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學術講演的開場和結尾用語與班級大小的關聯性之比較研究

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中 文 摘 要 ： 本研究使用 MICASE 語料庫來探討學術課堂演講的結尾的修辭結構(rhetorical structure)，以及班級大小對其之影響。本研究提出一個二層次之架構來分析課堂演講之結尾，第一個層次是階段(stage)，分為結束前(Pre-ending)，結束(Ending)，以及結束後(Post-ending)三個階段。第二個層次是策略(strategy)，每個階段都可使用不同策略。

研究結果顯示在課堂演講結尾時，三個最常使用的策略分別是：解釋下次上課的課程規劃，解散學生，以及明白的表示課程結束。整體而言，每個策略的使用率不高，不同老師所使用的策略也有很大差異，顯示每個老師對於策略的使用很有彈性。另一方面，班級大小對於演講結尾的修辭結構之影響有統計上的顯著差異，大小班級在結束前與結束後兩階段的策略使用也達到顯著差異。在大班級中，策略大多集中在結束階段，但是在小班級中，策略大多集中在結束前與結束後階段，顯示大班級使用較正式的課堂演講結尾，小班級則是有比較多的師生互動，尤其是在結束後階段，師生常有與課程不相關之非正式的互動。另外，小班級使用的策略總數較大班級多，有較多的師生互動策略，顯示小班級的課堂氣氛較大班級輕鬆，讓師生有較多的互動，學生也較願意提問。

在人稱代名詞的使用量方面，班級大小的差別也很大，相當接近顯著差異。老師在小班級使用我(I)遠比在大班的使用量多，達到顯著差異，但是在你(you)或是我們(we)的使用上，大小班並沒有顯著差別，這個結果與策略的分析結果相呼應，由於小班級使用較多的師生互動策略，老師和學生會較常使用我來問對方問題或是回應對方的想法。反觀在大班級中，老師通常是告知課程相關議題或直接解散學生，因此較常使用你和我們。此外，老師會很有彈性，也很有技巧的使用人稱代名詞，因為每個人稱代名詞都可用來指稱多個不同的語意指示者(semantic referents)。例如，老師雖然常用包含學生在內的我們(inclusive-we)來指稱自己和學生，以促進師生更密切的關係，但是也會在指定學生作業或說明考試時，雖僅指稱學生，卻用我們，以表示共同參與之事，避免學生排斥。這些研究結果顯示班級大小確實對課堂演講結尾有顯著的影響，也提供老師如何使用各種策略與人稱代名詞，以增進師生互動與良好關係，扮演適當的角色。

本研究的研究結果不僅可以使我們更深入了解英語課堂演講結尾的修辭結構、人稱代名詞的語意和語用特色、以及班級大小對於課堂演講結尾的影響。另一方面，研究結果也可以幫助新進老師瞭解課堂演講結尾之彈性架構與策略。由於本研究結果顯示課堂演講結尾的修辭結構彈性很大，老師應該

針對班級大小採用各種合適的策略以促進師生互動，並加深與學生之間的人際關係。此外，研究結果可以提供相關研究實用的分析架構、教學資料與真實語料實例。在學術口語文類的分析上，則建立課堂演講結尾的修辭結構，也確認其具有很大的彈性與差異性(variation)。此外，本研究讓我們瞭解課堂演講結尾這個部份文類(part genre)不單只是總結課程內容而已，更能增進師生互動與人際關係，具有社會言談功能。

中文關鍵詞： 學術課堂演講，學術課堂演講結尾，班級大小，MICASE，人稱代名詞

英 文 摘 要 ： The present study investigates the rhetorical structure of academic lecture closings, and the impact of class size on this part genre. A framework of stages and strategies is developed to analyze the rhetorical structure of lecture closings. Large and small classes are further compared to find how class size may influence the ways lecturers close their lectures. Personal pronouns I, you, and we are also examined to explore interpersonal dynamics. Results show that lecturers use a wide range of strategies in closings, yet with great variation. Three strategies—explicitly indicating the end of lecture, explaining course plans for the next class, and dismissing the class—are most frequently used. Large and small classes differ in both stages and strategies. Strategies tend to concentrate at the Ending Stage in large classes, but at the Pre-ending and Post-ending Stages in small classes. Interestingly, students and lecturers in small classes have frequent, informal interaction on non-course-related issues. Lecturers may use personal pronouns flexibly and strategically, referring to a variety of semantic referents, to enhance student engagement and mitigate potential disfavor. These findings demonstrate the impact of class size on lecture closings, which provide an opportunity for lecturers to establish close rapport with students.

英文關鍵詞： Lecture closings, Academic lectures, Class size, MICASE, Personal pronouns

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"That's it for today": Academic lecture closings and the impact of class size

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ABSTRACT

The present study investigates the rhetorical structure of academic lecture closings, and the impact of class size on this part genre. A framework of *stages* and *strategies* is developed to analyze the rhetorical structure of lecture closings. Large and small classes are further compared to find how class size may influence the ways lecturers close their lectures. Personal pronouns *I*, *you*, and *we* are also examined to explore interpersonal dynamics. Results show that lecturers use a wide range of strategies in closings, yet with great variation. Three strategies—explicitly indicating the end of lecture, explaining course plans for the next class, and dismissing the class—are most frequently used. Large and small classes differ in both stages and strategies. Strategies tend to concentrate at the *Ending Stage* in large classes, but at the *Pre-ending* and *Post-ending Stages* in small classes. Interestingly, students and lecturers in small classes have frequent, informal interaction on non-course-related issues. Lecturers may use personal pronouns flexibly and strategically, referring to a variety of semantic referents, to enhance student engagement and mitigate potential disfavor. These findings demonstrate the impact of class size on lecture closings, which provide an opportunity for lecturers to establish close rapport with students.

1. Introduction

Understanding lectures, for most university students, plays a critical role in their academic success. It is widely acknowledged that listening to lectures can present a considerable processing burden to students, particularly those who are non-native speakers (Flowerdew, 1994a; Young, 1994). Research has indicated that lectures are both linguistically and cognitively demanding (Flowerdew, 1994a; Flowerdew & Miller, 1997; Thompson, 2003), and that even L2 learners with adequate English proficiency have difficulty comprehending academic lectures (Allison & Tauroza, 1995; Flowerdew, 1994b; Flowerdew & Miller, 1996; Thompson, 1994; Young, 1994). A number of studies have examined various aspects of academic lectures to increase our understanding of academic lecture discourse and to help learners better process information in lectures. These have included, for example, the overall organization of lectures (Dudley-Evans, 1994; Tauroza & Allison, 1994; Thompson, 1994, 2003; Young, 1990, 1994), lecture introductions (Lee, 2009; Thompson, 1994), the interactive nature of lecture discourse (Crawford Camiciottoli, 2004; Morell, 2004), the use of asides (Strodt-Lopez, 1991), personal pronouns (Fortanet, 2004; Rounds, 1987a, 1987b; Young, 1994), discourse markers as signaling cues (Allison & Tauroza, 1995; Chaudron & Richards, 1986; Dunkel & Davis, 1994; Flowerdew & Miller, 1997; Jung, 2003, 2006; Thompson, 2003), and the pedagogical implications for EAP (Ferris & Tagg, 1996; Flowerdew, 1994b; Flowerdew & Miller, 1997). However, classroom lecture closings have not received much attention in academic discourse studies.

The closing of a lecture is as important as the opening or the body of the lecture because a strong and powerful ending often stays clearly in the listeners' minds. In legal situations, lawyers or prosecutors often make the best of their final

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closings to appeal to the juries. In a public speech, a powerful ending can leave the audience not only with a good impression of the presentation, but with the important messages the speech conveys as well. The same situation can apply to movies or book series, in which an attractive ending encourages viewers and readers to return. Although the situation in a university setting is slightly different, since the students are required to attend the course for a long period of time, the importance of lecture closings remains. In the closing of university lectures, lecturers can make up for lapses in the body of the lecture, review or summarize the key points, and discuss or explain course-related issues, such as homework or the following week's exam. Students, on the other hand, may use this time to ask questions about specific lecture content.

In addition, lecture closings provide a good chance for comparatively informal interactions, which help enhance interpersonal relationships between the lecturer and students. In these more relaxed moments, the lecturer and students may engage in small talk that deepens the positive bonding between them. Thus, pragmatically, closings are significant in highlighting interpersonal dynamics in the classroom. It is important, therefore, to investigate this part genre in terms of its rhetorical structure in order to acquaint students, teaching assistants and novice teachers with spoken academic language.

A few studies have investigated the macrostructure of lectures; for example, Young (1994) identified six phases: discourse structuring, conclusion, evaluation, interaction, theory or content, and examples. Among them, the concluding phase refers to a phase when lecturers summarize points they have discussed throughout the lecture. This phase may certainly occur at the end of a lecture, but a lecture closing often goes beyond a summary or conclusion of the lecture content; for example, it may include an explicit indication of the end of lecture, an explanation of course-related issues, as mentioned earlier, or even non-course-related issues, such as casual conversations between lecturers and students.

In addition to the analysis of entire lectures, the introductions of lectures have also attracted researchers' interest. Thompson (1994) proposed two main rhetorical functions in the introductions of lectures. One function sets up the framework of the lecture as a textual object, giving information about the topic, scope, structure, and aims of the lecture. The other function establishes a context for the topic, relating it to what the audience already knows.

However, lecturers' individual styles may have an impact on how lectures are organized and what discourse features are employed, and consequently, students may need to develop different strategies to understand the lectures. One of the variables that influence lecturers' styles and discourse is the size of the class (Ferris & Tagg, 1996; Lee, 2009). Conversational style lectures, in which lecturers deliver the lectures from notes and in a relatively informal style with a certain amount of interaction with students (Dudley-Evans, 1994), are becoming more common, especially in smaller classes (Crawford Camiciottoli, 2005; Morell, 2004, 2007; Northcott, 2001; Schleef, 2009).

Research on academic lectures has indicated that both the level of interactivity and the interactive style have an impact on how lectures are structured (Basturkmen, 1999; Crawford Camiciottoli, 2004; Jung, 2006; Morell, 2004, 2007; Northcott, 2001). Although it is expected that large class lectures are more monologic in nature, whereas small class lectures are more interactive, very few studies have empirically investigated the effects of class size on the macrostructure of academic lectures (Lee, 2009). Lee (2009) found that class size does affect lecturers' discursive decisions in university lecture introductions. Lecturers in large classes are inclined to have more reminders of class-related issues and upcoming lectures as a way to establish positive learning environments, whereas lecturers in small classes tend to make digressions to reinforce rapport between lecturers and students. Although Lee's (2009) study provides information on the effect of class size on lecture introductions, it is a small-scale exploratory study, consisting of only ten lectures. Studies with a larger sample size are needed for further generalization of the effects of class size on the rhetorical structure of lectures.

In addition to rhetorical structure, lectures are characterized by some linguistic features, including conversational characteristics such as incomplete clauses, pauses, false starts, redundancies, and repetitions (Dudley-Evans & Johns, 1981), phraseology (Simpson, 2004; Simpson-Vlach & Ellis, 2010), metadiscourse (Ädel, 2010; Mauranen, 2001), discourse markers (Chaudron & Richards, 1986; Flowerdew & Tauroza, 1995), and the use of personal pronouns (Fortanet, 2004; Rounds, 1987b). Among these features, the use of personal pronouns could reflect how speakers perceive social relations, including self, selves, others and the academic community; they could mark important interactional aspects of academic oral discourse, particularly the relationship between speakers and listeners and their roles and attitudes (Ädel, 2010; Mauranen, 2001).

Moreover, previous research on lectures has revealed that the size of the class tends to have an impact on the occurrences of personal pronouns in lectures (Crawford Camiciottoli, 2005; Lee, 2009; Morell, 2004). For example, Morell (2004) found that interactive lectures tend to be characterized by a greater number of the pronouns *you* and *we*, elicitation markers, and questions. Crawford Camiciottoli (2005) indicated that small classes appear to demonstrate features of interaction, such as the use of personal pronouns, asides and rhetorical questions, more clearly. Lee (2009) found that *I* and *you* occur more frequently in lecture introductions in small classes than in large classes while *we* occurs more frequently in large classes than in small classes.

Research has also revealed that personal pronouns may have a number of semantic referents. For instance, Rounds (1987b) found that teachers avoid third-person pronouns and they redefine first-person pronouns to include third-person and indefinite reference. Fortanet (2004) analyzed *we* in university lectures and demonstrated that *we* is used with a wide variety of referents and discourse functions. Despite these interesting findings in existing research, little is known about the semantic-pragmatic interface of personal pronouns in lecture closings in relation to the generic rhetorical structure or the interpersonal dynamics in large and small classes based on the use of *I*, *you*, and *we*.

Personal pronouns are more than a grammatical category that replaces nouns with simple semantic references. A pragmatic approach to the meanings and functions of personal pronouns in diverse types of discourse could enlighten the interpretation of texts or utterances in research (Hyland, 2001; Kuo, 1999; Mauranen, 2001). The pragmatic meanings of personal pronouns in lecture closings may be grounded in the notions of face and positive and negative politeness (Brown & Levinson, 1987; Fortanet, 2004). In interactions, speakers tend to employ appropriate politeness strategies to avoid or mitigate the threat to the hearer's positive face. For example, one of the positive politeness strategies Brown and Levinson identified is to include both speaker and hearer in an activity. The use of inclusive *we* in lectures can thus often be identified as positive politeness. Negative politeness is oriented towards the hearer's negative face and emphasizes the avoidance of imposition on the hearer. For example, the use of *you* and *I* instead of inclusive *we* in certain contexts may have a distancing effect and be regarded as negative politeness (Fortanet, 2004).

From this point of view, the use of *we* by the lecturer or the student can be inclusive or exclusive (Fortanet, 2004; Lee, 2009; Pennycook, 1994). *We*-inclusive has a covert assumption about shared communality between the speaker and the listener. *We*-exclusive, in contrast, defines the listener as a *you* for the claim of non-communality, serving a distancing function between the speaker and the listener. *You* suggests an assumed other being addressed and a dichotomy between the speaker and the listener. *I* assumes subjectivity, particularly in relation to the role and position the speaker takes, and stands in opposition to *you*, or even *we*.

In academic lectures, the pragmatic aspects of the use of personal pronouns, particularly the role relationship between lecturers and students and their interactions, are of interest to explore. The results could be expected to highlight the analysis of the rhetorical structure of lecture closings and the comparison between large class and small class lecture closings.

The present study, therefore, attempts to investigate both the rhetorical structure of academic lecture closings and the impact of class size on them. The study also analyzes the semantic-pragmatic meanings of personal pronouns *I*, *you*, and *we* since the use of these personal pronouns may reflect the level of interactivity and the interactive style between lecturers and students in the classroom. Specifically, the study aims to answer the following research questions:

1. What is the rhetorical structure of academic lecture closings?
2. What are the semantic-pragmatic meanings of personal pronouns in lecture closings?
3. Does class size have an impact on the rhetorical structure and the semantic–pragmatic use of personal pronouns in lecture closings?

2. Methods

2.1. The data

This study takes a corpus-based approach to the closings of authentic academic lectures in MICASE.[1] MICASE is a specialized corpus of contemporary university lectures recorded at the University of Michigan between 1997 and 2001 (Simpson, Lee, & Leicher, 2002). It contains approximately 1.7 million words (nearly 200 h) in 152 speech events. The speech events are categorized according to various contextual variables, including the type of event, the subject area of the event, the extent to which an event is monologic or interactive, as well as the academic role or level of the majority of participants (e.g., whether the class is a graduate or an undergraduate class, or whether the meeting is primarily of senior faculty members).

The *MICASE Handbook* (Simpson-Vlach & Leicher, 2006) provides not only rich and helpful contextual information, as indicated above, but the abstracts of the speech events and their pragmatic highlights as well. The interpretation and discussion of the results from analysis may benefit from the data and information.

The corpus in this study consists of 56 closings of lectures out of a total of 62 lectures from different disciplines in MICASE, excluding those without closings or those having restricted information on the transcripts. The large and small class lecture corpora (26 and 30 lecture closings, respectively) were selected according to the criteria defined by MICASE; that is, a large class lecture (LCL) refers to a class consisting of more than 40 students whereas a small class lecture (SCL) consists of 40 or fewer students. There are in total 7409 running words in the whole lecture closing corpus, including 2401 words from the LCL corpus and 5008 words from the SCL corpus. The average number of words per lecture closing is 132 words; however, there are fewer words per lecture closing in LCLs than SCLs (92.35 and 166.93 words, respectively).

2.2. Methods of analysis

The framework used in the analysis was characterized by the generic features of this part genre. Instead of using Swales' (1990) terms *moves* and *steps* or Thompson's (1994) *functions* and *sub-functions*, this study uses the term *strategy* to emphasize the non-sequential and recurrent nature of the elements in the framework. Strategies do not occur regularly or in sequential order in a lecture or a stage, and some strategies may recur in a lecture or a stage. The term *stage* is used to reflect the upper-level rhetorical structure, and the sequential process of lecture closings.

[1] MICASE stands for Michigan Corpus of Academic Spoken English. Transcripts are available online at http://quod.lib.umich.edu/m/micase/.

The coding process starts with the identification of the strategies, which were then categorized into the larger structure of stages. The rhetorical structure of a lecture closing was divided into *Pre-ending*, *Ending*, and *Post-ending Stages*, and under each stage, a number of strategies were identified. The *Pre-ending Stage* is when the lecturer prepares to wrap up the lecture, such as raising questions or issues for discussion, summarizing or reviewing key points of the lecture, and explaining course-related issues such as homework or exams, but not offering new information on the lecture topics. The *Ending Stage* follows the *Pre-ending Stage*, but it is the stage first identified in the analysis since the lecturer uses explicit ending expressions to signal the end of the lecture. The lecturer may, in the meantime, indicate future course plans, and allow students to leave, including leave-taking good-byes and good wishes. The third stage is the *Post-ending Stage*, referring to the period after the lecturer has explicitly indicated the end of the lecture but interactions and activities still go on before students leave.

Strategies were identified based on their communicative functions. A strategy is similar to a move in genre analysis, which can be defined as "a discoursal or rhetorical unit that performs a coherent communicative function in a written or spoken discourse" (Swales, 2004, p. 228). However, a strategy can occur in any stage of a lecture closing. A coding scheme of strategies consisting of codes for all the strategies identified in the corpus was then developed. The data of all occurrences of strategies were further examined to identify their possible sequential patterns in order to better understand the organization of each stage and how lecturers often combine strategies.

To mitigate the researcher's analytical subjectivity, all transcripts were also analyzed by two other raters independently (a former colleague and a graduate student in TESOL). Whenever there were disagreements among the raters on the coding of strategies, the three raters discussed the discrepancies until consensus was achieved. The computer software *AntConc 3.2.1* was used to analyze both the frequencies and sequences of the strategies.

The quantitative analysis of personal pronouns *I*, *you*, and *we* was also conducted on *AntConc 3.2.1*, but the discourse analysis of their semantic referents was done manually by the three raters.

2.3. Coding lecture closings

Analysis of the data showed that in the three main rhetorical stages of lecture closings, there are in total 15 strategies. The 15 strategies were further categorized into 12 teacher strategies and three student strategies (see Table 1). After the analysis of stages and strategies in the lecture closings, code tagging was performed. Strategy codes, as shown in Table 1, were tagged on the electronic texts. The tag was positioned at the beginning of each strategy in the text. The tagging served the following two functions: the statistical analysis of the strategies, and the retrieval of all cases of a certain strategy in the corpus via concordance.

2.4. Analysis of personal pronouns

The analysis of personal pronouns aimed not only at the frequency of *I*, *you*, and *we* but at their semantic referents and their variants as well, including the subjective, objective, and possessive forms, and those appearing with contracted verbs. The referent of each occurrence of these personal pronouns was determined on the basis of the discourse context where the personal pronoun occurred. All the referents in large and small class lecture closings were then pooled and compared.

The results from the analyses of strategies and personal pronouns were triangulated in the hope of reaching a better understanding of lecture closings and the possible impact of class size, such as the use of a specific personal pronoun in relation to a strategy to help realize its communicative function.

Table 1
Strategies in lecture closings.

Teacher strategies	
AE	Indicating the end of lecture
AF	Asking if students have questions
AQ	Answering students' questions
CA	Calling for attention
CC	Coming to a conclusion of lecture content
CI	Explaining course-related issues (e.g., assignments or class hours)
DS	Dismissing the class or leave-taking goodbyes and wishes
FP	Indicating the plan for the future (e.g., course content or activities for the next class)
NC	Explaining non-course-related matters
QD	Raising questions or issues for discussion
RK	Summarizing or reviewing key points
TR	Responding to students
Student strategies	
CQ	Raising questions about course-related issues
LQ	Raising questions about lecture content
SR	Responding to the lecturer

3. Findings and discussion

This section first presents and discusses the results from a corpus-based analysis of the stages and strategies in academic lecture closings and a comparative analysis of lecture closings in large and small classes. The frequency as well as semantic-pragmatic analyses of personal pronouns are subsequently reported, as is a comparison of their uses in large and small classes.

3.1. The overall rhetorical structure of lecture closings

A total of 221 occurrences of all strategies were identified in the 56 lecture closings, with a mean of 3.95 occurrences of strategies per lecture closing. To further examine how commonly each strategy occurs in the lecture closings and whether the strategy is obligatory or optional, both the frequency (i.e., occurrences) and range (i.e., distribution of each strategy in the 56 academic lecture closings) of each strategy were calculated. As shown in Table 2, indicating the plan for the future (FP) and dismissing the class or leave-taking goodbyes and good wishes (DS) are used most frequently, with a frequency higher than 30 and a range above 50%. This suggests that, at the end of the lecture, around half of the lecturers tell their students what they intend to do in the next class and also verbally dismiss the class. In addition, both the frequency and range of the strategies for indicating the end of lectures (AE) and explaining course-related issues (CI) are also relatively high, showing that lecturers often explicitly indicate the end of the lecture and explain course-related issues.

However, a noteworthy finding from this analysis is that all strategies occur in fewer than 60% of the lecture closings, and more than two-thirds of the strategies occur in fewer than 20% of them. The low frequency and low percentage of range of the strategies reflect the lack of a typical rhetorical structure of lecture closings. This is consistent with the findings of previous studies of lectures or lecture introductions (Lee, 2009; Thompson, 1994; Young, 1994). As discussed in the literature, the greater rhetorical flexibility of lecture closings can be expected, mainly because they are spoken discourse, occurring in real time (Flowerdew & Miller, 1997; Lee, 2009; Thompson, 1994). From the perspective of genre analysis, this seems contradictory to the definition of genres which states that exemplars of a particular genre share similarities in rhetorical structure (Swales, 1990). However, the value of genre analysis is not to provide prescription, but to identify the rhetorical structure that tends to recur in genre-specific texts (Swales, 1990). As disciplinary variation has been found to play a role in the rhetorical structure of the written genre of research articles, other factors, such as size of class, discipline, lecture type, or lecturing style of lecturers, may contribute to variability in individual lecture closings.

In addition to the mere counting of the strategies, an examination of the distribution of strategies across the three stages as well as their sequences may reveal the "rhetorical movement" (Swales, 1990, p. 140) in lecture closings and hence provide a clearer picture of this part genre.

3.2. Distribution of strategies across the three stages

An examination of the occurrences of the strategies across the three stages (Table 3) revealed that the *Ending Stage* has the highest occurrences (85) of strategies, followed by the *Pre-ending Stage* (70), and the *Post-ending Stage* has the least occurrences (66). However, the *Pre-ending Stage* (12) contains more types of strategies than the *Ending Stage* (9) and the *Post-ending Stage* (9). Furthermore, it can be observed that the frequencies of the strategies in each of the three stages are low. For example, DS, which has the highest frequency among all strategies at a single stage, has only 28 occurrences in the *Ending*

Table 2
Frequency and range of strategies in lecture closings.

	Frequency		Range[a]		
	Frequency	Rank	Range	%	Rank
FP	35	1	33	58.93	1
SR	34	2	12	21.43	5
DS	30	3	28	50.00	2
AE	23	4	22	39.29	3
TR	19	5	7	12.50	9
CI	16	6	14	25.00	4
NC	14	7	11	19.64	6
AQ	11	8	5	8.93	10
AF	9	9	8	14.29	7
CQ	9	9	5	8.93	10
CC	8	11	8	14.29	7
CA	4	12	4	7.14	12
LQ	4	12	3	5.36	13
RK	3	14	3	5.36	13
QD	2	15	2	3.57	15

[a] Range refers to the distribution of each strategy in all 56 lecture closings.

Table 3
Frequency of strategies in the three stages of lecture closings.

Pre-ending stage			*Ending stage*		*Post-ending stage*	
SR (14)[a]	CC (7)	QD (2)	DS (28)	SR (2)	SR (18)	LQ (4)
FP (11)	AE (3)	NC (1)	FP (24)	AQ (1)	NC (12)	CA (2)
CI (10)	RK (3)		AE (20)	CQ (1)	TR (11)	DS (2)
TR (8)	CA (2)		CI (6)	NC (1)	AQ (10)	CC (1)
AF (7)	CQ (2)		AF (2)		CQ (6)	
	70		85		66	

[a] Number in parentheses indicates frequency.

Stage, given that there are 56 lectures in the corpus. Moreover, most strategies can occur at any stage of a lecture closing. For example, strategies of raising questions about course-related issues (CQ), explaining non-course-related matters (NC) and responding to the lecturer (SR) occur at all three stages. These results suggest great flexibility in the use of strategies at the stages.

It was also found that a great majority of lectures (89.29%) have an *Ending Stage*, whereas the *Pre-ending* (39.29%) and *Post-ending* (26.79%) *Stages* are less common. Thus it seems most lecture closings focus on the *Ending Stage*. In fact, not many lecturers actually wrap up the lecture by summarizing key points, having a discussion of the lecture, and so forth, and not many lecturers seem to have further announcements, discussion, or interaction with the students after ending the lecture; more often lecturers continue the lecture until the very end of the class time and close the lecture briefly.

With respect to the use of individual strategies at each stage, DS, FP, and AE occur most frequently at the *Ending Stage* (together constituting 84.71% of all occurrences of strategies at this stage), while SR has the highest frequency at both the *Pre-ending* and *Post-ending Stages*. The former suggests that indicating the end of the lecture, explaining future course plans, and dismissing the class are three major strategies lecturers use more frequently than other strategies, and they use them more often at the *Ending Stage*. The latter reveals that there is more student involvement before and after the lecture ending is announced. The following are examples showing these high frequency strategies:

(1) so, have a nice weekend a good holiday. (*Ending Stage*, DS, S056)
(2) okay, exam on Thursday, don't forget. (*Ending Stage*, FP, L088)
(3) we're about out of time today so, i'm[2] gonna stop here continue later. (*Ending Stage*, AE, L074)
(4) i guess, i don't know. it just seems, to me that like picking them early wouldn't be that different than, shutting off the A-C-C synthase (*Post-ending Stage*, SR, S078)

3.3. Strategies in individual lecture closings

A majority of strategies occur only once in a lecture closing; however, strategies SR and TR (responding to students) occur more than once in most lecture closings that contain them. This is comprehensible since cycles of SR and TR show continuous interactions between the lecturer and students. We may infer that some lectures are more interactive than others. This finding was later found to be closely related to class size. In other words, they often show cyclic interactions between the lecturer and students.

Interestingly, 15 of the 56 (26.79%) lecture closings consist of only one strategy, and another 9 (16.07%) lectures contain only two strategies in the closings. Therefore, more than two-fifths of the lecturers end lectures briefly and these short lecture closings mainly contain one or two of the strategies FP, AE and DS. Examples 5 and 6 illustrate one-strategy-only and two-strategy-only lecture closings.

(5) okay it's time to stop, let's stop. (*Ending Stage*, AE, L097)
(6) any other questions about what i've done. <PAUSE:06> okay next time we'll start talking about carbon acids, and enolate ions and then move on to their reactions. (*Ending Stage*, AF-FP, L110)

3.4. Sequences of strategies

To know how the strategies are used in combination with each other, an analysis of strategy sequences was conducted, using the Clustering function of the software *AntConc*. As shown in Table 4, the frequencies of the 3-strategy and 4-strategy sequences are generally low, suggesting the lack of a fixed rhetorical structure in terms of strategy sequences, probably due to the fact that lectures are oral communication in real time, as indicated by Bhatia (1993) and Thompson (1994). It is also possible that lecture closings, similar to lecture introductions in Thompson's study, do not need to have a fixed or preferred sequence of strategy patterns, in contrast with endings in other academic genres (e.g., speeches or academic essays).

[2] Lower case of the pronoun *I* is used in MICASE transcripts.

Table 4
Frequency of strategy sequences in lecture closings.

3-Strategy	4-Strategy
SR–TR–SR (10)[a]	SR–TR–SR–TR (6)
TR–SR–TR (6)	TR–SR–TR–SR (5)
AE–FP–DS (6)	

[a] Number in parentheses indicates frequency. Strategy sequences with a frequency of 5 or higher are selected.

Only three 3-strategy and two 4-strategy sequences have a frequency higher than five, and four of them consist of the SR-TR pair or the pair in cycles. These interactive strategy patterns suggest cyclic interactions between the lecturer and students, corresponding to the results in the preceding section. Example 7 shows a 4-strategy sequence in a conversation between the lecturer (S1) and a student (S3) in the *Post-ending Stage* of a lecture closing.

(7) S3: (xx) (you know) next week we we don't have (time)
S1: let's try for Friday and then with the option to cancel how's that? i i would feel better if i
S3: (xx) Friday like i don't have class (xx) so
S1: oh Friday doesn't work okay (*Pre-ending Stage*, SR–TR–SR–TR, S138)

The only 3-strategy pattern that does not consist of SR and TR is AE–FP–DS. These three strategies are also strategies that have both high frequency and range and occur at the *Ending Stage* most frequently. We may infer that these three strategies in the sequence of AE–FP–DS are probably the most essential in lecture closings. An example is given below:

(8) and uh okay so we've run out of time, the final page on the handouts is just an illustration, of a transgressive sequence, in the, Grand Canyon. okay, and of course you'll notice that we have, sands at the bottom, uh then shale, then limestone, very much like we've just described, uh over here. okay on Thursday, i'll begin by, describing or defining exactly what radioactivity is and we can continue on from there. see you Thursday. (*Ending Stage*, AE–FP–DS, S108)

3.5. Comparison of stages of lecture closings in LCLs and SCLs

The comparative analysis of large and small classes revealed interesting differences in the rhetorical structure of their lecture closings (see Table 5), which in turn suggested the possible impact of class size on the teacher-student relationship and interactions in the classroom. First, the two-tailed t test performed on the frequency data of strategies in lecture closings shows a significant difference between LCLs and SCLs ($p < 0.05$); the difference between the two types of classes in the *Pre-ending* and *Post-ending Stages* is also significant ($p < 0.05$). However, the frequency of strategies at the *Ending Stage* between the two types of classes is not significantly different ($p = 0.06$).

Table 5
Three stages of lecture closings in LCLs and SCLs.

	LCLs[a]		SCLs[b]	
Pre-ending Stage	CC (4/6.15)[c]	CI (1/1.54)	SR (13/8.33)	RK (3/1.92)
	AE (2/3.08)	FP (1/1.54)	FP (10/6.41)	CQ (2/1.28)
	AF (1/1.54)	QD (1/1.54)	CI (9/5.77)	AE (1/0.64)
	CA (1/1.54)	SR (1/1.54)	TR (8/5.13)	CA (1/0.64)
			AF (6/3.85)	NC (1/0.64)
			CC (3/1.92)	QD (1/0.64)
Subtotal	12 (18.46)		58 (37.18)	
Ending Stage	FP (14/21.54)	AQ (1/1.54)	DS (15/9.62)	AF (1/0.64)
	DS (13/20.00)	CQ (1/1.54)	AE (10/6.41)	CI (1/0.64)
	AE (10/15.38)	NC (1/1.54)	FP (10/6.41)	SR (1/0.64)
	CI (5/7.69)	SR (1/1.54)		
	AF (1/1.54)			
Subtotal	47 (72.31)		38 (24.36)	
Post-ending Stage	CA (1/1.54)	NC (1/1.54)	SR (18/11.54)	CQ (6/3.85)
	CC (1/1.54)	DS (1/1.54)	NC (11/7.05)	LQ (3/1.92)
	LQ (1/1.54)	TR (1/1.54)	AQ (10/6.41)	CA (1/0.64)
			TR (10/6.41)	DS (1/0.64)
Subtotal	6 (9.23)		60 (38.46)	

[a] n (total occurrences of strategies in LCLs) = 65.
[b] n (total occurrences of strategies in SCLs) = 156.
[c] The first number in parentheses indicates occurrences and the second number indicates percentages (%).

Nevertheless, as we compared the amount of strategies used in the two types of classes in terms of percentages, it was revealed that the distribution of strategies in LCLs and SCLs are very different. As shown in Table 5, in LCLs, 72.31% of the strategies occur at the *Ending Stage*, whereas in SCLs, only 24.36% of the strategies occur at this stage. At this stage, lecturers in LCLs tend to use strategies like FP, DS and AE more frequently, suggesting a preference for a more formal lecture closing. However, lecturers in SCLs use interactive strategies like SR, TR, and AQ (answering students' questions) more frequently at the *Pre-ending* or *Post-ending Stages*, showing that they tend to interact actively with students before wrapping up the lecture or after ending the lecture and dismiss the class in a more informal way.

In addition, lecture closings in LCLs often have short or no *Pre-ending* and *Post-ending Stages*, whereas strategies are used much more frequently at these two stages in SCLs. At the *Pre-ending Stage*, the percentage of strategies in SCLs is more than two times the percentage in LCLs; strategies SR, FP, CI, and TR are used most frequently; in contrast, in LCLs, only the strategy of CC (coming to a conclusion of lecture content) has a percentage higher than 5%. This suggests that there are more interactions at this stage in SCLs than in LCLs.

At the *Post-ending Stage*, the occurrences of strategies in SCLs are about four times the amount in LCLs. Only six strategies were found at this stage in LCLs and each merely occurs once. The frequent use of strategies SR, NC, AQ and TR in SCLs (having a percentage higher than 5%) suggests not only that lecturers and students have more interactions, but also that non-course-related issues are raised much more often at this less formal stage, after the lecturers have dismissed the class.

3.6. Comparison of strategies in lecture closings of LCLs and SCLs

As shown in Table 6, in general, more strategies were identified in SCLs (156 occurrences, with a mean of 5.20) than in LCLs (65 occurrences, with a mean of 2.50). Specifically, FP, DS, and AE are the top three strategies, having the highest percentages in both frequency and range in both types of classes; they occur in half or more than half of LCLs and SCLs. This result can be expected since these strategies (by definition) use marked lexical expressions for the closing of lectures, performing a clear discourse function of signaling to students the lecturer's intention to end the lecture.

However, a striking difference between LCLs and SCLs is the great discrepancy in the use of SR and TR. These two strategies in SCLs far outnumber LCLs in both frequency and range, indicating a preference for interactions in SCLs. Similarly, strategies NC, AQ and CQ have a much higher frequency and range in SCLs than in LCLs, revealing that small class size may create a more relaxed atmosphere so that lecturers and students are more likely to talk about non-course related issues and students are more likely to raise questions. It might be assumed that students in large classes are likely to stay after the lecture to ask questions or to discuss certain issues with the lecturer. However, as shown in the data, it is not a very common practice in large classes.

In contrast, strategies AE and CC have both higher frequencies and percentages in range in LCLs than in SCLs, indicating that more lecturers in large classes tend to conclude their lectures or indicate that the lecture is going to an end more frequently than lecturers in small classes.

A close examination of the overall rhetorical structure of LCLs and SCLs shows that more than half of the LCLs (57.69%) use only one or two strategies, whereas only 30% of SCLs use one or two strategies (see Table 7). This suggests that more lecturers in LCLs end their class rather abruptly, compared to those in SCLs, where the ending of the class more often proceeds in all

Table 6
Frequency and range of strategies in lecture closings in LCLs and SCLs.

	Frequency		Range	
	LCLs	SCLs	LCLs[a]	SCLs[b]
FP	15 (23.08)[c]	20 (12.82)	15 (57.69)	18 (60.00)
DS	14 (21.54)	16 (10.26)	13 (50.00)	15 (50.00)
AE	12 (18.46)	11 (7.05)	12 (46.15)	10 (33.33)
CI	6 (9.23)	10 (6.41)	6 (23.08)	8 (26.67)
CC	5 (7.69)	3 (1.92)	5 (19.23)	3 (10.00)
AF	2 (3.08)	7 (4.49)	2 (7.69)	6 (20.00)
CA	2 (3.08)	2 (1.28)	2 (7.69)	2 (6.67)
NC	2 (3.08)	12 (7.69)	2 (7.69)	9 (30.00)
SR	2 (3.08)	32 (20.51)	2 (7.69)	10 (33.33)
AQ	1 (1.54)	10 (6.41)	1 (3.85)	4 (13.33)
CQ	1 (1.54)	8 (5.13)	1 (3.85)	4 (13.33)
LQ	1 (1.54)	3 (1.92)	1 (3.85)	2 (6.67)
QD	1 (1.54)	1 (0.64)	1 (3.85)	1 (3.33)
TR	1 (1.54)	18 (11.54)	1 (3.85)	6 (20.00)
RK	0 (0.00)	3 (1.92)	0 (0.00)	3 (10.00)
Total	65 (100)	156 (100)		

[a] Range of LCLs refers to the distribution of each strategy in 26 large-class lectures.
[b] Range of SCLs refers to the distribution of each strategy in 30 small-class lectures.
[c] Number in parentheses indicates percentages (%).

Table 7
One-strategy and two-strategy lecture closings in LCLs and SCLs.

	LCLs[a]		SCLs[b]	
One-strategy	AE (4/15.38)[c] FP (3/11.54)	DS (1/3.85) NC (1/3.85)	DS (4/13.33) AE (1/3.33)	CI (1/3.33)
Subtotal	9 (34.62%)		6 (20.00%)	
Two-strategy	FP DS (2/7.69) AE CC (1/3.85) AF FP (1/3.85)	CI DS (1/3.85) FP NC (1/3.85)	FP DS (1/3.33) FP NC (1/3.33)	RK FP (1/3.33)
Subtotal	6 (23.08%)		3 (10.00%)	
Total	15 (57.69%)		9 (30.00%)	

[a] *n* (number of lectures in LCLs) = 26.
[b] *n* (number of lectures in SCLs) = 30.
[c] The first number in parentheses indicates occurrences and the second number indicates percentages (%).

Table 8
Strategy sequences in lecture closings in LCLs and SCLs.

	LCLs[a]	SCLs[b]	
3	AE–FP–DS (3/4.62)[c]	SR–TR–SR (10/6.41) TR–SR–TR (6/3.85) AE–FP–DS (3/1.92)	CQ–AQ–SR (3/1.92) NC–CQ–AQ (3/1.92)
4	0	SR–TR–SR–TR (6/3.85) TR–SR–TR–SR (5/3.21)	

[a] *n* (total occurrences of strategies in LCLs) = 65.
[b] *n* (total occurrences of strategies in SCLs) = 156.
[c] The first number in parentheses indicates occurrences and the second number indicates percentages (%).

Table 9
Frequency of personal pronouns in lecture closings in LCLs and SCLs.

	LCLs		SCLs		Total	
	N	Frequency[a]	*N*	Frequency	*N*	Frequency
I/my/me/mine	53	22.07	215	42.93	268	36.17
We/our/us/ours	43	17.91	76	15.18	119	16.06
You/your/yours	86	35.82	166	33.15	252	34.01

[a] Frequency is calculated per thousand words.

three stages. Strategies AE and FP are used most frequently in one-strategy-only lecture closings in LCLs; however, strategy DS is the most preferred in SCLs. Examples of one-strategy and two-strategy lecture closings are provided in Examples 5 and 6 above.

Table 8 shows the strategy sequences in LCLs and SCLs. It can be observed that most of the common strategy sequences consist of interactive strategies SR and TR in cycles, but they occur only in SCLs. Another interactive strategy pair CQ and AQ also occurs in SCLs, forming 3-strategy sequences with SR and NC, respectively. These results provide strong evidence of the more interactive nature of SCLs than LCLs. In contrast, the sequence pattern of AE–FP–DS occurs comparatively more often in LCLs than in SCLs, suggesting that lecturers in large classes are more likely to remind students of the end of lecture or indicate the plans for next class when they dismiss the class. Examples 7 and 8 in the previous section illustrate the 4-strategy and 3-strategy sequence in SCLs.

3.7. Frequency of personal pronouns

The frequency analysis of *I*, *you*, and *we* showed that for all lecture closings, the differences among the three pronouns are substantial (see Table 9). The first-person singular pronoun *I* and its variants (i.e., *my*, *me*, and *mine*) occur most frequently (36.98%), followed by the second–person pronoun *you* and its variants (i.e., *your* and *yours*) (34.42%), whereas the first-person plural pronoun *we* and its variants (i.e., *our*, *us*, and *ours*) occur least frequently (16.06%). The result is consistent with Lee (2009) who showed that *we* occurs less frequently than *I* and *you*. However, the finding is in strong contrast to Kuo's (1999) analysis of the frequencies of these personal pronouns in research articles. Kuo found that *we* and its variants occur far more frequently than other personal pronouns in research articles while *I* does not occur at all and *you* has very few occurrences. These differences may result from many possible variables in the two genres, including their distinctive communicative

purposes and audience. The result, nevertheless, suggests that classroom lectures may be considered a more interactive genre than research articles, particularly in lecture closings; lecturers may finish the more monologic part of lectures and often discuss course-related issues, such as homework or exams, with students, and students may ask questions about specific lecture content or next week's plan. The high frequency of *I* and *you* in closings clearly demonstrates great personal involvement and a high level of interactivity.

With respect to the use of the three pronouns in LCLs and SCLs, raw frequency data showed that the frequency of all three personal pronouns together is much higher in SCLs than in LCLs. For individual pronouns, *I* and its variants are used more frequently in SCLs, but *you* and *we* have a slightly higher frequency in LCLs. However, the two-tailed t test showed that the p value for the frequency of all personal pronouns (*I*, *you*, and *we*) in these two types of classes is only near the significance level ($p = 0.0503$). For individual pronouns, LCLs and SCLs differ significantly in the frequency of *I*, but not in that of *you* and *we*. These results seem to correspond to the analysis of strategies, as reported earlier. For example, the more interactive strategies such as TR, SR, AQ and LQ (raising questions about lecture content) have higher frequencies in small classes than in large classes; both the lecturer and students use *I* much more frequently than *you* and *we* to ask and answer each other's questions or respond to each other's ideas. On the other hand, as shown in Tables 5 and 6, lecturers in large classes tend to explain course-related issues (CI), indicate the end of the lecture (AE), and dismiss the class (DS) more often than lecturers in small classes; the inclusive *we* and *you* may be more frequently used than *I* in these strategies, informing the students of how they are expected to subsequently act.

These findings are not completely consistent with Lee (2009), who found that in lecture introductions, the frequencies of both *I* and *you* are higher in SCLs than in LCLs. There are some possible reasons for the difference. Firstly, Lee's study focused on lecture introductions whereas this study considers lecture closings. Moreover, in Lee (2009), the various forms of the pronouns and the pronouns appearing with contracted verbs were not taken into account.

Since either *I* or *you* can have a number of semantic referents, merely counting the occurrences of the pronouns may not fully reveal how the use of personal pronouns is related to class size and the interactive nature of lectures in different types of classes. The semantic referents of *I*, *you*, and *we* as well as their strategic use, as discussed in the next section, may provide a better explanation of the role that class size may play in lecture closings.

3.8. Semantic-pragmatic meanings of I, you, and we

The semantic referents of *I*, *you*, and *we* were identified on the basis of the discourse context where each personal pronoun occurs. The semantic-pragmatic interface that the context may reveal was given special attention. An attempt was also made to integrate the results of the analysis of semantic referents with those of strategies. In other words, specific semantic referents in relation to a strategy or strategies are discussed.

It was noticed that lecturers may sometimes indicate that their lectures are videotaped or have a short conversation with the researcher of the MICASE project. Since the researcher obviously does not appear in typical classroom lectures, s/he was not taken into account in this study.

In total, four semantic referents of *I* were identified in the corpus. Table 10 shows that in both large and small classes, the lecturer almost always uses the first-person singular pronoun *I* to refer to himself/herself (95.83%). This use of *I* may suggest to the students the role of the speaker as the lecturer, and the power differentials between the lecturer and students, thus *I* in this sense often stands in opposition to the use of *you* to refer to the student(s). The fact that most occurrences of *I* refer to the lecturer is understandable in view of the need of the lecturer to show explicitly or implicitly his/her role in lecturer–student(s) interactions in most contexts.

Five occurrences of *I* were found to refer to anyone in the field and all in the context of explaining the technical content of the lecture, as shown in Example 9. "Anyone in the field" is the role of a representative disciplinary persona which lecturers often use when providing an example or explicating a method or procedure during the lecture.

Table 10
Referents of *I/my/me/mine* in lecture closings in LCLs and SCLs.

Referent	LCLs		SCLs		Total	
	N	%	*N*	%	*N*	%
Lecturer as speaker						
1. Lecturer	51	98.08	133	95.00	184	95.83
2. Anyone in the field	0	0.00	5	3.57	5	2.60
3. Anyone (general people)	1	1.92	0	0.00	1	0.52
4. Lecturer and students	0	0.00	2	1.43	2	1.04
Total	52	100.00	140	100.00	192	100.00
Student(s) as speaker						
1. Student	1	100.00	75	100.00	76	100.00
2. Anyone in the field	0	0.00	0	0.00	0	0.00
3. Anyone (general people)	0	0.00	0	0.00	0	0.00
4. Lecturer and students	0	0.00	0	0.00	0	0.00
Total	1	100.00	75	100.00	76	100.00

Table 11
Referents of *you/your/yours* in lecture closings in LCLs and SCLs.

Referent	LCLs		SCLs		Total	
	N	%	*N*	%	*N*	%
Lecturer as speaker						
1. Students	60	70.59	120	88.89	180	81.82
2. Anyone	22	25.88	8	5.93	30	13.64
3. Anyone in the field	3	3.53	7	5.19	10	4.55
Total	85	100.00	135	100.00	220	100.00
Student(s) as speaker						
1. Lecturer	1	100.00	20	64.52	21	65.63
2. Classmate(s)	0	0.00	6	19.35	6	18.75
3. Anyone	0	0.00	5	16.13	5	15.63
4. Anyone in the field	0	0.00	0	0.00	0	0.00
Total	1	100.00	31	100.00	32	100.00

(9) this is called a discrete logarithm. so, instead of working with the actual numbers, **i** can go, uh, and work, with the indices. it's just like, the indices tell **me**, what number **i** have to use, what, **i** have to raise two-to-the-third power, to get eight. **i** have to raise two, to-the, ninth power to get six. (S007)

Two occurrences of *I* refer to both the lecturer and students. Both occur in a small class lecture when the lecturer first uses a *we* to refer to what s/he and the students are doing, but then uses *I* to repeat what can be done and compare two different methods, suggesting, from a lecturer's professional perspective, appropriate activity for both students and himself/herself. One occurrence of *I* was found to refer to anyone (general people), serving as a general persona in exemplification, similar to the use of *I* to refer to anyone in the field. When the speaker is a student, all the occurrences of *I* refer to the student himself/herself.

Table 11 shows the referents of *you* in lecture closings. In most occurrences, the lecturer uses *you* to address the students (81.82%). Nevertheless, the lecturer also uses *you* to refer to anyone (general people) (13.64%) or anyone in the field (4.55%), both in the context of explaining a method or procedure. For instance, in the following example, *you* is used to refer to any member of society. The function of *you* here is to involve students as the persona in the exemplification the lecturer is providing. We can observe that these two referents together have a higher frequency in large classes than in small classes. A possible reason is that when lecturing in large classes, lecturers may desire more student involvement.

(10) and if **you** are middle class, that's the lowest of the low, man if **you** only get one trip to Hawaii per year, oh **you**'ve gone to the absolute bottom of, of the social ladder. (L090)

When the students are speakers, *you* may refer to not only the lecturer, anyone, or anyone in the field, but to the speaker student's classmates as well. This occurs in the situation when students have a conversation with each other, or when the lecturer has conversation with several students. In the following example, a student speaker (S2) is asking another student (Brody, SU-m) if he is going to Amsterdam.

(11) (The lecturer is asking students where they are going for their spring vacation.)
S1: is someone really going to Amsterdam? Cool. Are you going Brody?
SU-m: yeah.
S1: oh I wanna show you Brody's
S2: **you**'re going to Amsterdam?
S1: Brody did this great cover for his um, [S2: (xx) New York.] for his paper, wait. But where is my ba-here it is. (S085)

More interesting results reside in the semantic referents of *we*. As shown in Table 12, although the largest proportion of the occurrences of *we* refers to the lecturer and students (40.57%), other referents of *we* together constitute approximately three-fifths of the occurrences. This reflects the more flexible and probably also strategic uses of *we* in lecture closings. In particular, the frequency of *we* to actually mean the lecturer himself/herself is remarkable (29.25%), suggesting that the lecturer tends to replace an exclusive *I* with an inclusive *we* for either positive or negative politeness. In Example 12, the lecturer is indicating his/her intention to end the class and *we* is used to enhance positive politeness. This use of *we* is common in lecture closings, particularly in the strategy of FP (indicating the plan for the future) and AE (indicating the end of lecture). A possible explanation is that when signposting to the students what s/he would like to do in the next hour or the following week, or when s/he intends to end the lecture, the lecturer tends to present these as shared concerns/goals with the students, to show that s/he and the students are cooperators (Brown & Levinson, 1987). However, in Example 13, the lecturer uses *we* (the second *we*) for negative politeness, mitigating a possible threat to the students' face want, since s/he is talking about an exam which the students may dislike; this often occurs in CI (explaining course-related issues).

Table 12
Referents of *we/our/us/ours* in lecture closings in LCLs and SCLs.

Referent	LCLs		SCLs		Total	
	N	%	*N*	%	*N*	%
Lecturer as speaker						
1. Lecturer	9	20.93	22	34.92	31	29.25
2. Students	1	2.33	9	14.29	10	9.43
3. Lecturer and students	16	37.21	27	42.86	43	40.57
4. Anyone in the field	6	13.95	4	6.35	10	9.43
5. Larger group of general people	11	25.58	1	1.59	12	11.32
Total	43	100.00	63	100.00	106	100.00
Student(s) as speaker						
1. A student	0	0.00	2	15.38	2	15.38
2. A student and other student(s)	0	0.00	3	23.08	3	23.08
3. The whole class	0	0.00	7	53.85	7	53.85
4. The whole class and lecturer	0	0.00	1	7.69	1	7.69
Total	0	0.00	13	100.00	13	100.00

(12) kay well it's after ten so **we**'ll stop here, and **we**'ll pick up with structs tomorrow. (S099)
(13) uh, plan your time because **we** just have fifty minutes to get it in, uh **we**'ll probably try to pass them out as you come into the room so if you get here, on time you'll have a better chance to finish up. (S136)

We may further compare the use of *I* or *we* to refer to the lecturer himself/herself. In Example 14, when the lecturer uses *I*, s/he emphasizes the role of a lecturer (that is, assigning practice problems for homework), whereas inclusive *we* is used when the lecturer expects to wrap up the lecture.

(14) . . . and next Thursday **i**'m also gonna assign **i** mean this Thursday next lecture **i**'m gonna assign uh practice problems for homework. any questions before **we** wrap up. . .? (S052)

We can also be used to mean a larger group of general people (12 occurrences) or anyone in the field (10 occurrences), as shown in Examples 15 and 16. Both semantic referents occur much more frequently in large classes than in small classes, again probably because lecturers in large classes tend to call more student attention to the lecture content.

Ten occurrences of *we* refer to students only, mostly occurring in the context when the lecturer informs the students of course-related issues, such as an assignment or exam, probably for the purpose of addressing these issues as shared concerns, as illustrated in Example 17. Here the strategic inclusive *we* is used to actually refer to the students, who are going to take a quiz. *I* is used in the same utterance to refer to the lecturer himself/herself (that is, the role of a lecturer who is empowered to give a quiz).

(15) tha- that's just a real life style that depends on keeping trying, reproducing and eventually hope **we** get a, successful clutch. (S077)
(16) it's just, more of the same. biology **we** are still figuring out how life works, um, **we** are still figuring out basic, fundamental questions. how cancer works, um whether there's life on other planets. (L014)
(17) uh for next time i wanna then move, on into looking at the Roman family, and then as i say at the last part of of the time, uh **we**'ll have that quick quiz. take care. (L150)

When students are speakers, the referents of *we* can be the speaker student, the speaker student and other students, the whole class, or the whole class and the lecturer.

Comparing the semantic referents of *we* in large and small class lecture closings, we may observe that in both types of classes, lecturers tend to use *we* to refer to both lecturers and students or to lecturers. However, in large classes, nearly two-fifths (39.53%) of the occurrences of *we* refer to a larger group of general people, and anyone in the field. The percentage is much higher than that in small classes (7.94%). This finding suggests that lecturers in large classes may adopt a more formal lecturing style, using *we* for enhancing positive politeness.

When we correlated the results from the analysis of personal pronouns with those of the strategies, we noted that some are closely correlated with each other. For example, when *you* and *we* are used to refer to anyone in the field, or anyone/larger group of general people, they often occur in CC and RK (summarizing or reviewing key points) since this use is correlated with specific lecture content. The use of *we* to refer to only the lecturer can occur in FP, AE, AF (asking if students have questions), and CI, but more often in the first two strategies, while the referent of *we* for students also occurs in CI, AE, and FP; both are used strategically for positive or negative politeness, as indicated earlier. However, the lecturer may be implicitly assuming a different discourse role and status from the students. For example, in the lecture closing below, the lecturer is giving the students an assignment and telling them what he expects them to do; *we*, referring to the students, is used in

the first sentence and the last sentence to mitigate disfavor. It can be noted that *you* is used a number of times in the sentences between these two *we*'s. The lecturer is conscious of his own role as an instructor but uses the pronoun *we* strategically for pragmatic purposes.

(18) . . .because this week **we**'re gonna, have a search. . .[SU-f: oh no] about juvenile delinquents. Only Freetext. let me tell you this a thousand times you're gonna search Freetext, no descriptors however you can use descriptors. . . .okay **we**'re out of here. (S065)

An overview of all the referents of the three personal pronouns *I*, *you*, and *we* reveals two interesting phenomena. One is that all three personal pronouns *I*, *you*, and *we* can be used to refer to anyone in the field, or anyone/a larger group of general people; this is, as mentioned earlier, a persona for explication or exemplification of a method or process. The other phenomenon is that lecturers sometimes make shifts in the use of personal pronouns for pragmatic purposes. Lecturers may use the same personal pronoun to refer to different referents or use different personal pronouns to refer to the same referent. In Example 19, all three personal pronouns *I*, *you*, and *we* are used. The first *I* and *you* refer to the lecturer and the students, respectively. However, the first *we* is then used to refer to the students, indicating what they are required to do. Following this is a more detailed description of the job, and *you* is used to refer to what the lecturer expects the students to do. What attracts our attention is the change from *I* to *we* in the next utterance ("what i c-we care about"). The use of *I* implies that the speaker perceives her role to be that of the lecturer. Nevertheless, the speaker suddenly catches herself and replaces *I* with *we*. She is using inclusive *we* to mitigate student disagreement. The last *we* then refers to both herself and the students. Therefore, in this example, different pronouns *you* and *we* are used to refer to the same referent, the students, and the same pronoun *we* is used to refer to different referents, the lecturer and both the lecturer and students.

(19) okay **i** have one little task, **you**'re all ready to race out and jump in the lake and do something. **we** need to compile the info from this summer, this morning, which is not a big job. if **you** go into **your** groups, and, what **you** need to do **i** don't care about the individual points. what **i** c- **we** care about, is, uh, doing like **we** typically do on the checklist. (S028)

The flexible uses of personal pronouns are characterized by the variety of referents personal pronouns can have. The pragmatic meanings can be derived from the discourse contexts as well as the speaker's attitude and intention.

4. Conclusion

This study has investigated the rhetorical structure and personal pronouns usage of academic lecture closings; it has also examined whether class size has an impact on them. The analysis of the rhetorical structure reveals that there is not a preferred sequence of strategies across the three stages in academic lecture closings. The results also indicate that only a small percentage of lecture closings, mostly in small classes, contain all three stages, while in large classes, more than half of the lecturers end their lectures briefly in one stage, mostly the *Ending Stage*.

Although a total of 15 strategies are used in the lecture closings, none of them is obligatory. FP, DS, and AE are the strategies that lecturers use most frequently. They usually occur at the *Ending Stage*. In other words, lecturers most frequently indicate that the class is going to the end and address the course plan for the next class before they verbally dismiss the class. Many of the interactive strategies occur at the *Post-ending Stage*, suggesting that this stage provides an opportunity for teacher-student interaction and also for the lecturers to establish a closer rapport with students.

An unexpected result is the very few occurrences of strategies LQ, RK, and QD (raising questions or issues for discussion) despite the common advice in teaching resource books that summarizing at the end of lectures and providing students chances to ask questions are good lecturing techniques because they help students memorize and clarify key concepts in the lectures. In addition, it is suggested that drawing explicit conclusions provides continuity and indicates closure since students need to see how new topics relate to what they have already learned as well as to what they will be learning (Davis, 2009; McKeachie, 2002). However, it seems few lecturers actually apply these strategies in their lecture closings. As McKeachie (2002) himself commented, after having provided various teaching tips on how to conclude lectures, "having suggested all this, I must admit that my own greatest problem as a lecturer is that I never seem to be ready for the conclusion until it is already past time to dismiss the class" (p. 61).

The comparative analysis shows that class size does influence the rhetorical structure of lecture closings. More occurrences of strategies, particularly more interactive strategies, are identified in small classes than in large classes. Most of the non-course-related issues are also raised in small classes, especially at the *Post-ending Stage*. Thus lecturers are advised to make use of this stage to establish close rapport with students through course- or non-course-related interactions.

With respect to the use of personal pronouns, *I* and *you* are used far more frequently than *we*, suggesting that there may be a lot of interactions between the lecturer and students in lecture closings since a great majority of the occurrences of *I* and *you* refer to the lecturer himself/herself and the students, respectively. *We* seems to be used in a more flexible way by lecturers and has a variety of referents. Particularly, the lecturer tends to use inclusive *we*, instead of *I*, to enhance student engagement and rapport, or mitigate student disfavor. Comparing the frequency and semantic referents of these personal

pronouns in LCLs and SCLs shows that "size matters" (Lee, 2009, p. 53). The use of personal pronouns is also correlated with the high-frequency strategies in these two types of classes.

Although lecture closings are merely a small part of the genre of lectures, they encode the important interpersonal dynamics of this primarily monologic genre. Taking a genre analysis approach, this study reveals that the part genre actually goes beyond the communicative purpose of summarizing or concluding the lecture content. Moreover, it establishes that the generic structure of lecture closings is flexible and great variation should be expected. This study differs from previous studies of lectures in that it addresses the use of personal pronouns in lecture closings both semantically and pragmatically. The findings also provide valuable information to lecturers of large and small classes for making better choices of strategies and personal pronouns to establish teacher-student rapport. Limitations of this study should also be addressed. Using a ready-made corpus like MICASE can be a big time-saver for most researchers; however, as Lee (2009) pointed out, it also constrains researchers' ability to obtain ethnographic data about the lecturers and students' attitude towards the features in the lectures. Future research may use a self-constructed corpus of lecture closings and incorporate interviews with lecturers and students. There are other contextual variables beyond those addressed in this study, such as disciplines, native and non-native speaker lecturers, experienced and novice lecturers, the level of student participants, or the time during the semester when the recordings are made. They may also be considered for future studies.

The findings can provide practical applications in the preparation of prospective and novice lecturers. They can benefit from the awareness of the rhetorical structure and the use of personal pronouns in lecture closings, and consider the effect of class size. In addition, since the rhetorical flexibility of lecture closings is to be expected, lecturers should be more aware of the appropriate strategies they can adopt to facilitate students' understanding of lecture discourse and to cement the interpersonal relationship between them. Students may also benefit from their awareness of lecturers' strategies to enhance their understanding of the lecture and their relationship with the lecturer. Moreover, the findings can be incorporated into academic listening materials to provide authentic lecture closing examples for language learners, as well as teaching resource books to provide guidelines for lecturers to broaden their use of expressions, vocabulary choices, and interactive and involving ways of communication.

Appendix A. Supplementary data

Supplementary data associated with this article can be found, in the online version, at http://dx.doi.org/10.1016/j.esp.2012.05.004.

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國科會補助計畫衍生研發成果推廣資料表

日期:2013/04/29

國科會補助計畫	計畫名稱: 學術講演的開場和結尾用語與班級大小的關聯性之比較研究
	計畫主持人: 鄭維容
	計畫編號: 100-2410-H-009-033- 學門領域: 語用學

無研發成果推廣資料

100 年度專題研究計畫研究成果彙整表

計畫主持人：鄭維容	計畫編號：100-2410-H-009-033-
計畫名稱：學術講演的開場和結尾用語與班級大小的關聯性之比較研究	

成果項目			量化			單位	備註（質化說明：如數個計畫共同成果、成果列為該期刊之封面故事...等）
			實際已達成數（被接受或已發表）	預期總達成數(含實際已達成數)	本計畫實際貢獻百分比		
國內	論文著作	期刊論文	0	0	100%	篇	
		研究報告/技術報告	0	0	100%		
		研討會論文	0	0	100%		
		專書	0	0	100%		
	專利	申請中件數	0	0	100%	件	
		已獲得件數	0	0	100%		
	技術移轉	件數	0	0	100%	件	
		權利金	0	0	100%	千元	
	參與計畫人力（本國籍）	碩士生	2	0	100%	人次	
		博士生	0	0	100%		
		博士後研究員	0	0	100%		
		專任助理	0	0	100%		
國外	論文著作	期刊論文	1	0	100%	篇	
		研究報告/技術報告	0	0	100%		
		研討會論文	1	0	100%		
		專書	0	0	100%	章/本	
	專利	申請中件數	0	0	100%	件	
		已獲得件數	0	0	100%		
	技術移轉	件數	0	0	100%	件	
		權利金	0	0	100%	千元	
	參與計畫人力（外國籍）	碩士生	0	0	100%	人次	
		博士生	0	0	100%		
		博士後研究員	0	0	100%		
		專任助理	0	0	100%		

其他成果 (無法以量化表達之成果如辦理學術活動、獲得獎項、重要國際合作、研究成果國際影響力及其他協助產業技術發展之具體效益事項等，請以文字敘述填列。)	無

	成果項目	量化	名稱或內容性質簡述
科教處計畫加填項目	測驗工具(含質性與量性)	0	
	課程/模組	0	
	電腦及網路系統或工具	0	
	教材	0	
	舉辦之活動/競賽	0	
	研討會/工作坊	0	
	電子報、網站	0	
	計畫成果推廣之參與（閱聽）人數	0	

國科會補助專題研究計畫成果報告自評表

請就研究內容與原計畫相符程度、達成預期目標情況、研究成果之學術或應用價值（簡要敘述成果所代表之意義、價值、影響或進一步發展之可能性）、是否適合在學術期刊發表或申請專利、主要發現或其他有關價值等，作一綜合評估。

1. 請就研究內容與原計畫相符程度、達成預期目標情況作一綜合評估

■達成目標

□未達成目標（請說明，以 100 字為限）

□實驗失敗

□因故實驗中斷

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說明：

2. 研究成果在學術期刊發表或申請專利等情形：

論文：■已發表 □未發表之文稿 □撰寫中 □無

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3. 請依學術成就、技術創新、社會影響等方面，評估研究成果之學術或應用價值（簡要敘述成果所代表之意義、價值、影響或進一步發展之可能性）(以 500 字為限)

本研究的研究結果不僅可以使我們更深入了解英語課堂演講結尾的修辭結構、人稱代名詞的語意和語用特色、以及班級大小對於課堂演講結尾的影響。另一方面，研究結果也可以幫助新進老師瞭解課堂演講結尾之彈性架構與策略。由於本研究結果顯示課堂演講結尾的修辭結構彈性很大，老師應該針對班級大小採用各種合適的策略以促進師生互動，並加深與學生之間的人際關係。此外，研究結果可以提供相關研究實用的分析架構、教學資料與真實語料實例。在學術口語文類的分析上，則建立課堂演講結尾的修辭結構，也確認其具有很大的彈性與差異性（variation)。此外，本研究讓我們瞭解課堂演講結尾這個部份文類（part genre）不單只是總結課程內容而已，更能增進師生互動與人際關係，具有社會言談功能。