行政院國家科學委員會補助專題研究計畫成果報告

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※ ※
※ 碩士論文文類分析：訊息結構與語言特色 ※
※ A Genre-based Analysis of Master Theses: ※
※ Information Structure and Linguistic Features (I) ※
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執行單位：明新科技大學應用外語系

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碩士論文文類分析：訊息結構與語言特色

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一、 中英文摘要

近年來無論國內外都興起了對學術英語的研究興趣，不過大部分的研究都針對學術期刊論文的寫作，碩博士論文這個文類則相對地被忽視。然而我們知道，以英文寫作學位論文對英語非母語的研究生而言是很大的挑戰。對於英語非母語的研究生，寫作碩博士論文的困難，更因英語語言的使用和這個文類的約定俗成的表達方式而更形複雜。

研究指出，碩博士論文的結構，事實上並非一般論文寫作手冊所說明分析的那樣只有一種。此外，學位論文的訊息結構會依研究性質或領域的論文寫作習慣而有變化，不同領域知識表達的價值觀會影響碩博士論文中用以呈現知識的修辭和語言表達方式。

Swales (2000; 2004b)指出，碩博士論文和期刊論文是不同的文類(genres)，而且後者經常是由前者改寫去投稿出版而成為後者，因此我們實有必要去探討比較兩個文類之間的異同，但是這方面的研究卻很稀少。

本計畫因此以實證研究來探討碩士論文的訊息結構和語用特色。計畫第一年以文類分析方法來分析應用語言學領域之碩士論文。先以過去學者對論文各章節的分析結果為基礎，建立一個完整的分析架構(coding scheme)，並且選取 20 篇應用語言學領域之碩士論文以建構語料庫，進行分析研究。分析包括每篇論文各章之結構及訊息內容(information content)，以言步和次言步(moves and steps)做為訊息單元來分析。

分析結果顯示，以論文整體結構而言，20 篇中有 15 篇是採用傳統的 I-Lr-M-R-D-C 訊息結構，3 篇是結合數篇文章的結構(article-compilation pattern)，另 2 篇是以主題為主(topic-based pattern)的訊息結構。此外，有一些論文的討論會和結論或結果放在同一章。有三分之二的論文有獨立一章或一節來討論論文結果的教學含意(pedagogical implications)，這應是應用語言學論文的一個特色。

論文摘要之分析顯示，所有摘要都有論文序論、研究方法、研究結果三個言步，呈現直線式結構不太會有重複言步。結論這個言步則只出現在約一半的論文摘要中。論文摘要平均有 164 字，大部分摘要不含引述(citations)。應用語言學論文的摘要重點放在論文目的、研究過程和研究結果。

論文序論分析顯示，15 篇論文中有 4 篇是將文獻探討含在序論中。我們也發現引述他人研究的修辭功能並不只是做文獻探討，另有其他三種功能，因此決定在各章中另成一個引述他人研究的獨立言步。序論的訊息結構大致依循 Swales 的 CARS 模式，但是使用更多次言步，並且各種次言步的結合次序(sequence)有更多變化。不過我們也發現 Bunton 的摘要研究中的許多次言步並未出現在我們的碩士論文裡，也許這顯示了碩士論文不如博士論文涵蓋那麼複雜的結構。

分析論文的文獻探討顯示和 Kwan 類似的結果，即文獻探討這一章通常有一個引導的言步和一個結論的言步，中間則是一個包含數個重複探討主題和探討個別研究交替的結構(theme cycles)，這樣的重複形式顯示碩士論文的文獻探討為了突顯作者對研究領域和主題的熟悉，因此有分別主題的詳細探討結構。另外，四篇將

文獻探討放在和序論同一章的論文則有將文獻探討切入序論的結構，即在論文主題背景介紹和重要性討論之後加入文獻探討，文獻之後再提出研究目的、問題等。

論文的研究方法這一章一般描述論文採用的研究方法和步驟，以及描述論文樣本、取樣的方法和步驟。這些言步和次言步是這一章出現頻率最高最重要的。另外作者常引述他人研究以提供對自己採用的研究方法的背景資訊或增加該研究方法的適當性。次言步結合模式的分析顯示並沒有高頻率的三個次言步結合模式(3-step sequence)，這顯示也許論文研究方法可有很大差異性，因此並無固定的結合各個訊息單元的模式。

論文結果這章的分析顯示，說明作者將如何在此章呈現研究成果和報導研究結果是最重要的訊息單元。此外，作者常在報導一個研究結果後就會加上一些說明，再繼續報導另一個結果。在報導結果之前則常會說明使用的研究方法或指出相關的圖表兩個次言步。我們也發現這章的言步中後三個言步所包含的次言步出現的頻率較低，顯示他們和討論、結論兩章的一些次言步重疊，而非論文結果這章的重點。

討論這一章主要的次言步是報導主要研究結果和說明研究結果。另外，說明研究結果、說明得到結果的理由、以及和他人研究結果比較三個次言步常和報導研究結果結合，這顯示討論的主要言談功能不是報導研究結果，而是對研究結果加以說明和比較。

分析顯示論文的結論這章具有直線式結構，較少重複的言步或次言步。重要的次言步包括總結整個研究、指出研究結果的教學含意、和對未來研究的建議。本章雖然有些言步和次言步和討論一章中的言步次言步類似，但它們在兩章中的功能比重不同。結論強調研究的整體結果以及研究的貢獻，而討論的重點則在說明和討論重要的研究結果。

研究早已指出，文類知識對於提昇學術英語學習者對他們的目標文類的訊息結構之清楚認知(consciousness raising)非常重要。隨著我國追求學術卓越，國內的碩博士班研究生越來越多，我們必須提供他們一個清楚的碩博士論文的訊息結構以及常用的語言表達形式。本計畫的研究結果不僅可以釐清碩博士論文和期刊論文異同之處，並且對於論文寫作教學可以提供許多寶貴資訊和真實語料實例。

關鍵詞：碩博士論文、文類分析、學術寫作、學術英語

Abstract

There has been an increasing interest in EAP in recent years. Most attention, however, has been paid to the writing of research articles (RAs). The genre of theses/dissertations has relatively been neglected in research. On the other hand, thesis writing poses great challenge to most graduate students. To NNS writers, the difficulty of writing a thesis is further complicated by language use and generic conventions in English.

Studies have revealed that there is a wider range of thesis types than the guides and handbooks would suggest. The information structure of theses in actual practice may also vary as a result of different nature of research and disciplinary conventions. Furthermore, professional values and norms tend to modify the rhetorical and linguistic expressions of such disciplinary epistemologies in theses.

As Swales (2000; 2004b) indicated, theses/dissertations are a different genre from research articles. It is beneficial to know the similarities and differences between these two genres since many of the former are often transformed into the latter for publication. However, there have been few studies on this topic.

This project, therefore, investigates empirically the information structure as well as linguistic features of master theses. In the first year, it takes a genre-based approach to the analysis of theses in the field of applied linguistics. A coding scheme consisting of moves and steps in the major chapters of theses was developed on the basis of previous genre studies on individual chapters/sections of theses/RAs or complete

theses/RAs. A corpus of 20 master theses in applied linguistics was compiled. The information structure of each chapter of each thesis was analyzed in terms of moves and steps.

Results from analysis show that with regard to the whole thesis, 15 out of the 20 theses employ the traditional I-Lr-M-R-D-C information structure, while three employ the article-compilation pattern and two the topic-based pattern. In addition, in some theses, Discussions is combined with Results or Conclusions in the same chapter. Two-thirds of the theses have a chapter or a section dealing with pedagogical implications. This can be regarded as a feature of the field of applied linguistics.

Analysis of the abstracts in the thesis samples revealed that all abstracts have three moves: Introduction, Method, and Results, in a linear order and with rare occurrences of cycles. The move of Conclusions occurs in only about half of the abstracts. On average, Abstract contains 164 words. Most abstracts do not contain citations. Abstracts in applied linguistics seem to focus on the purpose of research, research process, and results.

Analysis of the introductions in the theses showed that four of the 15 thesis introductions have an embedded literature review. It was also found that referring to other studies has three rhetorical functions other than reviewing previous research. As a result, we decided to add an independent move of referring to other studies. Generally speaking, the information structure of Introduction in theses follows Swales' CARS model, but uses more steps and patterns of step sequences have more variations. In addition, a lot of steps identified in Bunton's study do not occur in our theses. This may suggest that master thesis Introduction does not have an information structure as complex as that in Ph.D. dissertation.

Analysis of Literature Review showed similar results to Kwan's study; that is, there is usually an introductory move and a concluding move, and between them are theme cycles consisting of repeated steps of surveying the research topic and reviewing specific studies. This structure reflects the centrality of showing familiarity with the research area and topic to thesis writers. In addition, as mentioned, four theses have a combined chapter of Introduction and Literature Review. In them, we found that Literature Review moves/steps usually follow Introduction moves/steps of background/topic generalization and centrality, while Introduction moves/steps of purpose statements and research questions/hypotheses will occur after Literature Review moves/steps.

The chapter of research methodology usually indicates and describes the method adopted as well as the sample and data collection procedure. These moves and steps occur most frequently and have high percentages in range. Moreover, it was found that the step of referring to other studies occurs frequently performing either the function of providing background information or supporting and justifying the method adopted. There are no high-frequency three-step sequences, showing that research method may vary greatly in different studies so that there are no fixed ways to combine the information units.

In the results chapter, the steps of indicating how research results are presented and of reporting major findings are two most important steps. In addition, writers tend to accompany the reporting of a finding with some explanations before moving on to the reporting of another finding. Either the step of indicating the method or the step of locating graphics frequently precedes the step of reporting major findings. It was also found that the last three moves for this chapter do not occur frequently, showing that they may overlap with some similar moves in Discussions.

Analysis of Discussions in the theses showed that the most important steps in this chapter are reporting major findings and interpreting results. Furthermore, three steps – interpreting results, accounting for results, and comparing results with literature -- often occur with the step of reporting major findings. This suggests that the major rhetorical function of Discussions is not reporting results but commenting on results.

Moves and steps in the Conclusions chapter generally occur in a linear order with rare occurrences of cycles. Important moves and steps include summarizing the study, drawing pedagogical implications, and recommending further research. Although a few moves/steps in this chapter are similar to those in Discussions, their rhetorical weightings in the two chapters are different. Conclusions focuses on the overall results and contribution of the study while Discussions puts more weight on commenting on results.

The importance of genre knowledge in helping EAP learners to raise their consciousness and master their target genres has been widely acknowledged. With an increasing number of graduate students in Taiwan, we certainly face the need of providing them with a clear picture of what constitutes an acceptable thesis/dissertation. This study on the genre of master theses not only clarifies the similarities and differences between research articles and theses/dissertations but also provides valuable information and authentic materials for EAP pedagogy.

Keywords: theses/dissertations, genre analysis, academic writing, EAP

二、緣由與目的 (Introduction)

With the increasing globalization of academic research and communication, there has been growing interest and effort in the field of English for Academic Purposes (EAP) in the past ten years. Research on EAP has focused on the genre of research articles (RAs) since it is the most prominent and widespread genre in the academic discourse community. Most studies on RAs take a genre-analysis approach, examining and analyzing both the macrostructure and microstructure of the text exemplars of this genre.

In contrast, a similar genre, theses and dissertations, has received much less attention (Dudley-Evans, 1999; Swales, 1990; 2004). Although there have been quite a number of manuals and guidebooks of theses/dissertations writing in the market, very few of them are based on empirical research. As Swales (2004) indicated, "little was known about this genre from a discoursal point of view, largely because of the daunting length of its exemplars…" (p.102).

For a majority of graduate students, it is, however, a critical writing task that determines to a large extent whether they can receive a master or Ph.D. degree. The task itself is challenging. As Dong (1998) pointed out, "the writing challenge is not only demonstrating knowledge related to the research but also using that knowledge to 'argue logically and meaningfully the meaning of the research results'" (p.369).

On the other hand, from the perspective of genre, theses/dissertations have distinctive communicative purposes which are different from RAs. One of them is to convince the graduate committee that the student has completed an independent study, showing both familiarity with knowledge of the specialized field and skills of research, and that the completed work, in essence, form, and style, can meet the expectations of the academic community. In addition, since the research process reflects how the graduate student, as an apprentice of the field, learns to conduct valid research, theses/dissertations focus on such a learning process, represented by more detailed descriptions of propositions in each chapter and a more elaborated literature review, in contrast to the more concise sections in RAs.

With regard to the macrostructure of theses and dissertations, according to Swales (2004), Ph.D. dissertations can have three types of information structure: the traditional I-Lr-M-R-D-C pattern, the article-compilation I-Lr-IMRD-IMRD-…-Conclusions pattern, and the topic-based I-Lr-T(heoretical framwork)-M-Topic-Topic-…-Conclusions pattern. He also indicated that on available evidence, the traditional pattern is much less frequent now than the other two patterns. However, we suspect that master theses, as the product of a much shorter period of study and research, and probably with a different communicative focus, may show different patterns of information structure. Theses and dissertations can be regarded as

two genres with generally similar features but different orientation and scope. Dissertations are usually more research-world-oriented and cover a number of topics in scope, while theses often have a strong focus on the real world with a more restricted scope (Swales, 2004).

Although there have been a few studies on theses and dissertations ever since 1990s, most have concentrated on doctoral dissertations (Dong, 1996; 1998; Bunton, 1998; 1999; Thompson, 1999; Paltridge, 2002; Hocking, 2003; Ridley, 2000; Turner, 2003; Swales, 2004). Moreover, most of them have investigated the information structure of one specific chapter rather than the complete dissertation.

The earliest study on theses/dissertations is a case study by James (1984) which investigated the writing problems of non-native doctoral students. Later studies are more variable in their research focus, including information structure (Dong, 1998; Bunton, 1998; Ridley, 2000; Thompson, 2001; Paltridge, 2002), argument structure (Shaw, 2000), disciplinary variation (Parry, 1998), and discoursal features such as citation practice (Shaw, 1992; Thompson, 1998) or metadiscourse (Bunton, 1998; 1999).

From a pedagogical perspective, as we know, Ph.D. students may already have some experience in academic writing, while master students often lack generic knowledge and writing experience. Moreover, there has been an increasing number of master students working hard on completing this difficult academic task. We, therefore, attempt to empirically examine the information structure of master theses in the field of applied linguistics, an area that deserves more attention for pedagogic and research purposes. The major concern is how the information structure of theses reflects the communicative purposes of this genre. We also intend to find how the rhetorical functions of theses are similar to or different from those of RAs.

三、研究方法 (Research Methodology)

This study takes a genre analysis approach to analyzing the macrostructure of master theses. A complete coding scheme (see Appendix) consisting of the moves and steps of all major chapters was first developed. Since most previous studies on theses/dissertations have focused on a single chapter, the coding scheme was based on a number of studies Abstract (Abstract -- Lores, 2004, Introduction -- Bunton, 2002, Literature review -- Kwan, 2006, Method -- Lim, 2006, Results, Discussions, and Conclusions -- Yang and Allison, 2003) while integrating and modifying the moves and steps to make them consistent across the chapters and fit the theses in applied linguistics. The whole coding scheme is very complicated as a result of the elaboration of steps under the moves. However, it is considered that such a coding scheme can better reveal the relationship between neighboring chapters and the subtle differences in the rhetorical functions of some of the same moves such as the move of reporting results in Results and in Discussions. The coding scheme was then used to analyze a corpus of 20 master theses in applied linguistics. The theses samples were selected from the ProQuest Digital Dissertation database. Keywords such as language learning, ESL, English, SLA, academic writing were used to elicit theses samples appropriate for analysis.

The analysis of moves and steps of each chapter in the theses was conducted by four researchers, two university faculty members and two master students, all in the field of applied linguistics. To ensure inter-coder reliability, all four researchers analyzed the same theses samples in the initial stage of the analysis and held weekly meetings to check the codes of moves and steps throughout each thesis. In later stages (after we finished analyzing Introduction), the four researchers were grouped into two pairs to speed up the analysis but could still secure high inter-coder reliability.

After the genre analysis of each chapter, the computer software AntConc was used for data analysis. Not only the frequency and range of each move and step were calculated but the move patterns (i.e., possible sequences of various moves and steps) were also derived. Some theses were found not following the organizational pattern of

I-Lr-M-R-D, and some not using rhetorical headings for the chapters. In addition, in a number of theses, literature review is embedded in the chapter of Introduction. The division between Discussions and Conclusions is unclear in a few theses, either. Therefore, criteria were established for the application of appropriate codes of moves and steps to these theses. If there are separate sections and the section headings clearly show their rhetorical nature (such as Results and Discussions in the same chapter but with different sections), different codes (that is, codes for Results and codes for Discussions) are used. If the moves and steps are mixed in the same section, then the codes for the major rhetorical functions of the chapter are used.

四、結果與討論 (Results and Discussions)

In the following, results of genre analysis are presented in the order of, first, the whole thesis, then Abstract, Introduction, Literature Review, Method, Results, Discussions, and Conclusions.

The Whole Thesis

The corpus of 20 master theses consists of 374,289 running words, on average 24,953 words a text. However, length varies greatly, ranging from 44,775 to 7,627 words.

Examining the table of contents of the 20 theses reveals that 15 are organized in the conventional ILrMRD while 3 in the article-compilation pattern (Dong, 1998) and 2 in topic-based pattern (Bunton, 1998). Further analysis of the 15 ILrMRD theses showed that 13 used rhetorical chapter headings while 2 have slight variations such as "Inquiry strategies" that correspond to a method chapter. The heading of Literature Review is used in 11 of the 15 theses, while 4 theses have embedded Literature Review in the chapter of Introduction.

All 15 theses have Introduction, Method, and Results chapters, but the heading of Discussions appear in only 10 theses (The rest of them are combined with Results or Conclusions, however, in the same chapter.)

As indicated by Yang and Allison's study (2003) on RAs in applied linguistics, pedagogic implication "reflects one of the principal concerns of applied linguistics as a discipline."(p.373) In this study, it was found that two-thirds of the theses in this field have a section or part of a section discussing pedagogic implications. They often occur in the chapter of Discussions or Conclusions.

In addition to the main chapters of a thesis, abstracts in master theses seem to be much shorter than those in Ph.D. dissertations though they are similar in length to those in RAs (Kuo, forthcoming). On average, the abstract of the theses in this study has 164 words.

To sum up, it appears that a large proportion of master theses in applied linguistics still follow the traditional organizational pattern of ILrMRD and use rhetorical headings for the chapters. Variations are more obvious in section headings within chapters which reflect the nature of individual studies.

Abstract

Abstract is generally considered as "a description or factual summary of the much longer report, and is meant to give the reader an exact and concise knowledge of the full article." (Bhatia, 1993: 78) However, it also has a promotional purpose, persuading readers that the article is worth reading. (Berkenkotter and Huckin, 1995; Hyland, 2000)

Analysis of the 15 abstracts of the theses in the corpus shows that all abstracts have a linear structure of AI-AM-AR, (including one instance of two AI-AM cycles in one thesis and combined AI+ AM in three theses). In other words, all these three moves are obligatory, having a range of 100%. AC, on the other hand, is optional, occurring in 8 (53.3%) of the 15 theses, all at the end of the theses. The combined AI+AM reflects the concise nature of Abstract. Cycling of moves is rare in the abstracts, also reflecting text conciseness.

Another observation is that abstracts in master theses seem different from those in doctoral dissertations, which often have more elaboration on the research methodology or results. This can be reflected from the much short length of master theses abstracts, as indicated earlier. However, Abstract is promotional, thus it should be selective representation, rather than exact representation, of the

thesis (Hyland, 2000). It is also noticed that the convention of not including citations in theses is followed by the writers of the theses since only two abstracts in the samples include a couple of citations.

Further examination of the content of the moves revealed that AI in most abstracts focus on the purpose of the thesis research or the centrality of the research topic. Hyland (2000), commenting on disciplinary variation, explained that in soft knowledge domains, as a result of the absence of well-defined sets of problems (p.97), writers have to work harder to acquaint readers with the background of their research and to construct its significance rhetorically; thus, greater focus was placed on situating writers' own study. In Swales' term, the move of Creating a Research Space seems to be more central than Method in the abstracts. AM, unless a specific or self-designed research method was adopted, tends to describe the research process, especially the participants and data collection. AR is highlighted in most abstracts, containing more than one sentence and informative statements are used to pinpoint the research findings. Finally, AC in the abstracts often focuses on pedagogic implications of the study, also reflecting disciplinary distinctiveness.

Introduction

Introduction is the section/chapter that is usually regarded as the most difficult to write. For example, the difficulty of making strong but convincing claims has been a great challenge to not only novice writers but also experienced professionals. Swales' canonical analysis of 48 RA introductions and his CARS model has long been esteemed as a classic in the field of genre analysis, but Bunton (2002) on Introduction in doctoral dissertations showed marked differences, suggesting possible differences between the two genres.

In this study, based on Bunton (2002), we used a scheme of three sequential moves and one independent move, consisting of 28 steps in total to analyze the information structure of the Introduction chapter. Similar to Bunton (2002), we found that a number of these (4, 26.7%) have an Introduction chapter which includes Literature Review, while the rest (11, 73.3%) have both Introduction and Literature Review chapters. It was found that in the theses that have separate Introduction and Literature Review chapters, the writers still use quite a number of citations in Introduction when introducing the field or the research topic. However, the rhetorical purposes are different from those citations in Literature Review. This is highlighted as we later, when analyzing the move structures of other chapters, found that the move of referring to other studies has different rhetorical functions in different chapters as a result of the communicative purposes of the various chapters. The various rhetorical functions of this move, thus, led us to add an independent move of referring to other studies in each chapter. The pedagogic implications of this finding should worth further research.

Also similar to Bunton (2002), a greater number of steps than those described in Swales' CARS model were identified. For example, the step of research questions or hypotheses occurs in more than half of the theses (6 theses, 55%), and the move of providing justifications for the present study, and that of indicating a problem or need in the field both occur in five theses (45%). Furthermore, when these steps occur, they usually have elaborated propositions or explanations, showing their centrality to Introduction. This suggests that some steps, even with a modest percentage in range, can be important to certain types of studies.

Among all the steps, topic generalization/background has the highest frequency (42 occurrences), followed by the step of reviewing previous research (27 occurrences). In terms of range, these two steps also have the highest percentages, 91% and 73%, respectively. Following these two steps, purpose statements and centrality claims both have a range of 64%. Analysis of move/step sequences showed that topic generalization/background is often followed by reference to other studies, either for the purpose of reviewing previous research (9 instances) or providing background information (12 instances). Either pattern tends to have many cycles in a single thesis Introduction. In other words, the writers often indicate a research

topic and provide background information by referring to a number of studies on this topic. They then move to a second topic and again refer to a number of pertinent studies. This suggests that theses usually involve a wide range of research topics and the writers have to introduce them by referring to important previous research on each topic. Reference to other studies is also used when the writers need to define terms. The step of defining terms occurs 10 times, followed by the step of reference to other studies for 7 times. This indicates that the theses writers tend to refer to the definitions or explanation of terms proposed by well-known scholars in the field for better acceptance of the definitions. Thus, in Introduction, we found different rhetorical purposes when the writers refer to other studies. In total, we identified four purposes: reviewing previous research, providing background, providing definition of terms, and providing support or justification. Of them three are non-literature-review steps. Therefore, an independent move of referring to other studies consisting of the non-literature-review steps was added to the coding scheme, as mentioned earlier.

Other sequence patterns of steps, as revealed from the cluster analysis in AntConc, do not occur frequently (with a frequency of lower than 5 in 11 theses). However, if we look at only move sequences, not step sequences, the move pattern IT-IN-IO occur regularly in most theses (9 of the 11) (although IT and IN tend to cycle in a few theses while IO occurs only once in most theses). This suggests that the three moves, namely, establishing a territory, establishing a niche, and occupying the niche, in Swales' CARS model still hold in theses and follow this order. The writers, however, may organize the steps in these moves in various ways.

Another observation is that all of the Introduction chapters end with the move of IO, although many steps in this move do not occur frequently, suggesting that master theses may not have an Introduction chapter as elaborated as that in Ph.D. dissertations, as shown in Bunton (2002).

It was also noted that among the ways of establishing a niche, the step of indicating a gap in previous research, and that of indicating a problem or need for research are more frequently used by the writers in applied linguistics. It is interesting to find that no writers use counter-claiming.

Literature Review

Kwan (2006), as reviewed earlier, has done a very detailed analysis of the Literature Review chapter in doctoral dissertations in applied linguistics. Her study revealed that Literature review chapter(s) display an Introduction-Body-Conclusion structure and the Body part is divided into several thematic sections, each of which displays recursive move structures that are similar to thesis introductions. In this study, we tried to find if the Literature Review chapter in master theses is similar to that in doctoral dissertations.

Similar to Kwan, it was found almost all theses have an Introductory move (LI) at the beginning of the literature review chapter (10 out of 11 theses). A majority also have a concluding move (LC) (8 out of 11).

In terms of frequency, LEn-LEr and LEr-LEn are the most frequently used step pairs. Also, they occur in many cycles (LEn-LEr-LEn-LEr…). This suggests that reviewing literature demonstrates recursive move structures in terms of themes, as suggested in Kwan (2006), each going from a general discussion of a theme by referring to a number of pertinent studies as a group, using often only non-integral citations and focusing on the theme rather than specific studies, to a more elaborated discussion of specific studies, using often integral citations and elaborating on specific parts of individual studies, one by one.

The LEn-LEr pattern (and its cycles) is often preceded by LNt, the step of providing background knowledge or making topic generalization; therefore, we can find that both LNt-LEn-LEr and LNt-LEn-LEr-LEn-LEr have high frequencies. Either move/step pattern represents a complete discussion unit of a given theme; such an elaborated review move is in contrast to a more concise review move in the Introduction section of RAs, reflecting thesis writers' communicative purpose of showing familiarity with the research theme/topic/field. Physically, a separate literature review chapter also enables the writ-

ers to "establish a territory" (Swales 1990) in a much larger space.

The LEn-LEr-LNs pattern shows that the move pair LEn-LEr is often followed by LNs, the step of summarizing the review of a theme. Again, cycles of the three-step pattern, or cycles of the first two steps followed by a single LNs are possible, depending upon the complexity of the theme.

Therefore, we may expect a complete review unit of a theme, represented as LNt-LEn-LEr(-LEn-LEr…)-LNs. However, only 6 occurrences of the pattern were found. This is because it is possible for other steps to occur between LEn-LEr and LNs.

Four of the theses in our corpus have an Introduction chapter embedded with the part of Literature Review. We, therefore, decided to have a separate analysis of the information structure in these four theses.

The analysis showed that all four theses display a similar organizational pattern; that is, all Literature Review moves are combined with Introduction moves. The Introduction move that usually occurs before Literature Review moves is IT, including two steps: ITb (topic generalizations/background) and ITc (centrality/importance of topic), while the move of IO (occupying the niche), including a number of steps, such as IOq (describing research questions/hypotheses), IOj (providing justification), and IOp (indicating purposes/aims/objectives), can occur after Literature Review moves/steps. Therefore, it can be suggested that the organizational pattern of these thesis Introductions is similar to an expanded RA Introduction.

On the other hand, similar to theses having a separate Literature Review chapter, these theses have high frequencies of LEn-LEr pair and they occur in cycles. Moreover, LEn, LEr, and LNs can occur in a number of sequences. However, the Introduction steps usually do not combine with Literature Review steps to form sequence patterns. In other words, although the Literature Review part is embedded in the Introduction chapter in these four theses, they constitute their own moves without mixing with the Introduction moves. Specifically, the macrostructure shows a pattern of Introduction-Literature Review-Introduction.

As there are only four theses that have a combined Introduction and Literature Review chapter, the significance of the move patterns as shown should not be expected. Further examination of a larger sample of theses is necessary.

Method

Method in RAs or in theses has not been well studied in comparison to other sections or chapters, probably as a result of the great variety in research methodology in different disciplines. Such variety is reflected in the information structure of this section/chapter in RAs or theses. Based on Lim (2006), which proposed an elaborated move/step scheme for management research articles, this study modified the rhetorical explanations of a few steps to make them more suitable for the field of applied linguistics and for theses. For instance, a move of introducing the Method, with two steps – indicating chapter/section structure (Mio) and overview of the study (MIs) -- was added. Also, the step of recounting steps in data collection (MDp) was changed to that of describing methods and steps in data collection. A new step, explaining variables and variable measurement was added under the move of delineating methods of data analysis.

Results from analysis revealed that MDp and MDs (describing the sample, including participants, location, time, etc.) occur in each of the 15 theses. They should be regarded as obligatory steps. Following them are MLj (referring to other studies to provide support for justification), MDj (justifying the data collection procedure), and MLt (referring to other studies to provide background information). Each of them occurs in more than 70% of the theses. They could be regarded as quasi-obligatory steps in Method. In terms of frequency, MDp is also the step that has the highest frequency. Other steps that have a frequency higher than 15 are MLj (46), MLt (34), MDj (29), MDs (26), MMm (explaining specific methods of data analysis) (24), and MIs (18).

Considering both frequency and range, we may conclude that in the Method chapter, writers tend to focus on data collection method(s) and procedure as well as the samples

(or participants). In addition, the writers frequently refer to other studies in order to provide background information for the method or to justify why the method is taken in the present study.

In terms of moves, it can be noted that Move 4 (elucidating data analysis procedure) occur much less often than the first three moves. This may be due to the fact that in some theses, describing data analysis procedure is combined with results and is given in the Results chapter. In contrast, the Method chapter would emphasize data collection method /procedure and data analysis method. They sometimes provide a general but not a detailed description of the analysis procedure in Method.

Analysis of sequence patterns showed that a number of pairs have high frequencies: MDp-MLt, MDp-MDj, MDp-MLj. In particular, they can occur in a reversed order and in cycles. However, high-frequency 3-step sequence patterns were not found except those that include repetitious steps. Therefore, this reflects not only the importance of these steps in Method but also the fact that there is not a fixed way to organize relevant information about research methodology in studies.

Results

Reporting research findings should be regarded as the most important communicative purpose of either an RA or a thesis. Therefore, it is essential to examine how this communicative purpose is realized in moves and steps. Previous studies on Results in RAs have indicated that Results sections both report results and comment on results, and that a cyclic pattern of reporting and commenting may occur. We, therefore would like to find out whether these will hold in master theses, particularly in the field of applied linguistics.

Analysis using AntConc showed that RRf (reporting major findings) and RIb (providing background or indicating how results are presented) have a range of 100%; in other words, they are obligatory steps in Results. RCi (interpreting results, 86.7%), RIm (indicating method or statistical procedures applied, 80%), RRg (locating graphics, 80%) also have high percentages in range. They are quasi-obligatory steps. In addition, RRf and RCi have the highest frequencies, followed by RIm, RRg, RIb, RCc, RLj, RCa, RSc, which have a frequency higher than 10. It can be noted that the top five high-frequency steps are also the top five steps with high percentages in range.

Analysis of step sequence patterns showed that the six steps with the highest frequencies, that is, RRf, RCi, RIm, RRg, RIb, and RCc, form several high-frequency sequence patterns. First, RRf and RCi, the two steps that occur most frequently (102 instances) form cycles, namely, RRf-RCi-RRf-RCi… in the Results chapter of many theses, illustrating how thesis writers organize the presentation of research. The main pattern is that results are reported one by one, each is followed by adequate interpretation. A second pair is RRg and RRf (45 instances), suggesting that the use of graphics is essential when reporting results in applied linguistics and writers tend to locate graphics and then indicate what the graphics show as the major findings of research. The third pair of sequence is RIm and RRf (37 instances), indicating the method adopted and then the major findings as a result of the use of the method. The pair of RIm and RRg also occur frequently (15 instances). RIb (providing background or indicating how results are presented) is often followed by RRf (reporting major findings, 19 instances) or RIm (indicating method or statistical procedures applied, 12 instances), while RCc (comparing results with literature) is often preceded by RCi (interpreting results), which is preceded by RRf, forming a three-step sequence RRf-RCi-RCc.

The six high-frequency steps also form a number of meaningful three-step sequence patterns: RIb-RRf-RCi (16 instances), RRg-RRf-RCi (16 instances), RIm-RRf-RCi (12 instances), RRg-RRf-RIm (12 instances), RRf-RCi-RCc (11 instances), RIm-RRf-RRg or RIm-RRg-RRf (10 instances).

If we look at moves instead of steps, we can observe that the two steps in Move 1 (Introducing the Results chapter) and the two steps in Move 2 (Reporting results) constitute four of the six steps in the above group of high-frequency steps and the sequence

patterns. The other two moves, RCi and RCc are two of the four steps in Move 3. Therefore, the first three moves could be regarded as representing the primary rhetorical functions in the Results chapter. On the other hand, it seems Move 4 to Move 6 are optional. This could be due to the fact that these moves/steps are overlapping with the moves/steps in the Discussions or Conclusions chapters. The writers may choose to present related propositions in the later chapters rather than the Results chapter.

Discussions

Discussions is usually regarded as a reversed part of Introduction rhetorically; in other words, it proceeds from the specific findings as reported in Results to a more general view of how the findings can be interpreted. This moving from specific to general is made repeatedly step by step, realized by cycles of moves and steps reporting and commenting on research findings (Yang and Allison, 2003). Swales (1990) and Hopkins and Dudley-Evans (1988) also emphasized the presence of repeated cycles as a feature of Discussions.

A further question we want to clarify in this study is how the rhetorical functions of reporting and commenting on results are differently realized in Results and Discussions chapters in theses. A detailed analysis of the moves/steps as well as their sequence patterns is needed.

Firstly, the frequency analysis of the steps showed that DRf, the step of reporting major findings, (96 instances) and DCi, the step of interpreting findings (92 instances) have much higher frequencies than other steps (lower than 50). This suggests that these two rhetorical functions are important in Discussion. In terms of range, DRf occurs in each of the theses examined. Thus, it should be considered as an obligatory step. DCi occurs in 9 theses (90%), and DCa (accounting for results), DIb (providing background information), DLj (referring to other studies for support or justification), and DSc (making conclusions of results) occur in 8 theses (80%). They, therefore, are quasi-obligatory steps.

Examining only moves, we can observe that the first four moves (that is, introducing the Discussions chapter, reporting results, summarizing results, and commenting on results) occur more frequently and in more theses than Move 5 to Move 7, which represent the rhetorical functions of summarizing, evaluating and deducing from the study, respectively. In particular, DCi, DCa and DCc are three steps that are used to accompany the reporting of major findings (DRf) and they have both high frequency and range. This confirms the essential communicative purpose of Discussions not just to report the findings but also to comment on findings.

Analysis of the step sequence patterns showed that DRf-DCi and DCi-DRf have the highest frequencies, 46 and 28 instances, respectively. Also, they occur in cycles in a number of theses. An alternative step following DRf is DCa, namely, DRf-DCa. There are 26 instances of this sequence pair, showing that the writers sometimes explain and give reasons for the findings they report. A third high-frequency pair is DCi-DLj, with 17 instances, illustrates that after interpreting results the writers may refer to other studies to provide support for their interpretation.

Sequence analysis also reveals a number of meaningful 3-step sequence patterns: DIb-DRf-DCi (8 instances), DIb-DRf-DCc (6 instances) DRf-DCi-DCc (8 instances), and DRf-DCi-DSc (6 instances). The first two patterns reveal that in the beginning of Discussions, the writers tend to re-state the research questions or design of the study, then they report the major findings, and finally interpret the findings or compare the results with those from other studies. The later two patterns show that after reporting major findings, the writers may choose to compare the results with those from other studies or to make conclusions of results.

Finally, as mentioned earlier, although there can be an independent Discussions chapter in a thesis (only 4 theses in the corpus), it may be combined with Results or Conclusions, and included in the Results or Conclusions chapters. Even within the Results or Conclusions chapter, Discussions can be an independent section or combined with results, implications, etc. With the criteria established earlier, we analyzed in total 10

Discussions in the theses.

Conclusions

Conclusions is a part that is often short, particularly in scientific RAs unless it is combined with Discussions. It is also a section/chapter has been long neglected in genre studies. However, the communicative purposes of Conclusions as a distinctive section/chapter from Discussions, especially when there are separate sections or chapters in an RA or a thesis, needs clarification, as Yang and Allison (2003) indicated. Yang and Allison (2003) revealed that Conclusions may have overlapping moves with Discussions; however, it has a more linear structure and different overall functional weightings on the overlapping moves. In other words, it concentrates more highlighting overall results and evaluating the study rather than commenting on specific results. In theses, as there are sometimes separate Discussions and Conclusions chapters, it is essential that the information structure of Conclusions be examined in relation to the communicative purposes of this chapter so that we can have a better understanding of how to conclude a thesis with appropriate rhetorical highlights.

In this study, only ten theses have an individual Conclusions chapter. Frequency analysis first revealed that the top three high-frequency steps (COs, CDp, and CDf, namely, summarizing the study briefly, drawing pedagogical implications, and recommending further research) also have high percentages in range. However, these three steps do not have frequencies as high as those high-frequency steps in other chapters, suggesting that cycles of steps do not occur in Conclusions. This confirms Yang and Allison (2003) that Conclusions usually has a linear structure. Another step, CVl (indicating limitations), is a step that also has a high percentage (90% in range) but its frequency not as high as the above-mentioned steps. This is reasonable because CVl tends to occur only once in each thesis; in other words, the writers would restrict the mention of limitations of their own study to one small part of Conclusions. Among these four steps, COs, having a range of 100%, is an obligatory step, while the other three can be regarded as quasi-obligatory.

In terms of moves, it can be observed that Move2 to Move4 (summarizing, evaluating, and deducing from the study) are characteristic of the communicative purposes of Conclusions in theses.

Analysis of sequence patterns revealed that all patterns have low frequencies (5 or less instances), suggesting that there is no fixed order of presenting the various moves/steps as they do not have clear sequential relationships.

It is also noticed that the Conclusions chapters of the theses in our corpus have very clear sectioning with rhetorical sectional headings. In a number of theses, the research questions are restated and followed by the major findings and discussion of implications, while in some others, the writers tend to focus more on personal reflections over the whole research process.

五、計畫成果自評 (Self-evaluation)

As indicated by Swales (2004), because of the daunting length of its exemplars, little was known about this genre from a discoursal point of view. It is a difficult and complicated task to analyze complete theses or dissertations. The development of a coding scheme itself is already time-consuming, not to mention the move analysis chapter by chapter. Although we finally analyze only a small corpus of 15 complete theses, the moves/steps analysis takes more than six months. However, the importance of genre knowledge in helping EAP learners to raise their consciousness and master their target genres has been widely acknowledged. With an increasing number of graduate students in Taiwan, we certainly face the need of providing them with a clear picture of what constitutes an acceptable thesis/dissertation. This study on the genre of master theses not only clarifies the similarities and differences between research articles and theses/dissertations but also provides valuable information and authentic materials for EAP pedagogy.

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Appendix The Coding Scheme

Chapter	Move	Step	code
Abstract (informative)	Move 1: Introduction (AI)		AI
	Move 2: Method (AM)		AM
	Move 3: Result (AR)		AR
	Move 4 Conclusion (AC)		AC
Introduction	Move 1: Establishing a territory (IT)	Topic generalizations/background	ITb
		Centrality/importance of topic	ITc
		Defining terms	ITd
		Parameters of research	ITe
		Reviewing previous research	ITl
	Move 2: Establishing a niche (IN)	Gap in previous research	INg
		Question-raising	INq
		Counter-claiming	INc
		Continuing/extending a tradition	INe
		Problem/need	INn
	Move 3: Occupying the niche (IO)	Purposes/aims/objectives	IOp
		Scope of research	IOc
		Chapter/section structure	IOu
		Theoretical position	IOh
		Announcing research/work carried out	IOw
		Parameters of research	IOe
		Research questions/hypotheses	IOq
		Defining terms	IOd
		Method	IOm
		Findings/results	IOr
		Product/models proposed	IOt
		Application	IOa
		Evaluation/significance	IOv
		Justification (why doing the study)	IOj
		Thesis structure	IOo

	Reference to other studies (IL)	Providing background/topic generalization	ILt
		Providing definition of terms	ILd
		Providing support or justification	ILj
Literature Review (each thematic unit: Move 1-3)	Introduction (LI)	Indicating organization of the review chapter(s) and justifying the themes (areas) to be reviewed	LI
	Move 1: Establishing one part of the territory of one's own research by (LE)	Surveying the non-research-related phenomena or knowledge claims	LEn
		Claiming centrality	LEc
		Surveying the research-related phenomena	LEr
	Move 2: Creating a research need (in response to Move 1) by (LN)	Counter-claiming (weaknesses and problems)	LNc
		Gap-indicating (paucity or scarcity)	LNg
		Asserting confirmative claims about knowledge or research practices surveyed	LNa
		Asserting the relevancy of the surveyed claims to one's own research	LNr
		Abstracting or synthesizing knowledge claims to establish a theoretical position or a theoretical framework	LNs
		Concluding a part of literature review or indicating transition to review of a different area	LNt
	Move 3: Occupying the research niche by announcing (LO)	Research aims, focuses, research questions or hypotheses	LOa
		Theoretical positions/theoretical frameworks	LOt
		Research design/processes	LOd
		Interpretations of terminology used in the thesis	LOi
	Conclusion (LC)	Providing a summary of the review of the themes and relating the review to the present study	LC
Method	Move 1: Introducing the Method chapter	Chapter/section structure	MIo
		Overview of the study(including purpose, context, hypotheses, research ques-	MIs

	(MI)	tions, etc.) (overall research design)	
		Theory/approach	MIt
	Move 2: Describing data collection method and procedure(s) (MD)	Describing the sample (participants, location, time, etc.)	MDs
		Recounting methods and steps in data collection (including materials, instruments, tasks, etc.)	MDp
		Justifying the data collection procedure(s)	MDj
	Move 3: Delineating methods of data analysis (MM)	Presenting an overview of the (data analysis) design	MMd
		Explaining specific method(s) of data analysis	MMm
		Explaining variables and variable measurement	MMv
		Justifying the methods of measuring variables or data analysis	MMj
	Move 4: Elucidating data analysis procedure(s) (MP)	Relating(or recounting) data analysis procedure(s)	MPp
		Justifying the data analysis procedure(s)	MPj
		Previewing results	MPr
	Reference to other studies (ML)	Providing background/topic generalization	MLt
		Providing definition of terms	MLd
		Providing support or justification	MLj
Results	Move 1: (Preparatory information) Introudcing the results chapter (RI)	Providing background information or how results are presented	RIb
		Indicating methods used or statistical procedure applied	RIm
	Move2: Reporting results (RR)	Locating graphics	RRg
		Reporting major findings	RRf
	Move 3: Commenting on results (RC)	Interpreting results	RCi
		Comparing results with literature	RCc
		Evaluating results (including strengths, limitations, generalizations, etc. of results)	RCv
		Accounting for results (giving reasons)	RCa
	Move 4: Summarizing results (RS)	Making conclusions of results	RSc

	Move 5: Evaluating the study (RV)	Indicating limitations of the study	RVl
		Indicating significance/advantage of the study	RVs
	Move 6: Deductions from the (research) Study (RD)	Recommending further research	RDf
		Drawing pedagogic implications	RDp
		Making suggestions	RDs
	Reference to other studies (RL)	Providing background/topic generalization	RLt
		Providing definition of terms	RLd
		Providing support or justification	RLj
Discussions	Move 1: (Background information) Introducing the discussions chapter (DI)	Providing background information (such as purpose, design, research questions/hypotheses, etc.) or how discussions are presented	DIb
	Move 2: Reporting results (DR)	Reporting major findings	DRf
	Move 3: Summarizing results (DS)	Making conclusions of results	DSc
	Move 4: Commenting on results (DC)	Interpreting results	DCi
		Comparing results with literature	DCc
		Accounting for results (giving reasons)	DCa
		Evaluating results (including strengths, limitations, , etc. of results)	DCv
	Move 5: Summarizing the study (DO)	Summerizing the study briefly	DOs
	Move 6: Evaluating the study (DV)	Indicating limitations	DVl
		Indicating significance/advantage	DVs
		Evaluating methodology	DVm
	Move 7: Deductions from the (research) study (DD)	Making suggestions	DDs
		Recommending further research	DDf
		Drawing pedagogic implications	DDp
	Reference to other stu-	Providing support or justification	DLj

	dies (DL)		
Conclusions	Move 1: Introducing the Conclusions chapter (CI)	Restating the purpose, design, research questions/hypotheses, results, or indicating how conclusions are presented	CIb
	Move 2: Summarizing the study (CO)	Summerizing the study briefly	COs
	Move 3: Evaluating the study (CV)	Indicating significance/advantage	CVs
		Indicating limitations	CVl
		Evaluating methodology	CVm
	Move 4: Deductions from the (research) study (CD)	Recommending further research	CDf
		Drawing pedagogic implications	CDp
		Making suggestions	CDs
	Reference to other studies (CL)	Providing support or justification	CLj