6	36.7	33.6
Total number of moves	76	48	45	49	175	79	89	137	90	788

4.3.3) Move 3: Summarizing Results allows authors to briefly present the main results of a study. The realization of Move 3 is demonstrated in example 15 with its linguistic signals italized. Ambiguous realizations of Move 3 are shown in examples 16, 17 and 18 below:

(15) "*To summarize*, the knowledge of job-related vocabulary, cultures and cultural differences and cross-cultural communication are recognized by the flight attendants as important for their work." [D10]

In example 15, the move identification was based on the use of an explicit lexical signal 'To summarize' and close reading. Example 15 summarizes that, based on a number of results related to 'job-related vocabulary', 'cultures and cultural differences', and 'cross-cultural communication', these different areas of knowledge are found to be 'important' to the flight attendants' work.

4.3.3.1) Ambiguous Move 3

The move identification of the following examples was not straightforward due to a number of factors such as unclear lexicogrammatical features and lack of distinct lexical signal.

(16) "*All of* the subjects were found to use their prior knowledge in order to activate their thoughts while reading the scientific texts." [D4]

Example 16 was preceded and followed by Move 4 'Commenting on results'. It was also found in the middle of a sub-section, 'Discussion One'. Through discussion, the use of 'All of' appeared to signal a summary.

(17) "*The result* from this session reflects that the teachers *were* likely to have high expectation on the element 'goals and objectives', and they *considered* that the goals and objectives *were* unsuitable in the actual teaching and learning situations." [D5]

Example 17 shared some of the lexicogrammatical features with that of Move 2, that is, the use of 'result' and past simple. Distinct lexical clues such as 'to sum up' or 'in summary' were not present. However, the example shows that there are two results concerning a group of the research participants being reported: first, the teachers 'have high expectation on the element goals and objectives'. Second, they believed that 'the goals and objectives were unsuitable' for the context. Therefore, this example was coded as Move 3: 'Summarizing results'.

(18) "The students and teachers *seemed* to have the opposite opinions on the subelement 'content' regarding the actual situations. Although both groups of the subjects *agreed* that the content *was matched* with the goals and objectives, they seemed unsatisfied with the macro-skill content. This is related to the weak points of the Foundation English Courses claimed by most of the students that the courses overemphasized on the grammatical content. They *stated* that more language skill content should be added to the course content, so that students can apply the skills to their daily life use." [D5]

Likewise, example 18 shared some of the lexicogrammatical features with those of Move 2, that is, the use of past tense such as 'seemed', 'agreed', 'was matched' and 'stated' but no distinct signal of Move 3 was present. The example, however, shows that a number of results concerning two groups of participants in the study: 'The students and teachers' were reported. Further reference to the context of 18 found that "**In the actual situation,** students considered the subelement "content" of the main element "teaching and learning processes" at the level of "Agree", while teachers considered it at the level of **"Disagree"** to **"Agree".**" preceded (18). Therefore, this example was coded as Move 3: 'Summarizing results'.

4.3.3.2) The Presence and Frequency of Move 3

As can be seen from Table 4.6, Move 3 occurred in every discussion in the corpus. It is the fifth most frequent move occurring 82 times out of the total 788 moves or 10.4%. The frequency range of Move 3 was between 5 times in D4 and D7 and 16 times in D8. Move 3 was most often found to precede as well as to follow Move 2 'Reporting results'. It was also found to co-occur with Move 1 'Background information', Move 4 'Commenting on results', and Move 7 'Deductions from the research'.

Table 4.6: Frequency and Percentages of Move 3s: 'Summarizing Results' in the Nine Discussions

	D2	D3	D4	D5	D6	D7	D8	D9	D10	Total
Occurrences of Move 3	12	7	5	7	8	5	16	12	10	82
Percentage	15.8	14.6	11.1	14.3	4.5	6.3	18	8.8	11.1	10.4
Total number of moves	76	48	45	49	175	79	89	137	90	788

4.3.4) Move 4: Commenting on Results differs from Move 2 and 3 in that it allows authors to subjectively make claims or generalizations based on the results, compare and contrast their results with those of previous studies, give an explanation of the results and point out the strengths and weaknesses of the results. There are four rhetorical options or steps available to realize this move: A) Interpreting results, B) Comparing results with literature, C) Accounting for results and D) Evaluating results. This move, similar to Move 2, is cyclical and found throughout the texts. The realization of Move 4, Steps (A) – (D) is illustrated in examples 19-25 with their linguistic signals italicized.

Move 4 – Step A: Interpreting Results

Step A allows authors to make claims or generalizations based on the results of a study. The realizations of Move 4 – Step As are illustrated in examples 19 and 20 with their linguistic signals italized.

(19) "The absence of an entire capitalized message in the data *suggests* that the Thai recreational users of web boards are aware of the effect of such a convention." [D2]

In 19, the result is first reported 'The absence of an entire capitalized message', and is followed by a tentative verb in the present tense 'suggests' which is typical of stating a claim. 'suggests' is, then, followed by a claim or an interpretation 'Thai recreational users of web boards are aware…'.

(20) "Given this, *it can be concluded* that the test of words in a natural context has a lower predictive power on reading than the test of words in a modified context because of its inability to draw the test takers' actual lexical guessing ability." [D3]

In 20, the result was reported in the previous segment of text signaled by 'Given this'. 'it can be concluded' is a distinct lexicogrammatical signal in this step that precedes a claim or an interpretation such as 'the test of words in a natural context has a lower predictive power on reading…'.

Move 4 – Step B: Comparing Results with Literature

Step B allows authors to compare a study's findings with those of previous studies. The realizations of Move 4 – Step Bs are illustrated in examples 21 and 22 with their linguistic signals italized.

(21) "*The results of the study are similar to the statement of Hammadou (1991: 27)* that reading comprehension is not just understanding words or sentences but involves a complex combination of the reader's prior knowledge, language proficiency and their metacognitive strategies." [D4]

In 21, two distinct linguistic features of Step B are present: 'similar to' and 'Hammadou (1991: 27)' or a citation. This Step is realized by comparing 'the results of the study' to that of Hammadou's and finding that the results from the two studies 'are similar'.

(22) "*Harwood and Wright (1956) also found* that there was no evidence that learners acquire knowledge of affixes. Their learners thought it took quite a long time to remember the difficult meanings of prefixes and suffixes." [D6]

In 22, two distinct linguistic features of Step B are present: 'Harwood and Wright (1956)' and 'also found'. This Step is realized by comparing a result of the study to that of Harwood and Wright's and finding that both results are similar, signaled by 'also found'.

Move 4 – Step C: Accounting for Results

Step C is generally used to explain or give reasons for differences in findings or unexpected outcomes. The realizations of Move 4 – Step Cs are illustrated in examples 23 and 24 with their linguistic signals italized.

(23) "*This may come from the reason that* prior to the experimental phrase, the teacher and students discussed the students' difficulties in reading." [D7]

In 23, two distinct lexical items are present: a modal 'may' and the word 'reason'. 'This may come from the reason that' signals that the following text is an explanation for the preceding result.

(24) "*The reason for this is* that English is not the native language of the flight attendants. When speaking to passengers, the mother tongue of the flight attendants, Thai, might influence stress and pronunciation. The flight attendants might wrongly pronounce the word, 'passengers' which must be stressed at the first syllable by stressing the second syllable instead." [D9]

In 24, a lexical item, 'reason', is present. 'The reason for this is' signals that the preceding result might be unexpected. 'The reason for this is' also signals that the following text segment is an explanation for the result.

Move 4 - Step D: Evaluating Results

Step D allows authors to objectively judge the results of a study by pointing out limitations of the results or highlighting their strengths. The realization of Move 4 – Step D is illustrated in example (25) with its linguistic signals italicized.

(25) "*However, these signs were from a small number of the students*." [D8]

In 25, two linguistic signals are present: 'However' and 'a small number of'. Step D is realized by pointing out that the 'signs' or results came from a few participants. Any interpretations of the result should be made with caution because 'these signs were from a small number of the students'.

4.4.4.1) Ambiguous Move 4

Ambiguous examples of Move 4 are shown below. The results of the initial coding and post discussion coding are reported and explained.

(26) "*It might be claimed* that while confronting difficult texts, the participants questioned themselves to check whether or not they comprehended the texts they had read." [D4]

In 26, a distinct linguistic expression 'It might be claimed' which is typical in realizing the function of making claims or interpreting results (Move 4 – Step A: 'Interpreting results') is present. The first coder, therefore, assigned this text segment as a Move 4 – Step A but the second coder assigned this text as a Move 2: 'Reporting results'. The use of the past tense in making a claim is somewhat peculiar. Further reference to the context of 26 in D4 found that "This result is consistent with the plan for comprehending suggested by Flavell (1981: 491)…" [D4] immediately follows 26. In this sentence 'This result' refers to 'the participants questioned themselves to check whether or not they comprehended…'. 26 was, then, reassigned as Move 2: 'Reporting results'.

(27) "*This may imply* that the Science Students had more vocabulary knowledge than the Arts Students do." [D6]

In 27, a distinct expression ‘This may imply’ which is typical in realizing the function of making claims or interpreting results, Move 4 – Step A: ‘Interpreting results’, is present. The first coder, therefore, assigned this text segment as a Move 4 – Step A but the second coder assigned this text as a Move 2: ‘Reporting results’. The use of past tense in making a claim is somewhat peculiar. Further reference to the context of 27 found that “Based on All Students' scores from the tests, the VT and QPT, the students in the science program did better than those in the arts program in the VT.” immediately precedes 27. Therefore, 27 is not an implication. 27 was, then, reassigned as a part of the previous Move 2.

4.4.4.2) The Presence and Frequency of Move 4

According to Table 4.7, Move 4 occurred in all discussions in the corpus. It was the second most frequent move occurring 206 times out of the total 788 moves or 26.1% of the corpus. The frequency range of Move 4 was 4 times in D5 to 68 times in D6. Move 4 was generally found to follow Moves 1, 2 and 3 and precede Moves 1, 3, 4, and 7.

Table 4.7: Frequency and Percentages of Move 4s: ‘Commenting on Results’ in the Nine Discussions

	D2	D3	D4	D5	D6	D7	D8	D9	D10	Total
Occurrences of Move 4	12	17	20	4	68	29	26	17	13	206
Percentage	15.8	35.4	44.4	8.2	38.9	36.7	29.2	12.4	14.4	26.1
Total number of moves	76	48	45	49	175	79	89	137	90	788

As can be seen from Table 4.8, only Step A: ‘Interpreting results’ occurred in all discussions but it was the second most frequent step. Step B: ‘Comparing results with literature’ was the most frequent step. It was used 97 times out of 206 times, or close to half of the total number of Move 4s. It was found in eight out of the nine discussions. Step C: ‘Accounting for results’, the third most frequent step, was found in six out of nine discussions. Step D: ‘Evaluating results’, the least frequent step, was found to occur only once in the corpus.

Table 4.8: Frequency of Move 4 Steps in the Nine Discussions

Move 4: Commenting on results	Step a) Interpreting results	Step b) Comparing results with literature	Step c) Accounting for results	Step d) Evaluating results
D2	4	6	2	0
D3	6	6	5	0
D4	7	13	0	0
D5	2	0	2	0
D6	14	29	25	0
D7	11	15	3	0
D8	15	10	0	1
D9	4	12	1	0
D10	7	6	0	0
Total	70	97	38	1

4.4.5) Move 5: Summarizing the Study presents the main points of the study, based on a number of results. All four examples of this move are shown below.

(28) "*The discussions of the results above show* that there were both strengths and weaknesses of the Foundation English courses (I and II). There were some agreements and disagreements between both of the subject groups' opinions." [D5]

In 28, based on 'the discussions of the results', the author gave a summary of the study which found that Foundation English One and Two courses had 'both strengths and weaknesses' and the two groups of participants in the study agreed and disagreed on certain issues.

(29) "*The discussion indicates* that self-esteem, risk-taking, interpersonal evaluation, motivation and attitudes, tolerance of ambiguity, beliefs, classroom activities and methods, and instructor-learner interactions seemed to be factors that caused the communication anxiety of the Basic Signal Officers students. Moreover, these factors directly correlated with one another. The three main factors that seriously affected the communication anxiety of the students when communicating in the class were interpersonal evaluation, classroom activities and methods, and self-esteem. However, other factors such as risk-taking, tolerance of

ambiguity and instructor-learner interaction also related to the performance of the students, but they were less severe. There was only one factor – competitiveness -- that did not result in communication anxiety." [D10]

In 29, although there was no distinct lexical signal such as 'in summary', this example is a summary which refers to the previous discussion of results and found that the primary communication anxiety inducing factors of the Basic Signal Officers students included 'self-esteem', 'risk-taking' and 'interpersonal evaluation'.

4.4.5.1) Ambiguous Move 5

Ambiguous examples of Move 5 are shown below. The results of the initial coding and post discussion coding are reported and explained. It was found the identification of the last two examples 30 and 31 was problematic. There were problems in both assigning a move and also in demarcating move boundaries.

(30) "(S1) *The findings of this study provided* us with insight into the first-year science students' lexical guessing ability. (S2) They had certain problems concerning guessing the meanings of unknown words from context." [D3]

In this example, both coders assigned different moves to the first sentence. The first coder assigned (S1) as a Move 5 because it read like the beginning of a summary of a number of results. The second coder, however, assigned Move 1 to (S1) because it seemed to be setting the scene for the following sentences by informing readers of what to expect later in the text. Both coders agreed on the identification of (S2) as Move 3 because of the use of simple past and it seemed that the author was reporting a result of the study. Through repeated readings of the text segment and its context, both sentences were identified as Move 5 because 'The findings of this study provided…' indicated that this was a summary of the results of more than one research instrument which proved that the participants had encountered 'certain problems' in guessing the meaning of words in the context.

(31) "(S1) *This research is a study on* the effect of negotiation of learning activities on the students' motivation in learning English. (S2) The findings indicate that negotiation increases the students' motivation in learning. (S3)

> In addition to the students motivation, negotiation contributes to effective cooperation between the students and the teacher and positive learning atmosphere. (S4) It can be concluded that negotiation is of great value in the English class." [D8]

In example 31, there were disagreements in both the identification of moves and move boundaries. The first coder assigned (S1) Move 5, (S2) and (S3) Move 3, and (S4) Move 6 - Step B: Indicating significance/ advantage. However, the second coder assigned (S1) Move 1 and (S2-S4) Move 5. The first coder thought (S1) gave a very brief account of the study and (S2) and (S3) gave a summary of the results to prove that 'negotiation increases motivation and contributes to cooperation and positive learning atmosphere'. Then, the first coder noted that the author of the study pointed out in (S4) that he or she found that this technique was 'of great value' so assigned Move 6 – Step B. The second coder, on the other hand, regarded (S1) as an introduction or a pointer which preceded a report of the main results of the study which were realized by (S2-S4). Through repeated close reading of the text segment and its context, (S1-S4) were re-assigned as Move 5 because they provided a brief summary of the study based on a number of results.

4.4.5.2) The Presence and Frequency of Move 5

As can be seen from Table 4.9, Move 5 occurred in four out of nine discussion sections in the corpus. It is the second least frequent move in the corpus, being used only once in four discussion sections. It was always found at the beginning of a section or sub-section and was followed by Move 7: Deductions from the research.

Table 4.9: Frequency and Percentages of Move 5: 'Summarizing the Study' in the Nine Discussions

	D2	D3	D4	D5	D6	D7	D8	D9	D10	Total
Occurrences of Move 5	0	1	0	1	0	0	1	0	1	4
Percentage	0	2.1	0	2	0	0	1.1	0	1.1	0.5
Total number of moves	76	48	45	49	175	79	89	137	90	788

4.4.6) Move 6: Evaluating the Study can be achieved through one or a combination of options: by acknowledging a study's limitations, by pointing out the strengths of a study or by examining a study's research methods. The move can be realized by one or a series of three steps -- Step A: 'Indication limitations', Step B: 'Indicating significance/advantage', and Step C: 'Evaluating Methodology'. All three examples of this move are shown below with their linguistic signals italicized.

Move 6 - Step A: Indication Limitations

This step allows authors to objectively critique different aspects of their study including research findings, and claims or generalizations.

(32) "Thus, *limitations of the study* are clear in that even though there are 148 web board usernames, the number of people who post 302 messages stored as data is unknown. Moreover, some messages may not be posted by Thai users, as the web board users do not have to give their nationality." [D2]

In 32, an explicit lexical signal is present: 'limitations of the study'. The author pointed out that although the data in the study included 302 messages, the number of people who actually posted them and their nationalities were not known.

Move 6 - Step B: Indicating significance/advantage

This step allows authors to point out the strengths of the study in terms of the study's applications or implications, for example,

(33) "*The study is essential and valuable* since it provides explicit information on the metacognitive strategies used by the subjects in their English scientific reading. It provides empirical support for other research results of metacognitive strategies that are important for English scientific reading." [D4]

In 33, a distinct linguistic expression is present, 'The study is essential and valuable'. The author clearly indicated that the study contributed both 'explicit information on the metacognitive strategies…' and provided 'empirical support for other research…'.

Move 6 - Step C: Evaluating Methodology

This step allows authors to highlight the research methodology's strengths and to objectively critique its weaknesses.

(34) "As the test of words in a modified context provided the test takers with *adequate* information for making good guesses, it could elicit the students' actual potential in deriving the meaning of unknown words. Conversely, the adequacy of information in the context necessary for intelligent guesses was unable to be controlled for the test of words in a natural context. Some test items therefore may not have enough information for the test takers to guess the meanings of the tested words. Guessing would only occur by chance. It is skeptical whether the test takers guessed the word meaning successfully by their actual ability or by chance." [D3]

In 34, reference to the study's abstract helped in assigning Step C to this text segment. The abstract stated that "The research instruments were 2 types of lexical guessing tests,…". Therefore, we can be sure that these tests were the research instruments. However, the author suggested that although his texts may work, 'natural context' tests may not be indicative of the students' guessing ability.

4.4.6.1) Ambiguous Move 6

Ambiguous examples of Move 6 are shown below. The results of the initial coding and post discussion coding are reported and explained.

(35) "(S1) Additional problems also were identified by the students, that is, they could not understand some conjunction words, lacked background knowledge of the text being read and were unable to identify the clues. (S2) This information raises the teacher awareness of existing problems that are usually neglected by previous research. (S3) While attention has been given to the type of the guessing strategies used influenced by research on learning strategies, it is clearly evident that fundamental linguistic problems also play an important role in guessing vocabulary in the context." [D3]

In 35, in the initial coding, both coders agreed to assign (S1) as Move 2 ‘Reporting results’ because the author reported the ‘additional problems’ that the study’s participants had. The first coder, then, assigned (S2-3) Move 6 – Step B ‘Indicating significance/advantage’ because the coder thought that this study reported results that were ‘usually neglected by previous research’ and also directed the attention of teachers and possibly further research to the ‘existing problems’ these students had. The second coder, however, coded (S2) as Move 7 – Step C: ‘Drawing pedagogical implications’ because this study showed that these ‘additional problems’ (in S1) were the areas where the students had difficulties. Next, the second coder coded (S3) as Move 3 ‘Summarizing results’ because it summarized the outcomes, which were stated in (S1), shown by ‘it is clearly evident that fundamental linguistic problems also play an important role…’. Through the discussion procedure, (S1) was coded as Move 2 ‘Reporting results’ because the author reported the ‘additional problems’ that the study’s participants had. (S2) was recoded as Move 7 – Step C: ‘Drawing pedagogical implications’ because this study showed that these ‘additional problems’ (in S1) were the areas where the students had difficulties. (S3) was recoded as Move 3 ‘Summarizing results’ because it summarized the outcomes, which were stated in (S1), shown by ‘it is clearly evident that fundamental linguistic problems also play an important role…’.

4.4.6.2) The Presence and Frequency of Move 6

As can be seen from Table 4.10, Move 6 occurred only once in three discussions of the nine discussions in the corpus, making it the least frequent move. Move 6 was found to follow Move 1 and Move 2 and precede Move 4.

Table 4.10: Frequency and Percentages of Move 6: 'Evaluating the Study' in the Nine Discussions

	D2	D3	D4	D5	D6	D7	D8	D9	D10	Total
Occurrences of Move 6	1	1	1	0	0	0	0	0	0	3
Percentage	1.3	2.1	2.2	0	0	0	0	0	0	0.4
Total number of moves	76	48	45	49	175	79	89	137	90	788

4.4.7) Move 7: Deductions from the Research presents, with respect to the overall study, what the research contributes to existing knowledge in the field. There are three available options to realize this move: Step A: 'Making suggestions', Step B: 'Recommending further research' and Step C: 'Drawing pedagogical implications'. Only examples of Step A and Step C are presented below with their linguistic signals italicized because Step B is not present in the corpus.

Move 7 – Step A: Making Suggestions allows authors to highlight what the research contributes to the existing knowledge in the field or to provide answers to the study's research questions.

(35) "This is, however, not to say that it *should* be a compulsory for every flight attendant to be equipped with a knowledge of a third language. This is just *a recommendation* for the flight attendants who would like to lessen the severity of language problems that occur when communicating with non-English speaking passengers." [D9]

In this example, two lexical signals are present: the modal 'should' and the word 'a recommendation'. This step is realized by suggesting that it 'should' not be compulsory but it is 'a recommendation' for all flight attendants to know a third language.

(36) Rivers (1981) notes that for all cross-cultural interactions, *it is important* that learners *should be* aware of the variations of forms and styles of speaking to suit with different sets of relationships,

different levels of formality, or different attitudes on the part of the speakers. [D9]

In this example, a distinct linguistic signal of Move 4 – Step B: 'Comparing results with literature' is present: the use of the citation 'Rivers (1981)'. However, the example was coded as a Move 7 – Step A because there is no comparison of results between the two studies. The use of 'it is important' and 'should' signals that a suggestion is being made.

Move 7 – Step C: Drawing Pedagogical Implications allows authors to state the pedagogical significance of the study or to indicate necessary pedagogical changes. The difference between Step A and C in Move 7 is that the Step C implications or suggestions are related to teaching.

(37) "So, a larger variety of materials used within the classroom *may* widen their lexical knowledge. *If* the teachers provide various kinds of materials, this *may help* the students to learn the language used both inside and outside the classroom." [D6]

In this example, three linguistic signals are present: 'may', 'if', and 'may help'. The Step is realized by suggesting that 'a larger variety of materials used… may widen their lexical knowledge. If the teachers provide…, this may help the students…'.

(38) "This study also found that *it is a very good idea to* check the meanings in both kinds of dictionary in order to ensure that students get the most internationally correct meanings. Gipe and Arnold (1979) and Nist and Olejnik (1995) found that when the learners saw words in context and then looked at the definition or used a bilingual dictionary, they could choose an appropriate definition in a particular situation. These strategies emphasize that dictionaries *are essential to* the students when they learn words. Dictionaries are *powerful resources that help* the students learn words independently. Laufer (1988) agreed that dictionaries have an important role in language learning. However, he warned, the students should be careful about choosing the appropriate meaning for the context when using dictionaries because various meanings of a word are given.

> When learners can choose the appropriate meanings and the correct spelling of a word in a dictionary, *this can help* them improve their language learning." [D6]

In this example, certain expressions that are common in making suggestions are present: 'it is a very good idea to', 'are essential to', 'powerful resources that help' and 'this can help'.

4.4.7.1) Ambiguous Move 7

Ambiguous examples of Move 7 are shown below. The results of the initial coding and post discussion coding are reported and explained.

(39) "There are a number of situations that the flight attendants need to develop speaking and listening skills. They need to listen and react appropriately to different social situations with friends, colleagues, and passengers. Also, because the flight attendants deal with passengers, they have to be able to speak to the passengers and listen to what the passengers say, in turn. This indicates that the flight attendants should have good speaking and listening skills since these two skills are employed on every flight." [D9]

In this example, the suggestions that 'the flight attendants need to develop speaking and listening skills.' and 'They need to listen and react appropriately…' read like a suggestion related to teaching but the research participants in this text segment are the flight attendants. The suggestions which the author made are related to the skills the flight attendants should possess such as 'the flight attendants need to develop speaking and listening skills' 'They need to listen and react appropriately' 'they have to be able to speak to the passengers and listen to what the passengers say' and 'the flight attendants should have good speaking and listening skills'. Therefore, the text was reassigned as Move 7 – Step A: 'Making suggestions'.

It was found that separating the two steps in Move 7, namely, Step A: Making suggestions from Step C: Drawing pedagogical implications proved to be problematic as both coders believed that the functions of both steps overlap and are, in some cases, interchangeable. It was observed that the function of Step C: Drawing pedagogical

implications was, in essence, identical to Step A: Making suggestions. The distinct difference between these two steps lies in whether the suggestions or implications are teaching-related.

4.4.7.2) The Presence and Frequency of Move 7

As can be seen from Table 4.11, Move 7 occurred in every discussion in the corpus. It is the third most frequent move occurring 118 times or 15% of the total 788 moves in the corpus. The frequency range of Move 7 was between 2 times in D4 and 29 times in D6. Move 7s were found to follow Moves 1, 2, 3 and 4, and precede Moves 4 and 7. It was most often found at the end of a section or sub-section.

Table 4.11: Frequency and Percentage of Move 7: 'Deductions from the Research' in the Nine Discussions

	D2	D3	D4	D5	D6	D7	D8	D9	D10	Total
Occurrences of Move 7	6	7	2	5	29	12	9	24	24	118
Percentage	7.9	14.6	4.4	10.2	16.6	15.2	10.1	17.5	26.7	15
Total number of moves	76	48	45	49	175	79	89	137	90	788

Of the three Steps, it was found that only Step C: 'Drawing pedagogical implications' occurred in all discussions, making it the most frequent step (see Table 4.12). It was used 85 times out of 118 times which was well over two-thirds of the total number of Move 7. The second most frequent step was Step A: 'Making suggestions', used in six out of the nine discussions. Step B: 'Recommending further research' was not present in the corpus.

Table 4.12: Frequency of Move 7 Steps in the Corpus

Move 7: Deductions from the research	Step a) Making suggestions	Step b) Recommending further research	Step c) Drawing pedagogical implications
D2	1	0	5
D3	1	0	6
D4	1	0	1
D5	0	0	5
D6	4	0	25
D7	0	0	12
D8	0	0	9
D9	23	0	1
D10	3	0	21
Total	33	0	85

Results of the move and step identification, in terms of overall frequencies and positions are reported. The next section reports findings related to research questions of the present study.

4.5 Results of the Study's Research Questions

In this section, the research questions posted in Chapter I will be restated and answered. The discussion of the results related to these questions, however, is included in the next chapter.

4.5.1) Research question 1: To what extent are the moves in the discussion section of the theses written by Thai graduate students in the MA in Applied Linguistics program at the Faculty of Science, Mahidol University similar to and different from those in published research articles studied by Yang and Allison's moves (2003)?

As can be seen in Table 4.13, published authors and the graduate students used these moves differently. The most frequent move employed by published writers was Move 4: 'Commenting on results' (38.2% of the total moves) whereas, the graduate students used Move 2: 'Reporting results' (33.6% of the total moves). The second most frequent move used by published writers was Move 7: 'Deductions from the research' (22.6% of the total moves) whereas, the graduate students used Move 4: 'Commenting on results' (26.1% of the total moves). The third most frequent move employed by published writers was Move 2: 'Reporting results' (19.6% of the total moves) whereas, the graduate students used Move 7: 'Deductions from the research'

(15% of the total moves). The least frequent moves employed by published writers were Move 1: 'Background information' and Move 5: 'Summarizing the study' (2.9% each of the total moves) whereas, the graduate students used Move 6: 'Evaluating the study' (0.4% of the total moves) least.

Table 4.13: Comparison of the Percentage of Moves and Steps in Yang and Allison's (2003) Study and the Present Study

Moves	Steps	Percentage of moves and steps in Yang and Allison's study (2003)	Percentage of moves and steps in this study
1. Background information		2.9	14
2. Reporting results		19.6	33.6
3. Summarizing results		6.9	10.4
4. Commenting on results		38.2	26.1
	a. Interpreting results	(10.8)	(9.1)
	b. Comparing results with literature	(6.9)	(12.1)
	c. Accounting for results	(17.6)	(4.8)
	d. Evaluating results	(2.9)	(0.1)
5. Summarizing the study		2.9	0.5
6. Evaluating the study		6.9	0.4
	a. Indicating limitations	(2)	(0.13)
	b. Indicating significance/advantage	(3.9)	(0.13)
	c. Evaluating methodology	(1)	(0.13)
7. Deductions from the research		22.6	15
	a. Making suggestions	(4.9)	(4.2)
	b. Recommending further research	(11.8)	(0)
	c. Drawing pedagogical implications	(5.9)	(10.8)

The general trend in the use of factual moves Move 1: 'Background information', Move 2: 'Reporting results' and Move 3: 'Summarizing results' and the use of non-factual moves or commentarial moves Move 4: 'Commenting on results', Move 5: 'Summarizing the study', Move 6: 'Evaluating the study' and Move 7: 'Deductions from the research' were different in these two studies. Less than a third or 29% of the total moves in published research articles were factual moves and over two-thirds or 71% of the total moves used by research article authors were commentarial. In contrast, more than one half or 58% of the total moves in the MA thesis corpus were factual moves and less than one half or 42% of the total moves used by the thesis writers were commentarial. This shows that published authors

believe that the primary communicative purpose of a Discussion is, to put it broadly, commentarial. Student writers, on the other hand, seemed to split into two groups over the primary communicative purposes of discussion sections. Half of which believed it to be factual and the other half believed it to be commentarial.

4.5.2) Research question 2: What is/are the obligatory or key moves?

The occurrences of each move are presented in Table 4.14. According to the criteria given in Section 3.3 Data analysis procedure, the seven moves were classified into one of the three categories: obligatory (100% occurrence), conventional (60-99% occurrence), or optional (less than 60% occurrence). Based on move presence, it was found that the seven moves fell into two groups. The first group consisted of five moves: Move 1: 'Background information', Move 2: 'Reporting results', Move 3: 'Summarizing results', Move 4 'Commenting on results' and Move 7: 'Deductions from the research'. These five moves were obligatory as they occurred in all discussions in the corpus. There was no move in the conventional category. The remaining two moves were optional -- Move 5: 'Summarizing the study' and Move 6: 'Evaluating the study'. Move 5 occurred in four discussions in the corpus. Move 6 was found in three discussions in the corpus.

Table 4.14: Frequency of Occurrence of the Seven Moves in the Nine Discussions

Moves	Steps	Frequency of occurrence (%)
1. Background information		100
2. Reporting results		100
3. Summarizing results		100
4. Commenting on results		100
	a. Interpreting results	(100)
	b. Comparing results with literature	(89)
	c. Accounting for results	(67)
	d. Evaluating results	(11)
5. Summarizing the study		44
6. Evaluating the study		33
	a. Indicating limitations	(11)
	b. Indicating significance/advantage	(11)
	c. Evaluating methodology	(11)
7. Deductions from the research		100
	a. Making suggestions	(67)
	b. Recommending further research	(0)
	c. Drawing pedagogical implications	(100)

According to Table 4.15, the number of each move and its steps are detailed. Only two Steps, Move 4 – Step A: 'Interpreting results' and Move 7 – Step C: 'Drawing pedagogical implications' occurred in all discussions in the corpus. Thus, these two steps are obligatory rhetorical options for realizing Moves 4 and 7. These steps were, however, not the most frequent steps. Move 4 – Step B: 'Comparing results with literature' was the most frequent step, occurred 95 times in eight Discussions.

Table 4.15: Frequency of Moves and Steps in the Nine Discussions

Moves	Steps	Total
1. Background information		110
2. Reporting results		265
3. Summarizing results		82
4. Commenting on results		206
	a. Interpreting results	(72)
	b. Comparing results with literature	(95)
	c. Accounting for results	(38)
	d. Evaluating results	(1)
5. Summarizing the study		4
6. Evaluating the study		3
	a. Indicating limitations	(1)
	b. Indicating significance/advantage	(1)
	c. Evaluating methodology	(1)
7. Deductions from the research		118
	a. Making suggestions	(33)
	b. Recommending further research	(0)
	c. Drawing pedagogical implications	(85)
Total		788

As shown by the results, there were five obligatory moves in the corpus: 'Background information', 'Reporting results', 'Summarizing results', 'Commenting on results' and 'Deductions from the research'. The two remaining moves: 'Summarizing the study' and 'Evaluating the study', are, on the other hand, optional.

4.5.3) Research question 3: Do the thesis writers cycle their moves? In general, how many cycles of moves do they employ in this section? Which moves are parts of the cycles?

The writers cycled their moves but the number of cycles varied from one discussion to the others. According to Table 4.16, the number of cycles in each discussion in the corpus ranged from 7 cycles in D5 to 50 cycles in D6. The average number of cycles was roughly 22 cycles.

Table 4.16: Cycles in the Nine Discussions

	D2	D3	D4	D5	D6	D7	D8	D9	D10	Total
Move count	55	48	44	23	168	72	81	82	75	648
Cycles	13	11	16	7	50	26	29	21	21	194
Average number of moves in a cycle	4.2	4.4	2.8	3.3	3.4	2.8	2.8	3.9	3.6	3.3

A total of 194 cycles was found in the corpus. According to Table 4.17, Move 2: 'Reporting results' occurred in 159 cycles; Move 4: 'Commenting on results' occurred in 144 cycles and Move 7: 'Deductions from the research' occurred in 85 cycles. The shortest cycle consisted of 2 moves and the longest one 9 moves. Typical patterns of two-part cycles consisted of Move 2 + Move 4 – Step A or Step B ('Reporting results' + 'Interpreting results' or 'Reporting results' + 'Comparing results with literature'). Every move and step, except Move 7 – Step B 'Recommending further research', was used at least once in the cycles.

Table 4.17: Frequency of Moves in Cycles

	Move 1	Move 2	Move 3	Move 4	Move 5	Move 6	Move 7
Cycle	42	159	46	144	4	3	85
Ranking	5	1	4	2	6	7	3

According to Table 4.18, the moves that were most often found at the beginning of cycles were Move 2: 'Reporting results' (124 times), Move 3: 'Summarizing results' (27 times), and Move 1: 'Background information' (22 times).

Table 4.18: Moves in the Beginning Cycles

Move	Number of cycles which begin with	Percentage
1: 'Background information'	22	11.3
2: 'Reporting results'	124	63.9
3: 'Summarizing results'	27	13.9
4: 'Commenting on results'	14	7.2
5: 'Summarizing the study'	4	2.1
6: 'Evaluating the study'	0	0
7: 'Deductions from the research'	3	1.6
Total number of cycles	194	100

According to Table 4.19, roughly a quarter of all the cycles in the corpus (50 out of 194 cycles) occurred in D6 though it is only the second longest discussion in the corpus. The longest discussion, D9, however, had only 21 cycles.

Table 4.19: Numbers of Cycles in the Nine Discussions

	Two	Three	Four	Five	Six	Seven	Eight	Nine	Total
D2	3	4	2	1	0	0	3	0	13
D3	2	1	2	4	1	1	0	0	11
D4	9	4	1	2	0	0	0	0	16
D5	1	3	3	0	0	0	0	0	7
D6	11	26	6	3	2	0	1	1	50
D7	14	8	1	2	1	0	0	0	26
D8	11	13	5	0	0	0	0	0	29
D9	7	5	2	2	2	2	0	1	21
D10	6	8	3	1	0	2	1	0	21
Total no. of cycle	64	72	25	15	6	5	5	2	194
Percentage	33	37	13	8	3	2.5	2.5	1	100

Table 4.20 details all of the patterns of two part-cycles which occurred 64 times in the corpus, the three most frequent patterns were ‘Reporting results’ + ‘Interpreting results’ (15 times), ‘Reporting results’ + ‘Comparing results with literature’ (14 times), and ‘Summarizing results’ + ‘Accounting for results’ (8 times).

Table 4.20: Move Patterns in Two-Part Cycles

No. of patterns	Move patterns	Total
1	‘Background information’ + ‘Accounting for results’	2
2	‘Reporting results’ + ‘Interpreting results’	15
3	‘Reporting results’ + ‘Comparing results with literature’	14
4	‘Reporting results’ + ‘Accounting for results’	2
5	‘Reporting results’ + ‘Making suggestions’	6
6	‘Reporting results’ + ‘Drawing pedagogical implications’	6
7	‘Summarizing results’ + ‘Interpreting results’	1
8	‘Summarizing results’ + ‘Comparing results with literature’	3
9	‘Summarizing results’ + ‘Accounting for results’	8
10	‘Interpreting results’ + ‘Reporting results’	1
11	‘Interpreting results’ + ‘Interpreting results’	1
12	‘Interpreting results’ + ‘Drawing pedagogical implications’	1
13	‘Comparing results with literature’ + ‘Reporting results’	2
14	‘Comparing results with literature’ +‘Summarizing results’	1
15	‘Summarizing the study’ + ‘‘Drawing pedagogical implications’	1
Total number of two-part cycles		64

Table 4.21 details all of the patterns of three part-cycles which occurred 72 times in the corpus, the three most frequent patterns were ‘Reporting results’ + ‘Accounting for results’ + ‘Comparing results with literature’ (5 times), ‘Reporting results’ + ‘Reporting results’ + ‘Comparing results with literature’ (4 times), ‘Reporting results’ + ‘Interpreting results’ + ‘Drawing pedagogical implications’ (4 times).

Table 4.21: Move Patterns in Three-Part Cycles

No. of patterns	Move patterns	Total
1	‘Background information’ + ‘Reporting results’ + ‘Comparing results with literature’	1
2	‘Background information’ + ‘Reporting results’ + ‘Indicating significance/advantage’	1
3	‘Background information’ + ‘Reporting results’ + ‘Drawing pedagogical implications’	2
4	‘Background information’ + ‘Summarizing results’ + ‘Drawing pedagogical implications’	2
5	‘Background information’ + ‘Comparing results with literature’ + ‘Interpreting results’	1
6	‘Background information’ + ‘Drawing pedagogical implications’ + ‘Background information’	1
7	‘Reporting results’ + ‘Background information’ + ‘Comparing results with literature’	1
8	‘Reporting results’ + ‘Background information’ + ‘Making suggestions’	1
9	‘Reporting results’ + ‘Reporting results’ + ‘Interpreting results’	3
10	‘Reporting results’ + ‘Reporting results’ + ‘Comparing results with literature’	4
11	‘Reporting results’ + ‘Reporting results’ + ‘Accounting for results’	1
12	‘Reporting results’ + ‘Reporting results’ + ‘Drawing pedagogical implications’	2
13	‘Reporting results’ + ‘Summarizing results’ + ‘Interpreting results’	2
14	‘Reporting results’ + ‘Interpreting results’ + ‘Background information’	1
15	‘Reporting results’ + ‘Interpreting results’ + ‘Reporting results’	1
16	‘Reporting results’ + ‘Interpreting results’ + ‘Comparing results with literature’	2
17	‘Reporting results’ + ‘Interpreting results’ + ‘Drawing pedagogical implications’	4
18	‘Reporting results’ + ‘Comparing results with literature’ + ‘Reporting results’	3
19	‘Reporting results’ + ‘Comparing results with literature’ + ‘Summarizing results’	2
20	‘Reporting results’ + ‘Comparing results with literature’ + ‘Interpreting results’	2
21	‘Reporting results’ + ‘Comparing results with literature’ + ‘Accounting for results’	2
22	‘Reporting results’ + ‘Comparing results with literature’ + ‘Drawing pedagogical implications’	1
23	‘Reporting results’ + ‘Accounting for results’ + ‘Reporting results’	2
24	‘Reporting results’ + ‘Accounting for results’ + ‘Interpreting results’	1
25	‘Reporting results’ + ‘Accounting for results’ + ‘Comparing results with literature’	5
26	‘Reporting results’ + ‘Accounting for results’ + ‘Making suggestions’	2
27	‘Reporting results’ + ‘Accounting for results’ + ‘Drawing pedagogical implications’	3
28	‘Reporting results’ + ‘Evaluating results’ + ‘Reporting results’	1

Table 4.21: Move Patterns in Three-Part Cycles (conts.)

No. of patterns	Move patterns	Total
29	'Reporting results' + 'Making suggestions' + 'Making suggestions'	2
30	'Reporting results' + 'Making suggestions' + 'Drawing pedagogical implications'	1
31	'Reporting results' + 'Drawing pedagogical implications' + 'Summarizing results'	1
32	'Reporting results' + 'Drawing pedagogical implications' + 'Comparing results with literature'	1
33	'Reporting results' + 'Drawing pedagogical implications' + 'Accounting for results'	1
34	'Reporting results' + 'Drawing pedagogical implications' + 'Drawing pedagogical implications'	1
35	'Summarizing results' + 'Reporting results' + 'Interpreting results'	1
36	'Summarizing results' + 'Reporting results' + 'Comparing results with literature'	1
37	'Summarizing results' + 'Interpreting results' + 'Summarizing results'	1
38	'Summarizing results' + 'Interpreting results' + 'Drawing pedagogical implications'	1
39	'Summarizing results' + 'Comparing results with literature' + 'Drawing pedagogical implications'	1
40	'Summarizing results' + 'Drawing pedagogical implications' + 'Comparing results with literature'	1
41	'Interpreting results' + 'Comparing results with literature' + 'Reporting results'	1
42	'Comparing results with literature' + 'Background information' + 'Drawing pedagogical implications'	1
43	'Comparing results with literature' + 'Reporting results' + 'Comparing results with literature'	1
44	'Drawing pedagogical implications' + 'Reporting results' + 'Comparing results with literature'	1
45	'Drawing pedagogical implications' + 'Interpreting results' + 'Drawing pedagogical implications'	1
Total number of three-part cycles		72

Table 4.22 details all of the patterns of four-part cycles. The two most frequent patterns were 'Reporting results' + 'Comparing results with literature' + 'Accounting for results' + 'Drawing pedagogical implications' (2 times) and 'Summarizing the study' + 'Drawing pedagogical implications' + 'Drawing pedagogical implications' + 'Drawing pedagogical implications' (2 times).

Table 4.22: Move Patterns in Four-Part Cycles

No. of patterns	Move patterns	Total
1	'Background information' + 'Background information' + 'Background information' + 'Indicating limitations'	1
2	'Background information' + 'Background information' + 'Reporting results' + 'Interpreting results'	1
3	'Background information' + 'Reporting results' + 'Drawing pedagogical implications' + 'Comparing results with literature'	1
4	'Background information' + 'Interpreting results' + 'Summarizing results' + 'Comparing results with literature'	1
5	'Reporting results' + 'Background information' + 'Comparing results with literature' + 'Accounting for results'	1
6	'Reporting results' + 'Reporting results' + 'Reporting results' + 'Accounting for results'	1
7	'Reporting results' + 'Reporting results' + 'Summarizing results' 'Drawing pedagogical implications'	1
8	'Reporting results' + 'Reporting results' + 'Drawing pedagogical implications' + 'Background information'	1
9	'Reporting results' + 'Reporting results' + 'Drawing pedagogical implications' + 'Drawing pedagogical implications'	1
10	'Reporting results' + 'Summarizing results' + 'Reporting results' + 'Making suggestions'	1
11	'Reporting results' + 'Comparing results with literature' + 'Interpreting results' + 'Drawing pedagogical implications'	1
12	'Reporting results' + 'Comparing results with literature' + 'Comparing results with literature' + 'Drawing pedagogical implications'	1
13	'Reporting results' + 'Comparing results with literature' + 'Accounting for results' + 'Drawing pedagogical implications'	2
14	'Reporting results' + 'Comparing results with literature' + 'Making suggestions' + 'Comparing results with literature'	1
15	'Reporting results' + 'Accounting for results' + 'Reporting results' + 'Drawing pedagogical implications'	1
16	'Reporting results' + 'Drawing pedagogical implications' + 'Interpreting results' + 'Reporting results'	1
17	'Summarizing results' + 'Reporting results' + 'Reporting results' + 'Interpreting results'	1
18	'Summarizing results' + 'Reporting results' + 'Summarizing results' + 'Comparing results with literature'	1
19	'Summarizing results' + 'Reporting results' + 'Summarizing results' + 'Drawing pedagogical implications'	1
20	'Summarizing results' + 'Reporting results' + 'Comparing results with literature' + 'Comparing results with literature'	1
21	'Interpreting results' + 'Reporting results' + 'Interpreting results' + 'Summarizing results'	1
22	'Summarizing the study' + 'Drawing pedagogical implications' + 'Drawing pedagogical implications' + 'Drawing pedagogical implications'	2
23	'Drawing pedagogical implications' + 'Background information' + 'Drawing pedagogical implications' + 'Making suggestions'	1
Total number of four-part cycles		25

In five-part cycles and more, there was no pattern which occurred more than once in the nine discussions Details of the patterns in five-part cycles and more are shown in Table 4.23-- 4.27.

Table 4.23: Move Patterns in Five-Part Cycles

No. of patterns	Move patterns	Total
1	'Background information' + 'Reporting results' + 'Background information' + 'Comparing results with literature' + 'Drawing pedagogical implications'	1
2	'Background information' + 'Reporting results' + 'Making suggestions' + 'Drawing pedagogical implications' + 'Background information'	1
3	'Background information' + 'Summarizing results' + 'Reporting results' + 'Background information' + 'Interpreting results'	1
4	'Background information' + 'Comparing results with literature' + 'Background information' + 'Reporting results' + 'Comparing results with literature'	1
5	'Reporting results' + 'Background information' + 'Background information' + 'Comparing results with literature' + 'Summarizing results'	1
6	'Reporting results' + 'Comparing results with literature' + 'Reporting results' + 'Interpreting results' + 'Comparing results with literature'	1
7	'Reporting results' + 'Comparing results with literature' + 'Comparing results with literature' + 'Reporting results' + 'Summarizing results'	1
8	'Reporting results' + 'Comparing results with literature' + 'Comparing results with literature' + 'Reporting results' + 'Making suggestions'	1
9	'Reporting results' + 'Comparing results with literature' + 'Making suggestions' + 'Making suggestions' + 'Making suggestions'	1
10	'Reporting results' + 'Accounting for results' + 'Background information' + 'Accounting for results' + 'Comparing results with literature'	1
11	'Summarizing results' + 'Reporting results' + 'Comparing results with literature' + 'Interpreting results' + 'Drawing pedagogical implications'	1
12	'Summarizing results' + 'Reporting results' + 'Accounting for results' + 'Interpreting results' + 'Comparing results with literature'	1
13	'Comparing results with literature' + 'Reporting results' + 'Background information' + 'Interpreting results' + 'Interpreting results'	1
14	'Comparing results with literature' + 'Summarizing results' + 'Background information' + 'Evaluating methodology' + 'Interpreting results'	1
15	'Accounting for results' + 'Reporting results' + 'Comparing results with literature' + 'Accounting for results' + 'Background information'	1
Total number of five-part cycles		15

Table 4.24: Move Patterns in Six-Part Cycles

No. of patterns	Move patterns	Total
1	'Reporting results' + 'Background information' + 'Background information' + 'Background information' + 'Making suggestions' + 'Making suggestions'	1
2	'Reporting results' + 'Interpreting results' + 'Reporting results' + 'Making suggestions' + 'Making suggestions' + 'Making suggestions'	1
3	'Reporting results' + 'Interpreting results' + 'Comparing results with literature' + 'Background information' + 'Reporting results' + 'Interpreting results'	1
4	'Reporting results' + 'Accounting for results' + 'Background information' + 'Interpreting results' + 'Reporting results' + 'Comparing results with literature'	1
5	'Reporting results' + 'Accounting for results' + 'Interpreting results' + 'Comparing results with literature' + 'Interpreting results' + 'Drawing pedagogical implications'	1
6	'Summarizing results' + 'Interpreting results' + 'Comparing results with literature' + 'Reporting results' + 'Drawing pedagogical implications' + 'Summarizing results'	1
Total number of six-part cycles		6

Table 4.25: Move patterns in seven-part cycles

No. of patterns	Move patterns	Total
1	'Background information' + 'Reporting results' + 'Reporting results' + 'Summarizing results' + 'Drawing pedagogical implications' + 'Drawing pedagogical implications' + 'Drawing pedagogical implications'	1
2	'Reporting results' + 'Reporting results' + 'Comparing results with literature' + 'Summarizing results' + 'Making suggestions' + 'Comparing results with literature' + 'Making suggestions'	1
3	'Reporting results' + 'Comparing results with literature' + 'Reporting results' + 'Comparing results with literature' + 'Background information' + 'Background information' + 'Interpreting results'	1
4	'Summarizing results' + 'Interpreting results' + 'Reporting results' + 'Interpreting results' + 'Interpreting results' + 'Reporting results' + 'Drawing pedagogical implications'	1
5	'Summarizing the study' + 'Drawing pedagogical implications' + 'Making suggestions' + 'Drawing pedagogical implications' + 'Background information' + 'Drawing pedagogical implications' + 'Drawing pedagogical implications'	1
Total number of seven-part cycles		5

Table 4.26: Move Patterns in Eight-Part Cycles

No. of patterns	Move patterns	Total
1	'Background information' + 'Background information' + 'Reporting results' + 'Accounting for results' + 'Background information' + 'Accounting for results' + 'Reporting results' + 'Making suggestions'	1
2	'Background information' + 'Reporting results' + 'Background information' + 'Reporting results' + 'Background information' + 'Reporting results' + 'Comparing results with literature' + 'Background information'	1
3	'Reporting results' + 'Reporting results' + 'Summarizing results' + 'Reporting results' + 'Drawing pedagogical implications' + 'Drawing pedagogical implications' + 'Interpreting results' + 'Drawing pedagogical implications'	1
4	'Summarizing results' + 'Reporting results' + 'Summarizing results' + 'Reporting results' + 'Summarizing results' + 'Background information' + 'Comparing results with literature' + 'Accounting for results'	1
5	'Comparing results with literature' + 'Interpreting results' + 'Background information' + 'Comparing results with literature' + 'Background information' + 'Reporting results' + 'Background information' + 'Reporting results'	1
Total number of eight-part cycles		5

Table 4.27: Move Patterns in Nine-Part Cycles

No. of patterns	Move patterns	Total
1	'Background information' + 'Reporting results' + 'Accounting for results' + 'Reporting results' + 'Accounting for results' + 'Comparing results with literature' + 'Interpreting results' + 'Comparing results with literature' + 'Drawing pedagogical implications'	1
2	'Reporting results' + 'Reporting results' + 'Reporting results' + 'Background information' + 'Background information' + 'Reporting results' + 'Background information' + 'Background information' + 'Making suggestions'	1
Total number of nine-part cycles		2

Next, Tables 4.28-4.36 detailing the move cycles that occurred in each of the nine discussions are presented. The left column 'No. of cycle' indicates the number of cycles which occurred in a discussion section. For example, in Table 4.28, there were 13 cycles in D2, or in Table 4.29, there were 11 cycles in D3, or in Table 4.30, there were 16 cycles in D4. The top right column 'Move position in cycles' indicates the sequence or order in which a move occurred in cycles. The second top right columns indicate positions in which a move occurred in cycles. For example, in Table 4.28, the first cycle that occurred in D2 consisted of four moves: Move 1 'Background information' + Move 1 'Background information' + Move 1 'Background information' + Move 6A 'Indicating limitations'. Or the fourth cycle in D2 consisted of three moves: Move 2 'Reporting results' + Move 4C 'Accounting for results' + Move 2 'Reporting results'. Or the eleventh cycle in D2 consisted of two moves: Move 3 'Summarizing results' + Move 7C 'Drawing pedagogical implications'.

Table 4.28: Cycles in D2

No. of cycle	Move position in cycles							
	One	**Two**	**Three**	**Four**	**Five**	**Six**	**Seven**	**Eight**
1	1	1	1	6A				
2	3	2	3	2	3	1	4B	4C
3	4B	4A	1	4B	1	2	1	2
4	2	4C	2					
5	1	4B	4A					
6	1	3	2	1	4A			
7	2	4A	1					
8	1	2	1	2	1	2	4B	1
9	2	4B						
10	1	7C	1					
11	3	7C						
12	7C	1	7C	7A				
13	3	7C						
Total	-	3	4	2	1	0	0	3

Table 4.29: Cycles in D3

No. of cycle	Move position in cycles						
	One	Two	Three	Four	Five	Six	Seven
1	1	1	2	4A			
2	2	4A	2				
3	4C	2	4B	4C	1		
4	3	2	3	4B			
5	1	4C					
6	1	4C					
7	4B	3	1	6C	4A		
8	3	2	4B	4A	7C		
9	3	2	4C	4A	4B		
10	3	4A	4B	2	7C	3	
11	5	7C	7A	7C	1	7C	7C
Total	-	2	1	2	4	1	1

Table 4.30: Cycles in D4

No. of cycle	Move position in cycles				
	One	Two	Three	Four	Five
1	1	2	6B		
2	4A	4B	2		
3	4B	3			
4	4B	2	4B		
5	4A	4A			
6	2	1	4A		
7	2	4B			
8	2	4B			
9	2	4B			
10	2	4B			
11	3	4B			
12	3	4B			
13	1	4A	3	4B	
14	4B	2	1	4A	4A
15	3	4A			
16	1	2	7A	7C	1
Total	-	9	4	1	2

Table 4.31: Cycles in D5

No. of cycle	Move position in cycles			
	One	Two	Three	Four
1	2	2	3	7C
2	2	2	2	4C
3	2	2	4C	
4	2	2	7C	
5	2	4A		
6	2	2	4A	
7	5	7C	7C	7C
Total	-	1	3	3

Table 4.32: Cycles in D6

No. of cycle	Move position in cycles								
	One	**Two**	**Three**	**Four**	**Five**	**Six**	**Seven**	**Eight**	**Nine**
1	1	1	2	4C	1	4C	2	7A	
2	2	4C	2						
3	2	4C							
4	2	4C	4B						
5	2	4B	4C						
6	2	1	4B	4C					
7	2	4B	4A						
8	2	4B							
9	2	1	7A						
10	1	2	4C	2	4C	4B	4A	4B	7C
11	2	4C	1	4A	2	4B			
12	2	4B	7C						
13	2	4A	7C						
14	3	2	3	7C					
15	1	2	4B						
16	2	4A							
17	2	4C	7C						
18	2	4C	7A						
19	2	4A							
20	2	4B	2	4A	4B				
21	2	4A	4B						
22	1	2	7C						
23	2	4B	4C	7C					
24	4B	1	7C						
25	2	7C	4B						
26	3	7C							
27	1	2	1	4B	7C				
28	2	4C	4A	4B	4A	7C			
29	2	4C	4B						
30	2	4B	4B	7C					
31	2	4C	2	7C					
32	2	4A							
33	2	4B	2						
34	2	4C	4B						
35	2	4C	4B						
36	2	4B	4C	7C					
37	2	4C	7C						
38	2	4C	1	4C	4B				
39	2	4A							
40	2	4A	4B						
41	2	4C	4B						
42	1	3	7C						
43	3	7C							
44	2	4C	7C						
45	2	7C							
46	2	4A	7C						
47	2	4C	7A						
48	3	7C							
49	3	7C							
50	3	4B	7C						
Total	-	11	26	6	3	2	0	1	1

Table 4.33: Cycles in D7

No. of cycle	Move position in cycles					
	One	Two	Three	Four	Five	Six
1	2	4B	4C			
2	2	4B	4A	7C		
3	2	4A	4B	1	2	4A
4	7C	2	4B			
5	2	4B				
6	2	4A				
7	4B	2				
8	4B	2				
9	2	4B	4B	2	3	
10	1	4B	1	2	4B	
11	2	2	4A			
12	2	4B				
13	2	4A				
14	2	4B				
15	4A	2				
16	2	4A				
17	2	2	4B			
18	2	4C				
19	2	7C	4C			
20	2	4A	7C			
21	2	4B				
22	1	3	7C			
23	7C	4A	7C			
24	3	7C				
25	4A	7C				
26	3	7C				
Total	-	14	8	1	2	1

Table 4.34: Cycles in D8

No. of cycle	Move position in cycles			
	One	**Two**	**Three**	**Four**
1	3	2	2	4A
2	3	2	4A	
3	2	4A		
4	2	4A		
5	2	3	4A	
6	2	3	4A	
7	2	4A		
8	2	4A		
9	2	4A		
10	2	4B		
11	2	4A		
12	2	7C	4A	2
13	3	2	4B	4B
14	2	4B	2	
15	4A	2	4A	3
16	2	2	4B	
17	2	4B	3	
18	3	2	4B	
19	2	7C		
20	3	4B		
21	2	4D	2	
22	2	4A		
23	3	4A	3	
24	2	4B	3	
25	1	2	7C	4B
26	2	7C	3	
27	5	7C		
28	1	2	7C	
29	2	7C	7C	
Total	-	11	13	5

Table 4.35: Cycles in D9

No. of cycle	Move position in cycles								
	One	Two	Three	Four	Five	Six	Seven	Eight	Nine
1	2	2	7C	1					
2	2	4B							
3	2	4C	4A						
4	2	4B	2	4B	1	1	4A		
5	2	2	4B	3	7A	4B	7A		
6	2	4A	2	7A	7A	7A			
7	2	4B	2						
8	2	4B	7A	4B					
9	2	4B	7A	7A	7A				
10	2	1	1	1	7A	7A			
11	2	4B							
12	2	2	2	1	1	2	1	1	7A
13	2	7A							
14	2	4B	4B	2	7A				
15	2	7A							
16	2	2	4A						
17	2	7A							
18	2	7A							
19	2	7A							
20	2	7A	7A						
21	2	7A	7A						
Total	-	7	5	2	2	2	2	0	1

Table 4.36: Cycles in D10

No. of cycle	Move position in cycles							
	One	Two	Three	Four	Five	Six	Seven	Eight
1	2	4B	4A					
2	2	1	1	4B	3			
3	1	2	2	3	7C	7C	7C	
4	2	2	4B					
5	2	4A	7C					
6	2	2	3	2	7C	7C	4A	7C
7	3	7C	4B					
8	2	7C						
9	3	4A	2	4A	4A	2	7C	
10	2	2	4B					
11	2	4B						
12	3	4A	7C					
13	2	2	7C					
14	2	7A						
15	2	7C						
16	2	7C						
17	2	7A	7C					
18	2	7C						
19	2	2	7C	7C				
20	2	3	2	7A				
21	5	7C	7C	7C				
Total	-	6	8	3	1	0	2	1

In summary, the number of cycles ranged from a total of 7 cycles, made up of 23 moves in D5, to a total of 50 cycles, with 168 moves in D6. The average number of moves in a cycle was 3 moves. Also, there were only 21 cycles made up of 82 moves in the longest discussion [D9]; whereas, there were 16 cycles made up of 44 moves in the shortest discussion [D4]. Move 2 'Reporting results' occurred most frequently. It was found in 159 out of a total of 194 cycles. Move 4 'Reporting results' was the second most frequent move in cycles. It occurred in 144 cycles. Move 2 'Reporting results' was also the most frequent move at the beginning of cycles, 124 cycles out of a total of 194 cycles. Move 3 'Summarizing results' was the second most frequent move to occur at the beginning of cycles, 27 cycles out of a total 194 cycles. A majority of the cycles consisted of two to three parts per cycle. Sixty-three cycles or 33% of all cycles found in the corpus were two part-cycles. The most frequent patterns of two-part cycles were 'Reporting results' + 'Interpreting results' (15 times) and 'Reporting results' + 'Comparing results with literature' (14 times). Seventy-two cycles or 37% of all cycles found in the corpus were three part-cycles. The most frequent pattern of three-part cycles was 'Reporting results' + 'Accounting for results' + 'Comparing results with literature'. It appeared that there was no preference for the position of moves in long cycles. Some discussions, D2 and D6, started their discussion with long cycles. Some long cycles occurred in the middle of the discussions as in D2, D9 and D10 and some occurred at the end of the discussions as in D3 and D4.

4.5.4) Research question 4: Can the seven-move hierarchical model explain the differences and similarities between particularly short discussion sections and particularly long discussions in the corpus?

It seems that there is no conclusive answer to this question as the results presented in the Tables 4.37 and 4.38 both support and contradict certain assumptions. For example, it was found that the two shortest discussion sections were more condensed and concise than the two longest discussions as supported by the lower number of words per move, 44 words in D3 and D4 versus 75 words per move in D9. It was surprising, however, to see that the two longest discussions employed only five

out of the total seven moves in the framework whereas, the two shortest ones were found to employ six moves in [D4] and all seven moves in [D3] (see Table 4.38).

Table 4.37: Word Count, Frequency of Overall Move, and Average Word per move of the Nine Discussions

	Word count	Overall move frequency	Average word per move
D4	1,960	45	44
D3	2,106	48	44
D8	2,964	89	33
D5	3,985	49	81
D7	4,367	79	55
D2	4,501	76	59
D10	6,389	90	71
D6	8,923	175	51
D9	10,293	137	75
Total	45,488	788	n/a

Furthermore, the split between the choice and ranking of the most frequent moves used in D4, D3, D6 and D9 which reflects the primary communicative purposes of the discussions was also unexpected. The most frequent move in D4, D3 and D6 was Move 4: 'Commenting on results' whereas, it was Move 2: 'Reporting results' in D9. The second most frequent move in D4, D3 and D6 was Move 2: 'Reporting results' whereas, it was Move 1: 'Background information' in D9.

Table 4.38: Percentage of Individual Move of the Nine Discussions

	D2	D3	D4	D5	D6	D7	D8	D9	D10
Move 1: Background information	35.5	14.6	13.4	6.1	10.9	7.6	6.8	19.7	10
Move 2: Reporting results	23.7	16.7	24.5	59.2	29.1	34.2	34.8	41.6	36.7
Move 3: Summarizing results	15.8	14.6	11.1	14.3	4.5	6.3	18	8.8	11.1
Move 4: Commenting on results	15.8	35.4	44.4	8.2	38.9	36.7	29.2	12.4	14.4
Move 5: Summarizing the study	0	2.15	0	2	0	0	1.1	0	1.1
Move 6: Evaluating the study	1.3	2.15	2.2	0	0	0	0	0	0
Move 7: Deductions from the research	7.9	14.6	4.4	10.2	16.6	15.2	10.1	17.5	26.7
Total	100	100	100	100	100	100	100	100	100

According to the above Table, only one Discussion [D2] had a primary communicative purpose which was to state or restate 'background information'. The other half of the Discussions [D2, D3, D6, and D7] had a primary communicative

purpose which was to ‘comment on results’. The remainder of the Discussions [D5, D8, D9, and D10] had a primary communicative purpose which was to ‘report results’. Thus, this structural move analysis could not give a conclusive answer concerning the difference in length of the Discussions.

4.5.5) Research question 5: What linguistic features signal individual moves?

For the most part, the lexicogrammatical features highlighted in this study are similar to those of previous studies (Peng, 1987; Brett, 1994; Dudley-Evans, 1994) although there were some instances of misuse of certain lexicogrammatical features in the corpus. This practice led to a high level of coding disagreement in the initial stage of coding procedure. Nevertheless, it was still possible to find some common linguistic features that could reliably signal a salient communicative purpose of a text segment. A summary of ambiguous move identifications related to lexicogrammatical features are presented later in this section.

During the coding of the corpus, it was found that differentiating between Move 1: ‘Background information’ and Move 4 – Step B ‘Comparing results with literature’ can be problematic because the scopes of Move 1 and Move 4 – Step B include statements related theories or previous studies. The purpose of restating related theories in Move 1 is to prepare readers for the following discussion of results of a study whereas, in Move 4 – Step B, it is to compare as well as contrast the findings of a study with those of previous research. It seemed, then, that reliance on explicit lexicogrammatical signals would help in separating these two moves, particularly certain words or expressions that are typically used to realize the functions of comparison and contrast such as ‘agree’, ‘to be similar to’, and ‘in contrast to’.

Distinguishing between Move 2: ‘Reporting results’ and Move 3: ‘Summarizing results’ was also difficult because the scopes of both moves include statements of findings. The distinct lexicogrammatical features of these two moves are identical, including the words such as ‘findings’ and ‘results’, reporting verbs such as ‘show’ and ‘find’, and the use of past simple tense and past passive. Although each move has unique signals such as the use of numerical values, graphs, tables in Move 2 and ‘to summarize’, ‘in sum’, and ‘in summary’ in Move 3, separating these two

moves requires repeated close readings because the unique signals were not always present in the corpus. In some cases, segments of text coded as Move 3s appeared to be on the borderline between Move 2 and Move 3, and vice versa.

Separating Move 4 – Step A: 'Interpreting results' from Move 4 – Step C: 'Accounting for results' was problematic as well because of the shared use of modals in realizing the functions of these two steps. In Step A, the authors used modals when making generalizations based on the results in order to convey the degree of tentativeness of their claims. In Step C, the authors also used modals in order to convey the tentativeness of their explanations of why the results of their study occurred. Identifications of these two steps, consequently, had to be based on close readings.

Demarcating Move 4 – Step D: 'Evaluating results', Move 6 – Step A: 'Indicating limitations', and Move 6 – Step C: 'Evaluating methodology' were also difficult due to overlaps in the scope of these steps. It seemed that the scope of 'Indicating limitations' encompasses that of 'Evaluating results' as well as 'Evaluating methodology'. The function of 'Indicating limitations', to a certain extent, included the functions of 'Evaluating results' and 'Evaluating methodology'. Further, the rare occurrences of these three steps resulted in only a partial list of lexicogrammatical signals for these steps. It would, then, seem that the identification of these three steps is not clear-cut.

Differentiating between Move 7 – Step A: 'Making suggestions' and Move 7 – Step C: 'Drawing pedagogical implications' was problematic as well, partly, due to the overlap in the scope of these two steps and, partly, due to the use of similar modals and verbs when realizing these two steps. The scope of 'Making suggestions' encompassed that of 'Drawing pedagogical implications'. The function of these two steps appeared to be similar, that is, to provide suggestions or recommendations or solutions to problems that a study sets out to answer. Further, modals such as 'should', 'would', 'may' and 'can' as well as a group of verbs such as 'suggest', 'recommend', and 'help' were used to realize these two steps. Discussions between the two coders concluded that any suggestions, or recommendations, or applications, or implications that were not related to recommending new areas of further research or pedagogically-oriented would be placed under 'Making suggestions', leaving recommendations

related to further research to Step B, and suggestions or implications related to teaching and learning to Step C.

Table 4.39 below details some of the common lexis and grammatical realizations of the moves and steps which were found in the corpus. Examples of each move and step were presented in Section 4.4 Move and step identification. It should be noted that the following table is not exhaustive as it was found that one of the steps in Move 7, ‘Recommending further research’, did not occur at all and also that Move 6: ‘Evaluating the study’ and its steps rarely occurred.

Table 4.39: Lexical and Grammatical Features in Individual Moves and Steps

Move/ step	Lexical signals	Realized by
1: Background information	'Research questions' 'aims' 'purposes' 'objectives of the study' 'discusses' 'interprets' 'as follows' 'next' 'then' 'first' 'firstly' 'finally' 'following'; citations; names of other researchers	Present simple or present passive; statements which include other researcher's names
2: Reporting results	'findings' 'results'; Reporting verbs: 'report' 'show' 'find' 'observe'; numerical values; graphs; tables; figures	Past simple or past passive; present simple or present passive which refers to a graph or a table or a figure
3: Summarizing results	'findings' 'results'; Reporting verbs: 'report' 'show' 'find'; 'to summarize' 'in sum' 'in summary' 'to sum up'	Past simple or Past passive
4a: Interpreting results	Tentative verbs: 'suggest' 'indicate' 'appear'; modals: 'might' 'may' 'would' 'could' 'likely to'; if-clauses;	Tentative statements
4b: Comparing results with literature	'To be consistent with' 'to be similar to' 'to be congruous with' 'to be agreeable to' 'to be concordant with' 'support' 'agree' 'confirms' 'accord with' 'in accordance with' 'also' 'similarly' 'replicate'; 'in contrast to'; citations; names of other researchers	Statements which include other researcher's names
4c: Accounting for results	'Thus' 'it is possible'; modals: 'may' 'might' 'could' 'would' 'possibly' 'probably + because'	Statements
4d: Evaluating results	'However'	Statements
5: Summarizing the study	'The findings of this study' 'the discussions of the results above show' 'this research is a study on' 'the discussion indicates'	Present simple statements
6a: Indicating limitations	'Limitations of the study'	Present simple statement
6b: Indicating significance/ advantage	'The study is essential and valuable'	Present simple statement
6c: Evaluating methodology	Variable	Statements
7a: Making suggestions	'Suggest' 'recommend' 'a suggestion' 'a recommendation'; modals: 'should' 'would' 'may' 'can'; 'important'	Present simple, present passive
7b: Recommending further research	-	-
7c: Drawing pedagogical implications	'Help' 'recommend' 'suggest' 'useful' 'important' 'effective' 'essential'; modals: 'should' 'might' 'may' 'can'; citations; name of other researchers	Present simple, present passive; future simple; Statements which include other researcher' names

In summary, the thesis discussions in this study were different from Yang and Allison's (2003) research article discussions in terms of their primary communicative purposes as shown by the results of the study. The most frequent and obligatory move

in the thesis corpus was Move 2 ‘Reporting results’. On the other hand, it was Move 4 ‘Commenting on results’ in the Yang and Allison’s study (2003). Though it was found that all thesis authors cycled their moves, the numbers of cycles varied greatly, ranging from 7 cycles in D5 to 50 cycles in D6; whereas, the average number of cycles in a discussion was 22 cycles. Also, unexpectedly the longer discussions did not necessarily have higher numbers of cycles. The only definite answers concerning the use of cycles that this study can offer were that Move 2 ‘Reporting results’ was used most frequently in cycles and that Move 2 was also the most frequent move to occur at the beginning of cycles.

As far as the results indicate, it seems that the move model cannot fully account for the differences in the lengths of the discussions in the corpus. It was found that shorter discussions such as D3 and D4 used more or all of the moves but the longer discussions such as D6 and D9 failed to do so. The list of the distinct linguistic signals of individual moves is also incomplete because certain commentarial moves and steps rarely occurred. Further, it was found that after the initial coding, some distinct lexicogrammatical signals were misused therefore, the identification of moves should be based primarily, if not solely, on close readings.

Results related to each move in the model in terms of its frequency, occurrence and position were reported in this chapter. Certain aspects of findings related to the five research questions were presented as well. Next chapter states and discusses a number of selected findings in relation to the research questions.

CHAPTER V
DISCUSSION

5.1 Introduction

In the following subsections, the research questions are answered. Certain aspects of the results of the study are summarized and discussed in relation to the research questions.

The research questions posed in Chapter 1 were:

1. To what extent are the moves in the discussion section of the theses written by Thai graduate students in the MA in Applied Linguistics program at the Faculty of Science, Mahidol University similar to and different from those in published research articles studied by Yang and Allison's moves (2003)?
2. What is/are the obligatory or key moves?
3. Do the thesis writers cycle their moves? In general, how many cycles of moves do they employ in this section? Which moves are parts of the cycles?
4. Can the seven-move model explain the differences and similarities between particularly short discussion sections and particularly long discussions in the corpus?
5. What linguistic features signal individual moves?

5.2 Discussion of Findings on Moves in Theses and Research Articles

Comparison of the move frequency between the thesis discussion corpus and that of Yang and Allison (2003) turns out to be unexpected (see Table 5.1 for detail). If the frequency of the moves is indicative of a text's communicative purposes, then the primary communicative purpose of the thesis discussion corpus is to report results but to comment on results in Yang and Allison's (2003).

In Yang and Allison's study (2003) of research article Results, Discussions and other closing sections in applied linguistics, they found that the main communicative purposes in Results and Discussions are different. The primary communicative purpose of the Results section is to report results and that of the Discussion section is to comment on results. At this point, a new question was raised that if the main communicative purpose of Discussions in the corpus is to report results, similar to the findings of the research article Results sections in Yang and Allison's study (2003), how comparable is the frequency of moves in the present study to the findings of the Results sections in Yang and Allison (2003) which share the same primary communicative purpose?

Table 5.1 details the frequency of each move which occurred in Yang and Allison's (2003) study of 20 research article Results sections and 8 research article Discussion sections, and 9 MA thesis Discussion sections in this study.

Table 5.1: Comparison of the Percentage of Moves in Yang and Allison's study (2003) and the Present Study

Moves	**Percentage of moves in Results in Yang and Allison's study (2003)**	**Percentage of moves in Discussions in this study**	**Percentage of moves in Discussions in Yang and Allison's study (2003)**
1: Background information	10.9	14	2.9
2: Reporting results	52.1	33.6	19.6
3: Summarizing results	3	10.4	6.9
(Percentage of Moves 2+3)	(55.1)	(44)	(26.5)
4: Commenting on results	33	26.1	38.2
5: Summarizing the study	0	0.5	2.9
6: Evaluating the study	0.7	0.4	6.9
7: Deductions from the research	0.3	15	22.6
(Percentage of Moves 4+5+6+7)	(34)	(42)	(70.6)
Total	100	100	100

It is noticeable from Table 5.1 that all of the communicative functions which occur in the Results section also occur in the Discussion sections but with differing frequencies. Both of the combined percentage of the function of stating results in full and in summarized form as well as the combined percentage of 'commenting moves' in the thesis corpus is more comparable to that of Yang and

Allison's (2003) study of the Results sections than their study of Discussion sections. An even greater difference is that the percentage of the function of commenting on results' in the thesis corpus is less than that of Yang and Allison's study of the Results sections. It is likely that the thesis writers may have placed relatively higher importance on objective reports of results and less on subjective commentaries and evaluations, suggesting that the results of a study can stand on their own, with or without commentaries.

Further, it may appear to the thesis writers that the amount of commentaries in the thesis discussions is comparatively higher than the thesis results sections, provided that these thesis writers strictly followed the University's guidelines in writing up their Results section which states that the thesis writers should only report the results of a study in the Results sections, that is, leaving all subjective commentaries of the results in Discussion sections. The validity of this claim, however, requires further investigation.

Although the overall frequency of moves indicates that the main communicative purpose of the corpus was to report results, a closer look at individual discussion sections in the corpus showed that there was a three-way split in the use of the most frequent moves: 'Background information', 'Reporting results' and 'Commenting on results' (see Table 4.38 for details of moves in the nine discussion sections). The results indicate that for some of the thesis supervisors, in judging the quality of the thesis discussion sections, the primary communicative purposes of the sections may not be one of the deciding factors.

For example, only D2 had a primary communicative purpose which was to state or restate 'background information' (see Table 4.38). The main communicative purposes in the remainder of the corpus were split between 'reporting results' and 'commenting on results'. Although Move 1 was considered to be an obligatory move in the corpus, it is surprising to find that to state background information was the primary communicative purpose. This unexpected finding may partially result from the expansion of Move 1's scope to include the function of metatext which were found throughout the corpus. The use of pointers or metatexts accounts for 5% of the total moves.

The high use of Move 1 can also be attributed to a number of general statements that the thesis writers made such as “There are similarities and dissimilarities between native and non-native English speakers.” [D2] and “Role-plays are a classroom activity, which give the learners the opportunity to practice the language, behaviors, and the actual roles the learners may need outside the classroom.” [D9] It seems, then, that some thesis writers may not know who are the audience that they should address. In a study of doctoral dissertations in agricultural botany, Thompson (2001) interviewed a group of four Agricultural Botany dissertation supervisors. He stated that the dissertations should be written “on a level of parity (neither speaking up nor down to the reader)” (p. 80) to researchers in the same field. However, this claim requires further investigation. The present study did not include interviewing the thesis writers to specify for whom their theses were written or the thesis supervisors to indicate to whom MA theses in applied linguistics should be addressed.

However, it is necessary to point out that the move model used in this study has never been validated nor developed for analyzing thesis discussion sections. Moreover, the coding disagreements were resolved through a series of negotiations and discussions although it would be ideal if the thesis writers could verify the identification of moves. One teaching implication concerning the findings of Move 1s is that both the students and thesis supervisors should explicitly discuss about who should thesis writers address to when writing so that the composing, revising and editing process of thesis writing can be focused and effective.

5.3 Discussion of Findings Related to Obligatory Moves

Based on the results reported in the previous chapter on move occurrences (see Table 4.12 for detail), there were five moves which invariably occurred in every discussion section in the corpus and thus deemed as ‘obligatory’ moves: ‘Background information’, ‘Reporting results’, ‘Summarizing results’, ‘Commenting on results’, and ‘Deductions from the research’. The remaining two moves: ‘Summarizing the study’ and ‘Evaluating the study’ which were found in four and three discussions, respectively, are optional.

Contrary to Yang and Allison's study which found that Move 4: 'Commenting on results' was the only move that occurred in all discussion sections they analyzed. The disagreement on the results of 'Reporting results' may be due to that the published research article discussions of Yang and Allison's (2003) only comprised eight discussion sections. In such a small sample, it is likely that there is an influence of idiosyncrasy, that is, out of the eight discussion sections that Yang and Allison analyzed, only one discussion section did not use Move 2: 'Reporting results'.

Only two out of the five obligatory moves, Move 2: 'Reporting results' and Move 4: 'Commenting on results', found in this study has been reported in previous studies. The findings of obligatory Move 2: 'Reporting results' agree with a number of previous studies of discussion sections in a range of disciplines. Using Yang and Allison's (2003) terms, Move 2: 'Reporting results' which includes or is comparable to 'Statement of results' (Peng, 1987; Hopkins & Dudley-Evans, 1988; Dudley-Evans, 1994), 'Observation' (Peng, 1987), '(Un)expected outcome' (Peng, 1987; Hopkins & Dudley-Evans, 1988; Dudley-Evans, 1994), 'Finding' (Dudley-Evans, 1994), and 'Stating selected findings', a step in Move 13: 'Consolidating results' (Kanoksilapatham, 2005), has been found to be obligatory in the proceedings of the international conference discussion sections in irrigation and drainage, and master's level dissertation discussion sections in biology (Hopkins & Dudley-Evans, 1988; Dudley-Evans, 1994) and research articles in biochemistry (Kanoksilapatham, 2005).

The findings of Move 4: 'Commenting on results' confirm the previously reported studies of research article discussions in applied linguistics (Yang & Allison, 2003) and in biochemistry (Kanoksilapatham, 2005) which also found Move 4 to be 'obligatory'. However, the results of Move 4 in this study differed from previous studies of research article discussion sections such as Peng's (1987) in chemical engineering, Hopkins and Dudley-Evans' (1988) in irrigation and drainage, Holmes' (1997) in social sciences and Peacock's (2002) in a range of disciplines, and thesis discussion section in biology (Dudley-Evans, 1994).

Yang and Allison (2003) explained that the differences in their findings may result from the use of different move frameworks, that is, Move 4:

‘Commenting on results’ in Yang and Allison’s (2003) model was broadly defined and can be realized by a number of steps. Yang and Allison’s (2003) ‘Commenting on results’ include the following Moves: ‘Comparison’, ‘Explanation’, ‘Deduction’, ‘Hypothesis’ and ‘Validation’ in Peng’s (1987) model, ‘Hypothesis’, ‘Reference to previous research’, ‘Explanation’, ‘Exemplification’, and ‘Deduction’ in Hopkins and Dudley-Evans’ (1988) model, ‘Reference to previous research’, ‘Explanation’, and ‘Claim’ in Dudley-Evans’ (1994) model, for example.

The results of the other three obligatory moves: Move 1: ‘Background information’, Move 3: ‘Summarizing results’, and ‘Move 7: ‘Deductions from the research’ was not reported in other move analysis studies. The obligatory use of Move 1 in the thesis corpus, in part, may appear to result from the expansion of the scope of Move 1 to include metatextual function. Swales (1990) also observed that compared to research article authors, thesis writers use a much higher number of metatexts.

The obligatory use of Move 3 may have been due to the length of theses. Unlike published research articles, the length of a typical MA thesis in applied linguistics at Mahidol University is over 80 pages long, the amount of data generated in a study can be very high. Results that have been previously stated in Results chapter may need to be summarized in discussion sections in order to remind thesis readers and aid their comprehension when the thesis writers refer to and comment on their results.

The obligatory use of Move 7, or to be more precise, of Move 7 – Step C: ‘Drawing pedagogical implication’ is likely to be influenced by the research orientation of an applied field such as applied linguistics in which its research is pedagogically motivated. Move 7 – Step C occurred and recurred cyclically in the corpus (see Table 4.15: Frequency of Moves in cycles for detail). In this study, six Discussions have separate ‘Pedagogical Implication’ subsections, suggesting that the writers may have made a conscious decision in including and highlighting Move 7 – Step Cs in their Discussions. Studies of research article Results, Discussion, and other closing sections in applied linguistics (Yang & Allison, 2003) also found that the function of ‘drawing pedagogical implication’ may occur

and recur in discussion sections, conclusion section, and under its own section ‘Pedagogical Implication’ or similar headings.

The optional use of Move 5: ‘Summarizing the study’ and Move 6: ‘Evaluating the study’ is similar to Yang and Allison’s (2003). They pointed out that the occurrence of certain moves such as ‘Summarizing the study’ may be affected by the existence of subsequent section(s) such as ‘Conclusion’ and ‘Pedagogical Implications’. In their corpus of eight discussion sections, ‘Summarizing the study’ only occurred in three Discussions, all of which were the final sections of the articles. In this study, it might also be possible that ‘Summarizing the study’ and ‘Evaluating the study’ occur in ‘Conclusion’. However, this claim requires further investigation. It should be pointed out that the identification of Move 5s ‘Summarizing the study’ was somewhat problematic because of the reliance on the use of distinct lexical signals which, in turn, may result in the low occurrence of this move.

Taking into account the sampling methods of this study, it is reasonable to claim that all well-written thesis discussion sections in applied linguistics at Mahidol University include at least these five obligatory moves: ‘Background information’, ‘Reporting results’, ‘Summarizing results’, ‘Commenting on results’, and ‘Drawing pedagogical implications’ in ‘Deductions from the research’. A pedagogical suggestion would be that thesis writers should include at least these five obligatory moves in their Discussions. However, it is important to stress that the move analysis model only analyzed the writer’s communicative purposes in a group of thesis Discussions. Some of the thesis supervisors who selected these theses may not agree with the above claim that well-written Discussions use at least these five communicative functions. They may have judged the quality of Discussions or placed greater importance on clarity of expression, logical organization, or a study’s implications, for example. In addition, the research methods did not include interviewing the thesis supervisors to specify their criteria on judging and selecting these well-written Discussions in the corpus. An in-depth interview with thesis supervisors should be conducted in a new study in order to provide a complete picture of this research process genre.

5.4 Discussion of Findings Related to Move Cycles or Recurring Patterns

Certain moves and steps in every thesis discussion in the corpus were found to be structured and sequenced cyclically. The findings of cyclical organization of the discussion corpus firmly support those of previous studies such as Peng's, 1987; Hopkins & Dudley-Evans', 1988; Swales', 1990. Moreover, the occurrences, recurrences and positions of Move 2: 'Reporting results' in cycles are consistent with those of Hopkins and Dudley-Evans', 1988 and Peacock's, 2002 that found Move 2 occurred in a majority of cycles and also to be in the head position of cycles (see Table 4.15: Frequency of Moves in cycles and Table 4.16: Moves in the beginning cycles).

Knowledge of move and move cycles or the cyclical patterning of moves and steps can be particularly useful in structuring lengthy texts such as theses. It can aid thesis writers in realizing the texts' communicative purposes and help the writers to organize and sequence the content they wish to deliver. Different aspects of a study may be reported and commented upon. For example, in Table 5.2, a number of results of vocabulary learning strategies of the Science Students in D6 are reported and commented on separately based on the types of strategies they used. The first cycle started with a metatextual Move 1: 'Background information' realized by (S1) and (S2) which functions as an introduction to inform readers of what is included in this section. Then, in (S3), the writer reported that 'the Science students did not like to use an English-English dictionary'. (S3) was coded as Move 2: 'Reporting results'. In addition to close reading, 'Possibly' in (S4), the use of modals in (S5) and 'possibly' in (S6) signaled that the writer was explaining the results. (S4-S6) were then coded as Move 4 – Step C: Accounting for results. The first cycle consists of Move 1: 'Background information' + Move 2: 'Reporting results' + Move 4 – Step C: 'Accounting for results'.

In the third paragraph, a new cycle began with (S7) which reported the results of the questionnaire and the think-aloud protocols of the use of English-Thai dictionaries. (S7-S8) was, then, coded as Move 2: 'Reporting results'. Apart from close reading, 'Possibly' in (S9) and the modal 'might' in (S10) signaled that the writer was explaining the results, (S9-S10) were coded

as Move 4 – Step C. Next, the name of a researcher, ‘Hulstijn’, and ‘also’ signaled that (S11) was a Move 4 – Step B: ‘Comparing results with literature’. The second cycle, then, consisted of Move 2: ‘Reporting results’ + Move 4C: ‘Accounting for results’ + Move 4 – Step B: ‘Comparing results with literature’.

These recurring patterns or cycles were repeated until the end of the discussions which almost always ended with the use of Move 7 – Step C: ‘Drawing pedagogical implications’ (see details of the results of move cycles in Section 4.5.3).

Table 5.2: Move Analysis and Cycles in D6

Move 1: Background information	5.3 Discussion of the Science Students' Vocabulary Learning Strategies *5.3.1 All Science Students' General Information Compared with the Science Students in Top, Middle and Low Group* [(S1) In this section, the Science Students' answers from the questionnaire, the interview, and the think-aloud protocols in the top, middle and low groups are discussed in order to explain what the students did when they learn vocabulary and how to help them to learn. (S2) The answers of the students from the questionnaire are looked at section by section: Determination Strategies (DET), Social Strategies (SOC), Memory Strategies (MEM), Cognitive and Metacognitive Strategies (COG and MET).]
Move 2: Reporting results Move 4 - Step C: Accounting for results	Determination Strategies (DET) [(S3) According to the results of the students' answers in the DET section of the questionnaire, the students in the science program did not like to use an English-English dictionary to look up the meanings of a word.] [(S4) Possibly, they might lack the opportunity to practice using this strategy because they were not sure whether they could understand the explanation of the word's meanings in this kind of dictionary. (S5) Although they have tried to use English-English dictionaries, they might not be confident that they could translate the meaning of words correctly. (S6) Possibly, the Science Students need to be sure that they have got the correct meaning of words and understand those words clearly.]

Table 5.2: Move Analysis and Cycles in D6 (conts.)

Move 2: Reporting Results Move 4 - Step C: Accounting for results Move 4 – Step B: Comparing results with literature	[(S7) However, 89% of Science Students preferred looking up the meaning of words in English-Thai dictionaries rather than in English-English dictionaries. (S8) Also, most Science Students (student A, B, C, D, and F) often used an English-Thai dictionary in the Think-aloud Protocols.] [(S9) Possibly, the Science Students need to know the meaning of words in Thai as fast as possible. (S10) They might not want to wait for any translation.] [(S11) Hulstijn's (1993) study also found that the good learners, more than the weak learners, preferred to confirm their guesses about the meanings of a word by consulting a bilingual dictionary.

Previous studies of master's level dissertations in biology (Dudley-Evans, 1994), and research articles in social sciences (Holmes, 1997), biochemistry (Kanoksilapatham, 2005), and a range of disciplines (Peacock, 2002) also found that discussion sections in theses and research articles show clear cyclical patterning of moves. It can then be concluded that MA thesis discussion sections in applied linguistics are organized cyclically, with Move 2: 'Reporting results' heading a majority of cycles.

The above example shows that the MA thesis discussion sections in applied linguistics display clear cyclical organization which Mahidol Thesis Guidelines do not explicitly acknowledge. The impression that one gets after finishing reading the guidelines on writing a discussion section is that the section is organized linearly and that the sequence of moves or functions is rigidly fixed. According to the thesis guidelines,

> Thesis discussion sections should follow the results section. The content of the discussions should include whether the results of the study are similar or different from those of previous studies or the previous studies in the literature review section as well as explain why the

> results are different or similar. It should also include whether there is any new discovery together with explanations. In the end of the discussion sections, there should be suggestions/recommendations related to the study, for example, if there is a further study, which study approach should be adopted so that the new study can come up with the best results. Or if there is a further study on the same topic, how the research methods should be adjusted in order to obtain better results than this present study. Moreover, implications or practical applications which the research suggests as well as the explanations for these applications. (Mahidol Thesis Guidelines, n.d., p. 26) [Translated by the researcher]

Based on the findings of the use of cycles in this study, it can be beneficial for graduate students to be informed of the use of move cycles in writing up discussion sections. Also, the use of cycles in thesis discussion sections should be included in Mahidol Thesis Guidelines, inclusion of the cyclical organization of discussion sections may be made and highlighted. Moreover, the findings of the choices of moves, their numbers and their sequences in cycles in this study (see detailed results on cyclical patterns in Section 4.5.3) deviated from those stipulated by the Guidelines; that is, a discussion section should include:

> whether the results of the study [Move 2: Reporting results] are similar or different from those of previous studies or the previous studies in the literature review section [Move 4B: Comparing results with literature] … explain why the results are different or similar. [Move 4C: Accounting for results] It should also include whether there is any new discovery together [Move 2: Reporting results] with explanations. [Move 4C: Accounting for results] … In the end of the discussion sections, there should be suggestions/recommendations related to the

> study, for example, if there is a further study [M7B: Recommending further research] … Moreover, implications or practical applications which the research suggests as well as the explanations for these applications." [Move 7A: Making suggestions/ 7C: Drawing pedagogical implications] (Mahidol Thesis Guidelines, n.d., p. 26)

Thus, it is suggested that another revision of Mahidol Thesis Guidelines on writing discussion sections may stress that the choices and numbers and sequences of moves in cycles are flexible.

5.5 Discussion of Findings Related to Differentiation of Moves between Short and Long Discussions by Yang and Allison's (2003) Model

The results showed that D4, one of the two shortest discussions in the corpus used all seven moves in the model and D3, the next shortest discussion used six out of the total seven moves in the model whereas, the two longest discussions, D6 and D9, used only five out of the total seven moves in the model (see Table 4.38 for detail). It seems clear then that the structural move analysis could not give a conclusive answer concerning the differences in length of the discussion sections of MA theses. Nevertheless, a conclusive answer that this study provides is that both shortest and longest discussions in the corpus shared these five communicative functions: 'stating background information', 'reporting results', 'summarizing results', 'commenting on results', and 'drawing pedagogical implications'. The assumptions of the association between the length of texts and their communicative purposes are unfounded.

One possible explanation for the findings that there is no conclusive answer concerning the difference in length of discussions in the corpus is that the study only focused on the analysis of texts. It did not take into account the writing and revising process in which the students and their thesis supervisors interact. Thesis writers write, rewrite and revise according to feedbacks and comments they

receive from their supervisors who are the theses' main audience, fellow students, and at the end, external examiners (Thompson, 2001).

In order to answer this research question, it is recommended that further research not only analyze thesis discussions but also interview thesis supervisors as well as thesis writers, if possible, to examine the thesis writing process so that a new study can gather enough data to answer the question.

5.6 Discussion of Findings Related to Distinct Lexicogrammatical Signals of Individual Move

It can be tentatively stated that thesis writers possess a relatively limited level of research writing vocabulary. Though the distinct linguistic features found in this corpus generally agree with previous studies (Brett, 1994; Dudley-Evans, 1994), the number of choices of lexical signals used in achieving communicative functions was somewhat low. For example, in D9 which was the longest discussion in the corpus, it was found that there were 12 occurrences of Move 4 – Step B: 'Comparing results with literature'. Eight out of the twelve occurrences were references to previous studies, such as "A study by Johns and Dudley-Evans (1978) also mentioned '*not knowing enough words'* was a difficulty for post graduate students of transportation." [D9] and "Harmer (1991) states that the main aim in teaching grammar should be to ensure that learners are able to communicate effectively with the grammar they have at their level." [D9] In the remaining four, the writer compared the results of his or her study with those of previous research. The distinct lexical signal 'accord' was used 3 out of 4 times. For example, "This accords with three studies of language skills in the leisure and tourism industry conducted by Hagen (1992), Sucompa (1998) and Davies (2000)." [D9]; "This accords with Davies' suggestion (2000) that the ability to communicate in at least three languages, one being English, is essential for people who work in the leisure and tourism industry." [D9]

Likewise, the use of 'accord' was also noted in D7, in which the function of 'comparing results with literature' occurred 15 times. For example, "This finding accords with the insights of Mallikamas (1997: 25) who indicated that translation can be used as a means of communication and a teaching device which

can assist students in understanding and using the target language more clearly and accurately." [D7], "This finding is in accordance with Cotterall (1990: 30-39) from her experience in using the reciprocal teaching technique to train adult students in reading the second language texts.", and "This view accords with the insights of Vacca, at al. (1991: 187) who indicated that students are involved in active comprehension when they generate questions throughout reading." [D7]

In addition, it was found that the lexical signal: 'support' used in realizing the function of 'comparing results with literature' was also high in D7. For example, "It supports Brumfit and Roberts (1983: 109) who remarked that the learners would have different levels of achievement if they were taught different instructional technique." [D7], "Supporting this view, Wiseman (1992: 147) advocated that readers who posses and use prior knowledge about the topic are more likely to comprehend the text." [D7], and "This is also supported by Doctorow et al. (cited in Bromley, 1992: 392) who taught sixth graders to write summaries." [D7]

Preliminary comparison between the thesis corpus and one research article in applied linguistics (Kanoksilapatham, 2005) of the use of lexical signal in realizing Move 4 – Step B: 'Comparing results with literature' found that there are more than ten different lexical signals used to realize this function in the above published article. The published author used, for example, "In contrast, Introductions in computer science do not always have Move 1, Step 3, …" (p. 275), "In congruence with Swales and Najjar's (1987) study of physics articles, Move 3…" (p. 276), "The above examples show that the Results section in biochemistry research articles not only reports data but also comments on them, a deviation from the style prescribed in a manual for writing for publications." (p. 282), and "The Discussion section, consistent with previous researcher (e.g., Belanger, 1982; Mckinley, 1983; Peng, 1987), displays a cyclical organization." (p. 286).

It appears, then, that graduate students at the Master's level may benefit from familiarization with a set of vocabulary that is commonly found in research writing. A starting point would be to include words from The Academic Wordlist

(Coxhead, 2000) in the university entrance examinations. The Academic Wordlist was developed from a corpus of published journal articles, textbooks, course workbooks, laboratory manuals in Science which includes biology, chemistry, mathematics, and physics, in Arts which includes history, education, linguistics, and philosophy, in Commerce which includes accounting, economics, finance, and management, and in Law which includes constitutional law, criminal law, and international law. The inclusion of The Academic Wordlist (Coxhead, 2000) in the university entrance examinations can help to assess whether the examinees have acquired a sufficient level of vocabulary knowledge to study and succeed in their desired programs. Another implication of the study is that, in addition to the required research methodology course that the Master's program in Applied Linguistics offers, more attention should be given to teaching and learning of vocabulary which is related to research writing.

It should be pointed out, however, that the sample of this study is small, including only nine thesis discussion sections in only one program. Interpretations of results need to be done cautiously because, given the size of the corpus, the findings of the study may merely reflect the preferred style of the writers and/or the supervisors who recommended them. It is, therefore, recommended that further study should, if practicable and relevant to a new study's research aims, includes, through a systematic sampling technique, a higher number of texts so that the selected texts are representative of the entire population and the results of the new study can be generalized to a wider context than this current study. Moreover, the analysis of texts in this study only concentrated on uncovering the occurrences and frequencies of moves and steps, it would be pedagogically useful for further study to also investigate the use of lexicogrammatical signals in realizing these communicative functions.

CHAPTER VI
CONCLUSION

A framework proposed by Yang and Allison (2003) was used to analyze a corpus of MA thesis discussion sections in applied linguistics. This move framework was developed based on their previous studies that examined different published sections of research articles in applied linguistics. The present study aimed to describe the discussion sections of MA theses using Yang and Allison's (2003) move analysis framework. These theses were written by Thai graduate students in an applied linguistics program as a part of the requirements for their MA degree at Mahidol University. The results of the study provided some insights into how thesis discussion sections were written up. The study also found that the move analysis framework proposed by Yang and Allison (2003) was generally compatible with the discussion sections written by a particular group of Thai graduate students.

In this chapter, the study's main findings are presented. Next, the study's limitations are stated and a number of recommendations for further research are given.

6.1 Summary

The study's main findings are as follows:

1. It was found that published authors and student writers used Yang and Allison's (2003) seven communicative functions or moves in discussion sections differently in terms of occurrences and frequencies. Move 6: 'Evaluating the study' rarely occurred and Move 7 – Step B: 'Recommending further study' did not occur at all in the corpus.
2. It was shown that in addition to Move 2 'Reporting results' (Hopkins & Dudley-Evans, 1988) and Move 4 'Commenting on results' (Yang & Allison, 2003; Kanoksilapatham, 2005) which were reported in previous

studies, ‘Move 1 ‘Background information’, Move 3 ‘Summarizing results’, and Move 7 ‘Deductions from the research’ were also found to occur in every discussion in the corpus. The remaining two moves: Move 5: ‘Summarizing the study’ and Move 6: ‘Evaluating the study’ only occurred in D4 and D3 in the corpus respectively.

3. The thesis writers cycled their moves but the numbers of cycles varied from seven cycles in D5 to fifty cycles in D6. A majority of cycles were short, consisting of only two to three moves. The most frequent move in cycles was Move 2: ‘Reporting results’, consistent with Hopkins and Dudley-Evans’ (1988) and Yang and Allison’s (2003).
4. It seems that the seven move model (Yang & Allison, 2003) cannot give a conclusive answer concerning the differences and similarities between short and long thesis discussion sections.
5. The lexicogrammatical features highlighted in this study were generally similar to those of previous studies (Peng, 1987; Brett, 1994; Dudley-Evans, 1994)

6.2 Limitations of the study

The limitations of the study are self evident:

1. The size of the sample was small, therefore, it is likely that the results of the study merely reflect the preferred ‘style’ of either the students or the thesis supervisors who recommended the theses.
2. The results only included the discussion sections of nine MA theses at Mahidol University; therefore, generalizations are only limited to these sections and these contexts, that is, the generalizations made are only applicable to MA thesis discussion sections written by Thai graduate students in applied linguistics at Mahidol University. The generalizations do not apply to other sections of the theses such as results sections or conclusion sections, for example.
3. The interpretations of results need to be done cautiously as the analysis framework used in this study was derived from a research article corpus. There are differences in terms of depth, length, content,

audience and organization between research-process genres: thesis discussion sections and research article discussion sections (Hewings & Hewings, 2002).

4. Another important area that this study did not address is the level of genre analysis which focuses on lexicogrammatical features or surface features of writing. Linguistic features that have been the focus of this level of analysis include epistemic modality or hedges and modal verbs, for example. The analysis at this level can provide a list of linguistic features which are typically used to realize the communicative functions or moves and might be able to explain, based on the analysis of surface features in target texts, why certain distinct lexicogrammatical features are typical in a particular genre.
5. The study only investigated the end product. Other related factors such as the writing process and revising process, and their participants, that is, thesis writers and supervisors, are not included in this study.
6. Yang and Allison's framework (2003) has never been validated and it was based on research articles not theses. Although the terms used to characterize the steps in the model seemed sufficiently descriptive, the scopes and definitions of moves and steps were not clear or adequate and were, therefore, open to interpretations. Moreover, two of the titles, Move 3: 'Summarizing results' and 'Move 5: 'Summarizing the study', are not functionally oriented which led to a number of coding problems.
7. Although the move model (Yang and Allison, 2003) was found to be generally applicable to the corpus, one discussion section in the corpus was dropped due to an unacceptably high number of coding disagreements.
8. The study's intercoder agreement or reliability index was not reported because not only both coders analyzed all discussion sections in the corpus, but also coding disagreements were resolved through a series of steps which was detailed in Section 3.3 Data analysis procedure, p. 50. In addition, the study did not attempt to invalidate Yang and Allison's (2003) move model for discussion sections.

9. The theses were recommended by various advisors who have different areas of interest and specialization. As a result, the quality of the selected theses was subject to individual interpretation. The results obtained from this study, therefore, may not be representative of all the published theses in the MA in Applied Linguistics program at Mahidol University.

6.3 Recommendations for further research

New studies should combine ethnographic methods which include the participants of the study, that is, thesis supervisors and thesis writers, with the ESP genre analysis approach in order to explain the widespread and frequent use of certain moves, steps and move patterns or cycles and the avoidance and the low use of certain moves and steps as well. Moreover, the data from the participants might be able to explain the differences between short and long thesis discussions.

It is also recommended that new studies should analyze whole texts because this study cannot give a conclusive answer whether these moves and steps: 'Evaluating results', 'Evaluating the study' and 'Recommending further research' were used by the thesis writers or not. If they are used, then, in which section that these moves and steps typically occur and why.

Further, the analyses of dissertations should be done at both levels, move or rhetorical structure level and lexicogrammatical level, and then tie the rhetorical moves to their typical lexicogrammatical features so that the results of new studies may be able to offer an extensive list of useful lexicogrammatical features that is commonly used in research/thesis writing. In addition to studies at the lexicogrammatical level of one single group of samples, comparison between dissertations of native speakers of English and non-native speakers of English in the same field would help to bring out the specific lexicogrammatical features that the non-native speakers of English students need to acquire.

In addition, the non-native speakers of English graduate writing was found to be distinct from that of published authors both at rhetorical or discourse level and linguistic and/or lexical level. Hence, any further study that attempts to analyze non-native speakers of English corpora should be aware of and adjust for these differences in the development and/or application

of their frameworks and particularly descriptions of the moves and steps. It is also equally important that the adapted or new frameworks should be trialed and validated so that any additional functions that are specific to the target genre are included. Moreover, a list of moves and steps or a set of functional categories should be given along with in-depth explanations, descriptive titles, clear definitions and a number of examples in addition to a detailed list of linguistic/lexicogrammatical signals unique to each move and step. Moreover, effective and detailed procedures for dealing with coding ambiguities and disagreements should be established.

The application of research article structural move analysis framework on the corpus of MA thesis discussions found a number of differences in terms of the primary communicative purposes, and the presence and frequency of certain rhetorical functions between these two research-process genres. It is hoped that the knowledge gained from this study can contribute to the understanding of thesis writing as well as encourage further research in this area.

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APPENDIX

APPENDIX A
AN EXAMPLE OF EXCESSIVE USE OF SHORT CYCLES IN A THESIS DISCUSSION

CHAPTER V
DISCUSSION

5.1 Introduction

As stated in Chapter I, the major aim of the study is 'to explore the similarities and differences between the thesis discussion sections written by Thai graduate students in the Applied Linguistics Program at the Faculty of Science, Mahidol University'. As a result, this final chapter is set to describe the moves of the discussion sections in theses written by Thai graduate students based on the framework developed by Yang and Allison (2003) as well as compare the extent to which the moves found in the corpus are similar to or different from those suggested by Yang and Allison (2003) in order to bring out the similarities and differences between these two research-process genres. In the first section of the chapter, the research questions are reposted and a summary of findings discussed in relation to the questions. Lastly, the implications of the findings are discussed and pedagogical suggestions are made.

5.2 Research Questions

In order to answer the research questions posted in Chapter I, related previous studies were reviewed in Chapter II. A move analysis framework for Discussions which is based on ESP genre analysis approach was chosen. ESP genre analysis "studies how writers conventionally sequence material to achieve particular purposes. This includes the identification of particular types of schema and how they are realized linguistically" (Richards & Schmidt, 2002, p. 224). The selected move framework which was based on an analysis of research articles in applied linguistics has been proposed by Yang and Allison (2003).

In the following subsections, the research questions are reposted; the results of the study are summarized and discussed in relation to the research questions.

The research questions, posted at Chapter I, were:

1. To what extent are the discussion moves of the theses written by Thai graduate students in the MA in Applied Linguistics program at the Faculty of Science, Mahidol University similar to and different from Yang and Allison's moves (2003)?
2. What is/are the obligatory or key moves?
3. Do the thesis writers cycle their moves? In general, how many cycles of moves do they employ in this section? Which moves are parts of the cycles?
4. Can the seven-move hierarchical model explain the differences and similarities between particularly short discussion sections and particularly long discussions in the corpus?
5. What linguistic features signal individual moves?

5.3 Discussion of Findings Related to Research Questions 1 and 2

As reported in the last chapter, the corpus of the discussion sections evidently differed from Yang and Allison study (2003) in term of move frequency. The general trend was that in this study the first three moves (Move 1: 'Background information' Move 2: 'Reporting results' and Move 3: 'Summarizing results') which are to be referred to later as the three factual moves occurred far more frequent than their counterparts in the Yang and Allison study (58% versus 29%). Consequently, the last four moves, however, (Move 4: 'Commenting on results' Move 5: 'Summarizing the study' Move 6: 'Evaluating the study' and Move 7: 'Deductions from the research') which are to be referred to later as the four commentarial moves occurred much less often than their counterparts in the Yang and Allison study (42% versus 71%). The comparison of the results of the two studies inevitably raises a question or two concerning the differences between the two research-process genres (published RAs and MA theses) in terms of the communicative purposes and functions, the organization and content of discussions, and their audience.

As shown by the results, the student writers may have read a number of published RAs but failed to notice the 'subtle' change in focus between these two sections. In the thesis Discussion corpus, the relative frequency of the factual moves is greater than the commentarial moves (58% versus 42%). The shifts in focus between these two RA sections are that in the Results sections, the relative frequency of the factual moves is greater than the commentarial moves (66% versus 34%); whereas, in the Discussion sections, the relative frequency of the factual move is fewer than the commentarial moves (29% versus 71%) (Yang & Allison, 2003).

Nevertheless, it is also likely that the students are just following the Mahidol thesis guidelines which prescribe that:

> …the discussion sections should follow the results section. The content of the discussions should include whether the results of the study are similar or different from those of previous studies or the previous studies in the literature review section as well as explain why the results are different or similar. It should also include whether there is any new discovery together with explanations. In the end of the discussion section, there should be suggestions/recommendations related to the study, for example, if there is a further study, which study approach should be adopted so that the new study can come up with the best results. Or if there is a further study on the same topic, how the research methods should adjusted in order to obtain better results than this present study. Moreover, what this research does contribute in terms of implications or applications and also provide the reasons behind these applications. 'Conclusion and Recommendation', Conclusion is the section which summarizes all of the key points in the study. Significant contributions from the study and the limitations of the study have to be included. 'Recommendation' is to recommend further research in summary as well as to predict the potential contributions or applications of the new research. (Mahidol thesis Guidelines, n.d., p. 26) [Translated by the researcher]

Following the Mahidol Guidelines would lead to the discussions that are confined to 'Move 2: 'Reporting results' and 'Move 4 – Step A: 'Interpreting results'

Step B: ‘Comparing results with literature’ and Step C: ‘Accounting for results’ but not Step D: ‘Evaluating results’ in the first half. In the second half or the end of the discussions is confined to Move 7 – Step A: ‘Making suggestions’ Step B: ‘Recommending further research’ and Step C: ‘Drawing pedagogical implications’. As shown the results of the study, the students had followed these guidelines.

It can be concluded that the thesis discussions used relatively higher number of factual than commentarial moves; whereas, the RA discussions mainly used commentarial moves. In terms of the primary communicative purposes of the discussions, the primary purpose of the thesis discussions is split between ‘reporting results’ and ‘commenting on results’; whereas, it is ‘commenting on results’ in RA discussions. While looking at the use and comparison of factual and commentarial move categories tells us about the differences of the main communicative purpose and the general trend, breaking down the move categories and looking at each individual move could help us to identify the presence, frequency, preference and patterns of each move.

Move 1: ‘Background information’ was present in all discussions; it is, therefore, obligatory. The finding is incongruous with Peng (1987; Hopkins & Dudley-Evans, 1988; Peacock, 2002). One of the reasons may be due to the differences in functions of these two research-process genres. Another likely reason is that the inclusion of metatextual function in Move 1.

The seemingly excessive use of Move 1: ‘Background information’ in the thesis corpus when compared to the published RAs in the Yang and Allison study (14% versus 3%) needs to be interpreted cautiously as, in part, the move scope was expanded to include the function of pointers or metatext which were found throughout the discussion sections. Also, it should be noted that we are comparing with two different ‘research-process genres’: theses and RAs. One of the distinct aspects of thesis writing as Swales (1990) observed was that there was more frequent use of metatexts in theses than in published RAs.

Apart from the use of pointers (which accounted for 5% of the total move), the greater use of Move 1 in the corpus than published RAs (9% versus 3%) indicates that the NNS student writers did not have a clear concept of audience. There were many instances of text segments being coding as Move 1: ‘Background information’ but

read like the students ‘stated the obvious’, for example, “When somebody e-mails the others, he/she must specify the e-mail address(s) of the recipient(s). However, Cc, Bcc, and Subject can be left blank. The heading sent via the e-mail system will automatically show the date and time of sending, sender's e-mail address (and name sometimes), and recipient(s)' e-mail address(s) (and name sometimes). As a result, it is not necessary for the sender to address the recipient(s) again as a salutation”. [D2] The student should assume that this fact is known to their expert audience or anyone who emails.

Another possible explanation for the overuse of Move 1 is due to the position of the Discussion sections, Swales and Feak (1994) stated that RA writers need to make a decision on how much detail concerning the background, theories, aims and purposes, methodology and results of the study to be included or how much writers can assume.

Both Move 2: ‘Reporting results’ and Move 3: ‘Summarizing results’ occurred in every discussion the corpus; it is, therefore, considered ‘obligatory’. This finding is similar to Hopkins and Dudley-Evans’ (1988) and Peacock’s (2002) but disagrees with the result of Yang and Allison’s study (2003). The difference in finding is likely to be the criteria that Yang and Allison used because, in their study, only the most frequent move can be obligatory. Based on the results, Move 2 is not only an obligatory function but also is the discussion primary communicative purpose.

The higher use of Move 2 ‘Reporting results’ (34% in this study versus 20% in Yang and Allison’s) and Move 3 ‘Summarizing results’ (10% in this study versus 7% in Yang and Allison’s) when compared to Yang and Allison’s study is possibly due to the student writers’ perceived obligation to report all the results even if they fail to comment on some of them. In RAs, on the other hand, published authors only reported and then commented on a few selected findings.

Further, this higher use of Move 2 was closely related to the thesis writers’ preferred use of short move cycles, i.e., those consists of two to three moves. The two-move cycles and the three-move cycles accounted for over two-thirds of the overall move cycles (70%) in the corpus (136 out of 194 cycles).

The last four moves, however, (Move 4: ‘Commenting on results’ Move 5: ‘Summarizing the study’ Move 6: ‘Evaluating the study’ and Move 7: ‘Deductions

from the research') which are to be referred to later as the four commentarial moves occurred much less often than their counterparts in the Yang and Allison study (26% versus 38%, 0.5% versus 3%, 0.4% versus 7% and 15% versus 23%, respectively).

Move 4: 'Commenting on results' occurred in every discussion the corpus; it is, therefore, considered 'obligatory'. This finding agrees with Peacock's (2002), and Yang and Allison (2003). The percentage comparison of each step between this study and Yang and Allison study is as follows: Step A: 'Interpreting results' (9% versus 11%), Step B: 'Comparing results with literature (12% versus 7%, Step C: 'Accounting for results' (5% versus 18%), and Step D: 'Evaluating results' (0.1% versus 3%). It is evident that the student writers preferred to comment on their results by comparing results with literature (Step B) whereas, published authors preferred to account for results (Step C). The difference suggests that the areas of research that students conducted are well-documented, and also that, on the whole, their results did not deviate from those of past studies, and therefore, eliminates the need to explain the differences in the findings.

Move 4 – Step D: Evaluating results, on the other hand, occurred only once in the corpus indicating and supporting the previous claim that student writers may have only partial knowledge of the chapter's many functions and purposes. However, one of the five advisors interviewed believed that student writers knew how to write a discussion but they did not have the research-writing related linguistic competence to realize this function. It is also possible that the corpus of this study is rather limited, including only the Discussion sections. Thus, it is likely that this step can be found in other chapters because the Mahidol thesis guidelines instruct that the limitations of the study should be included in the Conclusion chapter.

Based on the extremely low frequency of this step, it might be interesting to ask whether there is any correlation between the low use and avoidance of Step: 'Indicating a research gap' in RA introductions and this step: 'Evaluating results' in RA discussions. In contrastive rhetoric studies, the step: 'Indicating a research gap' has been singled out to imply that there is reluctance among NS published writers to point out a gap in others' research (Connor, 1996). In another move analysis study of RA discussions, Peacock (2003) found that only roughly half of NNS published

authors in applied linguistics used this step: ‘Evaluating results’; whereas, close to three-quarters of NS authors did so (52% versus 73%, respectively).

Move 5: ‘Summarizing the study’ was present in four discussions of the nine; it is, therefore, considered ‘optional’. Surprisingly, this finding somewhat agrees with Yang and Allison study which found this move occurred in three out of their eight discussion corpus. It is likely that the thesis authors found that this move should be used in the following chapter: Conclusion. The Mahidol thesis guidelines advise that a summary of a study should be included in the Conclusion section. Yang and Allison also observed that this move tends to occur in the Discussion sections provided it is the last section; otherwise, the move would occur in the Conclusion section or other closing section.

Another explanation for the low use of Move 5 may lie in the difficulty in identifying it. There were a number of instances in which both coders disagreed with each other in assigning a segment of text as Move 5 ‘Summarizing the study’ or Move 3: ‘Summarizing results’ For example, “(S1) The findings of this study provided us with insight into the first-year science students' lexical guessing ability. (S2) They had certain problems concerning guessing the meanings of unknown words from context.” [D3] The results from the initial coding were that the first coder identified (S1) as Move 5 whereas, the second coder identified it as Move 1: ‘Background information’. (S2) was identified as Move 3 ‘Summarizing results’ by both coders. In dealing with coding disagreements, the discussion procedure was followed. This segment of text (both S1 and S2) was then recoded as Move 5 due to, first, the use of the expression ‘The findings of this study provided us’ which tells us that the author is to make a summary or a conclusion , the position of this text segment which was found near the end of the discussion which is a possible position to find a summary or conclusion, and a summary of the findings which based on more than one result which tells us that this text segment is not a Move 3 ‘Summarizing results’. Further, the context in which Move 5 usually occurred also aided in the identification, all remaining Move 5 always preceded Move 7: ‘Deductions from the study’.

Move 6: ‘Evaluating the study’ occurred in only three discussions, it is therefore, considered ‘optional’. Move 6 was the least frequent move in the

corpus, its three steps (Step A: 'Indicating limitations, Step B: 'Indicating significance/ advantage, Step C: Evaluating methodology) occurred only once; this finding is contrary to the findings of previous studies. Peacock (2003) found his Move 8: 'Limitations' which is comparable to Step A: 'Indicating limitations' was used in 22 Discussions (62%) of the 36 RAs in Language and Linguistics. Yang and Allison's study also found that the move occurred seven times in their eight RAs. Kanoksilapatham (2005) found that her Move 14: 'Stating limitations of the study' which is roughly comparable to this Move 6: 'Evaluating the study' occurred in 48 Discussions (80%) of the 60 RAs in Biochemistry.

There are a number of possible explanations for the low frequency of Move 6; first, it is possible (because the corpus of this study only comprised the thesis discussion sections) that thesis writers evaluate their study or indicate the study's limitations in the Conclusion chapter as prescribed by Mahidol thesis guidelines or in other chapters which the students and their advisors consider appropriate.

Another likely factor for the very low frequency of this move is the move scope and description. It appears that the scopes of these three steps, namely, Move 4 – Step D: Evaluating results, Move 6 – Step A: 'Indicating limitations' and Move 6 – Step C: Evaluating methodology overlap. Yang and Allison did not provide any description and definition for these steps; they only gave one example of each step.

For the low frequency of Move 6 – Step B: 'Indicating significance/ advantage (occurred once in the corpus), it appears that thesis writers have another way to demonstrate their study's significance by presenting quite a few suggestions for teaching implications (Move 7 – Step C: 'Drawing pedagogic implications'), as shown by the frequency count of this step in the previous chapter. It is probable that this step is more commonly found in RAs because unlike published authors, thesis writers do not need to compete for a publishing space in academic journals. It is also possible that because most of the research areas that the students chose are well-established and well-

documented, there is not any ‘significance’ or ‘advantage’ in their methodology or results or study.

Move 6: ‘Evaluating the study’ occurred in only three discussions, it is therefore, considered ‘optional’. Move 6 was the least frequent move in the corpus, its three steps (Step A: ‘Indicating limitations, Step B: ‘Indicating significance/ advantage, Step C: Evaluating methodology) occurred only once; this finding is contrary to the findings of previous studies. Peacock (2002) found his Move 8: ‘Limitations’ which is comparable to Step A: ‘Indicating limitations’ was used in 22 Discussions (62%) of the 36 RAs in Language and Linguistics. Yang and Allison’s study also found that the move occurred seven times in their eight RAs. Kanoksilapatham (2005) found that her Move 14: ‘Stating limitations of the study’ which is roughly comparable to this Move 6: ‘Evaluating the study’ occurred in 48 Discussions (80%) of the 60 RAs in Biochemistry.

The low use of Move 6 – Step C: ‘Evaluating methodology’ could be due to a number of reasons. First, due to the limited scope of the corpus, the student may have evaluated their methods in the Methodology and/or Results sections when they described and justified their study’s methodology. Second, most of the students did not know that this function is conventional in the section. It is also possible that they know that this function should be included in the section but they do not have the linguistic competence to realize this function.

Lastly, it may seem absurd to the thesis writers to indicate any limitations of their study because they have spent so much time, energy and effort writing those previous four chapters, then, in writing this chapter to point out the weaknesses of their study.

Move 7: ‘Deductions from the research’ is the one of the five moves that occurred in all discussions; therefore, it is considered as ‘obligatory’. It ranked at number three in terms of frequency. The findings of this move are rather unexpected. It is because two of the three steps in this move, Step B: ‘Recommending further research’ did not occur at all. Also, the frequency of

Step C: Drawing pedagogic implications outnumbered its counterpart in Yang and Allison study.

The frequency of Move 7 ‘Deductions from the research’ was not far off from that of Yang and Allison’s study (2003). Apart from the non existence of Step B: ‘Recommending further research’, the frequency of the remaining two steps was higher than Yang and Allison’s (2003). It shows that one of the main focuses of the research here is to present teaching implication. It also indicates that students are likely not to have linguistic problems in realizing this move. The coding of this move was relatively more straightforward than other moves because almost all the implications were under the heading ‘Implications for teaching’ or other similar variations. It is also possible there may be some contributing factors that are beyond the scope of this study or the study research method because the move analysis can only give you the numbers of the move and what linguistic features the students used to realize these functions.

The absence of Step B may be due to a number of reasons; first, according to the Faculty of Graduate Studies’ guidelines, ‘Recommending further research’ should be included in the Conclusion chapter which follows the Discussion chapter. Second, the absence of ‘Recommending further study’ step is likely to be related to the very low occurrence of ‘Evaluating the study and/or results and/or methodology’ or ‘Indicating limitations’ moves in the corpus. Swales and Feak (1994) explained that authors use the ‘Indicating limitations’ function or evaluate their study in order to open up a new area of research or ‘Recommending further research’. It, then, follows that the low use of Move 6: ‘Evaluating the study’ leads to the low use of Move 7 – Step B: ‘Recommending further research’.

The higher frequency of Step C: ‘Drawing pedagogic implications’ than Yang and Allison’s study shows that instead of explicitly ‘indicating their study’s significance or advantage’, the thesis writers prefer to prove or stress their study’s significance by suggesting at least several teaching recommendations, therefore, highlight the practical or pedagogically-focused aspect of research in applied linguistics.

In summary, there are five moves: Move 1, 2, 3, 4 and 7 which occurred in every discussion; it is, therefore, considered ‘obligatory’. The two remaining moves: Move 5 and 6 occurred in less than 60% of the corpus; it is, therefore, considered ‘optional’.

5.4 Discussion of Findings Related to Research Question 3

The numbers of cycles found in each discussion in the corpus are surprising in terms of the diverse range and volume. In D5, there were a total of 7 cycles but 50 cycles in D6. These findings disagree with Peng’s (1987) which found a range of 2 to 10 cycles and Hopkins and Dudley-Evans’s (1988) which found only 3 cycles and also Peacock’s (2002) which found 3 to 4 cycles per RA. These discrepancies may, in part, be due to the differences in terms of length, depth and detail of the two research-process genres.

The use of long and short cycles in this study is somewhat similar to Peng’s (1988) as these short cycles which consist of 2 to 3 move per cycle and long cycles co-occurred and recurred. These findings are contrary to those of Hopkins and Dudley-Evans’ that found common move cycles in their corpus are of two types. The first type of cycles consists of 8 moves per cycles and occurs when the result being reported is expected or satisfactory; whereas the second type occurs when the result being reported is unexpected. These cycles are shorter than the first type and consist of 3 moves per cycle.

A majority of cycles in the corpus started with Move 2, this finding is similar to that of Peng’s (1987), and Hopkins and Dudley-Evans (1988). It is possible that in particularly long texts such as theses, restating results would aid readers in following the reasoning process or the arguments of the writers. The high frequency of Move 2 at the beginning position and as a component of cycles indicates that thesis discussions tend to be relatively more factual than commentarial suggesting that students place a higher emphasis on dealing with the factual aspect than commentarial aspect of research.

The dominant use of short cycles in the thesis corpus is more likely to be a result of a combination of factors than a single one. Possible reasons include the restrictions imposed on the communicative functions of the thesis discussions by the

Mahidol thesis guidelines (see the Mahidol thesis guidelines quoted at the beginning of the section). The emphasis on reporting results which reflected by the high frequency of Move 2 is also a likely factor. Moreover, it appears that students may not be aware of all the functions typically occurred in this section. It is also likely that students do not have an adequate level of linguistic level to realize these functions.

The style prescribed by The Mahidol guidelines not only discourages long cycles but also obstructing the flow of commentary or arguments that thesis authors may try to make. For example, the guidelines states that the authors can ‘commenting on results’ by the use of ‘Move 4 – Step A B and C and then at the end of the discussion they may state the implications and/or applications of the study. Therefore, it is commonly found in the corpus that ‘Drawing pedagogical implications’ moves only occurred at the end and under a separate subheading of ‘Implications of the study’.

Thesis readers may find the use of short cycles in the discussions as too simple and ineffective to support their claims or arguments, apart from the readers’ notion that the rhetorical structure of the texts does not meet the expectations of discourse communities or their expert members. Further, the failure to thoroughly ‘comment’ on results may equal the failure in demonstrating the significance of their study

As indicated by the results of the study, specific changes concerning the boundaries of Move 4: ‘Reporting results’ which is confined to the first half of the discussions and of Move 7 – Step A: ‘Making suggestions’ and Step C: ‘Drawing pedagogical implications’ which are confined to the end of the discussions should be revised (See the quotation of the thesis guidelines in the previous section). It is because these 'restrictions' discourage the use of long cycles which disrupt the flow of the interpretations of results and the arguments of writers. Additional change concerns the limit of rhetorical functions that may occur in the discussions. Previous studies (for example, Hopkins and Dudley-Evans (1988); Yang and Allison (2003); Kanoksilapatham (2005)) have found that there are more rhetorical functions which conventionally occur in the discussions than those advised by the guidelines. The 'allowed' list of rhetorical functions in the guidelines should be revised in order to reflect actual practice.

Peacock (2002) has made a number of practical recommendations for teaching communicative moves and cycles. The recommendations are as follows:

1. Discuss with students what moves are, why they are necessary and what they do.

2. Inform students that awareness of discipline-specific move structure is very important.

3. Prepare a discipline-specific move structure model.

4. Prepare discussion sections from the target discipline. Swales (1990) and many others describe the necessity of using these as models. In our view this is essential.

5. For teaching move structure, discipline-specific discussion sections and the move structure model will act as models and input.

6. Provide students with a discussion section with all the moves marked.

7. Ask students to describe the function of all the marked moves.

8. Ask students to mark all the moves in another (unmarked) text.

9. Ask students to write a discussion section.

10. It is particularly important to teach NNS authors in all three sciences to make an appropriate number of move 6. *claim* and 7. *limitation* and not to over-use the move cycle 3 + 5 (*unexpected outcome* + *explanation*) [‘Reporting results’ + ‘Accounting for results’]; and to ensure that NNS authors in the humanities make an appropriate number of move 8. *recommendation* [‘Recommending further research’]. (Peacock, 2002, p.493)

5.5 Discussion of Findings Related to Research Question 4

The results of move analysis of both long and short discussions in the corpus were unexpected. Short discussions (D3 and D4) employed all or almost all of the functions generally found in RA discussion sections; whereas, longer ones (D6 and D9) did not. It seems then that this structural move analysis could not give a conclusive answer concerning the differences in length of the discussion section of MA theses because the analysis only dealt with the end products which were the texts

itself but it cannot account for other related factors such as the writing process, the revising process, the student writers and the thesis supervisors.

5.6 Discussion o Findings Related to Research Question 5

It can be tentatively stated that thesis writers possess a relatively inadequate level of research writing related lexical knowledge. Though the distinct linguistic features found in this corpus is generally congruent with previous studies (Brett, 1994; Dudley-Evans, 1994) as reported in the previous chapter – Section 4.4 Move and step identification. There were quite a few instances concerning the coding disagreements which stemmed from the writers' improper use of lexical signals.

Nevertheless, it is interesting to note that one of the linguistic features of Move 7 – Step C: Drawing pedagogical implications' and of Move 4 – Step B: 'Comparing results with literature' was identical, i.e., the use of citations. In D6, for example, its author included more than ten citations or references in his or her twenty-five Move 7 – Step C's. Though the use of citations is characteristic of Move 4 – Step B, both coders agreed that the use of citations in Move 4 – Step B was to compare or contrast the findings of a study with those of previous studies, that is, either a Move 2 or Move 3 has to be present; whereas, the use of citation in Move 7 – Step C was either to support the thesis writers' teaching suggestions or to, first, acknowledge, then, to paraphrase or summarize those previous research pedagogic suggestions.

Though Move 7 – Step C's consistently occurred throughout the corpus, there has been no mentioning of the use of citations in achieving this function or in aiding the identification of this step in the previous studies reviewed. The practice of including citations in 'drawing pedagogic implications' indicates that, apart from the fact that the students' areas of research are well-established and well-documented, the students were also aware and acknowledged those implications in previous studies in order to support their teaching suggestions.

5.7 Pedagogical Implications

The teaching of moves and cycles should focus on the benefits that the students will get instead of telling them that they have to follow the writing conventions of their disciplines. For example, in teaching the students how to write the discussion sections, introduce the concept of communicative move as a choice (or a move model as a set of choices) that the students can choose in writing up the section. It might also be a good idea to step back if the students find the concept too abstract to understand and tell the students that this type of writing is well-structured unlike other types of writing and approaches such as creative writing with process writing that may appear not to have any predictable structure.

In writing, students have to have a purpose or purposes. Likewise, in writing the discussion sections, these purposes that the student may partially aware of are the same as communicative moves. In the discussion sections, the main purpose is to discuss results. Those moves in a model are all the choices they can choose to achieve the purpose or purposes.

Based on the high use of Move 1, a number of teaching implications are drawn as follows: firstly, graduate students should be advised that the audiences for their theses are members of their thesis committee who are experts in their fields (Thompson, 2001). Therefore, the amount of background information should be kept to the minimum. Secondly, the use of metatexts, though distinctly typical in thesis writing, should be used appropriately as there are some instances of misuse. Students should regard the use of metatexts as binding contracts – once used; they are obligated to fulfill those promises.

Due to the high use of Move 2 Move 3 and short cycles, teaching implications and recommendations are as follows: firstly, students should select only a few of their most important findings to report and discuss. A step title that Kanoksilapatham (2005) used in her move model is ‘Stating selected findings’ of Move 13 ‘Consolidating results’ in the discussions sections. Both Hopkins and Dudley-Evans (1988) and Peacock (2002) also found that an RA discussion has two to four cycles. Secondly, students should also ‘comment’ on the results whether they are expected or unexpected. If the results are expected, then, the students are required to justify by comparing them with previous studies and explain. On the other hand, if the results

are unexpected, the students are, then, required to explain for the differences in finding and interpret the findings.

Based on the findings related to Move 4, there are certain suggestions to be made concerning the two main groups involved in the production of theses, namely, graduate students and thesis supervisors. First, our graduate students need to be more informed of the communicative purposes and functions of the Discussion section. The move presence and frequency results indicate that not only the students have an incomplete knowledge of the purposes of this section reflected by the prevalence of short cycles but they also have the difficulty using lexicogrammatical signals in realizing the communicative purposes of the section.

Therefore, it is suggested that graduate students need to be aware of the dual aspects of writing that deal with both fact and commentary which are unique to this section. It is recommended that students analyze a few published RAs that are most related to their research and reread their own Discussion drafts in order to compare and learn about the communicative purposes and take note of the linguistic realizations that published authors used to achieve those purposes.

Second, thesis advisors should assume less and intervene more. They could start by modifying and handing out a Discussion move and step checklist based on these genre-based research writing books: Weissberg, R., & Buker, S. (1990). *Writing up research: Experimental research report writing for students of English*. Englewood Cliffs, NJ: Prentice-Hall; Swales, J. M., & Feak, C. B. (1994). *Academic writing for graduate students: Essential tasks and skills*. Ann Arbor, MI: The University of Michigan Press; Swales, J. M., & Feak, C. B. (2003). *English in today's research world: A writing guide*. Ann Arbor, MI: The University of Michigan Press.

Ad-hoc thesis workshops which are organized by different departments are recommended to place a greater emphasis on helping students to understand the rhetorical aspect of research writing because theses workshops tend to only focus on research methodology. These workshops should be small and limited to the students who are currently writing up their research so that materials can come from the student works and writing related problems may be answered (See Swales and Feak, 1994 and 2003 for details).

Another recommendation for the Graduate school or departments that run postgraduate programs is to set up a research writing laboratory in order to help students who have problems related to the linguistic aspect of research writing. Its staff, not necessarily NS's nor being experts in the students' fields of study, should have the understanding of working with Thai graduate writers and the competence in research-writing-specific areas, including, "rhetorical notions (reader-based writing, directness), linguistic notions (syntactic and lexical variety), conventional notions (citation and quotation), and strategic notions (drafting and revising)" (Silva, 1996, pp. 360-361).

Next, in order to use Move 5: 'Summarizing the study' effectively, it is suggested that students should make use of not only the distinct lexical signals: 'The findings of this study provided us…' or 'This study has reported…' or 'The findings of the study show that…' but also pay attention to a high-level claim or a deduction or a conclusion which derives from a number of results that follows. For example, "The findings of this study show that the structure of empirical RAs in applied linguistics tends to be flexible towards the end, partly because rhetorical functions can overlap, but differ in emphasis across RA sections, and reveal similarities as well as differences in comparison to corresponding sections of RAs in other disciplines" (Yang & Allison, 2003, p. 381). In this example, notice the use of the expression 'The findings of the study show that', the authors, then, made a high-level claim based on a number of results – the results from the study of RA Results, Discussion, Conclusion and Pedagogic Implications sections and stated a claim that 'the structure of empirical RAs in applied linguistics tends to be flexible towards the end, partly because rhetorical functions can overlap, but differ in emphasis across RA sections'.

For Move 6: 'Evaluating the study' which occurred only 3 times in the corpus, it is suggested, then, that more examples of typical expressions of this move can be found in Swales and Feak (1994) p. 201-202. It should also be remembered that the use of this move in thesis discussion sections may not be encouraged. Students should, therefore, consult with their thesis supervisors.

For Move 7: ‘Deductions from the research’, distinct lexical signals of Step A: ‘Making suggestions’ and Step C: ‘Drawing pedagogical implications’ of Move 7: ‘Deductions from the research’ include ‘suggest’ ‘suggestions’ ‘recommend’ ‘recommendations’ and modals.

APPENDIX B
D1 BIBLIOGRAPHY AND THESIS ABSTRACT

Theppreeda, J. (1998). *An analysis of cohesion in English and Thai short stories: A comparative study*. Unpublished master's thesis, Mahidol University, Thailand.

This research is a study of cohesion in English and Thai short stories. The objective of the study is to explore natural characteristics in the use of cohesive devices and cohesive patterns in the two languages and establish similarities and differences in the use of cohesion in English and Thai short stories. The analysis is performed on three English sort stories and three Thai short stories, following the method of cohesion analysis proposed by Halliday and Hasan (1976). The cohesive devices being studied are references, substitution, ellipsis, conjunction, and lexical cohesion, as characterized by Halliday and Hasan.

The results show that both English and Thai short stories have a preference for reference and use substitution least, among the five kinds of cohesion. There are differences in the proportion of the instances of each kind of cohesion. In English short stories, reference is used with very high proportion in comparison with other kinds of cohesion, whereas in Thai short stories the use of reference is not much higher in proportion to other cohesive devices. Moreover, the use of cohesion in Thai short stories is more varied than in English short stories. The comparative study of linguistic features of the two languages reveals that differences in the use of some cohesive devices result from the differences in certain grammatical features between English and Thai, for instance, the omission of subject in Thai sentences, or the obligation to have an item preceding most common nouns in English.

APPENDIX C
D2 BIBLIOGRAPHY AND THESIS ABSTRACT

Kaneungpian, S. (2002). *A study of the main language features of English used by Thai recreational users of web boards*. Unpublished master's thesis, Mahidol University, Thailand.

This study investigated to what extent web board was an informal mode of communication, and whether there were any language features of Thai users that might lead to an unintelligible dialect.

The three hundred and two messages analyzed in the study were selected from two Thai web boards; *Yindii Forum* (172 messages) and *I-Love-English. Community* (130 messages) between January 4, 2000 and September 18, 2002. Each message contained at least 20 words and was purportedly written by Thais. The number of usernames who posted these messages was 150.

The results of the study showed that Thai recreational users of web boards seemed to treat them as an informal mode of communication, as "Hi" or "Hello", an informal style of salutation, was the most frequently used opening (56.3%). Concerning the style of closing, the most common device was no closing (55.9%). A variety of styles of salutation and closing also indicated the idiosyncrasies of the web board users. The carefree use of punctuation, the creativeness of abbreviations, smileys and acronyms or netcronyms, as well as the relaxation of standard written grammar could be taken as evidence to the informal mode of a web board. In addition, there were many language features that could break into mutually unintelligible dialect. Both Thinglish and English-Thai code-mixing were found. Thinglish could be seen through the production of 'two snakes and two fish' to mean 'to know a smattering of something'. Grandma and grandpa, as well as Thai words such as pa /pa/, loong /lung/, p' or p /pii/ and khun or khoon /khun/ were found to be used as first person terms of reference and to be used to address the others. Emotional noises, such as laughter, were represented, for example, by 555, hihi, and kak…kak…kak.

This study also revealed that social conversation was the most frequently used message type (70%) in *I-Love-English. Community*. As for *Yindii Forum*, reflective converstations commonly occurred (50%). It may be inferred that users participated in *I-Love-English. Community* for socialization, and users who participated in *Yindii Forum* liked to talk about language. In both cases, the development and use of particular styles has important implications for teachers of English in Thailand.

APPENDIX D

D3 BIBLIOGRAPHY AND THESIS ABSTRACT

Subphadoongchone, P. (2000). *Lexical guessing in a scientific context: A case of first-year Mahidol Science students*. Unpublished master's thesis, Mahidol University, Thailand.

The purposes of this study are 1) to investigate the first-year Mahidol science students' lexical guessing ability, 2) to examine the predictive power of each type o lexical guessing tests—a test of words in a modified context and a test of words in a natural context—on reading ability, 3) to compare the opinions towards vocabulary learning of students with high and low lexical guessing ability, and 4) to compare the degree of lexical guessing strategies used between the high and low lexical guessing ability students.

The subjects were 141 first-year science students selected from a population of 271 attending the Faculty of Science, Mahidol University, for the 1999 academic year.

The research instruments were 2 types of lexical guessing tests, a set of questionnaire asking the students about their opinions towards vocabulary learning and vocabulary guessing strategies used, and reading tests which were developed by the Department of Foreign Languages, Faculty of Science, Mahidol University.

The data were analyzed by means of descriptive statistics, Pearson's product moment and the t-test. The findings of the study were as follows:

1. The students' test mean scores obtained from the test of words in a modified context and that from the test of words in a natural context were 11.85 and 9.77 respectively.
2. The test of words in a modified context had a higher predictive power on reading ability than the test of words in a natural context. The correlation coefficient between the scores on the test of words a modified context and reading scores was .795, whereas that of the scores on the test of words in a natural context and reading scores was .511.

3. There was no statistically significant difference in the opinions towards vocabulary learning in terms of learning vocabulary by memorization and learning vocabulary in context between the high and low lexical guessing ability students.
4. There was no statistically significant difference in the degree of the use of lexical guessing strategies in terms of using wider context and using immediate context between the high and low lexical guessing ability students.

This study revealed that students need improvement in lexical guessing ability. Their major problems in guessing word meaning from context were derived from limited existing vocabulary knowledge and lack of grammatical knowledge. In addition, the test of words in a modified context has proved more effective for predicting the students' reading ability than the test of words in a natural context.

APPENDIX E
D4 BIBLIOGRAPHY AND THESIS ABSTRACT

Chomphuchart, N. (1998). *A case study of metacognitive strategies used by graduate science students at Mahidol University, Faculty of Science to understand English scientific texts*. Unpublished master's thesis, Mahidol University, Thailand.

This study investigates metacognitive strategies which non-native English speaking graduate students at Mahidol University used to understand scientific reading and explore how these strategies were used. The participants were four graduate students who come from different nations namely Tanzania, China, Indonesia and Thailand, both male and female. They were studying in the Department of Biology, Physiology and Applied Inorganic and Analytical chemistry. The study was conducted during the academic year of 1997.

Interviews and think-alouds were used as instruments to gather data. The participants were asked to read selected scientific texts and they were asked to think-aloud the metacognitive strategies during a two month period. Then, the information obtained was transcribed, analyzed and interpreted. The results reveal that:

1. The subjects employed a diversity of metacognitive strategies such as using prior knowledge, self-questioning, highlighting important information, rereading, skipping unimportant parts, using interest, comparison and imagining.
2. The subjects used strategies which are taught in the course SCLG: 131. These strategies were: using word formation, getting the meaning of words from contexts, prediction and note-taking.
3. The subjects performed specific metacognitive strategies such as setting purposes before reading, finding further information and making summaries.
4. The discrepancy of settings between the subjects affect the way they performed the metacognitive strategies.

There are also recommendations for further study.

1. The replication of this study could be conducted with other groups at the graduate level who have different background knowledge and fields of study.
2. A further study should be extended to study teachers. It might survey teacher's metacognitive strategies while encountering scientific texts.

APPENDIX F
D5 BIBLIOGRAPHY AND THESIS ABSTRACT

Suwandecha, S. (2003). *A course syllabus evaluation of Foundation English Courses (I and II) at Sripatum University, Chonburi Campus.* Unpublished master's thesis, Mahidol University, Thailand.

The purpose of this research was to investigate the effectiveness of the Foundation English Courses (I and II) in terms of three major elements and their sub-elements of the course syllabi: goals and objectives, teaching and learning process, and student assessment and the course effectiveness. The subjects were 132 second-year students and five English teachers who studied and taught, respectively, the Foundation English Courses (I and II) in the 2001 academic year. Data were collected by two sets of questionnaires for students and teachers. Statistical devices used were Cronbach's Coefficient Alpha, arithmetic mean, frequency distribution, paired *t*-test and one-way analysis of variance (ANOVA)

Results revealed that most students had a "high" opinion of the sub-element of "teachers" in the actual situation. In the expected situation, most of them had a "high" opinion on the main element "goals and objectives". Regarding the overall teachers' opinions on the actual and expected situations, all of the teachers had a "high" opinion on the sub-element "teaching methods and activities".

Results from the paired *t*-test showed that the mean scores of the students' opinions on all elements in both actual and expected situations were of statistically significant differences at $p < .05$. Concerning the teachers' opinions, the mean scores of the teachers' opinions in both actual and expected situations were of significantly significant differences at $p < .05$ on certain sub-elements.

Results from the one-way analysis of variance (ANOVA) showed that there were statistically significant differences at $p < .05$ among the mean scores of the opinions of the students from various backgrounds on certain syllabus elements.

APPENDIX G
D6 BIBLIOGRAPHY AND THESIS ABSTRACT

Mingsakoon, P. (2002). *A comparative study of vocabulary learning strategies between Mattayom Suksa Six students in Science and Arts programs at Hunkhapittayakom School, Chainat Province*. Unpublished master's thesis, Mahidol University, Thailand.

This study aims to compare vocabulary learning strategies used by Mattayom Suksa Six students in the 'science' and 'arts' programs of Hunkhapittayakom School, Hunkha District, Chainat Province in the academic year 2001.

The population and sample of the study was 129 Mattayom Suksa Six students, from two classes in the 'science' program (78 students) and two classes in the 'arts' program (51 students) at the School. Both groups were non-native speakers of English who had taken English from Pratom Suksa Five (academic year 1994). The students in each program were classified into three groups (Top, Middle and Low) based on the scores in the Vocabulary Test and the Quick Placement Test. This study used a questionnaire, an interview and think-aloud to find out what vocabulary learning strategies the students in each program and each group use.

Based on the questionnaire and the interview data, it was found that the Science Students liked using an English-Thai dictionary to look up the meanings of words, seeing their classmates as a vocabulary knowledge resource to learn English words, learning words through traffic signs, product labels and computer games. From the think-aloud data, some good Science students used their background knowledge and context clues to identify the meanings of words in the texts. However, the Arts Students said in the questionnaire and the interview that they knew the meaning of a word because their friends had told them. They liked working in groups and listening to English songs in order to learn English vocabulary. The think-aloud data demonstrated that Arts Students preferred using an English-Thai dictionary and often ignored difficult words.

In conclusion, it was found that some opinions about vocabulary learning strategies of Science and Arts Students based on the questionnaire were significantly different at the Sig. (Two-tailed) 0.05. Based on the interview and the think-aloud, all students should be trained to used effective vocabulary learning strategies, such as using context clues and dictionaries when they learn English for every day life.

APPENDIX H
D7 BIBLIOGRAPHY AND THESIS ABSTRACT

Ratanakul, S. (1998). *An experimental study of the use of the reciprocal teaching technique in teaching English reading comprehension*. Unpublished master's thesis, Mahidol University, Thailand.

The purpose of this research was to investigate and compare two teaching techniques, the translation technique and the reciprocal teaching technique, to investigate their effectiveness in improving English reading comprehension and English reading achievement of first-year Nursing students at the Faculty of Nursing, Mahidol University.

The subjects of this study were 60 first-year Nursing students in the 1997 academic year at the Faculty of Nursing, Mahidol University. The subjects were divided into 2 groups: the control and the experimental groups. Each group had 30 students. The control group was taught by the translation technique while the experimental group was taught by the reciprocal teaching technique. The research instruments employed in this study were an English achievement test and two different questionnaires, one for each group. The English achievement test was created by the researcher to evaluate English reading achievement in both groups of subjects. The scores obtained from the pre-test and the post-test of the control and the experimental groups were analyzed to find out the effectiveness of the two teaching techniques. The rating-scale questionnaires were also given to students in order to investigate their attitudes toward the teaching technique they received and their suggestions. The findings from the study indicate that:

1. There was a significant improvement between scores gained from the reading pre-test and the reading post-test for students in the control group taught by the use of the translation technique.
2. The mean scores on the post-test of students in the experimental group taught by the reciprocal technique were significantly higher than the scores on the pre-test.

3. The post-test scores obtained by students in the experimental group taught by the reciprocal teaching technique were significantly higher than the post-test scores obtained by students in the control group taught by the translation technique.
4. The mean scores of both high-reading ability students and low-reading ability students in the experimental group were significantly higher than the mean scores on the pre-test of high and low-reading students in the control group.

The rating-scale questionnaires revealed that students in the experimental group showed more positive attitudes toward the reciprocal teaching technique than those in the control group showed toward the translation technique.

APPENDIX I
D8 BIBLIOGRAPHY AND THESIS ABSTRACT

Boonchaiyo, M. (1998). *The effect of negotiation of learning activities in the English class on M.4 students' motivation to learn English.* Unpublished master's thesis, Mahidol University, Thailand.

The purpose of this research was to study the effect of negotiation of learning activities on the motivation of M. 4 students at Kud Khon Kaen Witthayakom School.

The subjects of this study were 45 M. 4 students majoring in the Science programme at Kud Khon Kaen Witthayakom School in Khon Kaen province. There were 20 girls and boys in the class. This research was a case study. It was conducted during the second semester from November 1996 to March 1997. This group of students negotiated learning activities with their teacher in English class. The data of the study was collected mainly from the students' diaries supplemented by data from a teacher's diary, a colleague teacher's observation and a questionnaire.

The findings from the study indicate that negotiation of learning activities increases the students' motivation in learning English. It is also revealed that the students have positive attitudes towards English. Therefore, negotiation of learning activities is an effective alternative to enhance students' motivation in learning English.

APPENDIX J
D9 BIBLIOGRAPHY AND THESIS ABSTRACT

Permtanjit, G. (2003). *Analysis of Thai Airways International flight attendants' language difficulties to provide practical suggestions for language training.* Unpublished master's thesis, Mahidol University, Thailand.

The objectives of this study were 1) to investigate language problems and difficulties in terms of language functions and English usage which the Thai Airways flight attendants encountered while working during flights, 2) to identify particular needs regarding job-related language skills and knowledge which are essential for flight attendants' jobs, and 3) to provide practical suggestions for the Basic English Course for Flight Attendants. The subjects were 105 Thai Airways flight attendants who had worked for a maximum of one year. These subjects attended the basic training course including a five-day basic English course in the year 2002. The instruments employed in this study were a questionnaire and semi-structure interviews. The statistical devices employed were percentage and frequency distribution arithmetic mean, and standard deviation. The findings from the study revealed that:

1. Lack of familiarity with passengers' accents and the flight attendants' own accent and pronunciation were two major areas of difficulty which the flight attendants had encountered while working.
2. Speaking and listening skills were the two most important language skills for the flight attendants. Also, knowledge of job-related vocabulary and cultural differences were also recognized as essential for their in-flight work.
3. To increase effectiveness of the English courses, more job-related role-playing and pronunciation practice should be provided in the course. Additional English material such as leaflets about polite language and in-flight vocabulary should be used as supplements to the core handbook. In addition, course should be taught in teams of two teachers, one a native English speaker and the other a native Thai speaker who has experience as a flight attendant.

According to these findings, the English courses organized by Thai Airways should emphasize varieties of both standard and non-standard English and pronunciation practice. Also, to improve the English proficiency of the flight attendants, additional courses should be held so that the flight attendants can practice English on a regular basis.

APPENDIX K
D10 BIBLIOGRAPHY AND THESIS ABSTRACT

Udomkit, J. (2003). *Communication anxiety for the Basic Signal officers in the English classroom at The Signal School.* Unpublished master's thesis, Mahidol University, Thailand.

A great deal of current theory and research stresses the importance of providing learners with opportunities for real communication in second or foreign language acquisition. The English syllabus of the Signal School, one of the military schools of the Royal Thai Army, reflects the influence of such thinking. This study aims to investigate the following issues: first, whether or not the provision of opportunities of meaningful English communication, as advocated in the syllabus, is manifested in the Signal School's English classroom; second, what the level of learners' confidence is when communicating in English in class; and third, what factors account for the learners' different confidence levels when communicating in English in class. Data was collected in the forms of teacher and student diaries, interviews, COLT observation scheme and questionnaire.

The results of this study indicate, first, that the students had little opportunity for participating in classroom communication. Of the eleven requirements for communicative curriculum design and implementation, the role o the students, the syllabus and methodology, and class size were significant problems. Second, a majority of the learners was not confident when communicating in English in the classroom. Finally, eight factors contributing to learners' confidence levels when communicating in English in the classroom were identified. The researcher found that interpersonal evaluation, classroom activities and methods, and self-esteem were particularly important. Risk-taking, motivation and attitudes, tolerance of ambiguity, beliefs, and instructor-learner interaction were less evident.

APPENDIX L

D1 CODING RESULTS

D1	Coder One	Coder Two
CHAPTER V COMPARATIVE STUDY		
In this chapter the quantitative results of the cohesion analysis in English and Thai short stories are used to identify similarities and differences in the use of cohesion between the two languages. In the first section, the instances of each kind of cohesion occurring in English and Thai short stories are compared to present a preference for a particular cohesive device and the frequency of the usage of each kind of cohesion in both languages. The second section consists of a comparison of the similarities and differences in the linguistic nature of the use of each kind of cohesion and its subcategories in the two languages, as found in the analysis of texts, including the cohesive pattern created by each kind of cohesion. Finally, in the third section other findings concerning the use of different kinds of cohesion and the structural nature of each language are presented.	1 “ “ “ “ “ “ “ “ “ “ “ “	1 “ “ “ “ “ “ “ “ “ “ “ “
The examples given in this chapter are extracted from the analyzed short stories. The number of each sentence in the example is the number according to the full text. Only the cohesive device being discussed is underlined with the type and distance number of the tie stated in the bracket below. For the Thai texts, there is an English translation of every sentence. The translation is intended to maintain the word order of the original text and to make the sentence comprehensible at the same time. Therefore, the English translation may not be grammatically correct according to the grammar of English.	1 “ “ “ “ “ “ “ “ “ “	1 “ “ “ “ “ “ “ “ “ “
5.1 The Instances of each kind of cohesion in English and Thai Short Stories		
The results of the frequency count of the instances of each kind of cohesion in English and Thai short stories are compared by means of a bar chart in Figure 3.	1 “ “	1 “ “
Figure 3 The percentage of the total instances of each kind of cohesion in English and Thai short stories		

D1 (continued)	Coder One	Coder Two
The study of text reveals that the major difference in the use of personal reference in English and Thai short stories comes from more frequent use of possessive adjectives - a form of personal reference, in English. It may result from the linguistic nature of English: every common noun is always preceded by an article, or a demonstrative, or a genitive, which is not an obligation in Thai. The following example illustrates how often possessive adjectives are used in English sentences in comparison with Thai sentences. Example 3 The use of possessive form in English sentences and in Thai sentences Example 3.1 98.) He had such a white bit to his eyes, such ready smiles and she liked his lips. (From The Winning Way) 17.) ซอกฟันของเขาถึงได้เหลืองเขรอะพอๆกับครบขี้ไคลที่เกาะอยู่ตามซอกคอ So the teeth gap of he is so yellowish dirty as same as scurf cast of skin which fixed around crack of neck. (From The Brother) Example 3.2 12.) With his boots planted in the loose earth and his small, round, wrinkled face as still as the rock in the head-rig, he seemed to blend with the bleak landscape - a squat imitation of the slender monolith on the moor behind him. 13.) His clumsy fingers, curled round the shaft of the shovel, twitched spasmodically as he blundered through the threads of his thoughts like a blunt shuttle and his lips quivered as the fabric formed words in his mind. 14.) He was thinking of the case under his bed and the key concealed in the toe of his shoe. (From The Butterfly) 159.) เขาทิ้งก้นบุหรี่ลงบนพื้น He dropped cigarette stub on floor. 160.) ขยี้ด้วยรองเท้าฟองน้ำสึกบาง Crushed with worn-out, thin rubber sandal 161.) แล้วนั่งถูศีรษะเล่น Then sit rubbing head	2 “ “ 4C “ “ 1 “	3 “ “ 4C “ “ 1 “

D1 (continued)	Coder One	Coder Two
162.) เสียงเส้นผมแข็งสั้นเสียดสีกับฝ่ามือดังอยู่แกรกกราก Noise of short rough hair grazing with palm sounded scraping. (From The Brother)		
The above examples reveal that whereas English tends to put a preceding item with a noun, Thai is not obliged to have a preceding item. The examples illustrate how more often personal reference appears in an English sentence in comparison with a Thai sentence, resulting from this grammatical difference.	4A “ 1 “ “	2 “ 3 “ “
In the aspect of cohesive pattern, personal reference used in English and Thai short stories provides a similar pattern. It is used to create both immediate and non-immediate ties. The long distance non-immediate ties are mostly mediated-remote ties with a very high number of mediated ties in both languages. Hence, personal reference in English and Thai short stories tends to generate cohesive force through a chain of cohesive ties to cover a wide area of text. Nevertheless, in English short stories the cohesive force tends to be generated through the same kind of cohesion but in Thai short stories the cohesive property may be constructed upon different kinds of cohesion, as shown in the following example:	3 “ “ “ “ “ “ “ “ “ “	3 3 3 “ 4A “ “ 4A “ “ 2 “
Example 4 The cohesive pattern created by personal reference in English and Thai short stories 177.) Donald Alec continues his circuit of the streets, never thinking that the insult was directed at him. 178.) Even when the boys fell in behind <u>him</u>, making lewd *(Rl-O)* suggestions, <u>he</u> was unaware of their hostility. *(Rl-O)* 179) It did not occur to <u>him</u> that <u>he</u> could be harm in <u>his</u> own village. *(Rl-Ml) (Rl-Ml) (Rl-Ml)* 180.) <u>He</u> was sailing in the calm sea of <u>his</u> own freedom, feeling the *(R1-M2) (R1-M2)* long hair move across <u>his</u> face as <u>he</u> walked and the soft dress *(R1-M2) (R1-M2)* slide across <u>his</u> knees. *(R1-M2)* (From The Butterfly)		

D1 (continued)	Coder One	Coder Two
238.) เขานึกถึงทะเลอันดามัน เรือพม่า และซองโทรเลขจากแม่ He thought of the Andaman sea, Burmese ship, and the *(Rl -M99+N88)* telegraph from mother. 239.) นึกถึงน้องสาวกับครอบครัว Thought of sister and family. *(E2-M97+N88)0* 240.) นึกถึงพ่อและตัวเขาเองที่ดูเหมือนว่าเรือทั้งหลายเหล่านี้ได้จมลงแล้ว Thought of father and himself who were like all these ships, had *(E2-M98+N88) (R1-M98+N88)* sunken already. 241.) และที่สุดหลานสาวตัวน้อยๆ ของเขาที่ทำให้เขานึกถึง "ไต๋ก๋ง" ยุคใหม่ กับเรือชีวิตที่กำลังแล่นอยู่บนบกของหล่อน And, finally, his little niece who reminded him of modern day *(R1-M99+N88) (R1-M99+N88)* 'captain' with her ship of life which was sailing on earth. (From Weeping Sea, Sorrow Wind)		
The example from an English short story shows that the same kind of cohesion - personal reference, is used again and again in the cohesive chain referring back to a character. On the other hand, in the example from a Thai short story, the cohesive device which is involved in the cohesive chain of the same presupposed item is not only personal reference, there is also verbal ellipsis.	3 “ 3 “ “ “	2 “ 4C “ “ “
5.2.1.2 The Use of Demonstrative Reference in English and Thai Short Stories		
The use of demonstrative adjectives in English and Thai is fairly similar. The demonstrative adjectives: 'this', 'that', 'these', and 'those', are used in the same way and provide the same function as demonstrative reference in English and Thai short stories.	3 “ “ “	3 3 “ “

D1 (continued)	Coder One	Coder Two
The major difference in the use of demonstrative reference is in the use of the definite article 'the' in English which does not exist in Thai. The definite article 'the' is often used to function as a demonstrative reference in English. It is the demonstrative reference which is found most in the three short stories being analyzed. The following example shows how the definite article 'the' is used as demonstrative reference. Example 6 The use of the definite article 'the' as demonstrative reference in an English short story 5.) Donald Alec finished the tile drains in the laird's meadow. 6.) With his legs astride the deep slit in the soil, he cleared the last few inches at <u>the bottom</u>, pushing the long-handled shovel ahead *(R2-0)* of him through the earth. 7.) Its narrow blade slid sensuously into <u>the clay</u> leaving *(R2-0)* a round channel in which <u>the drain tiles</u> would fit neatly. *(R2-M1)* 8.) He worked mechanically, not thinking about <u>the drains</u> but *(R2-M2)* planning his evening. 11.) He reached the end of <u>the drain</u> and stood for a moment, *(R2-M2+N2)* gazing over the stone dyke at the hard slate sea and basalt sky. 12.) With his boots planted in <u>the loose earth</u> and his small, round, *(R2 -Ml +N4)* wrinkled face as still as the rock in the head-rig, he seemed to blend with the bleak landscape - a squat imitation of the slender monolith on the moor behind him. (From The Butterfly)	2 “ 1 2 1 “ “	3 “ 1 3 1 “ “

D1 (continued)	Coder One	Coder Two
The example presents the use of 'the' to define words which are related to a foregoing item, 'the bottom' in sentence 6.) relates to 'the tile drains' in sentence 5.) as well as 'the drain' in sentence 11.). In the same way, *'the clay'* in sentence 7.) and *'the loose earth'* in sentence 12.) are related to *'the earth'* in sentence 6.).	2 " " " "	2 " " " "
In Thai, demonstrative reference is only created by the use of demonstrative adjectives or, in some cases, a classifier of the noun is added. For instance, ผัดไก่นี่ *(this fried chicken)* = fried chicken + this, "ซองโทรเลขฉบับนั้น *(that envelope of telegraph)* =envelope (of) telegraph + piece + that. Moreover, as mentioned in 5.2.1.1, Thai is not obliged to have an item preceding a noun like English. A noun, therefore, may appear on its own or with a defining item. The following example illustrates the use of demonstrative reference in Thai along with the occurrence of the same item without any defining element.	1 " 2 " " 1 " 1 " " "	1 " 2 " 1 1 " 1 " " "
Example 7 The instance of demonstrative reference in a Thai short story 2.) เมื่อหันมาก็พบว่าลำแขนเล็กๆ นั้นยื่นซองโทรเลข When (he) turn, (he) found that small arm stretching out, giving envelope of telegraph. 8.) เขาถอนหายใจเฮือกใหญ่เมื่อรู้ข้อความในซองโทรเลข He breathed out a big heap of sigh when knew message in envelope of telegraph. 12.) เขาพับซองโทรเลขยัดลงในกระเป๋าเสื้อ He folded envelope of telegraph, stuffed into shirt pocket.		

D1 (continued)	Coder One	Coder Two
15.) ระหว่างที่เรือแหวกคลื่นท้องทะเลอันดามันที่เขียวดังมรกต ลัดเลาะเกาะใหญ่น้อยอยู่ในยามบ่ายของวันที่ปราศจากลางสังหรณ์ใดๆ ซองโทรเลขฉบับนั้นทำให้เขานึกถึงแม่ผู้ชราและหวนนึกถึงน้องคนเดียวที่เขาจำได้ว่าเธอลืมตาดูโลกในวันที่ทะเลหน้าบ้านทั้งผืนนิ่งเป็นแผ่นกระจก While the boat was sailing in the wave of Andaman sea which is green like emerald, sailing along big and small islands in afternoon of the day of which there was no sign of bad luck , that envelope of telegraph reminded him of elderly mother and recalled the only sister who,, he remembered, was born on the day when the whole sea in front of the house was as still as a mirror. (From Weeping Sea, Sorrow Wind)		
From the example, the word ซองโทรเลข *(envelope of telegraph)* is used again in sentence 8.) and sentence 12.) without any defining element. The same item becomes demonstrative reference in sentence 15.) when the demonstrative adjective 'that' is added to the item. It is likely that in Thai short stories, the presence of a noun is enough to provide cohesive force between related items, whereas in English short stories a defining item is needed. This difference leads to the difference in the instance of demonstrative reference in English and Thai short stories as shown in Figure 4.	2 “ “ “ 4A “ 2 “ “	2 2 “ “ 4D “ 2 “ “
The cohesive pattern created by demonstrative reference in English and Thai short stories is similar in the long distance ties. Both languages have the cohesive force generated through a cohesive chain of the same presupposed item. In addition, there are instances of remote tie with very long distance found in English and Thai short stories. Therefore, demonstrative reference creates a close cohesive pattern with occasional occurrence of loose pattern in both English and Thai short stories. Nevertheless, the result of the frequency count of the distance number reveals that there are more instances of immediate ties in Thai short stories (32.97% of the total ties, whereas it is 20.77% of the total ties in English short stories). Hence Thai writers tend to use demonstrative reference to connect a sentence to the next sentence more than English writers.	3 2 “ “ “ 3 “ “ “ “ 4D “	3 3 “ “ “ 4A “ 3 “ “ “ 4D “

D1 (continued)	Coder One	Coder Two
5.2.1.3 The Use of Comparative Reference in English and Thai Short Stories		
Comparative reference in English and Thai short stories is similar in grammatical form. In English, the comparative reference may consist of the adjective of comparison or the adverb of comparison, for instance, 'another clod', 'the same expression'. In Thai, word order may be different but the basic grammatical element is similar to the comparative in English. For example, อีกสามปี *{other three years)* = other+three years, สายใยเส้นอื่นๆ *(other connection)* = line (of) connection + line + other.	4A “ “ “ “ 2 “ “ “ “	1 “ “ “ “ “ “ “ “
The instance of comparative reference in Thai short stories is of very low frequency (0.23 % of the total ties). More information is needed to compare the cohesive pattern created by comparative reference in English and Thai short stories.	2 6A “ “	3 6A “ “
The similarities and differences in the use of reference in English and Thai short stories can be summarized as follows: 1. There are differences in the use of pronoun and grammatical form between English and Thai, but the differences do not cause major differences in the use of personal reference in English and Thai short stories. 2. English short stories tend to use personal reference more often than Thai short stories because of the obligation to have an item preceding a noun in English grammar. 3. In English short stories, the definite article 'the', which does not exist in Thai, is often used to create demonstrative reference. 4. The use of comparative reference in English and Thai short stories is similar. 5. Cohesive pattern created by reference is mostly the same in English and Thai short stories. Nevertheless, Thai short stories tend to have more instances of immediate ties created by demonstrative reference than English short stories.	3 “ “ “ “ “ “ “ “ “ “ “ “ “ “ “ “ “ “ “	3 “ “ “ “ “ “ “ “ “ “ “ “ “ “ “ “ “ “

D1 (continued)	Coder One	Coder Two
5.2.2 The Use of Substitution in English and Thai Short Stories		
The instance of substitution in English and Thai short stories is of very low frequency. In comparison, there are more instances of every kind of substitution in Thai short stories than in English short stories. The instances of each kind of substitution in English and Thai short stories are compared as shown in Figure 5.	2 “ “ 1 “	3 3 “ 1 “
Figure 5 The percentage of the total instances of each type of substitution in English and Thai short stories		
There is not a single instance of nominal substitution and verbal substitution in the three English short stories. There are few instances of these cohesive devices in the three Thai short stories. The study of text explains these differences in some aspects.	2 “ “ “	3 3 3 “
5.2.2.1 The Use of Nominal Substitution in Thai Short Stories		
According to Halliday and Hasan (1976 : 334), the items which are used as nominal substitution in English are 'one', 'ones', 'the same', and 'so'. The analysis of Thai text reveals that Thai writers use more varied items as nominal substitution. Some of the items have a literal meaning like other kinds of cohesion but function as nominal substitution. The following example presents the use of nominal substitution in a Thai short story. In the English translation, however, the substitutive item may not maintain the substitutive function as it does in Thai.	1 “ 2 “ “ “ 6C “ “	1 “ 3 3 “ 1 1 “ “
Example 8 The use of nominal substitution in a Thai short story 157.) เที่ยวเร่รับจ้างโรงแรมหรูแห่งหนึ่งขายของที่ระลึก อย่างพวงกุญแจ ไม้แกะรูปย่อของเรือฉลอมเรือตังแก เรือโล้ และ ฉลามร้าย Wonder around <u>working for a luxury hotel selling souvenirs like keyholder, wooden craft of model boats and scary shark.</u> 158.) หนูก็ทำอะไรๆ ช่วยตัวเองอย่างที่ลุงเห็นนี่แหละ Then I do <u>so and so</u> to help myself as you see. (From Weeping Sea, Sorrow Wind)		
The substitutive item อะไรๆ, literally means '*what-what'* substitutes for the noun phrase 'working for a luxury hotel...'.	4C “	2 “

D1 (continued)	Coder One	Coder Two
The literal meaning of the item is not the same as the meaning of nominal substitution in English but it can substitute for the foregoing noun.	4C “ “	4A “ “
5.2.2.2 The Use of verbal Substitution in Thai Short Stories		
Verbal substitution in Thai short stories is the word 'ทำ *(do)'* which is the same as one of the verbal substitutions in English, as listed by Halliday and Hasan (1976 : 334). Nevertheless, it is noteworthy that the instances of 'do' functioning as verbal substitution in Thai short stories are mainly a substitution for the verbs which relate to an activity, whereas in English, referring to Halliday and Hasan (1976 : 112), the verb 'do' is usually used as a verbal substitution for any verb. Furthermore, there are several different linguistic forms concerning the use of verb between English and Thai, for instance, modal verbs, the derivation of verb according to tense, or verb complements. Since the instance found in this study is of very low frequency, more information is needed to find out about the difference in the use of verbal substitution between the two languages. The following example presents how the word 'do' functions as a verbal substitution in Thai.	4B “ 4B “ “ “ “ 4C “ “ 6A “ “ 1 “	1 “ 4B “ “ “ “ 1 “ “ 6A “ “ 1 “
Example 9 The use of verbal substitution in a Thai short story 214.) ถ้าชวดตายชวดอยากให้มีงานใหญ่หรืองานเล็ก If you die, you want to <u>have big or small funeral.</u> 221.) แต่ฉันเองคิดว่าทำใหญ่คงดีนะ But I, myself, think <u>do</u> big may be good. (From The Price of Grandma)		
The word 'do' in sentence 221.) substitutes for 'have funeral' which is , in other words, the activity of setting up a funeral ritual, according to the context.	2 “ “	2 “ “

D1 (continued)	Coder One	Coder Two
5.2.2.3 The Use of Clausal Substitution in English and Thai Short Stories		
In the few instances of casual substitution found in three English short stories, the cohesive item is 'so'. The clausal substitutions found in Thai short stories are varied. Some of the items can function as other kinds of cohesion, depending on the context. For example, งั้น (means either *thus, such,* or *so),* งี้ (means either *so* ,or *this).* Hence Thai tends to have more alternatives for clausal substitution item. The following example presents the use of clausal substitute 'so' in English and Thai short stories.	2 2 “ “ “ 4A 1 “	2 3 3 2 “ 3 1 “
Example 10 The use of clausal substitution in English and Thai short stories. 10.) <u>The photograph of Lauren Bacall and Robert Taylor had gone too.</u> 11.) <u>So</u> had most of Lucy's filmstar collection which she kept in a shoebox , in a wardrobe. (From 'Night in Paris') 50.) จะให้ฉันยืนสั่งงานและคอยดุพี่เหมือนคนงานอื่นๆ งั้นรึ (you) <u>Want me to stand ordering and nagging you like other workers,</u> is that it?" 51.) ก็งั้นสิ "<u>That's it</u>. (From The Brother)		
In the example of the Thai text, sentence 57.) responds to the emphasizing question at the end of sentence 56). The English translation of 'งั้น' as 'that's it' is not a clausal substitution by literal meaning. But considering that the phrase substitutes for the whole phrase of sentence 56), it functions as clausal substitution, like 'so'.	4C “ “ “ “ “	2 1 “ 2 “ “

D1 (continued)	Coder One	Coder Two
Despite the low frequency of the instance of clausal substitution, the cohesive device is found most as an immediate tie in both English and Thai short stories. However, more information is needed to support this finding.	4A “ 6A “	3 “ 6A “
The use of substitution in English and Thai still needs further study to define similarities and differences. As for this study, the text analysis reveals that Thai tends to have more alternatives of substitution items than English. More study in the difference of grammatical form or other linguistic natures which may affect the use of substitution in the two languages is needed.	7B 4A “ 7B “ “	6A 3 “ 6A “ “
5.2.3 The Use of Ellipsis in English and Thai Short Stories		
The instances of nominal ellipsis and clausal ellipsis in English and Thai short stories are similar. There is a difference in the instances of verbal ellipsis, which are much more frequent in Thai short stories as shown in Figure 6.	2 “ “ “	3 3 “ 1
Figure 6 The percentage of the total instances of each kind of ellipsis in English and Thai short stories		
In the process of text analysis, the differences in the use of ellipsis in English and Thai short stories result in the same direction as the instance of tie : slightly different in the use of nominal ellipsis and clausal ellipsis, and very different in the use of verbal ellipsis.	3 “ “ “	3 “ “ “
5.2.3.1 The Use of Nominal Ellipsis in English and Thai Short Stories		
The use of nominal ellipsis in English and Thai short stories is similar. A difference is found only in the instance of some nominal elliptic items which have different grammatical forms in English and Thai. For example, in Thai the instance of nominal ellipsis in which a possessive form is promoted to be a head noun is only found in an on-going speech event, as shown in the following example.	2 “ “ 2 “ “ “	3 3 “ 3 “ 1 “

D1 (continued)	Coder One	Coder Two
Example 11 The use of nominal ellipsis in Thai short stories Example 11.1 151.) คือว่าที่มานี่ฉันอยากปรึกษาเรื่องขายที่ดิน The reason for coming here is I'd like to consult about selling the <u>land</u>. 160.) ของกูเองบอกขายตั้งนานแล้วยังขายไม่ได้เลย <u>Of myself</u> have been on sale for a long time, still can't sell yet. (From The Price of Grandma) Example 11.2 88.) แกน่าจะหาปฏิทินมาแขวนไว้บ้างนะ You should find a <u>calendar</u> to hang here. 91.) หรือแกยังไม่เคยเห็นของนังนั่น Or you've never seen <u>of that woman</u> yet. (From The Brother) In the above examples, the foregoing nouns: 'land' in Example 11.1 and 'calendar' in Example 11.2, are omitted in the following text. The possessive form 'of + noun' are promoted as a main noun. In the three Thai short stories, this particular form of nominal ellipsis is only found in the speech event. As for other forms of nominal ellipsis, they are found in any communicative mode either descriptive or conversation, as well as the occurrence in English short stories.	2 “ “ 4A “ “ “ “	2 “ 2 “ 3 “ “ “

D1 (continued)	Coder One	Coder Two
The following example shows the use of nominal ellipsis in English and Thai short stories. Example 12 The use of nominal ellipsis in English and Thai short stories 119.) The right hand still clenched some of <u>the seed corn</u>. 120.) <u>A few grains</u> were embedded in the mud on his boots but the <u>rest</u> lay in a heap across his chest, spilled from the sowing sheet. (From The Butterfly) 4.) That was <u>her first mistake</u>. 5.) <u>Her second</u> was standing it on the dressing table next to the glossy postcard photographs of her filmstar favorites, Lauren Bacall and Robert Taylor. (From 'Night in Paris') 35.) คนงานบางกลุ่มกำลังโยนถึงปูนส่งต่อกันไปอย่างคล่องแคล่ว <u>Some groups of workers</u> were throwing cement buckets, handing over to each other expertly. 36.) บางคนกำลังปีนป่ายนั่งร้านไม้ไผ่ ขณะอีกหลายคนกระจัดกระจายกันนั่งผูกเหล็กอยู่ทั่วบริเวณงาน <u>Some</u> were climbing up a bamboo scaffolding while <u>many others</u> were scatteringly sitting, tying iron bars all over the work area. (From The Brother)	1 “	1 “
It is noteworthy that in Thai, the quantitative modifier is always used with a classifier. For example, รถสามคัน *(three cars)* — car+ three+ classifier of car, คนบางคน *(some person)* = person + some + person, etc. The noun phrase คนงานบางกลุ่ม *(some groups of workers)* in the above Thai example can be translated word for word as 'workers some groups' . The word บางคน *(some person)'* in the following sentence is connected to ' some groups of workers' and equals 'some workers' rather than 'someone' which is an English literal meaning of 'บางคน'. Therefore, the item functions as nominal ellipsis - some, of which the main noun - workers, is omitted.	2 “ “ “ “ “ 2 “ “ “ “ 4C “ “	3 2 “ “ “ “ “ “ “ “ 3 “ “

D1 (continued)	Coder One	Coder Two
5.2.3.2 The Use of Verbal Ellipsis in English and Thai Short Stories.		
As shown in Figure 6, the instance of verbal ellipsis in English short stories is of lower frequency than the instance in Thai short stories. The study of text results in the same conclusion stated in Pongsri Lekhawatana's *A Contrastive Study of English and Thai* (1969:55) : "the subject is obligatory in English sentences, whereas the subject is often deleted in Thai sentences'. In other words, Thai tends to omit the operator of the verbal group more than English. In English short stories, verbal ellipsis is always an operator ellipsis, and mostly found in a speech event. The following example illustrates the instance of verbal ellipsis in an English short story.	2 “ 4B “ “ “ “ “ 1 “	2 “ 4B “ “ “ “ “ 2 “
Example 12 The use of verbal ellipsis in an English short story 72.) "Look at this, the label's been cut off it." 119.) "Sing for me." 157.) "Don't be dirty." (From The Winning Way)		
The three sentences in the above example illustrate operator ellipsis in verbal groups. All the sentences occur in speech events, on the basis that the people involved in the conversation can recognize the omitted item.	1 2 “ “	2 1 “ “
As for Thai short stories, the instance of verbal ellipsis, both operator and lexical ellipsis, is of high frequency. The elliptic ties are found in every kind of text as shown in the following examples	2 “ “	1 1 “
Example 13 The use of verbal ellipsis in Thai short stories 70.) นานเกือบสองปีที่วันดีกับสีทองไม่ได้กลับมาเยี่ยมบ้าน So long almost two years that Wandee and Sithong <u>did not come back home.</u> 71.) แต่มาครั้งนี้ดูผิดไป But <u>came</u> this time looked different. (From The Price of Grandma)		

D1 (continued)	Coder One	Coder Two
19.) ก็ตอนที่หมานควบสิบล้อผ่านไร่ของฉันนั้นฉันยังก้มหยอดเมล็ดข้าวโพดอยู่เลย When Man drove the ten-wheeled pass my farm, I was still bending, planting corn seed. 20.) ดูสิ See. 21.) เหลืออีกตั้งหลายกำ <u>Is left</u> many handful. (From The Brother)		
The cohesive patterns created by verbal ellipsis in English and Thai short stories are very different. The instance of verbal ellipsis in English short stories is mostly either an immediate tie, or a tie with a distance not greater than 10 sentences. The cohesive device, therefore, is used to create a close pattern in English short stories. In Thai short stories, verbal ellipsis is used to provide cohesive force covering a wide area of text. Although the cohesive pattern is a close pattern, like in English short stories, the close position results from the connection of one cohesive tie to another cohesive tie, stretching the cohesive force to a far item. Hence the cohesive force created by verbal ellipsis in Thai short stories covers a wider area of text than it does in English short stories.	2 “ “ 2 “ “ “ “ “ “ 4A “ “	3 1 “ 4A “ 1 2 “ “ “ 4A “ “
5.2.3.3 The Use of Clausal Ellipsis in English and Thai Short Stories The instances of clausal ellipsis in English and Thai short stories are similar in both percentage of the instance and grammatical form. The instance of clausal ellipsis mostly occurs in question-answer related sentences in both English and Thai, as shown in the following example. Example 14 The use of clausal ellipsis in question answer related sentences in English and Thai short stories 13.) "What's <u>the Gaelic for nightdress</u>?" he asked. 14.) *"<u>Eideadh-oidhche</u>."*	2 “ “ “ “	3 “ 2 2 “

D1 (continued)	Coder One	Coder Two
21.) “And this?” 22.) He took up one of the ribbons. 23.) *"Ribean* (From The Winning Way) In sentence 14.), which is the answer of sentence 13.), the omitted clause is 'the Gaelic for nightdress. The clausal ellipsis in sentence 23.) is similar to the instance in sentence 14.) : 'Gaelic for ribbon is...'. 156.) ฌาปณกิจที่พี่วันทำให้ยายนี่จะได้ซักเท่าไร How much <u>will be gotten back from the funeral fund you join for Grandma?"</u> 157.) คงหมื่นกว่าๆ <u>About ten thousand something</u>. (From The Price of Grandma) Nevertheless, the instance of clausal ellipsis is also found in the speech event which is not a question-answer context in both English and Thai short stories though not as often as the occurrence in question-answer related sentences. Example 15 The use of clausal ellipsis in English and Thai short stories 60.) " <u>It is the prayer meeting tonig</u>ht." 61.) " I had not <u>forgotten.</u>" (From The Butterfly) 155.) มาเสียไกลบ้านอย่างนี้มันก็นึกเหงาขึ้นบ้างละ <u>Come so far away from home</u> like this, it feels a bit lonely."	2 “ “ “ 2 “ “ “	2 3 “ “ 3 “ “ “

D1 (continued)	Coder One	Coder Two
156.) เขาว่า He said. 157.) ยังไม่ทันข้ามวันเนี่ยหรือ "Even not a day yet?" (From The Brother)		
The cohesive patterns created by clausal ellipsis in English and Thai short stories are similar. Most of the instances of clausal ellipsis in English and Thai are immediate ties. The non-immediate tie is always a tie with short distance, not longer than 10 sentences. Therefore, the cohesive pattern created by clausal ellipsis is a close pattern in both English and Thai short stories.	2 “ “ “ 4A “	3 “ “ “ 4A “
In summary, the use of nominal ellipsis and clausal ellipsis in English and Thai short stories is mostly the same, either in the aspect of grammatical usage or cohesive pattern. The use of verbal ellipsis is very different in the two languages. In Thai short stories, the instance of verbal ellipsis is frequent and occurs in any text mode. On the other hand, the instance of verbal ellipsis in English short story is less frequent and is mostly operator ellipsis occurring in a speech event. Furthermore, in Thai short stories, verbal ellipsis provides cohesive force covering a wide area of text through a chain of cohesive ties, whereas in English short stories the cohesive device is mostly used to create a short distance cohesive tie.	3 “ “ “ “ “ “ “ “ “ “	3 “ “ “ “ “ “ “ “ “ “
The Use of Conjunction in English and Thai Short Stories		
The result of the frequency count of instances of every kind of conjunction in Thai short stories is of higher frequency than the instances in English short stories. The percentage of instances of each kind in English and Thai short stories is compared in Figure 7.	2 “ 1 “	3 “ 1 “
Figure 7 The percentage of the total instances of each kind of conjunction in English and Thai short stories		
Since conjunction functions as a cohesive device by semantic meaning, there is not any difference in the use of conjunction in English and Thai short stories in terms of grammatical form. Moreover, the cohesive patterns created by conjunction are similar in the two languages: a very close pattern. The cohesive device is mostly used as an immediate tie, except for the instance of additive conjunction in English short stories. Most of the instances of additive conjunction in English short stories are remote ties with short distance whereas in Thai short stories, they are mostly immediate ties. The instance of non-immediate tie in both languages	2 “ “ “ “ “ “ “ “ “ “	3 “ “ 3 3 “ 3 “ “ “ 3

D1 (continued)	Coder One	Coder Two
is always remote tie, occurring in a similar way: a sequence of sentences in text mode is interrupted by another communicative mode. The following examples illustrate the use of each kind of conjunction in English and Thai short stories. Example 15 The use of conjunction in English and Thai short stories Example 15.1 The use of additive conjunction 188.) "You'll go?" her mother said, rounding on her with her angry precise Gaelic. 189.) "And where would you go? (From The Winning Way) 121.) เวลาไปบ้านเขา เขาก็เลี้ยงไม่อั้น When went to their house, they treated with no-limited food. 122.) แถมยังเอาไฮโลไปเขย่าได้ด้วย And can take the dice to play too. (From The Price of Grandma) Example 15.2 The use of adversative conjunction 62.) That year Lucy had started wearing 'California Poppy' perfume, Woolworth's one and six a bottle so she decided to put the present in her drawer until the other was finished. 63.) When she came to use it. however, it had gone. (From 'Night in Paris') 199.) เขาคว้าท่อนเหล็ก หันขวับมาเผชิญหน้าด้วยสัญชาตญาณของคนสู้ชีวิต He grabbed an iron bar, turning to face with the instinct of a street fighter. 200.) แต่เมื่อเห็นว่าเป็นผมเขาโยนมันทิ้ง But when (he) saw (it) was me, he threw it away. (From The Brother)	2 “ 1 “	“ “ 1 “

D1 (continued)	Coder One	Coder Two
Example 15.3 The use of causal conjunction 199.) He was at the counter, talking to a stout woman, and she stepped among the rails of clothes, wanting to speak to him by himself. 200.) So this was why he hadn't come to the house the last time : what a lovely surprise, setting up a shop on the island. (From The Winning Way) 11.) รถคว่ำตายพร้อมกันหมด The car crashed, all died at the same time. 12.) ธนาคารเขาเลยยึดหมด ทั้งบ้านที่ผ่อนส่งอยู่และรถบรรทุก So the bank took everything : both the house which was on loan and the truck. (From Weeping Sea, Sorrow Wind) Example 15.4 The use of temporal conjunction 69.) "Damned her," he whispered angrily. 70.) How does she know these things?" 71.) Then he smiled, remembering that there were things she did not know. (From The Butterfly) 101.) เขาก้มหน้าก้มตา คลี่และรีดใบจากจนเรียบ He concentrated on unfolding and pressing dried leaves until smooth. 102.) แล้วดึงเส้นใยบางๆ ของมันทิ้งก่อนยัดก้อนยาเส้นขนาดนิ้วก้อยเข้าไป Then pulled its thin fiber away before stuffing a chunk of tobacco size about the small finger inside. (From The Brother)		

D1 (continued)	Coder One	Coder Two
Example 15.5 The use of continuative conjunction 9.) "You would pay three times that in a city store." 10.) She leaned over the table and touched the material. 11.) It seemed to give her a shock. 12.) "All right, I'll take it," she said, reaching for her purse. (From The Winning Way) 232.) มึงจะปล่อยให้แร้งกินก็ตามใจมึง You'll let a vulture eat, up to you. 233.) แหม...ไม่ถึงงั้นหรอกชวด "Well... not like that, Grandma." (From The Price of Grandma)		
To sum up, there is no formal difference in the use of conjunction in English and Thai short stories. The only difference found from the result of the frequency count is that Thai writers tend to use conjunction to connect sentences more than English writers.	3 “ “ “	3 “ “ “
5.2.5 The Use of Lexical Cohesion in English and Thai Short Stories		
The instances of lexical cohesion in English and Thai short stories are similar. The percentage of the total instances of each kind of lexical cohesion in English short stories is slightly higher than the instance in Thai short stories, as compared in Figure 8.	2 “ “ “	2 3 “ 1
Figure 8 The percentage of the total instances of each kind of lexical cohesion in English and Thai short stories		
The uses of lexical cohesion in English and Thai short stories are not different. Different grammatical form does not lead to difference in the use of lexical cohesion since this kind of cohesion is created by the selection of vocabulary. Moreover, the percentage of the total instances of each kind is similar in the two languages. Hence it is likely that the selection of vocabulary to create lexical cohesion in English and Thai short stories is not different either.	2 4C “ 2 4A “ “	2 3 “ 2 4A “ “

D1 (continued)	Coder One	Coder Two
The cohesive patterns created by each kind of lexical cohesion in English and Thai short stories are similar (see Table 9 and Table 14 in Chapter IV) . Repetition and collocation are used to cover a wide area of text. The cohesive pattern is a loose pattern in both English and Thai although the great distance ties are mostly mediated-remote ties. As for synonym, superordinate, and general words, the cohesive force does not generate to a long distance. In both English and Thai short stories, the selection of vocabulary to provide cohesive effect is not intended to construct a cohesive tie upon another tie.	2 “ “ “ “ “ “ “ “ “	2 “ 2 2 “ 2 3 “ “ “
Nevertheless, there is a different linguistic form which leads to difference in the use of lexical cohesion in English and Thai. This linguistic form is discussed in the following section.	2 1 “	2 1 “
5.3 Other Findings		
There are some grammatical structures in English and Thai which involve different kinds of cohesion for the same grammatical function. These differences are found in sentence structures and nominal groups.	2 “ “ “	1 “ “ “
5.3.1 The use of Reference and Ellipsis as a Subject in English and Thai Short Stories		
As mentioned in 5.2.3.2 : subject is obligatory in English sentences, whereas it can always be deleted in Thai sentences. A pattern of sentence structure in English and Thai, therefore, can be written as : English Thai Subject-Verb-Object. (Subject)- Verb – Object	2 “ “ “ “	1 “ “
In English short stories, a personal pronoun is always used as a subject of a sentence, functioning as a personal reference. A sequence of sentences can be written in a pattern as follows. Rl-verb-object. Rl-verb-object. Rl-verb-object. Rl-verb-object. Rl-verb-object.	2 “ “ “ “ “	2 2 “
In Thai short stories, the instance in which a subject is deleted from a sentence is usual. In terms of cohesion, it is an operator ellipsis of a verbal group, a kind of verbal ellipsis. Nevertheless, the omission of subject always occurs when a sentence with a subject, which may be a personal reference, is not too far. The omitted item, then, is in the distance which can be traced back. A sequence of sentences in Thai can be written in a pattern of sentence structure as follows.	2 “ “ “ “ “ “	2 2 2 “ 3 2 “

D1 (continued)	Coder One	Coder Two
Subject-verb-object. E2-verb-object. E2-verb-object. E2-verb-object. E2-verb-object.	2 “	
The following example illustrates the presence of subject in English sentences and the omission of subject in Thai sentences which concern the use of cohesion.	1 “ “	1 “ “
Example 16 The use of reference as subject in an English short story and the use of ellipsis in a Thai short story Donald Alec walked along the street, his high heels clicking on the pavement. He was at peace for the first time in many years. *(Rl)* He watched the light on the reef blinking steadfastly in the Sound and *(Rl)* the streetlight rippling in the harbour. (From The Butterfly) เขายืนฟังนิ่งเฉย ยืนเกาะแฮนด์รถสามล้อที่เกาะอยู่ใต้ต้นตะแบกใหญ่ปลายฤดูร้อนหน้าโรงแรมที่มีคนเข้าออกพลุกพล่าน หมดแรง อยากร้องไห้แต่ไม่หรอก He stood listening still. - Stood clinging on the handle (R1) (E2) of a tricycle which was parked under a big tree in the late summer in front of a hotel which was busy with people coming in and going out. -Tired. - Would like to cry but not. (E2) (E2) (From Weeping Sea, Sorrow Wind)		
This difference in linguistic nature of English and Thai directly effects the use of cohesion. It is necessary to realize the difference in performing a task involving the two languages. It also leads to the questions concerning the use of cohesion across languages : can one kind of cohesion substitute for another kind in different language? Will one language lose its natural characteristics if it is translated from another language with the maintenance of the same kind of cohesion used in the original text?	3 4A “ “ “ “ “ “	3 3 7B “ “ “ “ “

D1 (continued)	Coder One	Coder Two
5.3.2 The Use of Lexical Cohesion with a Defining Article in English and without an Article in Thai		
Referring to Halliday and Hasan (1976 :274-282), the reiteration of a lexical item is always made explicit by the use of a reference item though there are other types of lexical cohesion which do not on the identity of reference. In English short stories, the definite article 'the' is frequently used with a noun to create referential meaning, as discussed in 5.2.1.2. From the study of text, lexical cohesion in English is likely to occur in combination with demonstrative reference. In Thai short stories, the use of reiteration to create lexical cohesion does not need a referential identity. A lexical item always enters into a cohesive relation without an indication of cohesive function. The following example presents the use of referential items with lexical cohesion in English and the instances of lexical cohesion in Thai.	1 “ “ 2 “ 4A “ 2 “ “ 1 “ “	1 “ “ 3 “ 3 “ 3 “ “ 1 “ “
Example 17 The instances of lexical cohesion with referential item in an English short story and without referential item in a Thai short story 17.) Having decided to move the key *(R2+L1)* to the calf shed, he laid down the shovel *(R2+L1)* and stepped in to the trench *(R2+L2)*, trying not to damage the narrow channel *(R2+L5)* at the bottom. *(R2+L1)* 18.)Working backward waist deep in the drain *(R2+L1)*, he began to lay the short, orange pipes, placing a clod of grass over each junction. 19.) He enjoyed this part of the work. *(R2+L4)* (From The Butterfly)		

D1 (continued)	Coder One	Coder Two
225.) บริษัทจ่ายค่าห้องพักเล็กๆ ในอพาร์ตเมนต์แห่งนี้ให้ผมได้ซุกหัวนอนมาตั้งแต่โครงการก่อสร้างโรงงานเริ่มก่อตัวเป็นรูปร่างขึ้น Company paid for small room in this apartment for me to stay *(L2)* since construction project started to be built up into shape. *(L1)* 226.) แม้สภาพห้องจะเล็กแคบและอับทึบไปบ้าง แต่ด้านหลังซึ่งสามารถมองเห็นแม่น้ำช่วยให้ผมรู้สึกว่ามันโล่งกว้างขึ้นมากทีเดียว Even if room was a bit small and was out of air but backside *(L1)* (of room) which can see river help me feel it much more airy. 227.) และที่สำคัญมันอยู่ไม่ห่างไกลจากที่ทำงานมากนัก And what importance was it was not far from work place. (From The Brother)		
The comparative study of the use of cohesion in English and Thai short stories reveals that there are both similarities and differences in the use of cohesion of the two languages. The differences result from the linguistic forms of each language. It is necessary to recognize these differences and similarities when performing a task concerning the two languages. The result of this study is applicable to any practical activity such as translation, or language teaching. These applications and recommendations for further study are discussed in the following chapter.	3 “ 4C 4A “ 6B “ 1 “	3 “ 4A “ “ 7B “ 7B “

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