INVESTIGATING DISCOURSE MARKERS IN CHINESE COLLEGE EFL TEACHER TALK: A MULTI-LAYERED ANALYTICAL APPROACH

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Thesis Submitted for the Degree of
Doctor of Philosophy

PHD in Applied Linguistics

NEWCASTLE UNIVERSITY
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November 2014

DEDICATION

To my dear family, teachers and friends

NEWCASTLE UNIVERSITY
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SCHOOOL OF EDUCATION, COMMUNICATION AND LANGUAGE SCIENCES

DECLARATION

I hereby certify that this thesis is based on my original work except for quotations and citations which have been duly acknowledged. I also declare that it has not been previously or currently submitted for any other degree at the University of Newcastle or other institutions.

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Date: 16. 10. 2014

ABSTRACT

In spoken conversation, the frequency of discourse markers (henceforth, DMs) is significant compared to other word forms (Fung and Carter, 2007). Essentially, DMs perform a range of functions in order to ensure that social interaction works smoothly and that mutual understanding is accomplished. In educational settings, DMs perform an important function in providing pedagogical clarification and in promoting effective interaction (Dalle and Inglis, 1990).

The present study attempts to reveal that in language classrooms, there is a reflexive relationship between teachers' use of DMs, classroom interaction, and pedagogical purpose. It examines the ways in which DMs are used and the functions they perform in academic spoken discourse. The data come from nine-hour video recordings of Chinese college EFL classes, recorded as part of a three-year research project "EFL Classroom Discourse Research and Teacher Development" and supported by China National Social Sciences Grants from 2007 to 2009. The spoken corpus is subjected to a multi-layered analytical approach which looks at both macro (text) and micro (word) levels, and which uses the principles of conversation analysis (CL) and corpus linguistics (CA), together with second language (L2) classroom modes analysis.

The appropriateness of adopting a combined CL and CA approach is based on a number of factors including the linguistic properties of DMs as lexical bundles (Biber and Conrad, 2002), a recognition of their multi-word nature (McCarthy, 2006), and their high frequency of occurrence in conversational practices (Schiffrin, 2003). Using a multi-layered analysis has resulted in a number of findings which might not have emerged by using a single mode of analysis. The study presents the linguistic and contextual patterns of DMs across various classroom micro-contexts, and highlights differentiated interactional features in relation to classroom pedagogy. This study has important implications for future research regarding curriculum design, EFL teacher training and education, specifically in its potential to help teachers achieve their pedagogical goals.

Keywords: Discourse Markers, EFL Teacher Talk, Higher Education Academic Discourse, Corpus Linguistics, Conversation Analysis, L2 Classroom Modes, Multi-layered Analytical Approach

ACKNOWLEDGEMENTS

During the journey of my PhD studies, there are numerous people that offered me generous advice and help, without which I could not simply be able to accomplish. It has been a privilege and rewarding experience for me to conduct the PhD research at the School of Education, Communication and Language Sciences, Newcastle University, UK.

First and foremost, I would like to thank my main supervisor, Professor Steve Walsh, who plays an extremely important role in the development of my research. He has been providing insightful suggestions, critical evaluations, and constant interaction throughout my PhD work. His wide knowledge and great insights not only enlightened the design of the thesis, but also greatly influenced me to devote into an academic career.

My special gratitude to Dr. Dawn Knight for being such a supportive friend and supervisor. This work could not tackle the technical obstacles without her encouragement and specialities in the field of corpus linguistics. I am blessed to have her support, especially when I was stuck at the data analysis stage. The supervisory team has provided invaluable feedback and great support in my research study and personal life.

I would also like to convey my deep regards to Professor Lian Zhang, School of English and International Studies, Beijing Foreign Studies University, China, for her great generosity to offer me a full access to China National Social Sciences Project "EFL Classroom Discourse Research and Teacher Development" as my PhD thesis database.

I am grateful to the Inter-Varietal Applied Corpus Studies (IVACS) research group, for being a witness of the birth and development of my research. Professor Michael McCarthy and Dr. Anne O'Keefe were particularly helpful. Thanks to researcher and friend Dr. Robin Humphrey, Dr. Laura Leonardo, Dr. Tom Morton, Dr. Mei Lin, Professor Charles Max, Dr. Saad Almutairi, and great friends including Darren Su, Aunt Xia, the Coates family, Claudia Albanese, Mikkel Strørup, Dr. Alex Leung, Dr. Isao Hara, Dr. Abdullah Alkaldi, Wayne Hollywood, Akhil Sharma, and Andrew Taylor. Special thanks to Ms Ruth Gibson from Student Advice Centre for her warm encouragement and legal support. I would like to thank Alastair Krzyzosiak for his support and understanding in my life.

Lastly, I am extremely grateful to my parents (Shouping Yang, Chengying Duan), my sister (Xinpei Yang) and her husband (Liang Chen) for their love and generosity.

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List of Abbreviations

AP	Adjacency Pairs
BFSU	Beijing Foreign Studies University
BNC	British National Corpus
CA	Conversation Analysis
CACODE	Cambridge and Nottingham Corpus of Discourse in English
CAQDAS	Computer Assisted Qualitative Data Analysis Software
CBDA	Corpus-based Discourse Analysis
CDA	Critical Discourse Analysis
CECC	Chinese College English Classes Corpus
CET-4	College English Test- Level 4
CIC	Classroom Interactional Competence
CL	Corpus Linguistics
CLAN	Allows for the coding and analysis of text, compatible with the CHILDES corpus/transcription database
DA	Discourse Analysis
DM	Discourse Marker
DMs	Discourse Markers
EFL	English as a Foreign Language
ELT	English Language Teaching
FL	Foreign Language
HKCSE	Hong Kong Corpus of Spoken English
IRF	Initiation-Response-Feedback
L1	First Language
L2	Second Language
LP	Learner Production
LTE	Language Teacher Education
MAXQDA	A professional software for qualitative and mixed methods data analysis
MICASE	Michigan Corpus of Academic Spoken English
MOE	Ministry of Education

MWU	Multi-word Unit
NNS	Non-native Speaker
NS	Native Speaker
NVivo	A tool that supports the alignment and analysis of multiple multi-media data streams
PMs	Pragmatic Markers
POS	Part-of-speech
SEDC	Survey of English Dialects Corpus
SETT	Self-Evaluation of Teacher Talk
SFG	Systemic Functional Grammar
SLA	Second Language Acquisition
TA	Teachers' Awareness
TCU	Turn Constructional Unit
TEM-4	Test for English Majors- Level 4
TESOL	Teaching English to Speakers of Other Languages
TRP	Transitional Relevance Place
TTFN	TESOL Talk from Nottingham
TTT	Teacher Talking Time

Chapter 1. Introduction

1.1 Research overview

Small words in ordinary conversation like *right*, *yeah*, *well*, *you know*, *okay* have received a great deal of attention from various research perspectives (Fraser, 1999; Jucker and Ziv, 1998; Müller, 2004). Mostly referred to as discourse markers (henceforth DMs), they are perhaps one of the most ambiguous, pragmatic phenomena in the literature (Polat, 2011). The multi-functional nature of DMs has been widely recognised in cognitive, social, and textual domains (Schiffrin, 2006). For any researchers who conduct studies on DMs, they often find it difficult to choose among different terminologies, characteristics, classifications, and approaches (Aijmer and Simon-Vandenbergen, 2011; Fischer, 2006; Romero-Trillo, 2002). Those research obstacles in effect reflect the dynamic nature of DMs in spoken discourse. In Fung and Carter (2007: 411), DMs can be defined as "intra-sentential and supra-sentential linguistic units which fulfil a largely non-propositional and connective function at the level of discourse". According to Aijmer (2002: 39), DMs are highly context specific and indexed "to attitudes, to participants, and to text". Due to their multi-grammaticality and multi-functionality, DMs not only work inside and outside the discourse but also reflect the interwoven relationship among the participants and context (Maschler, 1998).

The frequency of DMs is significant compared to other word forms as the top ten most frequent items (Fung and Carter 2007; McCarthy, 1999). Therefore, DMs are more characteristic of spoken language rather than written discourse as part of the fragmented nature of speech (Aijmer, 2004). Essentially, DMs perform a range of functions in order to ensure that social interaction works smoothly and that mutual understanding between participants is accomplished.

Despite the vital roles that DMs play in everyday conversation, there seems to be a growing number of studies focusing on their applications in institutional settings including psychotherapeutic practice (Tay, 2011), interviews (Trester, 2009), medical interaction (Haakana, 2002), and university lectures (Schleef, 2008). In pedagogical discourse, DMs are found operating in a functional paradigm which includes interpersonal, referential, structural, and cognitive categories (Fung and Carter, 2007). They serve as a lubricant to reduce understanding difficulties, incoherence, and social distance in teacher-student interaction (Grant, 2010). However, the relationship between DMs and the efficacy of classroom interaction is still under-researched (Yang, 2014).

Previous studies on DMs in classroom discourse are also limited to second language acquisition (SLA) rather than teacher talk. Any classroom, as Walsh (2006: 4) states, is a "dynamic" context where a series of events take place involving teachers, learners, discourses, settings, and learning materials. In classroom settings, a number of studies look into the beneficial effects of DMs in helping the communicative needs of language learners. For instance, Polat (2011) emphasises the importance of DMs in social communication through exploring their uses by non-native speaker (NNS) learners. Compared to the extensive research on DMs in SLA (see, for example, Fung, 2003; Jung, 2003), there has been relatively little research concentrating on the applications of DMs in English as a Foreign Language (EFL) teacher's spoken discourse, not to mention their pedagogical significance and relevance to teacher education.

Traditional approaches to investigating DMs include discourse coherence model (Schiffrin, 1987, 2003), grammatical-pragmatics (Fraser, 1999), relevance theory (Blakemore, 1992), and systemic functional grammar (SFG) (Halliday and Hasan (1976). There are also other alternative methods for the investigation of DMs. For instance, a dynamic-interactional approach is proposed (see Frank-Job, 2006) to view DMs as a developmental process of pragmaticalisation, which underlies the multi-functionality of DMs in meta-communication. In classroom discourse analysis, Sinclair and Coulthard (1975) recognise DMs as boundary markers in a higher level of transitions in their classic Initiation-Response-Feedback (IRF) exchange structure. Those approaches, however, have not examined the performance of DMs in teacher-student interaction.

In recent years, more studies aim to broaden the spectrum of studies on DMs by including new phenomena and approaches such as cross-cultural pragmatics (Aijmer and Simon-Vandenbergen, 2011). Therefore, to provide a multifaceted description of DMs in EFL teacher's spoken discourse that considers both macro and micro contexts motivates this study. The present research portrays the multi-functionality of DMs in teacher-led classroom interaction, higher education academic discourse in particular. It argues that in the second language (L2) classroom, there is a reflexive relationship between teachers' use of DMs, classroom interaction and pedagogical purpose. In response to the dynamic nature of DMs as well as classroom discourse, a novel multi-layered analytical approach is proposed, which sets out to enhance our understanding of the *interactional architecture* of the L2 classroom (Seedhouse, 2004).

1.2 Research aims and questions

Drawn from nine-hour video recordings, this study seeks to narrow the research and methodological gap by studying DMs in EFL teacher talk through a multi-layered analytical approach that combines corpus linguistics (henceforth CL), conversation analysis (CA), and L2 classroom modes analysis (Walsh, 2006, 2011). The research aims of the study include:

- A comprehensive description of how DMs are used in the language classroom, Chinese college EFL teacher spoken language in particular;
- An in-depth exploration of the use and functions of DMs in classroom interaction with the fulfilment of pedagogical purpose;
- The synergy and appropriateness of combining qualitative and quantitative methods as a powerful methodological tool to investigate classroom discourse;
- A close understanding of the relationship between language, interaction, and learning.

Therefore, two research questions can be raised as follows:

1. What are the range and variety of DMs used in Chinese college EFL teacher talk?
2. What are the functions of DMs in teacher-led classroom interaction in this context?

1.3 Significance of the study

It is important to consider the reasons for conducting this study in terms of research, methodology, and pedagogy. The study has great significance in the following aspects:

- It fills the research gap that few studies have examined DMs in EFL teacher's spoken discourse, which could enhance our understanding of the interactional process in the L2 classroom for both language learners and teachers;
- It emphasises both the methodological advantages and challenges in conducting mixed methods research in classroom discourse;
- It raises teachers' awareness (TA) of their language use in classroom interaction, which in turn helps to enhance language teaching and learning;
- It hopes to shed some light on the importance of classroom interactional competence (CIC) in the L2 classroom (Walsh, 2006);
- As there is no ready-made pedagogical space for DMs (Fung, 2003), it addresses the needs for incorporating DMs in future teacher training programme as well as language learning materials.

As mentioned above, the study fills the research gap in the literature by studying DMs in EFL teacher's spoken language to enhance our understanding of teacher-led classroom interaction. Methodologically, it proposes a novel multi-layered analytical approach to examine the dynamics of classroom discourse. Pedagogically, the study has direct relevance to language teaching, teacher training, and curriculum design that could lead to a closer understanding of CIC for language teachers. As McCarthy (1999: 11) points out, the lack of lexical content of DMs presents a problem to language pedagogy "which has traditionally divided teaching into grammar teaching and vocabulary teaching, with items such as DMs not fitting happily into either". Therefore, to include DMs in materials design can also benefit L2 learners' learning efficiency and their pragmatic competence in communication (Fung and Carter, 2007).

1.4 Study design

The data analysed are based on a corpus which consists of nine-hour Chinese college EFL classes, as part of a three-year research project (2007-2009) "EFL Classroom Discourse Research and Teacher Development", supported by China National Social Sciences Grants (Reference Number 07BYY036) (see Section 4.3 and Appendix A). With least interruption, the classes have been video-taped and transcribed. As Fung and Carter (2007) suggest, the use of video-recordings can provide the utmost naturalistic, hence relatively authentic interaction occurring in the classroom.

A mixed methods study is effective in offering a relatively comprehensive understanding of the research (Dörnyei, 2007). Compared with the traditional approaches to classroom discourse, a multi-layered analytical approach offers a deeper insight into different learning stages of classroom interaction (Walsh, 2006). Discussed in section 3.5, a combined CL and CA approach (henceforth, CLCA) makes the in-depth manifestation of talk-in-interaction possible (Walsh et al, 2011). More importantly, a mixed methods research design allows researchers to make use of any relevant research perspective (Chapter 3).

CL analysis in the study provides a general overview of DMs used by Chinese college EFL teachers in terms of range and variety (Section 3.3 and 5.2), which corresponds to the first research question (Section 1.2). Core corpus analytic techniques like word frequency counts, keyword analysis, and concordance searches are applied (Kennedy, 1998; Scott, 2010). The most frequent DMs in Chinese college EFL teacher's spoken discourse are identified, in comparison with reference corpora. It is important that through comparison, TA can be raised in future language teaching and training programme.

In qualitative analysis, further investigations are achieved through a CA analysis in micro-discourse (Allwright, 1980; Sacks et al, 1974). The study illustrates the detailed functional paradigm of DMs on the basis of the important mechanisms in CA, i.e. turns, topics, and tasks (see Section 3.4 and 5.3). In the literature, there are various levels of how CA can be suited to research. Considering the fact that there has always been epistemic doubt about integrating quantitative and qualitative research (Bazeley, 2009), this study is informed by the theoretical underpinnings and principles of CA rather than a full embracement of the epistemological and conceptual framework of ethnomethodology (Pomerantz and Fehr, 1997).

In order to describe the perceived pedagogical goals that DMs relate to, the study applies another framework, i.e. the Self-Evaluation of Teacher Talk (SETT) model (Walsh, 2006, 2011). This model is a useful meta-language in portraying L2 classroom interaction based on the description of pedagogic goals and interactional features (see Section 2.3.4.1). According to Walsh (2006: 66), there are four types of micro-contexts or *modes* that can be identified, i.e. *managerial mode* where a teacher's main task is to manage students' learning process, *materials mode* where classroom interaction orients to and is directed by teaching materials, *skills and systems mode* where the interaction between teachers and learners are centred on language skills and systems, and lastly *classroom context mode*, where students have more opportunities to participate in the classroom. Due to its high generalisation and flexibility in application, this model provides a comprehensive contextual basis for analysing DMs in L2 classrooms.

To sum up, the study sets out to depict a functionally-based representation of DMs in Chinese college EFL teacher talk. It proposes a multi-layered analytical approach which works within and beyond the discourse to discover the link between pedagogical purpose and language use.

1.5 Thesis overview

In this study, there are seven chapters. Chapter 1 offers an overview of the study. Chapter 2 problematises previous research on DMs regarding terminology, classification, characteristics and approaches. Chapters 3 and 4 discuss the methodology and research design. Chapter 5 reports the main research findings. Chapter 6 evaluates the results in relation to the literature and relevant pedagogical implications. Finally chapter 7 summarises the study and poses suggestions for future research.

Chapter 2. Literature Review

2.1 Introduction

This chapter is divided into five parts. The first part (Section 2.1) provides an overview of the chapter. The second part (Section 2.2) problematises the definition, classification, and characteristics of DMs in the literature. In section 2.2.2, a novel definition, classification and characteristics of DMs are proposed. The third part (Section 2.3) discusses the previous studies on DMs in educational settings (Section 2.3.2) and highlights the research gap that there is a lack of studies on DMs in EFL teacher talk (Section 2.3.3). It is argued that a better understanding of DMs not only largely promotes SLA but also enhances the efficacy of language teaching, especially in higher education academic discourse. In section 2.4, two theoretical frameworks are employed and introduced, namely Self-Evaluation of Teacher Talk model (SETT) (Walsh, 2006), and a functional paradigm of DMs in classroom discourse (Fung and Carter, 2007). Finally, a summary is provided in section 2.5.

2.2 What are DMs?

There are a growing number of studies and research interest in linguistic items like *you know*, *okay* and *well* that people use in written and spoken contexts since Schiffrin (1987) highlighted their significance. DMs not only have grammatical functions but also interactional features (Fraser, 1999; Maschler, 1998; Schiffrin 1987). In spoken conversation, the frequency and amount of DMs that people use is significant compared with other word forms (Fung and Carter, 2007). Nevertheless, there has hardly been an agreement in the literature due to various research perspectives such as discourse coherence, pragmatics, relevance theory, and other alternative approaches (Aijmer, 2002; Blakemore, 2002; Fischer, 2006; Jucker and Ziv, 1998; Müller, 2005; Schourup, 1999).

The study employs the convenient term *discourse markers* (DMs) in a broad sense, considering it is the most common and accepted term among researchers (Jucker and Ziv, 1998; Müller, 2005). Rather than other labels like discourse particles (DPs) (Aijmer, 2002; Fischer, 2006) or pragmatic markers (PMs) (Carter and McCarthy, 2006; Fraser, 1999; O'Keeffe et al, 2011), the term focuses more on the functional aspect with a wide range of applications (Fung, 2003; Jucker and Ziv, 1998; Schourup, 1999). As all functional approaches, this label yet can still be problematic and limited, especially in differentiating discourse meaning from pragmatic meaning (Romero-Trillo, 2002).

Since the 1970s, there have been numerous studies investigating DMs across different languages and their applications in various contexts (Schiffrin, 2003; Schourup, 1999).

Many studies concentrate on one specific form of DM or a set of DMs in English (Ariel, 1998; Blakemore, 2002; Fraser, 1999; Jucker and Smith, 1998; Redeker, 2006; Schiffrin, 2003). There are also scholars interested in equivalent Non-English DMs, including Catalan (González, 2004), Chinese (Yang, 2006), Finnish (Hakulinen, 1998), French (Hansen, 1998, 2006), German (Günthner, 2000), Greek (Archakis, 2001; Ifantidou, 2000), Hebrew (Maschler, 1998; Shloush, 1998; Ziv, 1998), Hungarian (Vaskó, 2000), Indonesian (Wouk, 2001), Italian (Bazzanella, 2006), Japanese (Suzuki, 1998; Takahara, 1998), Korean (Park, 1998), Norwegian (Fretheim, 2000), Spanish (De Fina, 1997), and Swedish (Aijmer and Simon-Vandenbergen, 2003).

DMs are shaped by and constrain the local discursive context in which they are used. Spoken contexts investigated include sociolinguistic interviews (Schiffrin, 1987; Trester, 2009), conversation between family/friends (Fuller, 2003; Maschler, 1998), telephone talk (Bolden, 2006), film speech (Cuenca, 2008), bilingual conversation (Maschler, 1994, 2000), and institutional talk such as classroom interaction (Chaudron and Richards, 1986; Hellermann and Vergun, 2007; Schleef, 2008), medical consultation (Vickers and Goble, 2011), courtroom talk (Hale, 1999), and psychotherapeutic talk (Tay, 2011). DMs also appear in written forms, like literature (Fuami, 1995; Jucker, 1997), students' writing (Dülger, 2007), and textbooks (Lam, 2009). In addition, corpora are useful resources that recent studies apply in comparative analysis (see, for example, Aijmer, 2002; Grant, 2010; Lee-Goldman, 2011; Lenk, 1998; Müller, 2005; Norrick, 2001).

Research studies on DMs can be divided into two divergent perspectives. Some studies employ a bottom-up approach to explore the use of one or several DMs (Norrick, 2001; Schiffrin, 1987). Others use a top-down approach to look at how DMs serve within a proposed theoretical framework (Blakemore, 2002; Fraser, 1999; Maschler, 1998). As Chaudron and Richards (1986) note, bottom-up approaches that start from the incoming data often have issues in terms of validity, whilst top-down ones meet criticisms of having presuppositions before analysis. The two types of processing procedure, however, should be interwoven simultaneously at all levels of analysis.

As discussed above, to conduct studies on DMs, the "fuzziness" existing in the literature is the main issue that most researchers encounter (Fischer, 2006; Jucker and Ziv, 1998; Schiffrin, 2003). The following list summarises the main challenges of conducting research on DMs:

- What is the employed definition?
- What are the linguistic features of DMs? Are there any criteria for identification?

- What is the research focus, for example, syntax, semantics, or pragmatics?
- What kind of methodology should be applied to study them?
- What are the research outcomes in relation to the context?

Those listed questions are important aspects for researchers to consider. In the following sub-section (2.2.1), the definition, classification, and characteristics of DMs are problematised through a discussion of the main research trends. In section 2.2.2, my own definition, classification and characteristics of DMs are illustrated.

2.2.1 *DMs: problematising definition, classification, and characteristics*

As highlighted previously, the terminology, classification, and characteristics of DMs, have been researched from different research domains, among which discourse coherence, pragmatics, and relevance theory are the most influential ones (Cohen, 2007; Frank-Job, 2006; Fraser, 1999; Jucker and Ziv, 1998; Schourup, 1999).

The first attempt at studying DMs was the discourse coherence model by Schiffrin (1987). According to Schiffrin (1987), five planes within the framework can be distinguished according to different levels of coherence functions that DMs play, namely *exchange structure*, including adjacency-pair like question and answer, *action structure* where speech acts are situated, *ideational structure*, which views idea exchange from semantics, *participation framework*, i.e. the interaction and relation between the speaker and listener, and *information state* where particiapnts organise and manage their knowledge (Fraser, 1999; Schiffrin, 1987, 2003).

Proposed by Fraser (1999: 936), the second approach is a solely "grammatical-pragmatic perspective". Referring to pragmatic markers (PMs), Fraser (1999) believes that these lexical items not only function to provide textual coherence but also signal the speakers' intention to the next turn in the preceding utterances. Compared with the coherence model, Fraser (1999) contributes to a more pragmatic view towards DMs, in a wider context rather than structural organisation. Similar to Fraser, Blakemore (1992) applies relevance theory in a pragmatic sense to claim that DMs only have procedural meaning and are limited to specific contexts. Referring to DMs as discourse connectives, Blakemore focuses more on DMs' presentation in discourse processing and segments' interrelation (Fung and Carter, 2007). Other recent approaches include systemic functional grammar (SFG) established by M. A. K. Halliday (Halliday and Hasan, 1976). Though Halliday and Hasan (1976) did not bring up the issue of DMs directly, in their analysis of textual function, sentence connectives like *and, but, I mean, to sum up,* that perform an important part in semantic cohesion are investigated. DMs are regarded as effective cohesive devices with various

meanings and functions in segment organisation. Though Halliday and Hasan's work is primarily based on written texts, it still sheds some light on the importance of DMs in function and meaning construction (Schiffrin, 2003).

2.2.1.1 *Definition problems*

DMs have a wide range of possible related labels such as lexical markers, discourse particles, utterance particles, semantic conjuncts, continuatives. One of the possible reasons is that DMs are inherently problematic and therefore difficult to define or characterise (Schourup, 1999). In her work, Schiffrin (1987, 2003) perceives DMs as coordinating elements between talk units to serve discourse coherence. Schiffrin's (1987) definition however is often criticised as too broad to identify DMs (Redeker, 1991). Blakemore (2002), on the other hand, perceives that DMs are only expressions with procedural meaning that constrains the utterance. The following table 1 summarises various linguistic labels of DMs.

Label	Example
backchannels/backchannel cues	Verschuren, 1999
continuatives	Romero-Trillo, 1997
cue words	Horne et al, 2001
discourse markers	Östman, 1981; Schiffrin, 1987
discourse signalling devices	Polanyi and Scha, 1983
discourse connectives	Blackmore, 1987, 1988
discourse operators	Redeker, 1990, 1991
discourse particles	Goldberg, 1980
fillers	Brown and Yule, 1983
gambits	Keller, 1979
linguistic markers	Redeker, 1991
modal particles	Waltereit, 2001
pragmatic expressions	Erman, 1992
pragmatic devices	van Dijk, 1979
pragmatic formatives	Fraser, 1987
pragmatic markers	Fraser, 1988
pragmatic operators	Ariel, 1994
Pragmatic particles	Östman, 1995
semantic conjuncts	Quirk et al, 1985
sentence connectives	Halliday and Hasan, 1976
utterance particles	Luke, 1990

Table 1. Terminology variations of DMs

Discourse coherence

Schiffrin (1987, 2003) distinguishes operational and theoretical definitions of DMs based on sociolinguistic unstructured interview data. At an operational level, DMs are defined as "sequentially dependent elements which bracket units of talk" (Schiffrin, 1987: 31). According to this definition, DMs are items that are used to connect sequences of talk at both sentence and discourse levels. They bear the characteristics of being anaphoric and cataphoric to link the proceeding and following units simultaneously. Rather than the narrow boundaries of units (e.g. tone groups, sentences, propositions or actions), units of speech correlates syntax, semantics and speech act through intonation realisation. Under this definition, DMs can appear in any of the above mentioned units.

Through a bottom-up perspective, Schiffrin (1987) describes 11 specific forms of DMs including *oh, well, and, but, or, so, because, now, then, y' know, I mean,* within a discourse coherence model to discuss the joint semantic, discourse, pragmatic and cognitive relationship that the speaker and hearer tend to use to build discourse coherence.

The model contains five sub-planes, namely *ideational*, *action,* and *exchange structure*, *participant framework*, and *information state*. Both linguistic (semantic) and non-linguistic (pragmatic and cognitive) structures are included in this model. The organisation of talk between the speaker and hearer is realised through *exchange* and *action* structure. In *exchange structure*, turns are the main units that the participants use to adjust their sequence of talk to a constrained and ordered system. *Action structure* relates to the social context and speech act of the participants. *Participant framework* reveals the relationship between the speaker and the hearer, as well as the speaker and the content of talk they produce at a pragmatic level. *Ideational structure* deals with the semantic relationship among units in terms of cohesion, topic, and the roles ideas play. Different from participant framework, *information state* focuses on the cognitive capacities of participants in a manner where they organise and manage their knowledge (what they know) and meta-knowledge (what they assume themselves and others to know).

After locating the specific DMs within the coherence model, Schiffrin (1987) finds that DMs perform various functions across the planes of talk. Some work at a certain level while others can relate to multi-levels (Fraser, 1999). This framework links the linguistic properties of DMs to the discourse to uncover the indexical function that DMs possess. In her theoretical definition, DMs are regarded as "members of a functional class of verbal (and non-verbal) devices which provide contextual coordinates for on-going talk"

(Schiffrin, 1987: 41). The deictic aspect of DMs aids to realise discourse coherence in a way that DMs index the utterance to the local discourse, to the planes of talk as discourse clues, and to the participation of both the speaker and the hearer at global level of context (Fraser, 1999).

In her later work, Schiffrin (2003: 54) reemphasises that DMs are "one set of linguistic items that function in cognitive, expressive, social, and textual domains". During the process of social interaction, speakers are assumed to obtain communicative knowledge in the above-mentioned domains. DMs are important communicative tools to integrate various functions through discourse.

Both Schiffrin's operational and theoretical definitions, however, meet critics like Redeker (1990) questioning on the adequateness and validity of the model to other lexical items. Redeker (1990: 372) proposes a more functional definition and claims that a DM is "a linguistic expression that is used to signal the relation of utterance to the immediate context". Redeker (1990) further emphasises that relation of coherence contains two parts: ideational and pragmatic relations. Redeker (1990) incorporates *information structure* and *participation framework* from Schiffrin's model as *sequential structure* because of the overlap between the two planes (Fraser, 1999; Fung, 2003; Schourup, 1999). Based on pure quantitative results, Redeker (1990) claims that there is a complementary distribution of markers in pragmatic and ideational structure under two situations (monologue and dialogue) between friends and strangers.

Influenced by the discourse coherence model, Fung (2003: 59) later defines DMs as:

> "intra-sentential and supra-sentential units of linguistic items which work metalingually at the level of discourse and fulfil a non-propositional and connective function. As useful contextual coordinates, they signal a transition in the evolving process of the conversation, index the relation of an utterance to the preceding context and indicate an interactive relationship between speaker, hearer, and message".

Again, the above definition leaves a great amount of open space for further clarification at both sentence and discourse level. In Fung (2003), the main functions that DMs play seem to be limited to structural, referential, and interpersonal categories. In addition, lexical items like interjections that express speaker's stance do not seem to fit into Fung's (2003) definition. Having defined DMs from a discourse coherence model, the following section will discuss a grammatical-pragmatic view towards DMs.

Grammatical-pragmatics

Another popular trend is a grammatical-pragmatic point of view that follows the works of Fraser (1990, 1995, 1996, 1999, 2006) who refers to DMs as pragmatic formatives and later pragmatic markers (PMs). He employs the term DM to label words like *and, but, so,* as a subclass of PMs (Fung, 2003; Schourup, 1999).

According to Fraser (1999: 931), PMs are:

> "a class of lexical expressions drawn primarily from the syntactic classes of conjunctions, adverbs, and prepositional phrases [which] signal a relationship between the interpretations of the segment they produce".

Proceeding and following segments are named as S1 and S2, with PMs lying between them. Different from Schiffrin (1987), DMs, in Fraser's (1999) definition, are only limited to linguistic words that signal adjacent discourse segments. In line with Schiffrin, Fraser (1999) characterises DMs as bearing a core meaning in relation to the context but focuses more on the grammatical status and signalling function. The core procedural rather than conceptual meaning is realised through imposing a range of negotiable interpretations on S2 in relation to the prior discourse.

The division of conceptual and procedural meaning in Fraser's (1999) list of DMs is criticised as being *incoherent* from relevance theory (Blakemore, 1996, 2002; Sperber and Wilson, 1986). Though Fraser's notion that DMs do not affect the content meaning is in line with the non-truth-conditionality feature by Blakemore (1996), the content meaning poses many questions and leads to a mismatch between definition and classification in Fraser (1999). Moreover, this definition has little acceptance among researchers with its inclusive restriction (Schourup, 1999).

Relevance theory

Different from discourse coherence approach to the role of DMs in discourse organisation, Blakemore's relevance theory (1996, 1987, 2002) concentrates on the cognitive effects that DMs impose on discourse. Under this framework, DMs are "expressions that constrain the interpretation of the utterances that contain them by virtue of the inferential connections that they express" (Blakemore, 1987: 105). Expressions like *frankly* and *in contrast* have conceptual representations that contribute to the truth condition, whilst items such as *but, so, and* only encode procedural information without affecting the content meaning. Only those with procedural meaning can be counted as DMs (or discourse connectives as she refers to them). Relevance theorists claim that the two main criticisms of discourse

coherence theory, i.e. the necessity of the existence of adjunct discourse units as well as controversial delimiting criteria of DMs, hence can be solved (Schourup, 1999).

In relevance theory, DMs may happen at turn-initial position without prior context (including non-verbal occurrence). For instance, a teacher may enter a classroom and starts the lesson straight ahead with "Ok, let's begin our lesson". *Ok* in this example is considered as a DM in Blackmore (1987) whilst excluded in Fraser (1999).

The conflict between discourse coherence and relevance theory, suggested by Shloush (1998), originates from their different perspectives towards DMs in discourse structure. In other words, the former assumes the pre-existed coherent relations in discourse segments while the latter perceives the coherence as generated and interpreted through optimal relevance which allows the addressee to expect a high level of relevance with the speaker for interpretation (Schourup, 1999). One problem with relevance theory is to answer the *why* question in selection of DMs (Aijmer, 2002). The selection procedure is also problematic which may lead to a confusion in classification.

2.2.1.2 *Classification problems*

In addition to the disagreement about the definition of DMs, there is an inconsistency in classifying DMs in the literature. In other words, allocating a particular DM to one functional category or another is fraught with difficulty. Following the previous discussion, this section evaluates different ways of classifying DMs from discourse coherence (Redeker, 1990), pragmatics (Fraser, 1999), context-focused perspective (Chaudron and Richards, 1986), and functional categorisation (Carter and McCarthy, 2006). These classifications, as Schourup (1999) suggests, have disagreement in terms of membership and individual functions of DMs.

In the discourse coherence model, Redeker (1990: 372) divides two types of markers of discourse structure depending on whether DMs function in ideational or pragmatic categories, namely *ideational* and *pragmatic* markers (see the list below). However, the first sub-category of ideational markers (see 1a) only focuses on the grammatical structure, hence is not widely applied in other scholars' classifications. Redeker (1990: 372) also limits the second sub-category ideational marker (1b) to those only appearing in clause-initial position (such as *what, when, as, before*), whilst the rest that obtain anaphoric meaning can be included as the third sub-category (1c).

1) Ideational markers
    a. Simple connectives: simple subordinator and pronouns like *that, who, of which*

b. Semantically rich connectives: clause-initial conjunctions and adverbials like question words (*what/why/how*), temporal connectives (*when, as, while, next, now, before*) and causal conjunctions (*because, so*)
c. Other temporal adverbials: non-clause-initial anaphoric adverbials (*now, then, after that*)

2) Pragmatic markers
    a. Pragmatic use of conjunctions: *and/so /but*
    b. Interjections: *well, okay, okay?, right? oh, anyway*
    c. Common clauses: *you know, mind you*

There seems to be an inconsistency in terms of whether to include lexical items like modal particles (*obviously*), focus particles (*just*), pause markers (*well*), vocatives (*Charlie!*), and interjections (*wow, oh*). Compared with the classifications in Schiffrin (1987) and Redeker (1990), both of which contain interjection and topic-initiated item (*and/so/now*), Fraser (1999) tends to have a narrower range of word choices. Though without a detailed list of DMs, Schiffrin (1987) has a broader categorisation to even include literal use of *you know* which Redeker excludes, as well as non-verbal expressions that neither Redeker nor Fraser agrees (Schourup, 1999). Certain phrases like *you know*, *well*, *I mean*, are considered to signal a null discourse relationship in Fraser's work (Schourup, 1999). For instance, DM y*ou know*, though included by Redeker (1990), is excluded in Fraser's (1996, 1999) classification where DMs are only categorised as a subclass of PMs.

Fraser (1999: 946) develops four types of PMs according to different messages conveyed by the speaker's intentions. In his classification, only words that signal a relationship between proceeding (S1) and following segments (S2) are DMs:

1) Basic markers: *I regret, please, how about, if only, oh, wow, did he, why not*
2) Commentary markers:
    a. Assessment markers: *amazingly, sadly, fortunately*
    b. Manner-of-speaking markers: *objectively, personally, precisely, bluntly*
    c. Evidential markers: *assuredly, certainly, clearly, conceivably, decidedly*
    d. Hearsay markers: *allegedly, I have heard, it appears, it has been claimed*
    e. Mitigation markers: *I see your point but, I'm no expert but*
    f. Emphasis markers: *by no means, really*
3) Parallel marker:
    a. Vocative markers: *waiter, Mr. President*
    b. Speaker displeasure markers: *right now, for the last time*
    c. Solidarity markers: *my friend, as your supervisor*
    d. Focusing markers: *alright, here, listen, look (here), now, so, well, y'see*
4) Discourse marker:
    a. Topic Change Markers: *before I forget, back to my point*
    b. Contrastive Markers: *though, but, contrary to this/that*
    c. Elaborative Markers: *in other words, in addition, above all*
    d. Inferential Markers: *accordingly, as a result, so, then, therefore*

The division of DMs into topic markers, contrastive markers, elaborative markers, and inferential markers in Fraser's work is in line with Schourup's (1999) classification from relevance theory. However, Schourup (1999) questions the lexical choices under different sub-sets, by claiming that there is an inconsistency and restriction in Fraser's categorisation. Schourup (1999) argues that if Fraser (1999) limits the fourth category to mark conclusion, examples like *you see* and *after all*, that link adjacent premises rather than conclusion, do not fit into this category. Also *moreover* should be classified as an inferential marker instead of an elaborative marker (Blakemore, 1987).

Though each proposes a different categorisation, Fraser, Redeker and Schiffrin, most scholars agree that conjunctions like *and, but, so, or* should be excluded. The following examples in (1a) and (1b) are considered to be DM while (1c) only perform a grammatical function as non-DMs (Fraser, 1999: 939).

1) a. Jack played tennis. **And** Mary read a book.
   b. Jack played tennis, **and** Mary read a book.
   c. Jack **and** Mary rode horses.

Based on a university lecture, Chaudron and Richards (1986: 117) identify four types of classroom structure where DMs are situated. In baseline structure, the content meaning of lecture is conveyed straight to the listener without any special signals. Whilst in micro and macro structure, DMs function respectively to organise discourse at high-level or low-level information, which hence can be divided and listed below as micro (inter-sentence/discourse) markers and macro (meta-language) markers (see the following list). Chaudron and Richards's (1986) work identifies DMs in relation to classroom context from a bottom-up perspective. The categorisation itself, however, due to limited data resource, is oversimplified in its sub-categories. What's more, although both Maschler (1998) and Chaudron and Richards (1986) include macro-markers such as *what I am going to talk about today* in their work, whether macro-markers should be considered as DMs is still under investigation due to the difficulties in sentence complexity and identification.

1) Micro-markers:
   a. Temporal links: *then, and, now, after this, at that time*
   b. Causal links: *because, so*
   c. Contrastive relationships: *but, actually*
   d. Relative emphasis: *you see, unbelievably, of course*
   e. Framing/segmentation: *well, ok, all right?*
2) Macro-markers: *what I am going to talk about today…*
   let's go back to the beginning…

Similar to Fraser (1999), Carter and McCarthy (2006: 105) perceive DMs from a functional perspective as one sub-class of PMs, which include stance markers, hedges, and

interjections. According to Carter and McCarthy (2006), DMs help to organise, structure, and monitor discourse in topic management as well as build interpersonal relationships. DMs are divided into four sub-sets in relation to discourse in order to encode the speaker's intentions. This classification, however, has certain confusion in separating discourse meaning and pragmatic meaning. For example, certain memberships of DMs like response tokens (1d) seem also to bear pragmatic meanings to some extent.

1) DMs
   a. discourse organiser:
      i. opening up: *right, now, so*
      ii. closing down: *so, anyway, fine, right, okay/ok, well*
      iii. sequencing: *and, and then, lastly, firstly, in general, next, what' more*
   b. structuring topics:
      i. marking boundaries and linking segments: *so, yeah, and, cos*
      ii. focusing attention: *hey, listen, look*
      iii. diverting: *oh, by the way*
      iv. shifting: *well*
      v. resuming: *anyway, so*
   c. discourse monitor:
      i. reformulations: *that's to say, I mean, as I was saying, if you like, well*
      ii. marking shared knowledge: *you see, see, you know*
   d. response tokens: *right, okay, I see, yeah*
2) Stance markers: *frankly, I am afraid, of course, no doubt, really, sorry, indeed*
3) Hedges (softener): *I think, just, sort of, maybe, like, kind of, perhaps, by any chance*
4) Interjections: *gosh, ouch, oops, ugh, wow*

To sum up, the classification of DMs is problematic in terms of word selection and membership inclusion. Variations in different frameworks leave DMs with issues regarding inconvenient labelling, descriptive definition, categorisation, selection criteria for sub-categories, and grammatical status. Confusion occurs when sub-categories of the above-mentioned classifications are unaligned. There are also mismatches between definition and classification. Even on the agreed categories of DMs, disagreements can arise in deciding their functions and applications in the context. As Schourup (1999) suggests, the difficulty of classifying DMs originates from their nature of multi-functionality. Another reason causing the confusion is a lack of effective criteria for identification. Since the properties of DMs manifest the most common features widely discussed across researchers, it is possible to summarise a range of agreed characteristics from different domains (Schourup, 1999). As Jucker and Ziv (1998) point out, the descriptive features cannot be established unless DMs are identified in the first place.

2.2.1.3 *Characteristics problems*

Basic characteristics of DMs, as Jucker and Ziv (1998) notice, have two identifiable categories: *diagnostic* and *descriptive* features. Diagnostic features are essential for researchers to identify DMs in operation while descriptive features provide additional information about DMs. However, it is found that in most literature reviews, both diagnostic and descriptive features are discussed in general without much distinction between them. Most agreed features of DMs are found in syntax and semantics, prosody, and multi-functionality (Brinton, 1996; Fung, 2003; Günthner, 2000; Holker, 1991; Müller, 2005; Schiffrin, 1987, 2003; Schourup, 1999; Yang, 2006). This section therefore briefly problematises the key features discussed in the literature before introducing a detailed list of the characteristics of DMs in section 2.2.2.

Schiffrin (2003: 58) proposes five operational features that characterise DMs: whether it is "syntactically detachable, initial position, range of prosodic contours, operates at both local and global levels and operates on different planes of discourse". This criterion, however, has limitations in practice in that a wide range of DMs do not necessarily appear in turn-initial position or operate across different levels of functional planes.

Similar to Schiffrin's notion on syntactic and semantic features, Schourup (1999) emphasises three main diagnostic features of DMs, namely connectivity, optionality and non-truth-conditionality, which has wider acceptance among researchers (Lee-Goldman, 2011). DMs' connective ability to relate to discourse or talk units is considered in Schourup (1999). Criterion items like stance markers (*frankly*) are ruled out from this definition. Syntactical optionality and semantic independence are two extra elements to distinguish DMs from other word classes. In other words, to remove DMs neither affects sentence structure nor content meaning. Other descriptive criteria in Schourup's (1999) work include weak clause association, initiality, orality, and multi-categoriality. DMs are found to have a detached and introducing role to syntactic structure, bear the feature of being oral and originate from different sources of lexical forms like adverbs and conjunctions (Schourup, 1999).

A more detailed list can be found in Brinton's (1996: 33) study which analyses five linguistic features of DMs in terms of phonology, syntax, semantics, function, and sociolinguistics. According to Jucker and Ziv (1998), the features listed below are from a linguistic point of view and mixed with diagnostic and descriptive criteria. In addition, the functional and sociolinguistic features are only descriptive aspects that DMs possess rather than elements for identification.

- Phonological and lexical features
  a) They are short and phonologically reduced.
  b) They form a separate tone group.
  c) They are marginal forms and hence difficult to place with a traditional word class.
- Syntactic features
  d) They are restricted to sentence-initial position.
  e) They occur outside the syntactic structure or they are only loosely attached to it.
  f) They are optional.
- Semantic features
  g) They have little or no propositional meaning.
- Functional features
  h) They are multi-functional, operating on several linguistic levels simultaneously.
- Sociolinguistic and stylistic features
  i) They are a feature of oral rather than written discourse and associated with informality.
  j) They appear with high frequency.
  k) They are stylistically stigmatised.
  l) They are gender specific and more typical of women's speech.

Other recent studies on analysing DMs' characteristics share similar features (Fung, 2003; Günthner, 2000; Müller, 2005). Fung (2003) lists seven criteria: position, multi-grammaticality, prosody, indexicality, contextual dependability, optionality, and multi-functionality. In contrast to Brinton's (1996) restriction on DMs initial position in syntactic structure, Fung (2003) considers DMs with a flexible syntactic position that can be inserted in any part of discourse, though they are more common in the initial position. Instead of phonological realisation, prosodic features like stress and pauses are also included in Fung (2003) as important criteria attributed to DMs. The multi-functional aspect in her list, however, focuses more on how DMs initiate, continue and summarise topics in turn exchange. Her characteristic list limits the function of DMs to discourse organisation without taking interpersonal or cognitive aspects into consideration. The common features that Fung (2003) discusses are comparable with the list provided by Müller (2005: 5), which also includes lexical, phonological, syntactical, semantic, and sociolinguistic features:

- No single word class
- Phonological feature
- Syntactic position
- Syntactic independence and grammatical optionality
- Lack of semantic content
- Orality
- Multi-functionality

In the following list, Yang (2006: 268) identifies eight elements as testing criteria to decide whether a linguistic item is a DM. The first four categories categorise three identifiable features of DMs: whether they have relational, syntactical, or discourse meaning. The rest of the criteria are in fact descriptive features that DMs may possess (multi-functionality) or

bring to different levels of discourse (discourse coherence). As Shourup (1999) points out, the dispute on whether DMs are meaningful may rise in discussing the difference between connectives like *but* and interjections like *oh*. However, the problem is more about the meanings DMs convey rather than whether they have meanings or not.

1. An item in this world class signals a relationship or status between units of a discourse.
2. The item is syntactically independent from the utterance; this facilitates a predominately discourse function for the item.
3. If it is content-full, the item should have status or relational lexical meaning, e.g. *then* lexically relates two unites in a sequential or causative relationship meaning.
4. If the item is lexically less constrained, then it must be able to take on status or relational meaning. For example, *oh* has limited inherent lexical meaning, but its discourse meaning is derived from the context and prosody.
5. The item brings salience and coherence to sequential utterances in terms of participants' information states and judgements of new information.
6. It brings coherence to discourse over both local and global scope, i.e. the scope of the coherence brought about is not necessarily restricted to immediately adjacent units.
7. The item integrates interactive, expressive, cognitive, and transmittal of information functions.
8. Differentiation of the status or relational meaning arises from the syntactic, contextual, discourse and prosodic environment.

2.2.2 *Definition, classification, and characteristics*

In the section which follows, my own definition, classification, and characteristics of DMs are presented separately. The purpose of this section is to provide a broad working definition of DMs alongside a discussion of their typical features in spoken discourse. It is not intended to serve as a strict definition or categorisation without controversy. The definition of DMs can be characterised as follows:

> Derived from lexis like conjunctions, adverbs, prepositional phrases and interjections, DMs are a set of independent "small" linguistic items occurring in initial, internal or final turn position to signal the relation or boundaries of discourse units, participants' interactional effort, and context, through prosodic realisation.

The word "small" is vague yet limits the word number of DMs discussed here (McCarthy, 2003). According to this definition, DMs are fixed, independent, and short phrases/clauses. Whole clauses with a multi-word clause like *what I am going to tell you* or *I am (not) sure* which are regarded as macro-markers functioning metalingually in Chaudron and Richards (1986) are excluded in this study. Maschler (1998: 36) points out there are objections towards macro-markers that "they are not quite as frozen or lexicalised as other expressions".

Other marginal meta-expressions like *let's go, let's start*, and *I don't know* are controversial. They are considered as DMs in Maschler (1998) and Grant (2010), though there are oppositions to the inclusion of macro-markers. The same condition also applies to whole

clauses like *talking about A* or *speaking of A*, which Carter and McCarthy (2006) take into account as DMs as they bear the function of linking previous topics to a new one with a relatively fixed syntactic structure. The propositional meanings of those semi-fixed clauses have gone through a lot of changes in a process of grammaticalisation (Aijmer, 2002), and they are included in this study.

Non-verbal words (*gestures*), vocatives (*Charlie!*), and non-word vocalisation (*uh, huh, mm hm, hmm, erm*) are also excluded from this definition due to their weak and controversial performance in discourse (Schegloff, 1982). Considering the wide range of existing studies (see, for example, Sacks, 1992; Schegloff, 1982), the present study sets out to concentrate on lexical words that have identifiable linguistic features, with discussions on associated prosodic aspects such as stress, pauses, and intonation. A focused definition works as a convenient guidance in practice, especially in data analysis.

Under this definition, DMs perform multi-functionality in various domains (Jucker and Ziv, 1998). On the referential level, they link between discourse segments through displaying correlations like cause and result, contrast, comparison, and exemplification. DMs are often found to organise discourse structure (opening, shifting and closing a topic) or mark the boundaries between them (Carter and McCarthy, 2006; Maschler, 1998). They are also indicators of the participant's intention as well as awareness of interaction in interpersonal (stance markers *obviously*) and cognitive categories (reformulation *I mean*). The syntactic position of DMs is flexible, though in most cases they appear in turn-initial position (Fung and Carter, 2007). DMs index an interactive relationship between discourse, participants, and context (Fung, 2003; Schiffrin, 1987).

Though to decide whether a lexical item is a DM remains problematic due to their high multi-functionality, a gross categorisation of prototypical DMs is not impossible (Maschler, 1998). Based on the previous studies of Fung and Carter (2007), Halliday and Hasan (1976), and Swan (1995), the following classification of DMs is proposed. DMs are grouped under four functional categories which include interpersonal, referential, structural, and cognitive aspects (Fung, 2003, 2010; Maschler, 1998). Note that this is a list of canonical DMs in common speech rather than an exhaustive class-membership of DMs.

1) DMs that relate to interpersonal category:
    a. Backchannels: *yeah, yes/no, great, right, oh, sure, well, go on*
    b. Stance markers: *frankly, actually, to be honest, of course, oh, wow, gosh*
    c. Hedges:
        i. Emphatics: *indeed, true,*
        ii. Softener: *sort of, just, kind of, please*

d. Speaker- discourse-hearer indicators
    i. Discourse deictic: *here, see, listen, look, wait, what else?*
    ii. Hearer deictic: *you know, you see, you understand?, okay?*
    iii. Speaker-hearer deictic: *let's see, let's start, shall we?, let's go*

2) DMs that relate to referential category:
    a. Cause and sequence: *because, since, and, then, so, hence, therefore, as a result*
    b. Comparison: *similarly, in the same way*
    c. Contrast: *however, but, even so, still, on the other hand, while, yet*
    d. Conditional: *though, although, even if, even though*
    e. Concession: *if, unless, whenever, as long as, so long as, provided that*
    f. Coordination: *and*
    g. Disjunction: *or*
    h. Exemplification: *for example, in particular, such as*
    i. Extension: *what's more, also, in addition, furthermore*
3) DMs that relate to structural category:
    a. Topic
        i. Opening: *to begin with, let's start, now, okay, right, all right*
        ii. Shifting: *as to, so, now, what about, how about*
        iii. Interrupting/digressing: *but, okay, well, right, by the way, talking of*
        iv. Resuming: *anyway, back to my point, and, so, after all, as I was saying*
        v. Summarising: so, *in general, to sum up, generally speaking*
    b. Sequence: *first of all, firstly, secondly, lastly, finally, for another thing*
4) DMs that relate to cognitive category:
    a. Reformulation: *that's to say, I mean, if you like, well, to put it in another way*
    b. Elaboration: *in other words, in my opinion, I mean, like*
    c. Denoting thinking process: *well, I think, I suppose*
    d. Hesitation: *well, sort of*

In the following paragraphs, typical examples of DMs from the above classification are presented. On the interpersonal level, DMs are useful conversational devices for social interaction. There are four sub-set categories including backchannels, stance markers, hedges, and speaker-discourse-hearer indicators. Firstly, mostly referred to as *backchannels*, DMs signal active listenership for the speaker to continue the speech (Carter and McCarthy, 2006; Knight, 2009; McCarthy, 2003). In the following example taken from Carter and McCarthy (2006: 222), B uses DMs in each turn to signal back that A's information is received and agreed to B.

2) A: So first of all, we have to meet Kulvinder cos she's got the car.
   B: **I see**.
   A: Then we'll pick up Sue.
   B: **Right**.
   A: So we'll come around to your place around seven.
   B: **Okay**, **I see**, **right**, thanks a lot.

Secondly they function as stance markers (including interjections) to indicate the attitude of the speaker, which bear similar features as commentary adjuncts in Halliday and Hasan (1976). This category, as Halliday and Hasan (1976) notice, is loosely attached to the clause structure. They signal a boundary between units, realised by pause/tone in speaking

(comma in writing). For instance, *unfortunately* in example (3) expresses a regretting feeling which is not affected by its syntactic flexibility (Halliday and Hasan, 1976: 83):

3) a. **Unfortunately**, the doctor hasn't left an address.
   b. The doctor, **unfortunately**, hasn't left an address.
   c. The doctor hasn't, **unfortunately**, left an address.
   d. The doctor hasn't left an address, **unfortunately**.

Hedges express the speaker's intention to emphasise or delimit the degree of assertiveness (Carter and McCarthy, 2006). This category includes intensifiers (e.g. *true, indeed*) and softeners (*just, sort of, kind of*). The deictic feature enables DMs to index discourse and the participants. When referring to the discourse itself, the use of DMs like *here, see, listen, look* helps to raise listener's attention on what is important for the speaker. DMs can also direct a connection between the participants. Words like *you know* and *you see* shorten the social distance between the speaker and listener through marking shared knowledge (Fox Tree and Schrock, 2002).

DMs' main function on the referential level is to relate discourse units based on various meanings including cause and sequence, contrast, comparison and so on. Schiffrin (1987: 202) considers *so* and *because* as DMs in any of three different semantic realisations (fact/knowledge/action based discourse) illustrated in example (4):

4) a. John is home **because** he is sick.
   b. John is home **because** the lights are burning.
   c. Is John home? **Because** the lights are burning.

However, Schiffrin's analysis (1987) has been criticised by other researchers (Carter and McCarthy, 2006; Fraser, 1990). In (4a) and (4b), *because* prefaces a subordination tightly attached to the clause. *Because* in (4c) works as a subordinate conjunction prior to question (Fraser, 1990). According to Carter and McCarthy (2006: 208), subordinators with in-clause use should not be considered as DMs in similar cases like (5) since it only introduces an adverbial clause at the level of clause. *Because* in (4c) hence should be considered as a DM in this case which links two independent adjacent discourses on the basis of providing additional meaning while in the other two conditions (4a and 4b), *because* functions sorely to preface subordination.

5) a. I bought extra food **so** we'd have enough in case more people turned up.

There are two types of markers either introducing conditional or concessive clauses that need to be further addressed. Examples are as follows:

- Conditional: *though, although, even if, even though, despite the fact that, in spite of the fact that, regardless of the fact that*
- Concessive: *if, unless, whenever, in the event of, as long as, so long as, provided that, assuming that, given that, after all*

Those markers, as Halliday and Hasan (1976) claim, are useful *cohesive devices*, especially in written context. Since the present study discusses common DMs in spoken context, conditional or concessive subordinators will not be considered like in (6a) and (6b) unless they are used as stand-alone adverbials or clause introducer in turn-initial position like examples from (6c) to (6e). The use of concessive or conditional conjunctions in discourse marking is to introduce a partial correction or cancellation (Bell, 2009) of prior utterance rather than to preface subordination before the main clause at the level of clause (Barth, 2000; Günthner, 2000). Therefore, in referential domain, DMs are restricted to those at turn-initial or stand-alone position.

6) a. **Even if** it rains, he comes anyway.
b. **Though** it rains heavily, he arrives.
c. I would like some drinks. **Unless** they are sold out.
d. He will be there. **Although** he is always late.
e. Well, **as long as** you agree.

DMs are useful devices for organising topics and signalling sequences of talk in relation to discourse structure (Carter and McCarthy, 2006; Fung and Carter, 2007; Maschler, 1998). Examples like *right, well, now, okay, so* enable the speaker to open, shift, interrupt, digress, resume, and generalise utterances or topics. For instance, in classroom contexts, the opening and closing are the most common positions that teachers employ DMs (Carter and McCarthy, 2006). See the following example:

7) a. **Now,** let's begin our lesson.
b. **Okay**. **So** that' all for today's class.

The use of *now* in (7a) is considered as a DM. Whether to decide it is a time adverbial or a DM largely depends on the discourse context where it is embedded. In this situation, the initial *now* together with prosodic feature (pause) attached to it marks a transition in topic rather than a time adverb (Hirschberg and Litman, 1993; Schiffrin, 1987).

Lastly, different types of DMs signal the speaker's cognitive process during interaction, including denoting thinking process (*well, I think*), reformulation (*I mean*), elaboration (*like*), and hesitation (*well*). DMs are time-gaining devices for process like word-searching (Dülger, 2007) and allow more time and space for the speaker to reorganise and modify his/her speech (Fung and Carter, 2007).

After generalising the class-membership of DMs, it is important to summarise common features that contribute to DMs. Though DMs' functions may vary across discourse contexts, to establish a set of criteria that distinguishes DMs from other grammatical items is crucial before discussing descriptive features they entail (Aijmer, 2002; Jucker and Ziv, 1998). Adapted from Brinton (1996), Fung (2003), and Müller (2005), a list of DMs' basic characteristics with a division of diagnostic and descriptive features is presented in table 2.

Diagnostic features:
a) Lexis: multi-resources, fixed/short/small, micro-markers;
b) Prosody: pause, intonation, stress, accompanied with non-word verbalisation;
c) Syntax: flexible in position, independent between clauses, detachable, turn-initial or stand-alone position in referential relation;
d) Semantics: independent, optional, no effect on truth condition;
e) Indexicality: anaphoric or cataphoric between discourse units.
Descriptive features:
f) Grammaticality: marginal categories, controversial grammatical status;
g) Multi-functionality: referential, structural, interpersonal, cognitive domains;
h) Stylistics: high frequency/diversity, repetition, stranding, cluster and collocation;
i) Sociolinguistics: context-dependent, orality.

Table 2. List of the characteristics of DMs

There are five criteria to help identify whether an item is a DM, despite the fact that controversies may still exist. First of all, DMs are lexically constrained in that they are small, short, and fixed linguistic items (Brinton, 1996; Günthner, 2000). Macro-markers, as discussed previously, are excluded in the study due to identification difficulty in syntax. The multi-grammaticality of DMs manifests that they are drawn from various grammatical and lexical phrases like adverbials, prepositions, conjunctions, interjections, and clauses (Fung, 2003; Günthner, 2000). The class membership of DMs is not limited to single word classes but a variety of choices as potential DMs (Müller, 2005; Schffrin, 1987; Svartvik, 1980).

Another important element to identify DMs from other lexical items is the associated prosodic features (Schiffrin, 1987). The prosodic contours, as Aijmer (2002) observes, have not been studied sufficiently yet. DMs are phonologically reduced and tend to form a separate tone group (Brinton, 1996; Jucker and Ziv, 1998). A widely quoted example among researchers (see, Aijmer, 2002; Fung, 2003) is the use of *now* in "John left. *Now*,

Mary was really frightened" from Fraser (1990: 388). DM *now* is separated by a pause and followed by comma which asserts the grammatical status of *now* as a DM rather than a time adverbial (Aijmer, 2002). In addition, as important evidence to help locate DMs, vocalisations like *er, erm* are also found to appear together with DMs as pause or hesitation in spoken language.

DMs are both syntactically and semantically independent linguistic entities. In syntax, they are flexible in any position of an utterance and optional to the structure. DMs can be inserted in initial, internal, or final position (Brinton, 1996; Müller, 2005). In most cases, however, it is common to find DMs in turn-initial position to signal upcoming information (Othman, 2010). DMs are detachable or optional in syntactic structure in a sense that to remove a DM does not affect the grammaticality of the host utterance (Fraser, 1988; Fung, 2003; Müller, 2005; Schourup, 1999). For example, the in-clause use of *you know* in case (8a) is not a DM but rather a reporting verb to introduce the complementiser which follows while (8b) is discourse marking (Carter and McCarthy, 2006: 208):

8) a. **You know** what we need? Another helper?
b. You've got terrace houses, **you know**, bungalows on the edge and everything.

Semantically speaking, DMs are independent in that they have no effect on the listeners' ability to understand the content meaning of the utterance or truth condition. DMs themselves lack semantic meaning compared to other content words (Schiffrin, 1987). What's more, to add or remove DMs does not necessarily affect informational content (Müller, 2005; Schourup, 1999). According to Schourup (1999: 232), DMs actually "display", "reinforce", or "clue" the intended interpretation rather than "create" additional meaning.

The aspect of deictic properties of DMs bridges speaker, hearer, and context as one holistic unit, which distinguishes them from other linguistic items. They index the utterance to the local level of discourse, as well as the participants to the context (Schiffrin, 1987). The presence of indexicality provides signposts or clues while establishing a coherent and interactive discourse through procedural meaning (Aijmer, 2002; Blakemore, 2002; Schiffrin, 1987). DMs like *here, look, listen* refer cataphorically to guide the hearer's attention to focus on the key points the speaker tends to emphasise (Carter and McCarthy, 2006). Take *now* for example:

9) a. The street used to be clean. **Now** it is dirty.
b. **Now,** let's move on to the next session.

In (9a), *now* suggests a contrast between two clauses, though whether it is temporal or locational comparison is difficult to identify. Schiffrin (1987) considers this as discourse marking while others oppose that it is rather a time adverbial simply to imply *nowadays* (Carter and McCarthy, 2006). In this study, only cases like (9b) are considered as DMs. Compared with the temporal use (9a), *now* in (9b) indexes the listeners' focus on the speaker as well as on the following content (Carter and McCarthy, 2006; Fraser, 1999). Though there are many marginal forms and controversial cases when deciding on what is or what is not a DM, a checklist with diagnostic features may assist in identification (Table 3). After all, descriptive features cannot be established unless DMs are located first (Jucker and Ziv, 1998).

Features	Checklist	Non Discourse Marking	Discourse Marking
Syntax and Semantics	• Semantic independence • Syntactically detachable • Lexically constrained	**You know** what I say.	**You know,** that's fine.
		Are you **all right**?	**All right**. That is the end.
		Even if he is here, I will not come back.	**Even so**, I would not admit it.
		I left **because** it was dark.	Yeah. **Because** he is sick.
Micro context	• Indexicality	**What I am going to tell you**	Well, ok. **Let's start**.
		It is raining **now**.	**Now**, let's move on.
Prosody	• Prosodic features	*Non-verbal:* ((Nodding)) ((laughing))	Pause
		Vocatives: **Everyone**! **Doctor**!	Hesitation Stress
		Non-word verbalisation: **Uh, uhmm, urgh, er, em**	Intonation

Table 3. Checklist of non-DMs and DMs

Following the previous discussion of diagnostic features, descriptive features have four additional characteristics that most DMs share including grammaticality, multi-functionality, stylistic, and sociolinguistic aspects (see table 2) (Brinton, 1996; Lenk, 1998; Müller, 2005). The grammatical status of DMs can be ambiguous due to the overabundant grammatical and lexical forms they derive from (Fraser, 1999; Fung, 2003). As Schiffrin (1987) emphasises, discourse context also contributes to the complexity of DMs in the process of grammaticalisation. As discussed previously in classification, the multi-

functionality of DMs distinguishes their functions at various levels of interaction including structural, referential, interpersonal, and cognitive domains (Frank-Job, 2006; Fung and Carter, 2007; Jucker and Ziv, 1998). Unlike other sub-categories, multi-functionality is widely accepted as one convincing aspect that most researchers observe and agree on (Fung, 2003; Jucker and Ziv, 1998; Müller, 2005)

Stylistically, DMs usually occur frequently, especially in spoken discourse. Tendencies of repetition, clusters, and collocations of a number of DMs are found to reinforce the clues of meanings that the speaker tends to convey. Frequent combinations include *well actually*, *well I think*, *oh you know*, *you know* (Aijmer, 2004). An example from Aijmer's radio data (2002: 31) presents five DMs clustering together in corresponding to different thematic slots:

10) **Well^ n\ow you'see# I ^th\ink I' mean**# ^ if the 'exploration' is on that…

Finally, from a sociolinguistic perspective, DMs are highly context-dependent (Fung, 2003). Text type and register have a correlation with the use of DMs in terms of category and distribution (Aijmer, 2002). Bearing the feature of being oral and informal, DMs like *well* and *you know* appear more often in spoken conversation rather than written texts (Biber, 1988; Brinton, 1996). Individual markers also differentiate from each other in different genres. For instance, *well* is observed as a canonical dialogue marker while DMs *now* and *however* occur frequently in monologue (Aijmer, 2002).

In conclusion, drawn from the discussion of previous studies on DMs, this section has concentrated on introducing a novel definition, a function-based classification, and a characteristic list which includes both diagnostic and descriptive features. The following section evaluates the current research trends of studying DMs in pedagogical settings.

2.3 DMs in pedagogical settings

In this section, the discussion is divided into three parts: features of L2 classroom discourse (Section 2.3.1), past research on DMs in classroom interaction (Section 2.3.2), identifying the research gap (Section 2.3.3).

2.3.1 *Features of L2 classroom discourse*

Any classroom, as Walsh (2006: 4) points out, is a "dynamic" context where series of events take place among teachers, learners, discourses, settings, and learning materials. The nature of classroom interaction, determined by classroom events, is characterised by the asymmetric role of participants, goal-oriented activities, and institutional needs (De Fina, 1997). The communication between teachers and learners is channelled through the medium of classroom discourse, which provides an ideal platform for different research perspectives to investigate teacher-student interaction (Walsh and Yang, 2014). Studies on classroom discourse have both theoretical and practical meanings in order to maximise the benefits of education (Hickman, 2009).

The characteristics of classroom interaction are structured in the organisation of teacher talk (Sinclair, 1982), including the canonical tripartite structure Initiation-Response-Feedback (IRF) (Sinclair and Coulthard, 1975), unequal turn allocation system (Sacks et al, 1974), and repair strategies (Kasper, 1985). The linguistic ability of the teacher, especially the ability to use language to organise the classroom, can largely affect the effectiveness of the teaching process, which is particularly true in foreign language classes where language is not only a pedagogical tool but also the ultimate goal of learning (Walsh, 2006).

Classroom discourse can be divided into several types such as first language (L1) or L2 classroom discourse, university lectures, written and spoken discourse (Yang and Walsh, 2014). Different from other discourse forms, L2 classroom discourse focuses more on the acquisition of the target language, in which the effectiveness of interaction has played an important role for L2 learning (Walsh, 2006).

From a teacher's perspective, there are four features of L2 classroom discourse: control of patterns of communication, elicitation techniques, repair strategies, and modifying speech to learners (Walsh, 2006: 5). Due to the nature of L2 classrooms, it is natural to find teachers in charge of classroom interaction most of the time. A teacher initiates, shifts, and summarises the topic, activity and learning stages. Teacher talk is seen as a crucial part in constructing classroom discourse. The second feature is the great amount of techniques a

teacher applies to elicit learner production and organise classroom structure (Walsh, 2006). Since the role of teachers and learners are *asymmetrical*, more effort is required by the teacher as the initiator of both conversation and classroom activity. One common routine is that a teacher asks a question and the students choose to respond/react to the question. Proposed by Sinclair and Coulthard (1975), the question and answer routine is seen as a common and appropriate practice in the language classroom. Also repeated clarification and modification are necessary means to help learners to pay attention to various linguistic points in the target learning materials.

2.3.2 *DMs in classroom interaction*

As previously mentioned, different forms of communication between teachers and learners are realised through the medium of classroom discourse. As an essential part that constitutes classroom interaction, DMs are useful devices that help the participants' understanding of discourse and information progression (Schiffrin, 1987).

Studies on DMs in pedagogical settings have largely focused on L2 learners' acquisition (see Section 2.3.2.1 for discussion). It is generally recognised that the continued study of DMs has important implications for effective communication for language learners (Polat, 2011). However, as part of the registers of teacher talk, DMs in EFL teacher's spoken discourse are still under-researched in the literature (Sections 2.3.2.2 and 2.3.2.3).

2.3.2.1 *DMs and second language acquisition (SLA)*

A large amount of previous research has focused on language learners' use of DMs. In the field of SLA, learners' acquisition of the linguistic forms of the target-language has always been the centre of research. This section will discuss relevant studies.

Bearing more characteristics of spoken discourse, DMs are important indicators for L2 learners' communicative competence and oral fluency. Compared to NS, there is a tendency that language learners do not often use DMs in the same expected ways that NS do (Hellermann and Vergun, 2007). Using a developmental learner corpus, Polat (2011) displays different patterns of three focal DMs *you know, like*, and *well*, used by immigrant L2 learners. *You know* was heavily overused whilst *well* has null usage. The use of *like*, on the other hand, fluctuates over the year. What's more, studies have also shown that language learners with a higher proficiency are more likely to use more DMs (Hellermann and Vergun, 2007).

Most of the studies repeatedly demonstrate an underuse/misuse of DMs in pragmatic functions by language learners, which may in turn have negative consequences in

communication (Hellermann and Vergun, 2007; Polat, 2011; Romero-Trillo, 2002). For instance, Romero-Trillo (2002) focuses on the pragmatic fossilisation of DMs in both child and adult NNS in Spain with comparison to NS during their processes of learning English. The study shows that the linguistic production of NNS has lower competence in pragmatic development of the L2 language. Dailey-O'Cain and Liebscher (2006) further reveal a functional distribution and specialisation of *so* and *also* in mixed code of German and English used by L2 students in the bilingual classroom.

One of the reasons behind language learners' insufficient use of DMs is possibly a lack of exposure in their interlanguage system (Hellermann and Vergun, 2007). In the studies of DMs in SLA, learners are all exempt from a consistent teaching of DMs in language instruction (Romero-Trillo, 2002). Hellermann and Vergun (2007: 176) state that:

> "the learners' use of these markers may be due to incidental learning of these language forms and a result of the learners' socialisation into English languages use".

O'Keeffe et al (2011) also emphasises that the pervasiveness of DMs used in speaking bear various micro-functions to add on oral fluency and high pragmatic value in interaction, which can be designed in awareness building tasks for L2 learners to acquire. Therefore, there is an urgent need for more exposure of language instruction inside the classroom as well as conversational interaction outside the classroom.

2.3.2.2 *DMs in teacher talk*

In the previous discussion, how DMs can promote the learning process in SLA is presented. The relationship between DMs and the efficacy of classroom interaction, however, is still unclear, particularly in teacher spoken discourse. In order to enhance our understanding of classroom discourse and awareness of quality teacher talk, it is therefore important to look at the roles that DMs play in classroom interaction as an indispensable part of the register of teacher talk.

Teacher talk, especially in the L2 classroom, shares great similarities with foreign talk or caretaker talk (Ferguson, 1975; Henzl, 1973; Kumaravadivelu, 2006), which can be defined as (Kumaravadivelu, 2006: 67):

> "a slow rate of delivery, clear articulation, pauses, emphatic stress, exaggerated pronunciation, paraphrasing substitution of lexical items by synonyms, and omission, addition, and replacement of syntactic features".

In order to make the knowledge transmission process accessible and understandable to the students, teacher talk in language classrooms focuses on form and meaning, both of which

provide different sources for teachers to adopt. Teacher-student dialogue in the classroom is also a process which functions to build social rapport between teachers and students as one discourse community through modified interaction (Long, 1981). Interactional devices on textual, ideational, and interpersonal levels are adjusted or negotiated in conversational structure which contains a range of checks for comprehension, confirmation, and clarification (Kumaravadivelu, 2006).

DMs are considered part of what makes up the register of teacher talk (Hellermann and Vergun, 2007). In a 135 min of teacher language use, Hellermann and Vergun (2007) suggest that the register of teacher talk includes many discourse markers such as *alright, now, so, well* and *okay*. A corpus-based study of McCarthy (2013) also indicates that DMs are among the top ten lexical items in pedagogical settings. As McCarthy (2013) points out, spoken academic contexts bear the characteristics of "conversationalisation" (Fairclough, 1995). In other words, there is a cline of conversational features in classroom interaction including metalanguage, DMs, modal items, and interactive words, which reflect the *interactiveness* as a key nature of spoken academic discourse (Evison, 2009: 4).

DMs are found as useful signposts in teacher's spoken discourse for pedagogical clarification and effective interaction (Dalle and Inglis, 1990). As it is observed, DMs perform both a social and educational function at the same time in classroom discourse (Fung and Carter, 2007; Grant, 2010; Walsh, 2006). In classroom contexts, DMs function as a lubricant in teacher-student interaction to reduce understanding difficulties, incoherence, and social distance between teachers and students.

DMs have an important role for students to have a better understanding of teacher language, which in return helps them to improve learning efficiency (Dalle and Inglis, 1990). Previous studies agree, in general, that DMs in teacher talk have a positive role to reduce the difficulties of learners' listening comprehension to lectures (Christodoulidou, 2011; Elder and Golombek, 2003; Eslami and Eslami-Rasekh, 2007; Flowerdew and Tarouza, 1995; Jung, 2003; Moreno et al, 2006; Othman, 2010).

Jung (2003) demonstrates that discourse signalling cues like summarisers (*to sum up*) and logical connectives (*and, so, first*) considerably aid L2 learners to recall both high and low level information from academic lectures. By studying similar organisation markers in rhetorical structure, Elder and Golombek (2003) also suggest beneficial effects of DMs on listening and reading comprehension through inputting an audio-taped academic lecture to two groups of students (marker group and non-marker group). In their study, students in

the marker group develop a more accurate understanding of the lecture while confusion and misunderstanding occur in the non-marker group. DMs are found to aid readers or listeners threefold: they activate a schema for organising and retrieving text information systemically, relieve cognitive processing load by providing allocation guidance from major to minor content, and reduce the effort of identifying numerous inferences interrelated between different ideas (Elder and Golombek, 2003).

Though studies like Chaudron and Richards (1986) and Dunkel and Davis (1994) fail to prove the positive effects of DMs in assisting learners' listening comprehension, they meets criticism such as Elder and Golombek (2003) in terms of the reliability and validity of their classroom data. Elder and Golombek (2003) criticise that Chaudron and Richards (1986) undermine the experiment procedure under an artificial environment rather than an ordinary conversation. Similarly, in Dunkel and Davis's (1994) study, there seems to be a lack of sensitivity in comprehension (Elder and Golombek, 2003).

Moreover, a wide range of studies have uncovered the patterns of teachers' use of DMs in classroom interaction. DMs in teacher talk are discovered functioning as markers of discourse organisation to show relationships between classroom activities as well as interactional devices which are more likely occur in a conversational register.

DMs in teacher talk are characteristic of the work that teachers do to manage information for an entire classroom (Hellermann and Vergun, 2007). In the early work of Sinclair and Coulthard (1975), a class of small words like *right, well, okay, now* is observed to occur frequently in the speech of all the teacher participants indicating boundaries in the lesson. These markers, which are referred to as *frame* in their study, may vary in lexical choices of different teachers but occur "invariably at the beginning of a lesson, marking off the settling-down time" (Sinclair and Coulthard, 1975: 22).

Schleef (2008) examines the use and functions of four structural markers *okay*, *alright*, *right* and *okay* in 24 American university lectures. These markers are found in the instructors' talk to function as textual markers, pre-closings, attention getters, elaboration markers, and embedded hesitations. The use of structural markers largely depends on "the academic tasks performed and the ways that different content is mediated when instructors present a lecture in fresh talk" (Schleef, 2008: 81).

In five hours of video recordings of Spanish language lessons, De Fina (1997) identifies two functions that the Spanish marker *bien* (*okay* or *fine* in English) occurs in teacher-student interaction, namely transitional and evaluative marker. Language teachers mainly

use *bien* to signal upcoming transitions between or within classroom activities (60%, transitional), whilst 30% of *bien* is used to signal a positive response by the teacher in the feedback move (evaluative). According to De Fina (1997), the most important characteristic of language classroom discourse is the centrality of the teacher's role in such context and those main functions are therefore closely related to such role, i.e. organising and facilitating learning, as well as evaluating students.

Hellermann and Vergun (2007) analyse a sample of 135 minutes of teacher language use in the language classroom with different English proficiency levels of students. In their study, DMs are not heavily used by the instructors. However, as teachers use a more intricate register in the classroom, DMs in the instructors' talk seem to have a higher occurrence in the highest class level for academic discourse. The markers which appear in teacher talk perform mostly to connect between classroom activities in discourse organisation. Among the markers they focus on including *like*, *you know*, and *well*, only *well* are noted in teacher talk with five occurrences whilst *like* and *you know* do not occur. *Well* in teacher talk work which is common in conversational interaction to mitigate a forthcoming dispreferred response. Teachers use a greater percentage of DM in the upper level classes to communicate with students, and more likely, to establish more local, interpersonal relationships in an interaction (Hellermann and Vergun, 2007).

The interpersonal function that DMs play in teacher-student interaction are emphasised in recent studies such as Hellermann and Vergun (2007) and Othman (2010). Othman (2010) investigates three specific DMs *okay, right,* and *yeah,* used in academic lectures by NS lecturers in Lancaster University, UK. The study uses 12 hours of naturalistic video recorded data as well as interviews with lecturers to cross-reference the interpretation from both the lecturers and the researcher's point of view. In his study, it was found that NS lecturers use DMs as important signposts in lecturing as a subconscious behaviour. DMs are highly "related to the idea and structural organisation of a lecture discourse in signalling intended information and intended actions of the lecturers" (Othman, 2010: 678). In addition, the reality use of *okay, right* and *yeah* is highlighted as interactive conversational markers in academic lectures (Othman, 2010).

To sum up, DMs play an important role as part of the register of teacher talk in terms of their use and functions in classroom discourse. The fact that DMs have more of the characteristics of resources in textual and interpersonal planes, as discussed in the literature, needs to be elaborated with empirical evidence (Maschler, 1998).

2.3.2.3 *DMs and classroom pedagogy*

DMs are often not taught in the classrooms but acquired outside the classrooms (Hellermann and Vergun, 2007). According to McCarthy (1999), the lack of lexical content of DMs challenges current language pedagogy which traditionally divided teaching into grammar and vocabulary teaching. Therefore, there is a need to establish the teaching of spoken grammar on the agenda and reflect on current language teaching practices.

Romero-Trillo (2002) emphasises that more research studies are needed to address the issue of DMs in language instruction, especially in teacher training programmes. Moreno et al (2006) and Dalle and Inglis (1990) are among a few studies that investigate the implications of including DMs in teacher education. Moreno et al (2006) choose DMs as one aspect of classroom interaction in language teacher education (LTE) through a corpus-based investigation of language courses. Student teachers were found to use more DMs due to their prominent roles in the classroom compared with the pupils (De Fina, 1997). It was found that only a limited number and functions of DMs are used by NS teachers, which suggests a possible task design for NNS in future training programmes. Dalle and Inglis (1990) recognise and give training in the importance of DMs to international student assistants as part of communicative techniques. Students are provided with practical guidance in how to integrate teacher talk to improve pedagogical communication. After the training programme that focuses on DMs, positive student feedback is reported in their study (Dalle and Inglis, 1990).

As section 2.3.2.1 states, DMs are important indicators for L2 learners' communicative competence and oral fluency. Uncovering the patterns of DMs used in classroom interaction can largely demonstrate teachers' ability to interact with learners and enhance language teaching. As Walsh (2011) emphasises, the concept of classroom interactional competence (CIC) is recognised as an important fifth skill to enhance learning and teaching in classrooms. The CIC of language teachers demonstrates their abilities to "use interaction as a tool for mediating and assisting learning" (Walsh, 2006: 132). Summarised in Walsh (Walsh, 2011:165), the core features of CIC include convergence of language use and pedagogical goals, the process of shaping learner contributions (e.g. scaffolding, paraphrasing), interactional space, the use of extended wait time, requests for clarification, minimal response tokens and content feedback. Therefore, understanding DMs in teacher talk can benefit our discourse awareness in language teaching and curriculum design of spoken grammar, which has an important impact on effective communication and classroom practices for teachers, educators and practitioners.

2.3.3 *Identifying the research gap*

The discussion of previous research on DMs in pedagogical settings has clearly demonstrated that there is a lack of comprehensive description of DMs in EFL teachers' spoken language in terms of the following aspects:

- The most frequent and common DMs EFL teachers use in the language classroom;
- The applications and functions of DMs across different micro-contexts in classroom interaction;
- The pedagogical aims that DMs help to realise;
- The relationship between teachers' use of DMs, classroom interaction, and pedagogical purpose.

In classroom context, less attention has been paid to the important role that DMs play in teacher talk, though many studies have suggested the positive effect of using DMs as conversational endeavours (Othman, 2010). The frequencies, categories, and effects of DMs in EFL teacher talk have not been fully described in the literature. Recognising the role of DMs as an essential aspect of interactional competence can largely promote language learning and teaching through classroom interaction. As Fung (2011) proposes, there is a need to develop linguistic awareness of spoken features in order to facilitate effective communication. To sum up, by addressing the above mentioned research gap, the study aims to reveal the complexity of DMs used by college EFL teachers. In the following section 2.3.4, it proposes a theoretical rationale of combining two research frameworks towards L2 classroom discourse.

2.4 A theoretical rationale for conducting research on DMs

This section provides a rationale of two theoretical frameworks as the bases for conducting research on DMs in teacher spoken discourse. Firstly, in order to have a better understanding of the relationship between DMs and pedagogy, it is important to establish a metalanguage that portrays the general features of the language classroom, namely Self-Evaluation of Teacher Talk (SETT) model (Walsh, 2006, 2011). The SETT model provides a research platform where DMs can be investigated across different micro-contexts and linked to L2 classroom pedagogy. The second model is a core functional paradigm that describes the performance of DMs in pedagogical settings (Fung and Carter, 2007). The two models complement each other in the way that the former serves at a higher level of discourse (pedagogy) whilst the latter focuses on the functional aspects of DMs in classroom interaction.

2.4.1 *Self-Evaluation of Teacher Talk (SETT) model (Walsh, 2006)*

Elicited from a spoken corpus, Walsh (2006, 2011) proposes a framework of Self-Evaluation of Teacher Talk (SETT) for analysing L2 classroom discourse. This model, as Walsh and O'Keeffe (2007) state, is based on four assumptions. Firstly, L2 classrooms are goal-oriented in that teachers are predominant in directing the interaction, which is partially due to the unequal role that teachers and students have in the classroom. What's more, as in the L2 classroom where language is not only the medium for knowledge transmission but also the goal of acquisition, the pedagogical purpose and language of teaching are in fact tightly linked together. Thirdly, any classroom, as a discourse community, is a combination of various micro-contexts including social and institutional baggage that participants carry into the classroom (Stucky and Wimmer, 2002). Lastly, those micro-contexts are considered as co-constructed between teachers and students through the process of "participation, face-to-face meaning-making, and language socialisation" (Walsh and O'Keeffe, 2007: 4)

In this framework, the concept of *mode* is introduced to investigate the micro-contexts of the L2 classroom. A mode, as Walsh (2006: 111) defines, is "an L2 classroom micro-context which has a clearly defined pedagogical goal and distinctive interactional features determined largely by a teacher's use of language".

The application of L2 classroom modes analysis in this study is to interpret DMs in relation to the nature of classroom context and pedagogy. Previous studies mainly focus on the syntactical-structural level and pragmatic coherence of DMs, whilst research on interactional features and contexts is scarce (Jucker and Ziv, 1998). By discussing the local and global contexts (Schiffrin, 2003), how DMs are employed in classroom interaction can be elaborated in emic constructs with more meaningful accounts of the real communication used in such contexts (Markee and Kasper, 2004; Walsh, 2006). After all, there is a link between language use and pedagogical purpose throughout the construction of classroom discourse, which needs to be elaborated in detail for a better understanding towards the interactional architecture of classrooms (Seedhouse, 2004; Walsh and O'Keeffe, 2007).

The SETT model provides a detailed description of the relationship between pedagogic goals and interaction features, particularly in L2 classroom discourse (Table 4). It promotes four major modes, namely, *managerial mode*, *materials mode*, *skills and systems mode*, and *classroom context mode* (Walsh, 2006: 66).

Mode	Pedagogical goals	Interactional features
Managerial	• To transmit information • To organise the physical learning environment • To refer learners to materials • To introduce or conclude an activity • To change from one mode of learning to another	• A single extended teacher turn which uses explanations and /or instructions • The use of transitional markers • The use of confirmation checks • An absence of learner contributions
Material	• To provide language practice around a piece of material • To elicit responses in relation to the material • To check and display answers • To clarify when necessary • To evaluate contributions	• Predominance of IRF pattern • Extensive use of display questions • Form-focused feedback • Corrective repair • The use of scaffolding
Skills and Systems	• To enable learners to produce correct forms • To enable learners to manipulate the target language • To provide corrective feedback • To provide learners with practice in sub-skills • To display correct answers	• The use of direct repair • The use of scaffolding • Extended teacher turns • Display questions • Teacher echo • Clarification requests • Form-focused feedback
Classroom Context	• To enable learners to express themselves clearly • To establish a context • To promote oral fluency	• Extended learner turns • Short teacher turns • Minimal repair • Content feedback • Referential questions • Scaffolding • Clarification requests

Table 4. L2 classroom modes (Walsh, 2006: 66)

According to Walsh (2006), *managerial mode* usually happens at the opening or ending of a lesson, as well as the transition of different modes to manage the classroom. The characteristics of this mode include extended teacher turns, a large amount of DMs, and an absence of learners' participation. On the other hand, in *materials mode*, activities are constrained by the subject/topic. All the activities designed are centred on the target learning materials. The typical pattern here is IRF exchange structure yet the teacher dominates and controls the conversation. *Skills and systems mode*, as the term suggests, focuses on the process of linguistic acquisition. The interaction between teachers and learners is centred on language skill and system practice. Instead of extended teacher turns, *classroom context mode* offers more opportunity for the participation of the students. Hence it is characterised by extended learner turns and relatively short teacher turns. In this mode,

teachers in the conversation tend to encourage more interactional space. The output of the target language can be efficiently improved under teachers' instructions (Walsh, 2006).

The four modes are identified on the basis of an understanding of the relationship between interaction and classroom pedagogy. The classification in Walsh's (2006, 2011) model is a relatively comprehensive description or a useful metalanguage in portraying L2 classroom context. The framework is not only highly representative but also links instructional goals to the real classroom interaction. Each mode, as Walsh (2006) points out, is not exclusive from each other. Distinguished features, overlapping, and mode switching are possible and can also happen in the classroom. A number of mode side sequences can be found in teacher talk in which while one mode dominates the speech, the teacher switches to a secondary mode and quickly adjusts back to the main mode. In this system, modes are considered as a dynamic and changing system in line with classroom interaction. The study proposes to describe DMs under the L2 classroom modes, with an aim to gain a closer understanding of language use in interactional process (Walsh, 2011).

2.4.2 *A Multi-functional framework of DMs (Fung and Carter, 2007)*

In pedagogical discourse, a comprehensive, functional paradigm of DMs is described by Fung and Carter (2007), through examining the use of DMs by NS and NNS from a comparative study of two corpora: a multi-billion word corpus of English language, i.e. the Cambridge and Nottingham Corpus of Discourse in English (CANCODE), and natural transcripts of classroom recordings in Hong Kong. In their study, it is found that DMs serve as useful interactional endeavours to structure and organise learners' speech in class for both NS and NNS.

Based on the notion of Schiffrin's model (1987) and Maschler's terminology (1994, 1998) (see Section 2.2.1.1), Fung and Carter (2007) have categorised a core functional paradigm that DMs contribute to discourse coherence at both local and global levels (Fung, 2003, 2011), including *interpersonal, referential, structural*, and *cognitive* orientations (see Table 5). The *interpersonal* category equals to the *participant framework* in Schiffrin's coherence model in that it correlates the relationship between the participants. The *referential* category is similar to *ideational structure* (Schiffrin, 1987), though with a broader scope of semantic relations to ideas structures. The *structural* category combines *information state* and *exchange structure* (Schiffrin, 1987) of how the speaker organises turns in talk-in-interaction (Sacks et al, 1974). Taken from part of *information state* plane (Schiffrin, 1987), the *cognitive* category is emphasised by Fung (2003) as one separate realm to elicit the speaker's denoting process.

Interpersonal	Referential	Structural	Cognitive
Marking shared knowledge: *see, you see, you know*	Cause: *because* Contrast: *but, yet*	Opening and closing of topics: *now, ok/okay, right, let's start*	Denoting thinking process: *well, I think, I see, and*
Indicating attitudes: *well, really, I think, sort of*	Coordination: *and* Disjunction: *or*	Sequence: *first, second, firstly, next, then*	Reformulation/self correction: *I mean*
Showing responses: *ok/okay, yeah, I see, great*	Consequence: *so*	Topic shifts: *so, now, how about*	Elaboration: *like, I mean*
	Digression: *anyway*	Summarizing opinions: *so*	Hesitation: *well, sort of*
	Comparison: *similarly*	Continuation of topics: *yeah, and, so*	Assessment of the listener's knowledge about the utterances: *you know*

Table 5. A core functional paradigm of DMs in pedagogical discourse (Fung and Carter, 2007: 418)

The core functional framework of DMs in pedagogical settings is effective in that it provides a descriptive model to analyse DMs in multi-functional dimensions. This context-based model depicts L2 classroom discourse from a functional perspective. In addition, it is also the basis for the classification of DMs (see previous Section 2.2.2).

According to this paradigm, there are four planes of discourse that DMs mainly operate on. On the *interpersonal* level, DMs are used often to reduce social distance, marking social roles, and signalling rapport between the speakers, through the process of sharing common knowledge (*you know, you see, listen*), response tokens (*oh, right, I see, great, yeah, yes*), and indicating attitudes on propositional meanings (*I think, sort of, frankly, really, obviously, you know, to be honest*). On the *referential* level, DMs mainly function to connect preceding and following segments in meaning. Relationships DMs indicate include cause (*because*), sequence (*so, thus, therefore*), contrast (*but, however, yet, on the other hand*), and comparison (*similarly*). On the *structural* level, DMs function to signal connection and transition between topics (*now, ok, right, well, by the way, firstly, so, how about, to sum up*). Considering its function of being a topic initiator (Aijmer, 2002; Carter and McCarthy, 2006; Siepmann, 2005), deictic use of *now* fits in this category to introduce to new ideas rather than as a simple linking connector. In terms of topic development, DMs mark particular sequences in terms of how they relate to the suspected project, theme and stance, which are essential to interactional projects (Schegloff, 2007). Lastly, DMs work as *cognitive* device in mental construction including denoting thinking process (*I think*), reformulations (*I mean*), elaboration (*like*), hesitation and so on.

2.5 Summary

The discussion in this chapter suggests the disagreement and diversity in terms of the definition, classification, characterisation, and research perspectives in the studies of DMs (Section 2.2). In section 2.2.2, a functional definition is proposed towards a closer understanding of DMs in spoken context. Under this definition, DMs are classified into four different categories including referential, structural, interpersonal, and cognitive domains (Fung, 2003, 2011; Fung and Carter, 2007). DMs are used to correlate related discourse units through various semantic meanings (such as cause and consequence, comparison, contrast), organise conversational structures regarding to topic management and sequence of talk, realise social functions on interpersonal relationships (response token, stance indicator), and finally denote cognitive processes during structuring the interaction (elaboration, hesitation, reformulation).

Rather than providing a list of general features that constitute DMs, section 2.2.2 presents the main characteristics of DMs with both diagnostic and descriptive features, though those criteria that characterise DMs may still change, especially when certain lexical elements are undergoing a so-called grammaticalisation process (Hopper and Traugott, 2003; Lehmann, 1995) and arriving towards "discourse markerhood" (Maschler, 1998: 36).

The discussion in section 2.3 identifies the research gap that in contrast to the extensive research on DMs in SLA, DMs in EFL teacher talk are relatively under-researched (Yang, 2014). The thesis highlights the importance of conducting a study that examines the important role that DMs play in teacher talk in order to enhance the efficacy of classroom interaction (Section 2.3.2.2 and 2.3.2.3).

The fact that the use of DMs is largely constrained by discipline, context, and conversation in the classroom (Scheelf, 2004) raises the importance of a comprehensive and fine-grained understanding towards DMs. In the following chapters, a multi-layered analytical approach will be proposed to account for the multiple presentation of DMs.

Chapter 3. Methodology

3.1 Introduction

This chapter proposes a novel framework of a multi-layered analytical approach by combining L2 classroom modes analysis (Walsh, 2006), with techniques used in CL and CA analyses. According to Maschler (1998: 14), DMs "do not occur randomly throughout interaction". It is necessary to resort to a mixed methods research design to uncover the complexity of DMs in classrooms.

A multi-layered analytical approach raises methodological challenges in both theory and practice (Aijmer and Simon-Vandenbergen, 2011). Among different research methods, CL and CA are two research perspectives that provide divergent analytical angles. Spoken corpora are effective tools in analysing larger naturally-occurring databases, which allow researchers to describe the actual use of language (McEnery and Wilson, 1996). So far, corpus-related research has shown that "our intuitions frequently prove to be incorrect when they are tested empirically against the actual patterns of use in large text corpora" (Biber et al, 1994: 170). In the research design of the current thesis, CL offers a general description of the linguistic patterns of DMs. It helps to pave the way for further qualitative analysis using a micro-analytical perspective (CA), which reveals the actual performance of DMs in talk-in-interaction (Drew and Heritage, 1992). The synergy of CLCA as a methodological tool has both advantages and challenges. A further discussion regarding L2 classroom discourse and pedagogy provides an up-close description of the context where DMs occur (O'Keeffe and Walsh, 2012).

This chapter is divided into seven parts. The first part is a brief introduction, which is followed by a multi-layered analytical model which is proposed as the core approach in the mixed method research (Section 3.2). This chapter then probes into how CL (Section 3.3) and CA (Section 3.4) can benefit the studies of DMs separately. In section 3.5, the advantages and disadvantages of synergising CLCA are discussed in terms of their common and complementary grounds (Section 3.5). In this section, how a multiple level analysis can contribute to the research findings is evaluated. A justification of the methodology is provided in section 3.6. Finally, a summary concludes the chapter (Section 3.7).

3.2 Mixed methods research

This section moves onto an evaluation of prior approaches. Criteria to account for the variety and richness existing in previous approaches to DMs include integratedness, target form, methodology, and research perspective (Fischer, 2006). Then in the following sections, I propose a mixed methods approach to DMs in response to the dynamics of classroom discourse.

3.2.1 *Problematising prior approaches to investigating DMs*

So far, traditional approaches towards DMs including discourse coherence, grammatical-pragmatics, and relevance theory have been discussed previously. Those approaches, however, mainly focus on certain specific linguistic features of DMs (lexical, semantic, and grammatical status) and have limitations in linking those features to the context. Recent studies propose other alternative methods. For instance, a dynamic-interactional approach views DMs as a developmental process of pragmaticalisation which underlies the multi-functionality of DMs in meta-communication (Frank-Job, 2006).

In real interaction, DMs are embedded in various levels of discourse processing in terms of turn-taking system, macro-structure (thematic sequence), and super-structure (conversation) (Zeevat, 2006). Schleef (2004) investigates the frequency and distribution of DMs from a sociolinguistic perspective. Variables such as contextual constraints, conversational roles, and educational background seem to have significant impact on governing the use of DMs. According to Fischer (2006: 4), a presentation of different approaches to DMs is the fundamental step to understand "the heterogeneity of the field and to identify those parameters in which the various approaches differ, as well as the common assumptions". The variability of approaches can be understood through the dimension of *integratedness* DMs constitute to utterances (Figure 1, Fischer, 2006: 11).

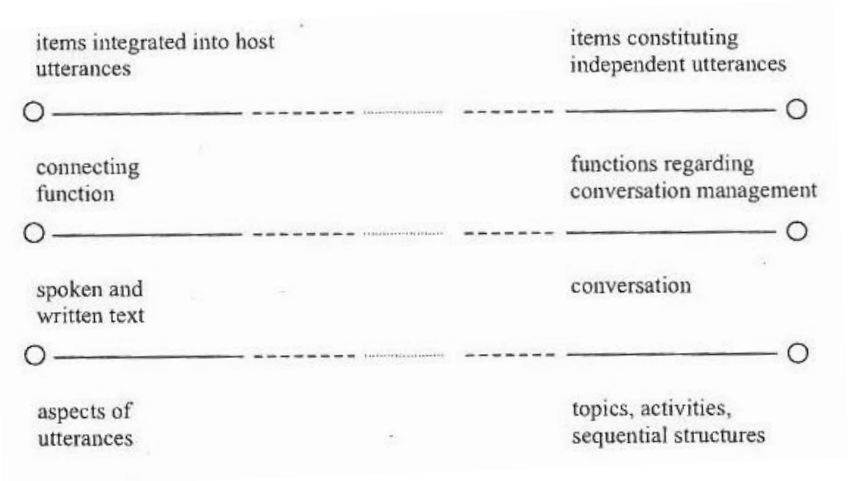


Figure 1. Dimensions of integratedness, function, data and host units (Fischer, 2006:11)

Integratedness forms a useful criterion to account for the spectrums of various approaches, in terms of function, types of data, and host units. In figure 1, there are two poles on opposite ends of each dimension. The first dimension reveals a division of two perspectives to select divergent types of DMs according to the degree of their integratedness to the utterances. On the one hand, some studies predominately analyse DMs like sentence connectives (*and, so, but*) in clauses, which are inextricably integrated into the host utterance (Blakemore, 2002; Fraser, 1999; Halliday and Hasan, 1976). While others focus on DMs that constitute independent utterances, like response tokens (*yeah, great, well*) (McCarthy, 2003) and interjections (*oh*), which are loosely attached to the host utterances. On the second dimension, it can be found that approaches to integrated DMs tend to concentrate on the connecting function in textual/referential category (Blakemore, 2002; Redeker, 2006). On the contrary, studies on unintegrated or independent DMs are more likely to address their functional aspects in the organisation of the sequence of talk (structural) and participant framework (interpersonal) (Frank-Job, 2006; Schiffrin, 1987). As a consequence, the more DMs are unintegrated from utterances, the more likely they are associated with spoken and informal contexts, whilst a tight integratedness with surrounding texts tends to restrain the occurrence of DMs to written context (Fischer, 2006). Therefore, the types of data on the third dimension can be distinguished into spoken/written text (Hansen, 2006) and conversation (Schiffrin, 2006). On the last dimension, integrated DMs constitute aspects of host units with reference to co-text at a local level yet unintegrated ones consider broader units at a global level (Schiffrin, 1987) which may include topics, activities, and participants.

Despite the fact that integratedness can be regarded as one important criterion to understand the multi-functional nature of DMs, there are other essential categories to distinguish the considerable amount of studies on DMs, like research perspectives and analytical methods. It seems that Fischer's (2006) description is limited to the forms of items without taking the above mentioned aspects into consideration. What's more, the core determiner in his multi-dimensional elaboration depends on the integratedness on the first level. The rest of the levels such as function, data, and host utterances are categorised, in response to the first dimension. A broader overview of previous approaches is hence illustrated in the following figure 2:

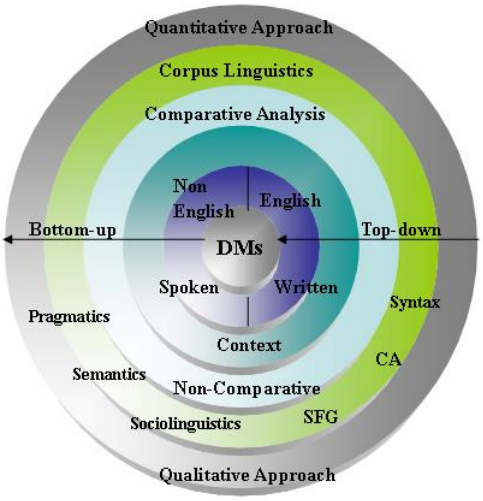


Figure 2. An overview of prior approaches to DMs

As Figure 2 suggests, there are three aspects that divide possible approaches, namely *target form*, *methodology*, and *research perspective*. This overview demonstrates how the spectrum of various approaches is presented such that "the strengths, weaknesses, coverage, and limitations become visible and comparable" (Fischer, 2006: 2).

First of all, approaches may vary according to the target forms of DMs. DMs can be found in English and non-English languages or occur in written or spoken forms. Studies in non-English language tend to conduct a comparative analysis with equivalent English DMs from a cross-cultural perspective. For example, through comparing contrastive connectives in English, Korean, and Japanese in dispreferred responses, Park (1998) discovers a shared similarity on explication of functions and actions. Registers and genres are also key factors that different approaches take into consideration.

Secondly, two types of research perspectives are distinguished. Some apply pure quantitative analysis (Dunkel and Davis, 1994), most of which prefers corpus analytic techniques (Schleef, 2004). Others resort to qualitative ones including pragmatics (Fraser, 1999) and conversation analytic approaches (Hakulinen, 1998; Tsui, 2004). Two research processing procedures, namely bottom-up and top-down, are used, depending on the starting point of data treatment (Chaudron and Richards, 1986). There are obvious drawbacks to both two extreme poles as the research results and data may be biased from a sole research angle. There are many studies between the two extremes using mixed methods (see Aijmer, 2002; Bamford, 2004; Jucker and Smith, 1998; Maschler, 1998). Advocacy of mixed methods suggests that examining data sources from a multi-layered perspective contributes to a comprehensive understanding of the emergence of DMs as the interaction itself is a dynamic on-going process (Maschler, 1998).

3.2.2 *Understanding mixed methods research*

As section 3.2.1 concludes, a single research study conducted in the extreme paradigms (pure quantitative or qualitative research) would fail to depict the multi-functional nature of DMs, and therefore can be problematic. DMs needs to be further examined to reveal the diversity of language use as well as their relations to the context (Chapter 4). The discussion in prior approaches reflects the emergence of synergising different views towards DMs.

According to Woolley (2009), the selection of research design and methods should be guided by the research questions and objectives. Considering that research usually deals with multiple layers of design and data, the traditional distinction between qualitative and quantitative research has long been criticised as "naive" or "oversimplified" (Nunan, 1992: 3). Complex designs of mixed methods where data are embedded in multiple stages are now gradually coming to people's attention (Creswell, 2009). Mixed methods research, according to Dörnyei (2007: 24), "involves different combinations of qualitative and quantitative research either at the data collection or at the analysis levels". Similarly, Tashakkori and Teddlie (1998: 17) define it as studies that "combine the qualitative and quantitative approaches into the research methodology of a single study or multi-phased study".

Mixed methods, as Dörnyei (2007) states, not only can provide complementary forms, but also support each other by integrating embedded quantitative and qualitative data at different levels which hence makes the results "more meaningful" (Dörnyei, 2007: 273). An approach that combines different methods offers the opportunity to present the overall picture from a multiple perspective (Bryman, 2006, 2007; Tashakkori and Teddlie, 2003). There are three phases can occur in mixed methods research, including data collection, data analysis and data interpretation (Onwuegbuzie and Teddlie, 2003; Tashakkori and Teddlie, 2003). Teddlie and Tashakkori (2003: 11) distinguish two types of multiple methods designs as follows:

- Multi-method design (more than one method but *restricted* to within one worldview)
  1. Multi-method QUAN studies
  2. Multi-method QUAL studies

- Mixed methods designs (use of QUAL and QUAN data collection procedures or research methods)
  1. Mixed methods research (occurs in the method stage of a study)
  2. Mixed model research (can occur in several stages of a study)

Though there have always been epistemological concerns in the integration of quantitative and qualitative paradigms, as Bazeley (2009) points out, a separation of the two strands

may result in unproductive arguments on boundary issues and impede analytic integration. It is common practice for researchers to integrate or triangulate quantitative and qualitative data sources during the data collection process to reach integrative conclusions (Gorard and Taylor, 2004). Despite this, less research effort has been made to integrate data analyses due to theoretical and practical difficulties, particularly the process of how the two combined values are achieved (Bazeley, 2009; Jones and Bugge, 2006).

This thesis deploys a multi-layered analytical approach to provide a multi-perspectived framework to study DMs in EFL teacher talk. The approach is applied in a sense that the data is analysed by integrative mixed methods techniques, which is *mixed analyses* (Onwuegbuzie and Teddlie, 2003). In Onwuegbuzie and Teddlie (2003: 353), mixed methods data analysis is defined as:

> "the use of quantitative and qualitative analytical techniques, either concurrently or sequentially, at some stage beginning with the data collection process, from which interpretations are made in either a parallel, an integrated, or an iterative manner".

This perspective emerges as one integrative analytical strategy by allowing simultaneous examination in both micro and macro contexts (Bazeley, 2009). It provides more comprehensive analytical resources by enhancing representation and legitimation than either single approach alone does. As Bazeley (2009) stresses, integration in data analysis can take various forms. Summarised by Greene et al (1989: 270), there are four types of mixed methods data analysis/interpretation:

- Zero integration: data analysis and interpretation are conducted separately without any integration;
- Partial integration: separate analysis but with integration during interpretation;
- Full integration: integration throughout both analysis and interpretation part;
- Analysis procedure not reported

In terms of actual practices, Caracelli and Greene (1993: 196) review a repertoire of four integrative strategies for mixed-method data analysis including *data transformation*, *typology development*, *extreme case analysis*, and *data consolidation/merging*. In data transformation, it allows quantitative and qualitative datasets to be transformed to each other and integrated during analysis. For instance, qualitative data can be numerically coded and included in statistical analysis. Typology development enables one typology yielded from one type of data analysis to be used in analysing another data type. Identified from either qualitative or quantitative analysis, extreme cases can be examined via other contrasting perspectives, which in turn refine the original explanation. Joint data reviews in either quantitative or qualitative form are consolidated or merged in data interpretation

process for further analysis. Based on the above integrative strategies, this study takes on a full degree of integration in that multiple analyses are synergised throughout analysis and interpretation phases (Section 3.2.1 and 4.9).

In the present study, DMs are investigated in classroom spoken discourse using a mixed methods approach (Figure 3, see Section 3.2.3 for further discussion). A combination of top-down and bottom-up approaches is applied in the research design used here. Quantitative analysis firstly provides an initial overview of the linguistic patterns of DMs in terms of range and variety. Then for the qualitative analysis, DMs are examined within and beyond the relevant discourse context where they are situated. As Aijmer and Simon-Vandenbergen (2011) state, among different approaches to spoken discourse, a conversation analytic perspective is useful to capture the naturalistic occurrence of any linguistic item in a micro-conversational system like turn and exchange as well as larger sequences (Hakulinen, 1998; Heritage, 1984), so this will be utilised here. Lastly, based on the results from macro and micro analysis, relevant interactional features and classroom pedagogy that DMs are associated with are discussed in relation to the L2 classroom discourse.

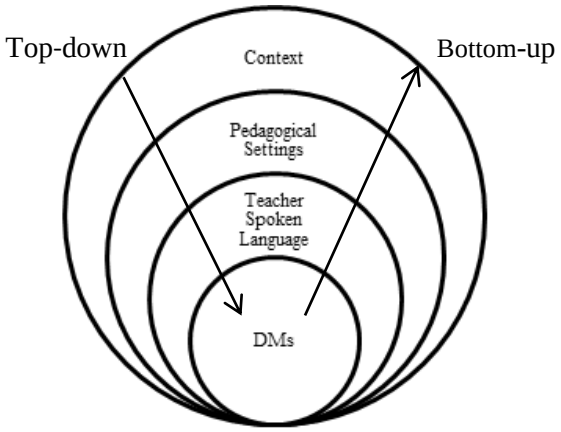


Figure 3. A mixed methods research design

From a systematised evaluation of prior approaches to DMs, this section highlights the necessity to adopt mixed methods research. Due to the multi-functionality of DMs (Section 2.2), there seems to be a need for a multi-dimensional perspective to study their roles in the dynamics of classroom discourse (Walsh, 2006). In the next section, the study will illustrate a novel, multi-layered analytical approach in detail.

3.2.3 *A multi-layered analytical approach*

As discussed in chapter 2, previous studies on DMs have concentrated mostly on the lexical and grammatical aspects rather than their multi-functionality and interrelationship between language use and context, particularly in pedagogical settings. A multi-layered perspective, on the other hand, is effective to "understand, describe and explain" the complexity of phenomenon in society (Morse, 2003: 189). With aims to depict DMs in terms of distributive patterns, functions in talk-in-interaction, as well as the situated local environment, a multiple level analysis will serve to provide a comprehensive description of DMs. The deployment of this approach is based on the following assumptions discussed in the literature (Section 2.2):

- DMs are part of high-frequency chunks that form spoken discourse. Their occurrence and amount are so significant that they cannot be ignored (Aijmer and Stenström, 2004; McCarthy, 2006; McCarthy and Carter, 2004).
- The polysemic nature of DMs is identified in multi-functional regimes during social interaction (Fung and Carter, 2007; Maschler, 1998).
- DMs are useful and indispensable conversational devices (Aijmer. 2004; Othman, 2010; Schiffrin, 2003).
- A constellation of various factors including conversational tasks and context is responsible for the use of DMs (Schleef, 2004).

By bringing qualitative and qualitative results together, mixed methods research provides a powerful methodological tool. Quantitative results have shown a high frequency of DMs occurring among the top ten word forms in spoken discourse (Allwood, 1996). Many researchers (to name a few, Aijmer, 1996, 2002, 2004; Dahlmann and Adolphs, 2009; Grant, 2010; Mauranen, 2004) focus on the frequency and distribution of DMs using CL techniques as a popular method. Previous research on DMs suggests that the use of DMs is in fact constrained by both local and global context (Lam, 2009; Schleef, 2004). Studies have also discovered DMs' performance in structural, referential, interpersonal, and cognitive categories (Fung and Carter, 2007; Jucker and Ziv, 1998; Maschler, 1998). Therefore, a qualitative analytical framework seems essential for researchers to *zoom in* micro-contexts after *zooming out* from statistic aspects. To take on both qualitative and quantitative perspectives provides research evidence in exploring the relationship between meaning and interaction (Christodoulidou, 2011).

The current approach follows a principled analytical procedure at different levels of discourse in terms of range and variety (CL), discursive patterns in talk-in-interaction (CA), and pedagogical considerations (L2 classroom modes analysis). Figure 4 presents the integration of three analytical trends:

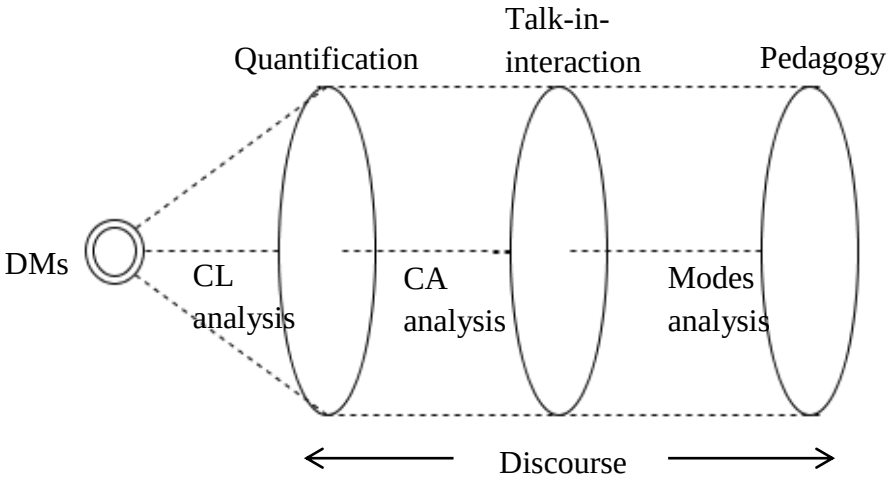


Figure 4. Model of a multi-layered analytical approach

The quantitative layer deploys the analytic techniques of CL to identify the linguistic patterns of DMs so to provide a general description in terms of word frequency, keyword lists and concordances. This stage of analysis works as a launching pad by taking the pulse of the preliminary findings and isolating a smaller set of patterns for the researchers to start with (Adolphs et al, 2004).

The conversation analytic layer corresponds to the necessity of examining DMs in micro-discourse using CA. For any analysis of a text and its context, the basic step to consider is to analyse the text "on its own terms" (ten Have, 2007: 58). Various micro-analytical approaches to investigate classroom spoken interaction include interactional analysis, discourse analysis (DA), critical discourse analysis (CDA), and CA (Aijmer and Stenström, 2005; Walsh, 2006). The impact of DA and CA is both highly valued in McCarthy (1998) as useful approaches to improve the use of spoken data in language teaching and language acquisition studies. Discourse analysis, as McCarthy (1998) argues, provides useful insights into linguistic patterns above and beyond the sentence at higher-order structure. For instance, classroom talk is seen as a systemic hierarchy that consists of IRF exchanges (Sinclair and Coulthard, 1975). However, as Aijmer and Stenström (2005) notice, critical approaches to discourse and interaction like DA and CDA has been long criticised for bringing pre-assumptions of wider context to the micro-analysis. Derived from ethnomethodological traditions, CA offers "fine-grained descriptions" of the occurrence of "order" in the organisation of turn taking and sequence, with valuable implications for language teaching activities (McCarthy, 1998: 20). Compared with critical discourse approaches, CA is more concerned with local co-construction of interaction without presuppositions before analysis (Billig, 1999; Schegloff, 1997; Wooffitt, 2005). As noted

by ten Have (2007: 58), "CA does not want to take off from grand social and political conceptions, as exemplified in the idea of *unmotivated looking*".

The pedagogical layer is to examine the context associated with DMs in classroom interaction, using L2 classroom modes analysis (Walsh, 2006, 2011). In any L2 classroom, there seems to be a reflexive relationship between pedagogical focus and interactional organisation, which constitutes of a series of micro-contexts or modes (Seedhouse, 2004; Walsh and O'Keeffe, 2007). DMs are examined more closely through the L2 classroom micro-contexts, with discussions on relevant interactional features and language teaching pedagogies. The model of L2 classroom modes serves as an effective platform for researchers to investigate and reflect on classroom discourse.

The three stages of analysis are interrelated, offering a deeper insight into the performance of DMs from quantitative, interactional, and pedagogical perspectives. The analysis processes in a non-linear and iterative manner with a full integration (Greene et al, 1989). For instance, qualitative data are numerically coded in data transformation, and joint data reviews are produced in either quantitative or qualitative form (data consolidation) (Section 3.2 and 4.9). Table 6 demonstrates various analytical aspects that the integrated approach would offer, including lexical and grammatical patterns, characteristics of DMs in talk-in-interaction, relevant interactional and pedagogical implications in classroom discourse.

Analysis	QUAN	QUAL	
Aspect	Lexical-grammar	Talk-in-interaction	Context
Method	➢Corpus linguistics	➢Conversation analysis	➢Modes analysis
	Word	Turn construction unit	Interactional features
DMs	Word cluster	Sequence	L2 classroom discourse
	Grammatical pattern	Social action	Pedagogical implication

Table 6. Analytical aspects of DMs in L2 classrooms

The multi-layered analytic model compensates for inherent weakness in each single approach (see further discussion in Section 3.3 and 3.4) to explore DMs from both macro and micro contexts. With aims to explicate the multi-functional nature of DMs through the process of classroom interaction and their contributions to the effectiveness of pedagogical realisation, a combination of quantitative and qualitative approaches is therefore methodologically powerful in strengthening the analytic dimension as well as the credibility of research results (see further discussion in Section 3.5) (Adolphs et al, 2004).

3.2.4 *Strengths and weaknesses of mixed methods research*

The major strength of using a mixed methods approach, according to Morse (2003), is to enable researchers to develop comprehensiveness or completeness in research. Compared with a single method, methodological integrity is less constrained by one method in that it verifies complementary data types and analytical strategies. It is generally agreed that there are four main strengths of mixed methods in terms of research strengths, multi-level analysis, validity and multiple audiences (Dörnyei, 2007; Macaro, 2010):

- Enhancing the strengths while eliminating the weaknesses. Mixed methods combine and complement qualitative and quantitative strengths considering the fact that the former is criticised as too context-specific and unrepresentative while the latter as being oversimplified and decontextualised during generalisation;
- A multi-level analysis which consists of both numeric trends and description allows us to address more complex issues for a better understanding;
- Mixed methods improve research validity through convergence and corroboration of the findings;
- Mixed research results may attract multiple research interests for potential interdisciplinary cooperation.

Similarly, Teddlie and Tashakkori (2003) suggest three reasons why the utility of mixed methods research is superior compared to one single method. First of all, it allows researchers to answer confirmatory (quantitative) and exploratory (qualitative) research questions simultaneously. Secondly, it provides stronger inferences (validity) to unveil complex phenomenon from multiple perspectives. And finally, it welcomes diversity of research opinions if relevant.

Nevertheless, the main strength of being comprehensive, which most mixed methods researchers advocate, can also be challenged as a weakness here. According to Morse (2003), supplemental data in multiple research methods may not be considered as in-depth as if they were in a single method. Another criticism towards the convergence of divergent research approaches has included the possibility of misusing mixed methods, inadequacy of researchers' ability in practice and the danger of unprincipled mixing, as Greene and Caracelli (1997) summarise:

- It is possible for mix methods to substitute in-depth analysis;
- Researchers may not develop equal methodological skills for both quantitative and qualitative research;
- Mixing highly divergent methods may result in random combination without criteria.

What's more, the inconsistency of inference between qualitative and quantitative orientation still remains at issue in mixed methods research with regard to the controversy

of quality of validity, the standards for evaluation and creation of proper evaluative standards (Teddlie and Tashakkori, 2003).

Having discussed the strengths and weaknesses of mixed methods research, it is now necessary to outline, and then evaluate, the methodology used in this study. A multi-layered analytical approach is effective in the following aspects:

- It combines both quantitative (CL) and qualitative (CA and L2 classroom modes analysis) strengths that previous studies have discussed in studying DMs;
- It provides different analytical layers towards the same datasets, and therefore helps researchers to gain a closer understanding of complex performance of DMs;
- It enhances the reliability and validity of research instruments in terms of data representation and legitimation (see further discussion in Section 3.6);
- It raises practical implications for future mixed methods research in classroom discourse.

As previous sections illustrate, the analytical approach that the current study proposes integrates different research strengths in the literature. A combination of multiple analytical angles serves to address both the macro and micro contexts where DMs occur. However, there are also several potential sources for problems:

- A novel methodological proposal can be challenging in theory and practice as there is limited previous research;
- It is possible that due to the analytical abilities of individual researchers, mixed methods research may not produce in-depth research results;
- It could be time-consuming to conduct a multiple analysis on the same dataset;
- There seems to be a lack of evaluation on mixed methods approaches in terms of data quality, analytical principles, and methodological effectiveness.

After discussing the issues relating to mixed methods research, the following section moves on to introduce two research methods in detail, namely CL (Section 3.3) and CA analysis (Section 3.4). The synergy of CLCA is discussed in section 3.5. Section 3.6 then provides a justification towards the methodological combination of the current approach in terms of reliability and validity.

3.3 Corpus linguistics

3.3.1 *Overview of the approach*

Derived from Latin, the term corpus simply means body (McEnery and Wilson, 1996). According to Biber et al (1994: 4), a corpus is a "large and principled collection of natural texts". As Hunston (2002) points out, a corpus can be defined in terms of form and purpose, which differentiates it from a text archive or database. As Lam (2009) emphasises, the use of a corpus brings a real-world example. A corpus is structured throughout data collection and corpus building processes (Hunston, 2002; Sinclair, 1991), while a text archive is a random accumulation of sizeable text files which lacks systematic design or plan (Kennedy, 1998).

Debate on whether CL is a linguistic branch or a methodological tool has always existed (Baker, 2010; McEnery and Wilson, 1996; Walsh and O'Keeffe, 2007). In recent studies, more researchers tend to agree that CL is a complementary methodology, rather than a type of linguistic theory or discipline (Adolphs, 2008; Baker, 2010; Biber et al, 1998; Kennedy, 1998; Leech, 1992; McEnery and Wilson, 1996). Unlike fields such as semantics or syntax that describe certain aspects of language use, CL methods can be "aligned with any theoretical approach" (Thompson and Hunston, 2006: 8).

With the help of computer technology, CL has gained rapid development in the management of empirical language databases (Sinclair, 1991). The role of computers enables corpus linguists to deal with large bodies of language data and its analytic techniques provide a general description of linguistic patterns. Biber et al (1998: 4) lists three strengths of the application of computers in CL as follows:

- The use of computers help to enhance the scope and reliability of data;
- It enables linguists to investigate the language used in a "natural" occurring context;
- It allows qualitative interpretation instead of a single approach.

This development has been widely applied in various areas from written to spoken discourse (Adolphs, 2008; Baker, 2010; Sinclair, 1991). Spoken corpora, in particular, have received less research attention due to the existence of difficulty in data collection, transcription, and questionable analytic techniques derived from written discourse (Adolphs, 2008). As Baker (2010) argues, the fact that corpora usually have a large scale of data is the premise of being representative of a particular linguistic variety. Therefore, in order to be representative, a corpus needs to "contain samples of all the different parts of the linguistic population that the corpus is supposed to represent" (Gries, 2011: 84).

CL is a complementary tool embracing qualitative integration. The creation, annotation and analytical process on corpora also require human manual analysis. So far corpus-related analyses have shown that "even the notion of core grammar needs qualification" (Biber et al, 1994: 169). This is particularly true because investigation integrated at different linguistic levels to look into the patterns of structure and use can reveal important and systematic patterns across registers.

CL techniques are flexible for adaption to provide new perspectives into analysis (Hornero et al, 2008). In previous studies, CL has been combined with various qualitative methods to offer complementary explorations, such as DA (see Biber, 2010; Conrad, 2002; Leech, 2000), more specifically corpus-based discourse analysis (CBDA) (Lee, 2010), CDA (Baker, 2010; Baker et al, 2008), CA (Adolphs et al, 2004; O'Keeffe and Walsh, 2012; Walsh et al, 2011), sociolinguistics (Baker, 2011), and pragmatics (Adolphs, 2006, 2008; Aijmer, 1996; Koteyko, 2006). As one type of source of evidence, CL and other sources together contribute to the language sciences, with its speciality in investigating lexical and grammatical patterns. This is partially due to its application of analytic techniques like word lists and concordances, which will be further elaborated in sub-section 3.3.3. The distinction between *corpus-based* and *corpus driven* research is noted by many researchers (see, for example, Baker, 2010; Tognini-Bonelli, 2001; Walsh et al, 2011). A corpus-based study normally refers to a corpus as a source of examples to falsify the quantitative results whilst a corpus-driven study can use the corpus as part of its data to analyse (Baker, 2010; Walsh et al, 2011). Similarly, other types of *corpus-assisted* research can involve corpora as well as other forms of data in data collection or analysis (Partington, 2006). As Walsh et al (2011: 3) state, "the corpus and its description is not an end in itself, the corpus is merely a means to the end of finding out more about a broader research question".

In sum, the study considers the analytic techniques of CL to uncover the statistical patterns of DMs in terms of lexis and grammar from a high level of discourse (see Chapter 4 for further discussion). Using CL to analyse DMs is in line with their linguistic properties and their multi-functionality (Section 2.2.1 and 2.2.2). The following section will discuss and evaluate previous studies that use CL to investigate DMs.

3.3.2 *CL and DMs*

A range of CL work on DMs-related linguistic items including lexical bundles, word clusters, gambits, and discourse particles has shown how the use of corpora can sharpen the analysis of discourse patterns, particularly in cross linguistic studies (Adolphs, 2008; Aijmer, 1996, 2002, 2004; Biber and Conrad 1999; Carter and McCarthy, 2006; O'Keeffe et al, 2007; Östman 1981; Svartivik, 1980).

CL is particularly useful to discover patterns by investigating single lexis or multi-word chunks in larger corpora in comparison with other registers. In terms of single-word DMs, Lam (2009) applies CL to compare the use of *well* in the Hong Kong Corpus of Spoken English (HKCSE) and a database consisting of English textbooks designed for upper-secondary students in Hong Kong. In his work, there is a mismatch between "real" English and teaching materials in terms of its frequency of occurrence, position in utterance and discourse functions. The use of a spoken corpus hence brings a real-world example and raises the issue of to what extent English textbooks reflect natural usage of DMs when language learners' main exposure is to rely on textbooks.

With regard to chunks, CL helps sort out combinations of word clusters across different registers through cluster analysis. DMs like *I mean, you know* are among the most frequent word chunks in spoken corpora and signal important communicative functions in organising conversation and maintaining speaker-listener relationship (Carter and McCarthy, 2006; O'Keeffe et al, 2007). Their high frequency and pragmatic functions needs to be further addressed to help learners in vocabulary learning. Also, another type of high frequency clusters, markers of vagueness and approximation like *things like that, or something like that* are discovered to be central to help speakers lead a more open-ended and interactive communication (Aijmer, 2002; Mauranen, 2004; McCarthy, 2006). Corpora studies enable researchers to uncover various preferences of DMs across genres. Some research suggests a careful textual interpretation to discover ambiguous cases in a close-up analysis (for example, Mauranen, 2004).

To sum up, this section has demonstrated the powerful influence of CL in discovering linguistic patterns of DMs in the basic organisation of language in terms of single word, clusters, and grammar. As McCarthy (2006: 9) points out, corpora can reveal the regular, patterned preferences of lexical output, "ready-made" multi-word units and help locate its surrounding context. The next sections moves on to the basic CL techniques.

3.3.3 *Analytic techniques*

The application of computer software in CL studies enables us to rearrange the language which makes it assessable to process (Hunston, 2002; Scott, 2010). The software that the current study uses is called WordSmith Tools (Scott, 2008). There are mainly three basic techniques for the software to process the texts, namely frequency, phraseology and collocation from lexical and grammatical perspectives (Hunston, 2002; Kennedy, 1998; Sinclair, 1991)

Frequency is the basic step to identify a range of hits or clues to the nature of a text. A frequency list offers us a specific idea of how often words occur in a corpus (Sinclair, 1991). It is particularly useful to compare frequency lists across different registers of corpora, in order to reveal the salient features of a particular corpus (McEnery and Wilson, 1996). Taken from Evison (2010: 126), table 7 shows the top ten items from the British National Corpus (BNC) and the TESOL Talk from Nottingham (TTFN) corpus.

N	*BNC*	*TTFN*
1	**I**	the
2	**you**	and
3	it	of
4	the	**I**
5	and	a
6	a	to
7	to	that
8	that	**you**
9	yeah	in
10	oh	it

Table 7. Comparison of rank frequency (Evison, 2010: 126)

The BNC corpus contains intimate conversations whilst TTFN comprises informal broadcast conversations between university teachers. The difference of ranking frequency in table 7 reveals that the first and second personal pronoun *I* and *you* appear higher up in intimate conversations rather than academic conversations. This example shows that, by comparing the rank order of items, CL can identify useful frequency information on words that are overrepresented or underrepresented in one corpus as compared to a more balanced reference corpus (Gries, 2009).

Phraseology presents the researchers with the tendency of words or latent patterning to occur in a preferred sequence through a concordance programme (Hunston, 2002; Sinclair

and Coulthard, 1975). Concordance lines are in fact texts in themselves (Sinclair, 1991). They display the regularities of a certain word or phrase in use by reference to its occurrence in a text. Table 8 presents an example of the concordance output of the word *were* as it appeared in the Survey of English Dialects Corpus (SEDC) (Baker, 2010: 23). As Hunston (2002: 12) points out, the subtlety of some instances can be difficult to discover by intuition, yet is observable "only when a lot of evidence is seen together so that the pattern emerges". Though they are unlikely to distinguish linguistically important patterns in a short text, CL techniques bring related forms together and locate their contexts in a convenient way.

1	were an old xxx. He said, he was saucy. **He**	were	an old xxx. He said, I don't know any that were x
2	ly Darnall, his name were Darnall. And **he**	were	a little bit of a fellow (the) blacksmith, he were
3	hink back to to what the differences were. **I**	were	. I was talking to a chap yesterday and he was s
4	oul leave if you liked, to go to work. And **I**	were	going by past the first three and then the fourth s
5	two had fifteen each. Hard times. Cor. **It**	were	. Do you think people are happier no? No I don't
6	here (of) course, him what were killin(g) **It**	were	havin(g) some an(d) as well, why, we got about
7	tarted milking in a morning, soon as ever **It**	were	daylight, three o'clock. We used to think naught
8	I'll tell you a thing as happened Oh, **It**	were	seven or eight mile from here. I used to take a m
9	owed everything up. Round here. Severe **It**	were	one Sunday afternoon for three or four hours. I b
10	I says it's time we were in bed. Some **men**	were	up thou knowst. Xxx. We goes on to Abbey Roa
11	. And dabbed it in it. Then they **reckoned**	were	. They were [\] they said, somebody chopped yo
12	you couldn't see (the) wall. It I couldn't **see**	were	t(he) road when I when I [\] would get home at ni
13	eight o'clock. An(d) (the) fettlin(g) **shop**	were	workin(g) all night.And uh then (the) next mornin
14	ell, I'll be up tonight to see him. But **that**	were	about six o'clock. By God, he stopped till twenty
15	decorater an(d) a funny thing there. **There**	were	no electricity round here. They made their own a
16	giving anything away. Oh, the days, **there**	were	enough work and earned sixpence a day. Aye. A
17	nymore. They 've only built that one. **They**	were	going to build another, but they (the) Depression
18	xx. And they were up, in a field. And **there**	were	a biggish man came down, so xxx, I went to fetc
19	t were the wagons and carts like? Oh, **they**	were	a queer old lot, some of 'em. Hmm. Yeah. You h
20	se teddy boys. Look how they are. Eh, **they**	were	there was a harvest home up up [\] where I com

Table 8. Concordance of *were* sorted one place to the left (Baker, 2010: 23)

Collocation indicates "the statistical tendency of words to co-occur" (Hunston, 2002: 12). CL work has demonstrated that particular sequences of words reoccur in tight combination either at the level of macro-structure or at individual collocations (Kennedy, 1998). Similar to concordance searches, collocation analysis provides a list of collocates of a word-form with its environment (Hunston, 2002). The actual collocational distinctiveness reflects different degrees of fossilisation in that some word combinations are more lexicalised to recognise in terms of frequency than others (Kjellmer, 1984).

Those above processing procedures are all useful techniques to provide evidence for linguistic description with the support of a computer. It is clear that current CL research results of linguistic instances in use conflict and challenge our intuition towards certain common phenomena of the language (Sinclair, 1991). In this study, those above mentioned analytic techniques are applied in CL analysis to create a lexical, grammatical and semantic description of the most frequent DMs in the spoken corpus (Chapter 4 and 5). So far the effectiveness of using CL techniques has been demonstrated. It is now necessary to address the other research method: CA.

3.4 Conversation analysis

3.4.1 *Overview of the approach*

As Biber et al (1998) concludes, corpus related approaches should not be limited to only describing quantitative patterns of linguistic features. A detailed discourse-level analysis is essential to further understand the interaction within context. Originated from American sociological traditions and established by Sacks, Schegloff and Jefferson in the early 1960s, CA is an analytical endeavour that explores the sequential order in talk-in-interaction by examining language as social action (Hutchby and Wooffitt 2008; Goodwin and Heritage, 1990; ten Have, 2007; Wooffitt, 2005). It studies "the order/organisation/orderliness of social action, particularly those social actions that are located in everyday interaction, in discursive practices, in the sayings/tellings/doings of members of society" (Psathas, 1995: 2). In the literature, CA has been widely applied by various disciplines like psychology, anthropology and linguistics to investigate everyday conversation or institutional talk (see, for example, Allwright, 1980; Seedhouse, 2004; ten Have, 2007).

The two main purposes of CA, as Seedhouse (2004) points out, are to uncover the ordered rules underlying interactional organisation from an emic perspective and to understand the process of intersubjectivity through sequenced actions participants perform in talk-in-interaction. There are four typical organisational types in interaction, namely, adjacency pairs (AP), preference organisation, turn taking and repair (Seedhouse, 2004; ten Have, 2007). What follows is a brief description of the four types:

The format of AP is the basic unit for sequential organisation of interactional talk (Liddicoat, 2007; ten Have, 2007). In CA, any utterance in conversation is considered "to have been produced for the place in the progression of the talk where it occurs" (ten Have, 2007: 130). Therefore, some types of talk are to initiate next actions (first pair parts) while the others are to complete the initiations (second pair parts). Canonical examples include question/answer and greeting/greeting.

The concept of preference organisation, according to Sacks et al (1974), is demonstrated in the construction of turn-design between preferred and dispreferred alternative actions. In social relationships, actions like agreement and acceptances are expected and chosen while disagreements and rejections are dispreferred choices. However, these alternative options are represented in the design of the turn shape rather than the personal expectations of the participants (ten Have, 2007).

Turn-taking in conversation, as Liddicoat (2007) stresses, is an orderly process as a result of socially constructed behaviour. According to Sidnell (2010), the preservation of one party talking at a time in conversation is organisationally primary. Sacks et al (1974) identifies two essential components, namely a turn constructional component which includes turn constructional unit (TCU) and transitional relevance place (TRP), and a turn allocation component in terms of the selection of next speaker. The units of the turn-taking system are not defined or adequate till from the perspective of the participants, the action is complete (ten Have, 2007). As the following example (11), taken from Sidnell (2010: 10), shows, a single turn of a speaker can be constructed out of several unit types: a sentential (line 36), lexical (37), phrasal (38), or lexical (39) TCU:

11)

35	Debbie:	whatever:an [.hhh
36	Shelley:	[you were at the halloween thing.
37	Debbie:	huh?
38	Shelley:	the halloween p[arty
39	Debbie:	[ri:ght.

Repair organisation is a term to deal with various difficulties or trouble sources such as misunderstanding that arise in conversations. As ten Have (2007: 133) puts it, "at its simplest, a repair sequence starts with a *repairable*, an utterance that can be reconstituted as the *trouble source*". In a repair sequence, Schegloff et al (1977) distinguishes the concepts of who takes the initiative and who provides the repair. A repair can start with the repairable initiator (self-initiated repair) or the receiver (other-initiated repair). The repair itself also can be accomplished either by the original speaker (self-repair) or others (other-repair). Example 12 from Schegloff et al (1974: 364) demonstrates a self-initiated other-repair trajectory:

12) B: he had dis uh Mistuh W-m whatever k-I can't think of his first name, Watts on, the one that wrote [that piece

A: [Dan Watts

In total, there are four possible combinations of repair format: self-initiated self-repair, self-initiated other-repair, other-initiated self-repair and other-initiated other repair. From the ethnomethodological perspective, the mechanism of repair reveals the self-organising system of conversation which the participants manage and construct locally to deal with troubles in progress (Liddicoat, 2007). In language classrooms, repair is of particular importance in order to understand how L2 learners and teachers maintain the flow of communication through the process of repairing breakdowns or misunderstandings (Seedhouse, 2004).

CA as an analytic approach has developed its own methodological procedure and practices that differentiates it from other research methods (Seedhouse, 2004; ten Have, 2004; Woffitt, 2005). Using audio or video recordings collected in the real world, CA practitioners focus on the mundane practices and hence solve the problem of "invisibility of common sense" in ethnomethodology (ten Have, 2004: 5). The transcripts of the recordings are the products as well the target of analysis for interpreting the social orderliness. Therefore, the CA conception of an emic perspective examines both the context-free construction of talk as well as the implementation of sequential organisation which is context-sensitive (Seedhouse, 2005).

According to Seedhouse (2004), there are four general principles and procedures which can be discussed in CA to study human actions. The first principle is the concept of rational organisation. In other words, talk in interaction is orderly and socially structured, especially in institutional discourse with specific aims and organisations. The second principle is that contributions to interaction are both context-shaped and context-renewing. The context of a next action cannot be understood without reference to the prior sequences, and itself is also renewed recurrently by next sequential environment. The third principle underlies the importance of the highly detailed transcription system as the primary data. The last principle points out its bottom-up and data-driven nature in data analysis, which, however, does not mean that CA tends to ignore the existence of contextual factors like gender or power but it only considers such details when the participants orient to them (Seedhouse, 2004).

An initial CA approach is able to portray the subtle relationship between interactional practices and pedagogy in classroom contexts. In his comprehensive examination of language classrooms, Seedhouse (2004: 96) argues that:

> "CA institutional-discourse methodology attempts to relate not only the overall organisation of the interaction, but also individual interactional devices to the core institutional goal. CA attempts, then, to understand the organisation of the interaction as being rationally derived from the core institutional goal".

Applying CA to study DMs in spoken interaction addresses the current research need to develop a dynamic and variable perspective towards classroom discourse (Seedhouse, 2004; Walsh, 2006, 2011). By looking at micro-contexts within a CA framework, researchers are able to uncover the process of how and why DMs are used in talk-in-interaction, as well as to take their interactional and pedagogical relevance into consideration.

3.4.2 *Institutional talk: L2 classroom interaction in higher education*

Two main research focuses can be found in the work of CA: ordinary conversation and institutional talk (Heritage and Clayman, 2010; Markee, 2004). Institutional interaction tends to be more formalised and ritualised in terms of different interactional dimensions including orientations to institutional tasks and functions, restrictions on the contributions to the talk and distinctive features of interactional inferences (Drew and Heritage, 1992).

In classroom contexts, CA is a useful tool to discover the relationship between interactional organisation and pedagogical focus as fingerprints (Heritage and Greatbatch, 1991) through tracing the progression of the talk (Heritage and Clayman, 2010; Seedhouse, 2004). University lectures are characterised with features referred to as discourse structuring from meta-language to lexical level that helps guide listeners (Crawford Camiciottoli, 2003). In addition, another key feature of procedural talk is used to structure the lecturer's talk (Mauranen, 2001). Higher education L2 classrooms consist of a series of various micro-contexts co-constructed through the process of language socialisation. During this process, constraints like language use, pedagogical purpose and social assumptions that participants bring are interwoven with each other (Walsh and O'Keeffe, 2007). Arminen (2005: 112) lists five basic patterns of classroom talk as follows:

- Lecturing format
- Pedagogical cycle
- Repair sequence
- Correctional activities
- Organised extra-curricular activities

According to Arminen (2005), lecturing, or teaching through extended multi-unit turns, is a central and essential activity in the classroom, which is particularly predominant in university lectures. This type of form of talk in classroom interaction cannot be simply generalised as monologue, but a two-directional process with consideration of targeted participants. Teachers' formulating talk hence is analysable within conversation analytic techniques, in terms of the process, the audiences and the consequences when the monologue is achieved (Arminen, 2005). The fundamental pedagogical cycle is featured with preference organisation of tripartite structure as Initiation-Response-Feedback (Markee, 2004; Sinlair and Coulthard, 1975) and the operation of a turn allocation system and repair organisation (De Fina, 1997). In classroom contexts, it is often the case that turns are allocated by the teacher to the students due to his/her privileged status. Meanwhile, other-initiated repair seems to be more widely used in classrooms than in daily conversation. This is particularly true in language classrooms (Kasper, 1985). Correctional activities such as recasts, repeating learners' utterances and asking questions, are likely to

relate to classroom behaviour by maintaining order. Extra-curricular activities such as collaborative storytelling also seem to be a systematic classroom activity corresponding to a traditional teacher-centred lecturing format (Arminen, 2005).

Teachers' behaviour in class, especially in L2 classrooms, is highly guided by the pedagogical agenda. L2 classroom interaction differentiates itself from other types of classroom talk in the following aspects (Seedhouse, 2004: 183):

1. Language is both the vehicle and object of instruction;
2. There is a reflexive relationship between pedagogical focus and the organisation of turn-taking and sequence, and interactants constantly display their analyses of the evolving relationship between pedagogy and interaction;
3. The linguistic forms and patterns of interaction which the learners produce in the L2 are potentially subject to evaluation by the teacher in some way.

The above-mentioned interactional properties constitute the uniqueness of L2 classrooms. L2 in language classrooms is not only the vehicle, but also the object of the teaching. Therefore, as the pedagogy varies, the construction of interaction varies as well. The linguistic forms and patterns that learners produce are constantly under potential evaluation to the teacher through repair and correctional activities (Seedhouse, 2004). The actualisations of the speech exchange system that reflects those properties of L2 classroom interaction can be identified as follows (Seedhouse, 2004: 187):

1. A pedagogical focus is introduced. Overwhelmingly the focus is introduced by the teacher, but it may be nominated by learners;
2. At least two persons speak in the L2 in normative orientation to the pedagogical focus;
3. In all instances, the interaction involves participants' analysing this pedagogical focus and performing turns in the L2 which display their analysis of and normative orientation to this focus in relation to the interaction. Other participants analyse these turns in relation to the pedagogical focus and produce further turns in the L2 which display this analysis. Therefore, participants constantly display to each other their analyses of the evolving relationship between pedagogy and interaction.

The basic sequence organisation illustrates the interplay of teacher-student L2 classroom interaction. Firstly, the teacher introduces the pedagogical focus to the learners, which is subject to analysis and evaluation of the matching between the production and focus either by the interaction of the teacher and the students or among the students in their group work. The students also can nominate the pedagogical focus, in which case, the teacher has to analyse and validate their production of turns in response to the realisation of actual pedagogy.

3.4.3 *CA and DMs*

Substantive studies have demonstrated that the multi-functional features of DMs are not only orderly chosen by the speaker but also display contiguity in conversation including activities like change of topics, states and signalling recipiency (Drew, 2012; Heritage, 1984). Traditional treatment of classifying DMs into broad categorisations has not so far explicitly addressed the complexity of their surrounding interactional environment (Beach, 1995; Heritage, 1984). As a fine-grained empirical approach, CA displays its analytical manoeuvre to explicate the predominant and interactional moments of interaction at the turn level in utterances (Beach, 1993; O'Keeffe and Walsh, 2012).

For example, CA studies discover *oh* as a change-of-state token in conversation. It is suggested that the use of *oh* is associated with the change of the speaker's local state of knowledge, information, orientation and awareness, normally in question-answer-*oh* structure (Heritage, 1984, 1998, 2002; Jefferson, 1978, 1983). *Oh*-prefaced responses occur mainly in an informing and repair environment to accept prior talk as informative (Schegloff, 2007).

A class of objects named acknowledgement tokens including *yeah* and vocalisations like *mm hm, uh huh* is discussed in Jefferson (1983). In her work, Jefferson (1983) distinguishes the difference between *yeah* and *mm hm*. *Yeah* signals a readiness to transmit from recipiency to active speakership while *mm hm* exhibits a passive recipiency without intention to take over the floor (Beach, 1993; Jefferson, 1983). Similar to *oh, okay* is also commonly used in conversational practices (Schegloff, 2007). Beach (1993, 1995) identifies a broad range of usage of *okay* including free-standing response tokens, pre-closure resources, and projection devices in transition moves. Aside from acknowledging the inferential and discourse connections, Bolden (2006, 2008) presents the role of *so* as a TCU to preface and implement sequence-imitating actions to enact the speaker's pending agendas. Park (2010) discovers the distinctive features of *anyway* both as a stand-alone TCU and a TCU initial component. *Anyway* can be used to signal the recipients as a sequence-ending device, index a preparedness to shift to a new sequence, and mark an impasse of a current sequence that tends to emerge from interactional troubles like a break in contiguity or misalignment between the participants (Park, 2010).

As discussed above, it is methodologically important to examine DMs within action sequences and larger stretches of talk. The functions of DMs to some extent may relate to their position in the sequence as well as the position of the sequence in larger interactional projects (Bolden, 2009; Schegloff 2007).

3.4.4 *Quantified CA?*

In his extensive discussion of quantification in CA, Schegloff (1993) points out that it makes more sense to reflect on the analytical challenges in CA regarding quantification to study interaction rather than readdress the recycled argument about quantitative versus qualitative research. As a qualitative methodology that treats single instances case-by-case within an emic perspective, CA has always been mistakenly considered to prohibit any statistics related approach (Seedhouse, 2005). However, as Schegloff (1993: 101) emphasises, "the single case is also a quantity". As a matter of fact, informal or vague quantitative expressions such as *massively*, *regularly*, *recurrent*, *absent* have been found constantly in CA reports, in terms of frequency account (Heritage, 1999; Heritage and Roth, 1995; Schegloff, 1993; Seedhouse, 2005).

Quantitative analysis, as reflected by Schegloff (1993: 102), is "not an alternative to single case analysis, but rather is built on its back" because "in examining large amounts of data, we are studying multiples or aggregates of single stances". In other words, the standardisation in quantitative procedure is possible if the phenomenon can be qualified through a systematic coding operation (ten Have, 2007).

Three concerns that relate to quantification in CA, as Schegloff (1993: 103) discusses, are the denominator, the numerator and the domain where the data are drawn from. The first concern, denominator or environment of "possible relevant occurrence" (Schegloff, 1993: 103), has to be considered. For example, to simply count backchannels or continuers like *uh huh*, *yeah* per minute, is relatively meaningless without considering the environment of relevant occurrences as people do not interact per minute. However, if one compares two relevant possible occurring environments of using backchannels, then a denominator is needed because "it is organisationally related to it in the conduct of interaction" (Schegloff, 1993: 104). The second issue deals with what should be counted as the occurrence or numerator. An individual instance depends so much on its environment that deviant cases often occur (ten Have, 2007). Hence there is a need for single case analysis to examine non-occurrence. Take the example of backchannels again. The performance of *yeah* may signal portending disagreement and be heard differently accordingly as *yeah?*. The third problem concerns the domain or universe of the data. The settings or contexts of every talk-in-interaction vary and distinguished from each other. Therefore, in analysis, "one should situate any findings in a particular domain" (ten Have, 2007: 160).

After reviewing relevant research work in CA, Heritage (1999) addresses the possibility of becoming more quantitative in CA for the next period of its development (Haakana, 2002;

Seedhouse, 2005; Tanaka, 1999). Statistical data is now becoming a new resource for the renowned CA research (Heritage, 1999). In the past CA traditions, conversational devices were perceived as dependent variables in rigorous case-by-case analysis. Nevertheless, due to the success of CA in supporting quantitative analysis by fielding and accumulating empirical findings, it is increasing likely to ask questions about the distribution of interactional practices (Heritage, 1999). Four situations in which a CA method can integrate statistical analysis are identified as follows (Heritage, 1995: 146):

- As a means of isolating interesting phenomena;
- As a means of consolidating intuitions which are well defined, but where the existence of a practice is difficult to secure without a large number of cases;
- In cases in which independent findings about a controversial practice can have indirect statistical support;
- In almost all cases where a claim is made that the use or outcome of a particular interactional practice is tied to particular social or psychological categories, such as gender, status, etc. statistical support will be necessary.

Research studies have suggested different approaches to how quantification and CA results can build on and complement each other (Gardner, 2004; Seedhouse, 2005). The earliest work of quantification in CA can be found in Schegloff's (1968) analysis of deviant cases in sequencing in conversational openings. In his analysis, there is only one derivative occurrence out of roughly 500 phone conversations in the entire corpus (Heritage, 1999). Relevant work includes Jefferson's (1985) discussion of laughter from data collected in male and female conversation, where quantification works as a launching point to narrow down and sort out the data (Heritage, 1999). Similarly, examining laughter in Finnish medical settings, Haakana (2002) presents how the distribution of laughter between the participants reveals interactional roles and footing. In Adolphs et al (2004), a range of linguistic patterns is detected from keyword analysis before CA unveils several interactional strategies of those patterns used by health advisors to role-playing clients. The quantitative analyses provided in these studies are found to strengthen the credibility of the claims in CA analysis. As Schegloff (1993: 114) reminds us:

> "we need to know what the phenomena are, how they are organised, and how they are related to each other as a precondition for cogently bring methods of quantitative analysis to bear on them".

3.5 Synergy of CLCA

This section now moves on to a discussion of synergising CLCA as an effective and compatible approach in this study. The merging of CL and CA methods has been applied in various contexts to look at the linguistic and conversational patterns that exist in various types of spoken discourse, such as survey designs (Campanelli et al, 1994), political interviews (Carter and MaCarthy, 2006), health care contexts (Adolphs et al, 2004), educational settings (Llinares García and Romero-Trillo, 2008; Walsh and O'Keeffe, 2007, 2011), and cross-linguistic comparison (Santamaría-García, 2011).

Though CL and CA have been popular approaches to studying spoken discourse, each has its advantages and limitations. In terms of CL, the use of corpora can provide a quantitative description of linguistic patterns among various resources. According to Aijmer (2002: 3),

> "corpora represent actual performance and provide the opportunity to study the distribution and function of [discourse] particles in extensive text extracts representing different registers".

However, by focusing on a large scale of data, CL is often found to look at interaction from a higher level of discourse (Walsh et al, 2011). On the other hand, CA analysts focus on the microscopic details in the interactional organisation of turn-taking, sequence and repair (O'Keeffe and Walsh, 2012). Though being criticised for its lack of systematic analytic categories, fragmentary focus and mechanistic impetration of conversation (Eggins and Slade, 1997), CA unveils the small segments of interaction in a case-by-case manner which simply cannot be reached by CL (Biber et al, 1998; O'Keeffe and Walsh, 2012). The following categories in Yang (2014) summarise the common and complementary grounds that CL and CA share:

- Common grounds:
    - Data resources: both use empirical and naturalistic data from the *real world* rather than intuitions (Campanelli et al, 1994);
    - Procedure: both data are from a principled collection of interactional episodes (O'Keeffe and Walsh, 2012);
    - Analysis: both investigate actual patterns of *language in use* with its social context (Biber et al, 1996; O'Keeffe and Walsh, 2012);
    - Focus: both probe into iterative development in language (Arminen, 2005; Llinares García and Romero-Trillo, 2008; Walsh et al, 2011);
    - Reference: both allow baseline comparison with other registers (sequential order in CA and reference corpora in CL) (O'Keeffe and Walsh, 2012).
- Complementary grounds:
    - Scope: CL allows sizable and traceable selected texts while CA provides limited yet detailed collections (Biber et al, 1994);
    - Recurrent significance: CL techniques of actual frequency, distribution and lexical choices support the vague sense of conversation analysts in describing the regularity of recurrent orderliness;

- Analysis: the systematic way that CL identifies and characterises words with associated linguistic features serves as a launching pad for CA analysis (Adolphs et al, 2004; Biber et al, 1996);
- Perspective: CL provides macro-linguistic patterns while CA focuses on the micro-contexts (O'Keeffe and Walsh, 2012).

It can be argued that CLCA are compatible methodological approaches by incorporating the iterative development of analytical framework and a comprehensive view of context at both discursive and sequential levels (Llinares García and Romero-Trillo, 2008). There are still objections to integrate CLCA, most of which originate from conversation analysts. Some theorists argue that CA does not develop arguments on the basis of frequency data which cannot reveal any structure of conversation (Markee, 2000). It is true that statistical data resort to numbers and percentage in presentation. However, this does not disqualify CL as an incompatible tool for CA analysis. On the contrary, corpus analysis of keyword, multi-word units and concordance all require the researchers to move towards the source context around the patterns (O'Keeffe and Walsh, 2012). As O'Keeffe and Walsh (2012: 164) state, both methods "start from the data and can bring us to understanding of context of use". According to Biber et al (1998: 11), a corpus-based approach is actually "framed in terms of the constructs and hypotheses resulting from earlier micro-analyses of individual texts". Meanwhile, CA is originally a reaction to the quantitative techniques in sociology which results in a strict empirical approach (Aijmer and Stenström, 2005). It has produced empirical findings of conversational practices with a wide relevance of typicality or atypicality (Heritage, 1999). O'Keeffe and Walsh (2012: 164) propose a framework of combining CL and CA for analysing spoken language, which is demonstrated in figure 5:

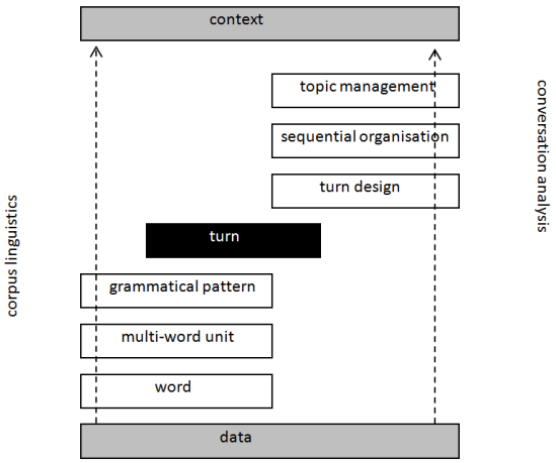


Figure 5. CL and CA as a combined framework for analysis of spoken language (O'Keeffe and Walsh, 2012: 164)

In the above integrative proposal, "CL meets CA at the level of turn" in that CL looks at a larger scope of texts whilst CA offers a comprehensive analysis at the turn level in discourse

(O'Keeffe and Walsh, 2012: 164). In this study, the analytic techniques of CL and CA are combined at the analytical level to offer suitable and multiple resources to investigate DMs as a result of their multi-functional nature. The appropriateness of using CL lies in the linguistic properties of DMs as lexical bundles in conversation (Biber and Conrad, 1999) and the recognition of their multi-word nature (Coulmas, 1979; McCarthy, 2006).

Sinclair and Coulthard (1975) note DMs as boundary markers in a higher level of transitions in classroom discourse. In their studies, the analysis of classroom discourse can be organised into transaction, exchange, move, and act level (McCarthy and Slade, 2007). However, a move-based DA analysis seems a bit broad to describe DMs in the dynamics of classroom interaction. In practice, speakers are more likely to follow the turn-taking machinery in their own conversational behaviours unaffected by social variables (Markee, 2000; Sacks et al, 1974). In addition, the emphasis of using authentic data in CA helps to reduce the bias towards DMs as redundant conversational habits in spoken language (McCarthy and Slade, 2007). Figure 6 shows an integrated and iterative procedure of using CLCA to analyse DMs.

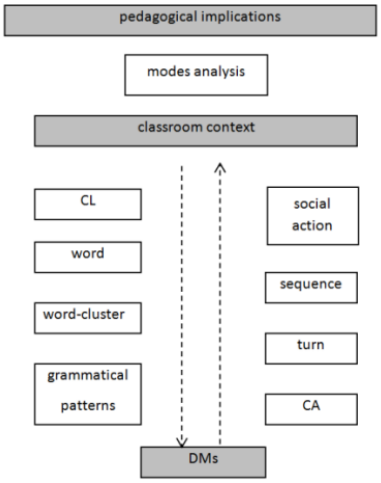


Figure 6. CL and CA as a combined method for analysing DMs

As discussed above, it is apparent that a combined CLCA method serves as a suitable methodological tool for the current study and offers a more fine-grained description of spoken interaction. As figure 6 demonstrates, the study uses CL firstly to scope out and examine DMs in terms of lexical and grammatical patterns. Drawing upon the patterns in CL analysis, CA examines the contexts where DMs occur more closely. Finally, the third layer of analysis (L2 classroom modes analysis) is added as a complementary tool to reflect on the pedagogical environments around DMs that CLCA may overlook. In return, the integrated approach aims to deliver a powerful methodological platform to investigate DMs from a multiple research perspective (see Chapter 4 for more details).

3.6 Methodological justification

Having discussed how a multi-layered analysis can benefit the study, this section aims to provide a methodological justification for this approach. In section 3.2.2, reliability and validity were mentioned as the two key elements that ensure the trustworthiness and credibility of research. Both can be divided into internal and external themes (Dörnyei, 2007; Nunan, 1992). Reliability is defined as the degree of repeatability of a study (LeComote and Goetz, 1982). Validity refers to the accuracy of the findings of a study (Arminen, 2005). Figure 7 suggests the detailed aspects of how a multiple analysis of mixing CA and CL strengthens the reliability and validity of research instruments in terms of data representation and legitimation (Onwuegbuzie and Teddlie, 2003).

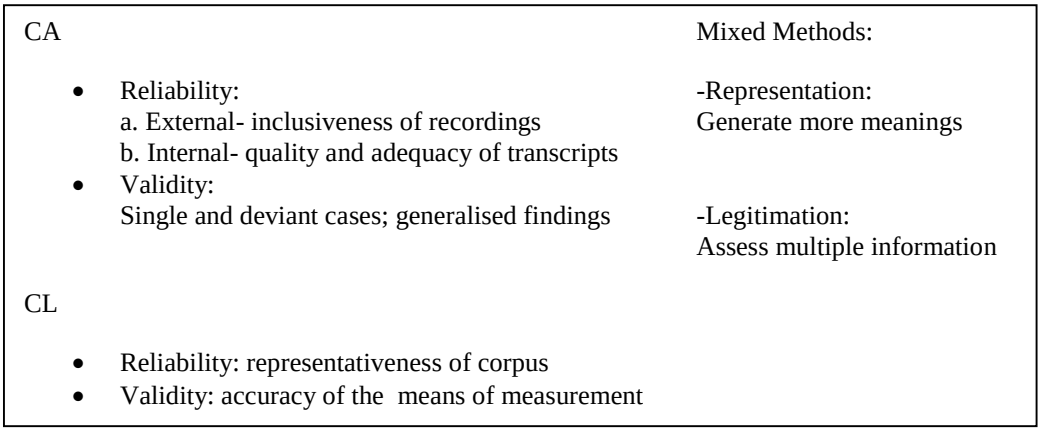


Figure 7. Reliability and validity of a CLCA approach

As shown in figure 7, the use of recordings and the standard practices in CA transcription and analysis of the primary data build on a transparent, comprehensive and replicable process (Seedhouse, 2005). With regard to validity, CA retrieves actual phenomena in the real world to ensure the quality of the data (Arminen, 2005). The mechanism generated by individual instances may provide a generalisable descriptive aspect of social actions in a particular setting (Peräkylä, 1997; Seedhouse, 2005). In CL, the concepts of representativeness and balance greatly affect the degree of generalisability (Biber, 1993; Kennedy, 1998; Sinclair, 2004b). The judgement of the researcher can only be an approximate goal when compiling a corpus. The size of the database, weighting between different components, and means of data collection and annotation process are factors that need be taken into consideration in order to validate the results (Golafshani, 2003). Mixed methods data analyses of CLCA therefore enable the researcher to enhance the rationales of representation and legitimation by generating more comprehensive meanings and interpretations from the original data (Onwuegbuzie and Teddlie, 2003). In the next chapter, how to integrate multiple analyses will be elaborated in terms of the data preparation, treatment and analysis phases.

3.7 Summary

This chapter proposes and argues that a multi-layered analytical framework can benefit research studies on DMs in classroom discourse. Firstly, various prior approaches to DMs are evaluated and systematised in terms of integratedness, target form, methodology, and research perspectives (Section 3.2.1). The following sub-sections (Sections 3.2.2, 3.2.3 and 3.2.4) further suggest that mixed methods research that combines both quantitative and qualitative analyses may well serve to describe the multi-functionality of DMs, in relation to the context they are associated with.

To conduct a multiple analysis using CL, CA and L2 classroom modes analysis in effect aligns with DMs' high frequency, multi-functional nature in interaction, and the goal-driven dynamics of L2 classroom discourse. As a single analytical technique, CL and CA have their own advantages and limitations. The advantage of using CA lies in its systematic and micro-analytic efforts that can reveal the moment-by-moment use of DMs in teacher-student interaction. However, CA has been long criticised for mechanical and detailed examination while CL is unable to provide up-close views of interaction due to its use of large databases. The integration of mixed analyses therefore provides beneficial research insights from both macro and micro contexts of DMs.

The synergy of CLCA offers a comprehensive and complementary description of spoken interaction (Aldoph et al, 2004; O'Keeffe and Walsh, 2012). As Arminen (2005: 26) puts it, "CA and quantitative analysis do not mainly contradict each other; they simply address different orders of things". CLCA share common grounds with regard to data collection resources, procedure and research focuses. In addition, CLCA complement with each other with respect to data sample size, analytic techniques and research perspectives.

Issues like the compatibility of quantitative and qualitative analysis are raised as methodological challenges. Nevertheless, in this study, the principles of CL and CA are synergised in data analysis with scrutiny of integration of quantitative and qualitative methods, rather than confronting the epistemological dispute.

A multi-layered analytical framework enables a powerful methodological tool to combine various resources and at the same time in order to, "get more out of the data" than either qualitative or quantitative methods can achieve alone (Onwuegbuzie and Teddlie, 2003: 353). Mixed methods data analyses therefore enhance the research findings by probing deeper insights into the phenomenon in terms of data representation and legitimation.

Chapter 4. Research Design

4.1 Introduction

This chapter illustrates the research design of a multi-layered analytical approach. It is divided into nine sections. First, section 4.1 briefly outlines the chapter. Then section 4.2 demonstrates the practical procedure of using the approach to analyse DMs in spoken discourse. In this section, the research design is presented through data preparation, treatment and multiple analyses phases. Classroom video recordings are deployed as the basic data resource for analysis. Video recordings of language classrooms are collected, transcribed and divided into four sub-corpora according to L2 classroom modes. In the data treatment phase, DMs are annotated at three levels in terms of identification, location in micro-contexts or modes, and performance in the functional paradigm. In the data analysis phase, CL and CA are combined to probe into the salient and recurrent features of DMs in a mode-by- mode manner.

Section 4.3 introduces the main data resource that the research draws from: a three-year research project entitled "EFL Classroom Discourse Research and Teacher Development" (Project Reference Number 07BYY036), supported by China National Social Sciences Grants from 2007 to 2009. The research project consists of 19.5 hours' video recordings of Chinese college English classes, covering three types of classes including speaking, reading and writing classes. A nine-hour sub-corpus of video recordings is taken as the main database for this study.

This chapter then demonstrates a principled operational procedure including transcribing data (Section 4.4), building corpora (Section 4.5), identifying the functional categories of DMs (Section 4.6), annotating corpora (Section 4.7), and presenting corpora (Section 4.8). Discussions in section 4.5 and 4.6 consider ambiguous/deviant cases that occur in the data as part of the methodological challenges. In section 4.7 and 4.8, how to detect and tag DMs with reference to modes and functions is demonstrated in detail. Two types of computer software are applied, namely WordSmith Tools (Scott, 2008) and Transana (Fassnacht, 2012). The former helps conduct CL analysis while the latter is useful to assist CA transcription and analysis.

Section 4.9 presents the step-by-step procedure of how to use a multi-layered analysis to unveil the use of DMs in practice. Lastly, section 4.10 summarises this chapter.

4.2 Research design of a multi-layered analytical approach

By combining CL, CA and L2 classroom modes analysis, a multi-layered analytical approach is represented through primarily three stages, namely data preparation, data treatment and multiple analysis phases (see Figure 8).

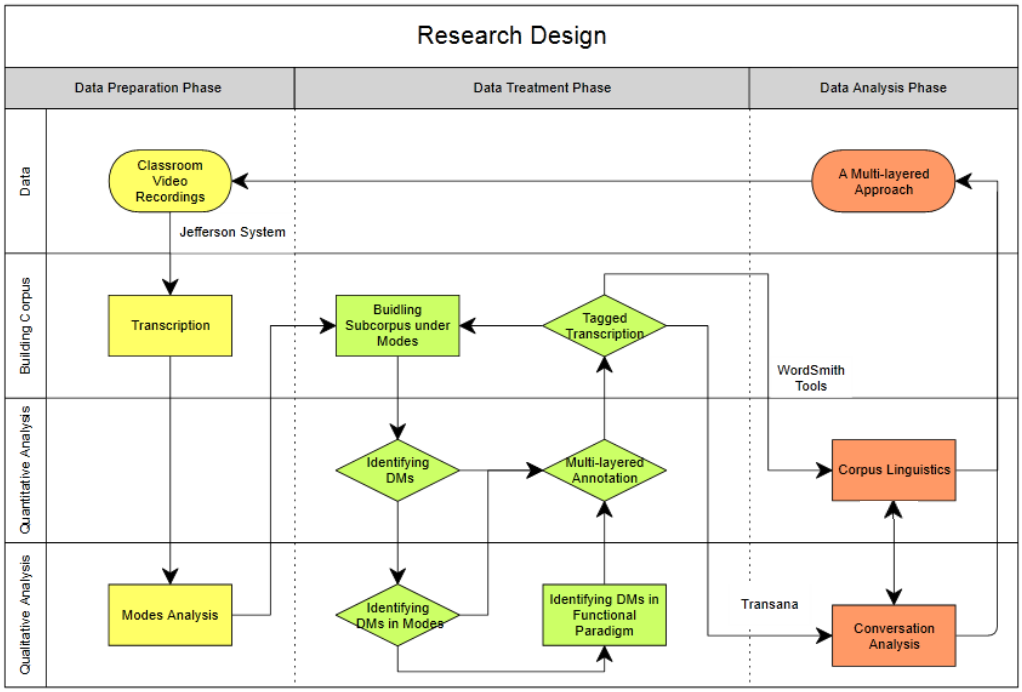


Figure 8. Research design of a multi-layered analytical approach

In the data preparation process, the main activities include data collection, transcription creation and corpus design. In this stage, Chinese English classes are collected through video recordings as the basis for investigation. As ten Have (2007) suggests, recordings of natural interaction are unique sources which provide a wealth of contextual information for analysis. The transcription of video recordings is an initial step in analysis as well as the key for interpreting spoken corpora (Adolphs, 2006; Hutchby and Wooffitt, 2008). To capture the detailed interaction, Jefferson's system (2004: 24) is deployed as the basic conventions for transcription (see Appendix B). During the phase of constructing the transcript files, the data are divided into four sub-corpora under different micro-contexts, namely managerial mode, materials mode, skills and systems mode and classroom context mode (Walsh, 2006). The reason for building sub-corpora according to modes is to achieve a deeper analytical insight into similar interactional episodes for comparative purposes, in order to uncover the interplay between the use of DMs and pedagogical orientations.

In the data treatment phase, a three-layered annotation process is introduced to help identifying DMs, their occurrences across the modes and functions in interaction. In response to the tripartite analysis, DMs are annotated at multiple levels accordingly with techniques used in CL (see Section 4.7 and 4.8).

In the data analysis phase, CL and CA are integrated to examine both the macro and micro contexts of DMs. CL serves as an effective approach to provide an overall description of DMs in Chinese college EFL teacher talk in terms of range and variety. In CL, one main software package WordSmith Tools (Scott, 2008) is used. Techniques in CL like word frequency counts, keyword analysis and concordance lines (see previous Section 3.3 for more details) are used to identify and compare the patterns of DMs in the L2 classroom with comparison to NS corpora. In CA, the qualitative analysis software program Transana is selected as an interactive and evaluative tool for micro-analysis (Section 4.4.2). In the final layer of the multiple analysis process, DMs are further examined in larger stretches of talk-in-interaction, and linked with relevant interactional features and pedagogical goals under L2 classroom modes.

The above illustration of the research design is necessary in enabling the analysis of the salient patterns of DMs from moment to moment, and mode to mode. The researcher's interpretation in data analysis is cross-referenced by colleagues to achieve a high level of reliability and validity, using the perspectives of others for verification of the accuracy of the findings (Burns, 2010). The current research design reflects the previous discussion in the literature review in chapter 2 as follows:

- The design of a multi-layered annotation process reflects the multi-functional nature of DMs in spoken discourse (Section 2.2 and 2.3.4.2);
- The tripartite analysis provides a powerful and integrated approach that combines both quantitative and qualitative perspectives to study DMs (Section 2.4).

As discussed above, there are two considerations associated with the proposal of the research design. First and foremost, L2 classroom discourse is not static or fixed but rather dynamic and co-constructed by the participants (Walsh, 2011). The communication and roles between teachers and learners constantly shift due to various pedagogical agendas (Walsh and O'Keeffe, 2007). The context in which DMs occur is an ongoing interactional process, during which meanings are undergoing constant negotiations, alternations, and renewal (Frank-Job, 2006). In addition, considering the fact that DMs are mostly used in real communicative contexts, the polysemy of DMs corresponds with the dynamics of conversation through performing multi-tasks simultaneously in discourse processing (Frank-Job, 2006). Therefore, as proposed by several studies (Seedhouse, 2004; Walsh and O'Keeffe, 2007), it is necessary to reveal those elements from a multi-layered research perspective.

4.3 Research project

Awarded by China National Social Sciences Grants, a three-year research project "EFL Classroom Discourse Research and Teacher Development" (Project Reference Number 07BYY036) was conducted in Beijing, P.R. China, with an aim to investigate Chinese EFL classrooms in higher education and to help develop teacher training programmes for Chinese college English teachers. The research project was directed and launched in 2007 at the School of English and International Studies at Beijing Foreign Studies University (BFSU), which has been China's principal base to offer the largest number of foreign language programs in 49 languages.

As shown in table 9, the project comprises overall 19.5 hours' of video recordings of English classes, which forms the Chinese college English classes corpus (CCECC). The total word count of the spoken corpus is 131,398 words. The data were collected from two Chinese universities from 2007 to 2009, one in the capital city Beijing, and the other in Henan province, central China. There are all together 11 experienced Chinese college EFL teachers (six female and five male) and over 300 Chinese college students who participated in this project (Section 4.3.2). CCECC consists of 26 college EFL classes (45 minute per class), covering three types of classes in terms of linguistic skills, including academic writing, intensive speaking and speaking classes.

In their review of research ethics for social scientists, Israel and Hay (2006: 37) demonstrate the following reasons to value ethical conduct in research:

- protecting others, minimising harm and increasing the sum of good;
- assuring trust;
- ensuring research integrity;
- satisfying organisational and professional demands;
- coping with new and more challenging problems;
- form concern to conduct.

During the research project, all the participants were fully informed about the research and asked for their consent to be recorded. Due to ethical considerations, individual participant's information remains anonymous in this study. As a researcher of the project, the author is given full access to the database of CCECC. Appendix A provides detailed information on authorisation to use the data.

Class Type	Teacher	Students	Duration	Word Count	University
Academic Writing	A: Male, 30-40	All the classes: 24 students/class 1st or 2nd year undergraduate B.A. in English, or a joint degree that combines English with international journalism	1.5 hour (45 min/class)	9536	One university in Beijing, P. R. China
	B: Female, 30-40		1.5 hour	10604	
Oral Debating	C: Female, 40s		1.5 hour	3740	
Intensive Reading	D: Male, 30-40		1.5 hour	12,286	
	E: Female, 30-40		1.5 hour	11,627	
	F: Female, 30-40		1.5 hour	12,166	
	G: Female, 30-40		3 hours	22,805	
	H: Male, 50s		3 hours	20,698	
	I: Female	undergraduate, major in English	1.5 hour	10,933	One university in Henan province, P. R. China
	J: Male		1.5 hour	7508	
	K: Male		1.5 hour	9495	
Total	11 teachers		19.5 hours	131398	2 universities

Table 9. Research Project "EFL Classroom Discourse Research and Teacher Development"

4.3.1 *Context*

In mainland China, English has become an integral component in university curricula across the country (Cheng and Wang, 2012). English language teaching (ELT) in higher education in China is divided into two main strands, one for English majors and the other for non-English majors (Gil and Adamson, 2011). The standards of English proficiency requirement for English major students and non-English major students are different (Lam, 2009). The total period of time studying English as a major can range from 600 to 2100 hours while non-English major students need to fulfil the requirement of a 225 hours' college English programme. All college students are expected to pass the examinations for English language to obtain a bachelor's degree. Non-English major students must pass the College English Test 4 (CET-4) whilst English major students are required to pass the Test for English Majors 4 (TEM-4), a more demanding test than the CET (Cheng and Wang, 2012; Gil and Adamson, 2011). Some Chinese universities also offer dual/joint degree programmes that combine dual majors such as business and computing to allow students to expand and specialise in their area of interest (Lam, 2009).

ELT in China has traditionally been teacher-centred and grammar-oriented. Research results have shown that students often perform better in reading comprehension and writing skills than using English to communicate (Cheng and Wang, 2012). Poor communication skills, argued by Cheng (2011), may be a fair reflection of the fundamental flaws of traditional teaching methods (e.g. Grammar-Translation) that had been dominating in schools. In 2004, the Division of Ministry of Education (MOE) first emphasised that Chinese college ELT should improve students' comprehensive English skills. So far, the English curriculum in China has undergone constant reforms and developed general teaching schemes for college students in terms of four types of language skills, namely listening, reading, writing and speaking (China Ministry of Education, 2007). Therefore, how to improve English communication skills is seen as a critical challenge in the new economic and global environment. With the new focus towards English education, college EFL teachers and practitioners are beginning to develop various teaching methods (e.g. Communicative Language Teaching), in order to enhance students' communicative competence as a priority in ELT. As Cheng (2011: 170) observes:

> "Strengthening English education [in China] now becomes not only an integral part of the education reform but also part of the national strategic plan for economic development".

4.3.2 *Participants*

Table 10 lists the detailed background information on the participants in CCECC. There are 11 Chinese college EFL teachers involved in the research project. The average age of the teachers is around 35, with at least 5 years' teaching experience in universities. The college students who participated are undergraduates, mainly from first/second year studies. In CCECC, students are from different disciplines such as English, diplomacy, business and journalism. Both teachers and students were native speakers of Mandarin. As shown in the table, the L2 (English) proficiency level of the college students from the university in Henan province is relatively lower than that of the students from the university in Beijing. One possible explanation may be that the university in Beijing has a higher requirement of English level in the national college entrance examination. As discussed previously, detailed information on the participants such as name, department and individual background is withheld due to ethical considerations.

Research Project Participants			
		1	2
Database	2 Chinese universities	Beijing	Henan Province
Teachers	L1	Chinese	Chinese
	L2	English	English
	Number	8	3
	Sex	3M/5F	1M/2F
	Age	Middle aged to senior	Middle aged
	Teaching Experience	5-20 years	5-10 years
Learners	L1	Chinese	Chinese
	L2	English	English
	L2 Proficiency	Advanced	Intermediate
	Number	24 /class	×
	Grade	1st and 2nd	1st and 2nd

Table 10. Background information on the participants

This study uses a sub-corpus of the CCECC. Overall, nine hours' video recordings from the Beijing database were selected regarding class types, teaching experience of teachers and size of the selected data (see Table 9). Six experienced Chinese college English teachers (teacher A-F, 2 male, 4 female) were chosen and the video recordings were collected in 2009. The EFL teachers belonged to a similar age group (age 30 to 40), with similar years of ELT experience. The sub-corpus consists of six classes, including three class types: Intensive Reading (4.5 hours), Oral Debating (1.5 hour) and Academic Writing classes (3 hours). The number of students involved was 144 (24 students in each class). The students were first year undergraduates, aged between 18-20 years old. They were either studying a bachelor degree in English or a joint degree that include English and an international journalism programme. In the dual degree programme, students were expected to achieve the same level of English proficiency as English major students.

4.4 Transcription

The transcripts of recordings are essential as the basis of data archives, especially when building spoken corpora. Transcriptions are the first level of analysis within themselves and representation of the phenomena of analytic interest (Heritage and Atkinson, 1984; Psathas and Anderson, 1990). Transcripts help the researchers to provide a device for highlighting research interest, a system for building a database, and access to a range of interaction (ten Have, 2007).

4.4.1 *Transcription conventions*

Video recordings of natural interaction, as ten Have (2007) argues, have always been the preference for providing evidence of the complexity of its details. Though it is unavoidable to find bias in various systems of transcription conventions, transcripts of recordings help analysts elaborate and highlight specific phenomena in texts (ten Have, 2007).

As one of the main contributors to CA, Gail Jefferson (2004: 24) developed a system of transcription conventions for sequential analysis referred to as the Jefferson system which has been widely used by conversation analysts (see Appendix B). The aim of CA transcripts is to "make what was said and how it was said available for analytic consideration" (ten Have, 2007: 32). Heritage and Atkinson (1984) also stress that CA transcripts do not claim to capture all the interactional details but to reveal the *sequential* features of talk. In the Jefferson system, the main effort is to note sequential contributions completed by each participant by visualising the timeline of the interactional stream on paper and adding prosodic features like pause and intonation besides the texts (Hutchby and Wooffitt, 2008; ten Have, 2007).

The reason to use CA's transcription system lies in its five strengths: firstly, it is designed for naturally occurring interaction; secondly, it helps to operate closer to the analysis of the phenomenon, despite the fact that the conversation analysts can be criticised as being too obsessed with the details; also, the system is flexible "in response to the merging analytic needs and insights" (ten Have, 2007: 32); what's more, it is a type of collective property that can be shared among audience and analysts; finally, compared with other conventions, CA transcripts are supposed to remain faithful towards the authenticity of the original interaction through including interactional details, which however can be time-consuming (Jefferson, 2004; ten Have, 2004).

4.4.2 *Computer assisted qualitative data analysis software: Transana*

With the development of modern technologies, the use of video recording has become an important tool for researchers to capture human behaviour. Video technology not only provides a useful source for data collection, but also allows an analytic platform for the researchers to transcribe, observe, note, code, and play back interesting interactional episodes repeatedly and precisely (Parmeggiani, 2011). As Canning-Wilson (2000) points out, recordings, especially video recordings, are useful evaluative tools for observation and reflection.

In qualitative analysis, to decide what and how to observe without technical supports can be difficult and easily subject to biased interpretation. A growing number of computer programs have been developed with a wide range of techniques for the analysis of qualitative data (Schönfelder, 2011). Developed by Chris Fassnacht and now maintained in the Wisconsin Centre for Education Research, Transana belongs to a category of software packages called Computer Assisted Qualitative Data Analysis Software (CAQDAS) to aid qualitative analysis and data manipulation (Dempster and Woods, 2011; Knight, 2009; Lewins and Silver, 2007; Mavrikis and Geraniou, 2011; Parmeggiani, 2011). Similar CAQDAS software packages include CLAN (Badre et al, 1995), NVivo, and MAXQDA (Schönfelder, 2011).

Among various computer programs, Transana is considered as a suitable tool to support conversational transcription, multiple coding themes and alignment of transcripts with video recordings, especially for conversation analysts (ten Have, 2007). The main purpose of Transana, noted by Mavrikis and Geraniou (2011: 246), is "to facilitate the transcription, analysis, and management of digital video or audio data". The advantages to using this software program can be summarised as follows (Mavrikis and Geraniou, 2011; Parmeggiani, 2011):

- It offers a sophisticated, analytic environment for multiple media files, multiple transcripts as well as multiple users;
- It allows the play back of minor episodes repeatedly;
- It is embedded with the Jefferson system for CA style transcription;
- It synchronises transcriptions and videotape events as it plays by placing time codes in the transcripts;
- It supports a multi-layered annotation process and defines specific keywords by anchoring the notes to the matching points of the transcripts;
- It has qualitative analytic techniques like keyword and time sequence maps to represent coding across the time line of a media file.

4.5 Establishing sub-corpora under modes

On the basis of transcription, the next step of the research design is to build four different sub-corpora under L2 classroom modes.

Leech et al (1995) identify five stages when compiling a spoken corpus, which include recording, transcription, representation (mark-up), coding (or annotation) and application. After the transcripts are created, the data then undergo the process of being categorised into four sub-corpora according to different modes. The detection of different modes follows the CA mechanism, which is manifested in the turn-taking system, sequential structure, topic management, interactional features, and pedagogical purpose (Walsh, 2006). According to Walsh (2006: 65), each L2 classroom mode marks itself with unique fingerprints (Heritage and Greatbatch, 1991) in terms of linguistic, interactional, and pedagogic features, which differentiate themselves from each other. The transcripts are identified, underlined and re-organised into four corpora under four modes (see Appendix D and E). As discussed previously in chapter 3, the challenge of how to make judgements about the quality of the research seems fundamental in achieving validity (Burns, 2010). The process of establishing sub-corpora can be illustrated through the following excerpt. Excerpt 4.1 is taken from an intensive reading class of teacher D that centres on a discussion of a short article on education. A sample of excerpt 4.1 cross-checked by another colleague can be found in Appendix F.

Excerpt 4.1

→ 1 T: there are people who are vegetarian by preference
2 by preference (.) and: by religion we know that
3 like Buddhists (.) they don't eat meat at all
→ 4 (0.1) so (.) that's paragraph three (.) what is
5 the author doing? ↓here (.) right in this whole
6 paragraph (1) is he trying to tell us that (.)
7 you know (.) there's something wrong with his
8 education? in this paragraph?

9 S17: it tells what education has taught him

10 T: that is to get him in touch with those differences
11 among different nations or cultures (.) so here
12 he's talking about his- what his education had
13 actually taught him right? even- even (1) probably
14 where his education was right was was helpful (.)
15 was useful right? was useful (.) ↑okay (.) that's
→ 16 paragraph three (1) now paragraph four (.) S18
17 (.) can you please read this paragraph for us?
18 slowly (.) deliberately (.) and loudly

In total, there are three main modes detected in the above excerpt, which includes classroom context mode from line 1 to 4 (blue underlined), materials mode from line 5 to 16 (orange underlined) and managerial mode from line 16 to 19 (red underlined). In the beginning of excerpt 4.1, the teacher is extending the concept of vegetarianism from the textbook. By stating "so, that's paragraph three" in line 4, the teacher closes down the previous discussion (line 1-4, classroom context mode). He then guides the students back to the material by initiating a display question of "what is the author doing" (line 5). The content from line 5 to 16 hence belongs to the materials mode. From line 16 to 19, the teacher is moving from materials mode to a new learning activity by using transition markers like *okay* and *now* (line 16) and asking S18 to read aloud (line 17-19). The managerial mode can be detected and marked from line 16 to 19 in a transitional position to link two adjacent learning stages.

However, as every classification has its exceptions, it is often the case that during the process of building sub-corpora, the content of modes can be too ambiguous to be determined. In general, three types of deviant cases may happen (Walsh, 2006: 83):

a) Mode switching: movements from one mode to another.
b) Mode side sequences: brief shifts from main to secondary mode and back.
c) Mode divergence: where interactional features and pedagogical goals do not coincide.

The occurrence of modes seems present in a dynamic manner. There are occasions when more modes appear simultaneously or particular classroom interaction digresses from the main mode. In classrooms, talk-in-interaction and classroom pedagogy can be momentarily mismatching since teachers do not plan their language use (Walsh, 2006). In those cases, the main mode is considered. Above all, the occurrence of mode convergence, divergence, or side sequences is accidental in the progression of the conversation. By examining longer stretches of talk, the procedure extends the understanding of moment-by-moment decision making (Bolden, 2009; Walsh, 2006). What's more, though it is possible to meet criticism that in the process of detecting, the standard to decide the beginning and ending of one mode can be ambiguous, particularly in a transitional position, the actual meanings of interaction can be mutually understood by the participants in the next-turn, particularly given necessary context information (Frank-Job, 2006). By building four separated sub-corpora under L2 classroom modes, this study aims to describe, distinguish and analyse the orderliness of interactional patterns of DMs in relation to classroom pedagogy, on the basis of a closer understanding of the dynamics of classroom interaction.

4.6 Identifying the functional categories of DMs

In his book *Forms of talk,* Goffman (1981) points out that the shifts of frames of natural talk, or *footing*, constantly undergo changes in the alignment of the speaker and the hearer. Besides interpersonal constraints, our frames for events often switch into other contextual realms in interaction (Maschler, 2009). One could shift to his prior or up-coming referential world, open a new discourse topic or move to cognitive processes. Between different conversational action boundaries, DMs are found as part of the fingerprints to manifest those shifts of interactional moments (Maschler, 2009).

The notion of *language* differentiates itself from *languaging* in that the former refers to an accomplishment while the latter is an on-going process (Becker, 1988; Maschler, 2009). Languaging is a process through which we understand the world beyond language (extralingual world) or interaction of using language (metalanguage). The employment of DMs in interaction can be viewed as part of the process of metalanguaging. In language alternations, DMs mark as signals to refer to and switches into different metalinguistic dimensions (Maschler, 2009).

As previously mentioned in the literature, four types of contextual categories constrain the use of DMs to shift conversational actions, namely referential, structural, interpersonal, and cognitive categories (Maschler, 1994, 2009; Fung, 2003). To detect the category/categories that a DM performs therefore relies on the moment of interaction. The following excerpts help demonstrate the process of identifying the functional domains of DMs. The researcher's interpretation is crossed checked against a colleague's (Appendix G). In excerpt 4.2 which is taken from an intensive reading class, the teacher attempts to draw the opinions from the students about the reasons for being a vegetarian.

Excerpt 4.2

```
1     T:   okay (.) what are: the other reasons (.) why people
2          are vegetarians?
3     S15: =I think they were uh they prefer to be a
4          veget'rian to live uh more healthy life
5     T:   so it's about health (.) right?
```

Two functions that DMs play in the excerpt can be observed, namely structural and interpersonal. The teacher uses *okay* (line 1) to mark a shift to a sub-topic from the main topic by asking an open question (lines 1 and 2). S15 produces *healthy life* as one potential answer. *So* (line 5) enables the teacher to gain the floor back and summarises the topic for S15 and for the rest of the class. Both *okay* and *so* function to organise discourse structure.

There is an alignment between the participants in that the teacher takes up the word *health* in his utterance (line 5) which S15 produces previously (line 4). DM *right?* with a question mark (line 5) functions interpersonally by seeking for a confirmation from the student (Beach, 1993).

DMs also can perform multiple functions simultaneously. Referred to as being inter-categorical (Fung, 2003), the same DM may be categorised into more than one classification when placed in different discourse positions. For instance, when *well* is used in turn initial position, it normally operates structurally to open a topic. In other cases when *well* is in third-turn recipient position, it then often marks a response from the hearer performing an interpersonal function. In addition, DMs can perform multi-tasks in interaction. Particularly in transitions, it is often the case that the functions of DMs can be ambiguous or difficult to decide (Maschler, 2009). Based on the current paradigm, the study adds another separate category, namely *multi-functional category*, to help identify DMs that perform more than one function simultaneously. Taken from an L2 classroom in Walsh (2006: 69), excerpt 4.3 demonstrates the use of multi-functional DMs in a transitional stage.

Excerpt 4.3

1	T:	**all right okay** can you stop there please where you
2		are… let's take a couple of… examples for these
3		and… put them in the categories er… so there are
4		three groups all right this one at the front
5		Sylvia's group is A just simply A B and you're C
6		((teacher indicates groups)) all right so… then B
7		can you give me a word for ways of looking (3) so
8		Suzanna… yeah

Transition markers *all right* and *okay* (line 1) not only signal a shift from the end of one learning stage to another, but also draw the students' attention onto the teacher. DMs therefore function in structural and interpersonal categories to help students navigate their way (Walsh, 2006). The dual function of "exhibiting while shifting", noted by Jefferson in the 1980s, occurs often in cases of topic shift (Maschler, 2009). In Maschler's (2009) study, the duality of DMs being structural and interpersonal simultaneously is observed mostly by the recipients. Yet in classrooms, the multi-functionality of DMs is found often in teacher talk. The ambiguous cases are essential to understand the interplay between different functional categories and the relation between text and language use (Maschler, 2009). After all, every utterance is shaped and renewed by context, and constrained in institutional interaction (Arminen, 2005).

4.6.1 *Interaction and codability*

The establishment of modes and functional categories is not intended to generalise interactional patterns, rather serving as a meta-language to understand DMs in L2 classroom discourse (Maschler, 2009). The possibility of coding interactional phenomena can be a double-edged sword. The difficulty of a manual annotating process limits the size of the dataset (Hunston, 2007). It also can be argued that the meanings attached to the codes are subjective to the transcriber's judgement. According to ten Have (2004), CA studies tend to take on an extensive and mechanical examination of large collections of instances. Therefore it allows the possibility to code a limited number of phenomena from certain interactional episodes.

Previous studies have shown the methodological advantages of CA being developed into a quantitative enterprise. In his study of laughter in medical consultations, Haakana (2002) presents several advantages of using quantification in conversational analytical work. He identifies three types of laughter including laughter with acceptance, laughter without acceptance, and laughter with smiling. The quantitative results suggest that patients laugh more than the doctors and the laughter is mostly jointly constructed in these contexts. His classification serves to describe the general patterns of laughter and capture the complexity of institutional talk.

One criticism of quantifying social interaction is that the classifications normally are assigned to certain meaning/function beforehand or sometimes contain limited categories (Haakana, 2002). The problem lies in the difficulty of classifying interactional systems. It is often the case that the same object can perform multiple or contrary tasks due to different contexts. Compared to computer-assisted methods, a manual annotation process benefits smaller size corpora with slower yet more meaningful interpretation (Hunston, 2007). Though the specific meanings of minor instances can be inevitably lost, ambiguous or misunderstood during the coding process, to develop a user routine which is sensitive to the sequential environment can largely prevent incorrect assumptions or misinterpretations. Instead of mechanical counting, the scheme of coding needs to develop a more complex categorisation system with analysis of recurrent and absent interactional instances. To address the issue, ten Have (2004: 15) emphasises:

> "In coding transcripts for computer assisted analysis, I have proposed to include codes for the sequential environment as part of the 'routine'. In short, whether one codes in order to investigate distributions or for purposes of quick retrieval in a data base, the coding should be sensitive to shifting meanings, especially in relation to shifting environments".

4.7 Annotating corpora: Multi-layered tagging

Corpus annotation or mark-up is the practice of adding extra information to the raw data (Leech, 2004). It can be done manually (smaller corpora) or automatically through the use of a computer. Different types include part-of-speech (POS), phonetic, grammatical, structural, and discourse mark-up. Problem-oriented tagging allows the researchers to invent and encode what they want to investigate (McEnery and Wilson, 1996). Though there are sceptics who prefer to maintain the purity of corpus without alternation, the addition of tags or labels enriches the original raw data by adding values for the research purposes (Sinclair, 2004a).

Traditionally, corpora are annotated automatically for practical reasons and even for smaller corpora, human annotation is based on automatic taggers and parsers (Meurers and Müller, 2009). Multi-functionality, as Leech (2004) points out, is one issue that most annotation processes encounter. An annotated corpus that seems useful to one particular type of use may not be compatible with others. Schegloff (1993) criticises that conventional ways of quantification including counting frequency as evidence of interaction do not help in explaining the occurrence of the phenomenon. Three aspects to evaluate the quality of annotation include realism, accuracy and consistency (Leech, 2004). In practice, it can be difficult to draw the line and standardise the annotation process. How human/computer annotators perform accurately and consistently is essential to generate a good quality annotation. In most cases, it is unlikely for any annotation process to achieve 100% accuracy due to the unpredictability of language use. Still, it is not impossible to create tags and apply them to the categorisation system (see, for instance, Carlson et al, 2003). By following principled guidelines and procedures, human analysts can make annotation decisions with high consistency. The study proposes a multi-layered annotation on DMs at three levels:

- Identifying DMs
- Encoding DMs in L2 classroom modes (Labels: Mn)
- Encoding DMs in the functional paradigm (Labels: Cn)

According to McEnery and Hardie (2011), annotation typically uses the same encoding conventions as textual mark up, such as angle-brackets <symbol>. Once the sub-corpora are established, DMs are identified in the corpus. An angle-bracket tag <Xn> is used to identify DMs and locate the modes and functions they are associated with. For instance, the modes they are situated are annotated as <Mn>, and the functional paradigm is labelled as <Cn>. The presentation of the corpus will be demonstrated in the next section.

4.8 Presenting corpora with multi-layered annotation

After data collection, transcribing and coding process, the final stage of compiling corpora is the application and presentation of corpora, which heavily relies on the software used to perform those operations (Knight, 2009). Two types of software are used to present the data in this study, namely WordSmith Tools (Scott, 2008) and Transana (Fassnacht, 2012). Each DM in the corpus is annotated manually in terms of L2 classroom modes and the functional paradigm in which it occurs. The following representation illustrates the categories and labels:

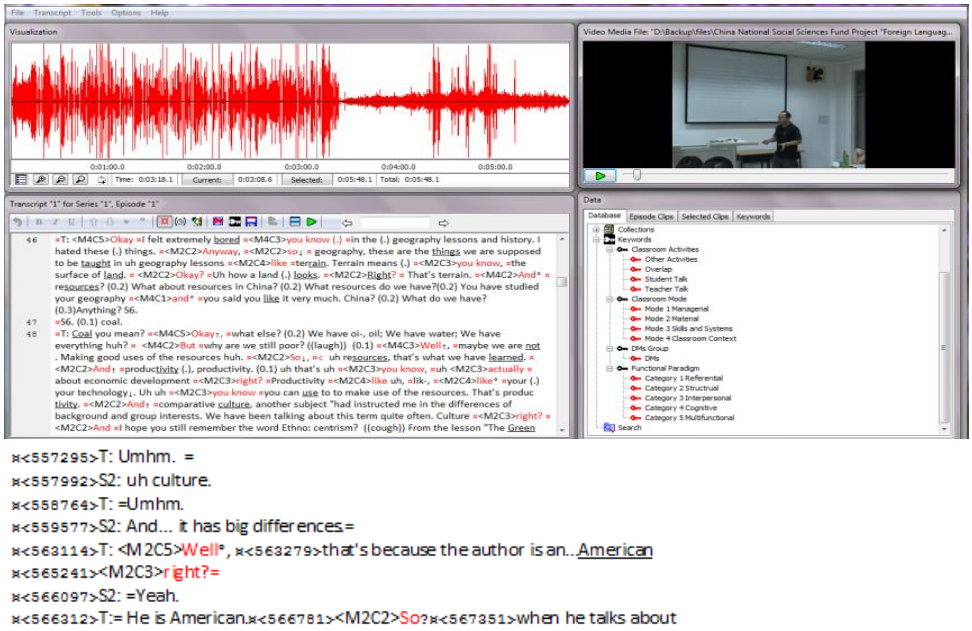
Modes:	Mn
Managerial mode	M1
Materials mode	M2
Skills and systems mode	M3
Classroom context mode	M4
Functional paradigm:	Cn
Referential category	C1
Structural category	C2
Interpersonal category	C3
Cognitive category	C4
Multi-functional category	C5

The column on the right represents the multi-layered coding symbols: Mn=L2 classroom modes, Cn=the functional paradigm. The column on the left is the meaning of each code. In CCECC, DM is represented and annotated as <MnCn>DM, with two types of tags. The multi-layered annotation works in three aspects: first, actual DMs are identified, so as to exclude all the non-DMs; second, the functions of DMs are presented. A multi-functional category is added when DMs perform multiple or ambiguous functions; third, the frequency and distribution of DMs can be easily obtained through searching relevant tags. During the annotation process, all the tagged DMs were regularly cross checked with two colleagues across four sub-corpora to achieve a high level of accuracy and consistency (see Appendix F and G), Table 11 displays an exhaustive list of a combination of 20 tag-pairs involving different modes and functions.

MnCn		L2 classroom modes: Mn			
Functional Paradigm:	Cn	Managerial M1	Materials M2	Skills and systems M3	Classroom context M4
Referential	C1	M1C1	M2C1	M3C1	M4C1
Structural	C2	M1C2	M2C2	M3C2	M4C2
Interpersonal	C3	M1C3	M2C3	M3C3	M4C3
Cognitive	C4	M1C4	M2C4	M3C4	M4C4
Multi-functional	C5	M1C5	M2C5	M3C5	M4C5

Table 11. List of tag combinations

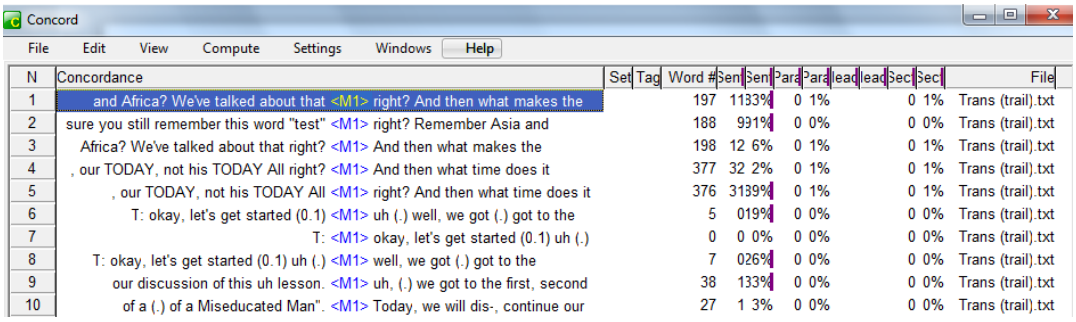
The spoken corpus is annotated in the software tool Transana. The following figure 9 is a snapshot of time-stamped transcription with multi-layered annotation. Detailed samples of the annotated transcription can be found in Appendix D and E.



¤<557295>T: Umhm. =
¤<557992>S2: uh culture.
¤<558764>T: =Umhm.
¤<559577>S2: And... it has big differences=
¤<563114>T: <M2C5>Well°, ¤<563279>that's because the author is an..American
¤<565241><M2C3>right?=
¤<566097>S2: =Yeah.
¤<566312>T:= He is American.¤<566781><M2C2>So?¤<567351>when he talks about

Figure 9. Presentation of transcription with time stamps in Transana

The interactive window of Transana not only allows the transcriber to edit their data with transcription conversations and notes, but also synchronises the multi-transcripts and the video by adding time stamps and keyword themes alongside the transcripts (Knight, 2009). The multi-layered transcription can be detailed, modified and added with more value/information. It also makes the frequency and distribution of DMs available through concordancing on tags like <M*C*> in WordSmith Tools, as shown in figure 10.



Concord

File Edit View Compute Settings Windows Help

N	Concordance	Set	Tag	Word #	Sen	Sen	Para	Para	lead	lead	Sec	Sec	File
1	and Africa? We've talked about that <M1> right? And then what makes the			197	1	33%	0	1%			0	1%	Trans (trail).txt
2	sure you still remember this word "test" <M1> right? Remember Asia and			188	9	31%	0	0%			0	0%	Trans (trail).txt
3	Africa? We've talked about that right? <M1> And then what makes the			198	12	6%	0	1%			0	1%	Trans (trail).txt
4	, our TODAY, not his TODAY All right? <M1> And then what time does it			377	32	2%	0	1%			0	1%	Trans (trail).txt
5	, our TODAY, not his TODAY All <M1> right? And then what time does it			376	31	39%	0	1%			0	1%	Trans (trail).txt
6	T: okay, let's get started (0.1) <M1> uh (.) well, we got (.) got to the			5	0	19%	0	0%			0	0%	Trans (trail).txt
7	T: <M1> okay, let's get started (0.1) uh (.)			0	0	0%	0	0%			0	0%	Trans (trail).txt
8	T: okay, let's get started (0.1) uh (.) <M1> well, we got (.) got to the			7	0	26%	0	0%			0	0%	Trans (trail).txt
9	our discussion of this uh lesson. <M1> uh, (.) we got to the first, second			38	1	33%	0	0%			0	0%	Trans (trail).txt
10	of a (.) of a Miseducated Man". <M1> Today, we will dis-, continue our			27	1	3%	0	0%			0	0%	Trans (trail).txt

Figure 10. Output of concordancing on the tag <M1> using WordSmith Tools

The concordance search on tags allows the researchers to track and count the statistical information on DMs immediately. In figure 10, by inputting the tag <M1>, the occurrence of DMs in managerial mode (M1), together with their surrounding texts can be accessed easily. With the help of computer technologies, software programs like Transana and WordSmith Tools ease the manual annotating process and retrieve the coding information in a consistent manner.

4.9 A multi-layered analytical procedure

This section now moves on to an overview of a multi-layered analytical procedure. As discussed previously (Section 3.2), the multi-layered analytical procedure takes on the perspective of a full integration: integration throughout both analysis and interpretation (Greene et al, 1989). A full degree of integration is understood here as the same data are examined from both high and low levels of discourse (macro and micro contexts), in a convergent direction. How to present quantitative analysis results with qualitative analysis results, however, can be challenging. An integration of CL and CA methods offers a way to understand how conversational agendas are achieved in talk-in-interaction (Walsh and O'Keeffe, 2007). The study therefore begins by scoping out the general patterns of DMs using CL. It is the CL analysis that provides the platform for CA to build on. In the tripartite analysis phase, the primary step for CL analysis includes:

1. Selecting one L2 classroom mode;
2. Detecting DMs in the selected mode;
3. Detecting the functional category/categories that each DM operates in;
4. Annotating DMs with regard to the modes and functions;
5. Analysing DMs using CL techniques.

Once the patterns of DMs in the selected mode are identified, it is beneficial to probe into the sequential environment, in relation to the local and global context. The strength of using CL first lies in that a macro-analysis under modes not only sets up the common domain for multiple analyses but also provides a *broad brush* view of interaction. Based on the results of CL analysis, the CA method then follows the procedure below:

1. Selecting the same mode;
2. Scoping out the recurrent DMs from CL analysis;
3. Selecting the sequences in which DMs occur and building a collection of interactional episodes in the mode;
4. Examining DMs in the talk-in-interaction using CA techniques.

The final stage of multiple analyses is to link quantitative and qualitative results, discuss the interactional features and classroom pedagogy associated with DMs, compare the contextual patterns of DMs across the modes, and finally examine the ambiguous/deviant cases that may appear in the corpus:

1. Examining DMs under L2 classroom modes;
2. Linking the results from multiple analyses;
3. Comparing the patterns across the modes;
4. Carrying out deviant case analysis.

4.10 Summary

This chapter describes the research design of a multi-layered analytical approach for the analysis of DMs in teachers' spoken discourse. There are three stages involved in the research design, namely data preparation, data treatment and multiple analyses phases.

In the data preparation phase, L2 classroom modes analysis aims to help establish four sub-corpora under different classroom micro-contexts, as the basic domain to first scope out the data. In the data treatment phase, the transcripts undergo three levels of annotation to identify DMs, their position in the modes and functions they realise. Compared to traditional mechanical annotation processes, a multi-layered annotation exhausts the occurrences of different combinations of DMs in relation to both modes and functions. In multiple analyses, a combined CLCA method with consideration of L2 classroom modes is used to provide multiple-layered examinations of the data.

To sum up, the current research design serves as the blueprint for data analysis in the following chapter. It illustrates the process of manual annotation, as well as the methodological challenges in practice. There are inevitable issues in the operational procedure in terms of realism, accuracy, and consistency (Leech, 2004). Selection of annotation methods needs to consider issues like research objectives, levels of annotation, and complexity of the texts. In a limited-size corpus, an in-depth analysis from multiple perspectives can shed some light on methodological integration. Analysts may also develop a so-called user routine to minimise the problems raised through data analysis and interpretation (ten Have, 2004).

Chapter 5. Investigating DMs using a multi-layered analytical approach

5.1 Introduction

In this chapter, DMs are investigated using a multi-layered analytical approach to address the two research questions the study sets out to answer (Section 1.2):

- What are the range and variety of DMs used in college EFL teacher talk in China?
- What are the functions of DMs in teacher-led classroom interaction in this context?

First, section 5.2 presents the linguistic patterns of DMs in Chinese college EFL teacher talk using CL techniques. The results from a general CL analysis suggest an uneven distribution of DMs across L2 classroom modes and there seems to be a reflexive relationship between teachers' use of DMs, interactional organisation and classroom pedagogy. As the pedagogic focus varies, so language teachers' use of DMs varies.

A triple-layered perspective that combines CL, CA and L2 classroom modes analysis is then adopted to investigate the use and functions of DMs in detail (Section 5.3). In a mode-by-mode manner, CL scopes out the salient DMs through analytic techniques like frequency analysis, keyword lists and concordance analysis. Based on the CL results, CA further investigates the sequential environment where DMs occur. As important features of DMs, marked prosodic and multi-modal aspects are also included in discussion. In addition, interactional features and pedagogical goals associated with DMs are uncovered in the interactional organisation of each mode.

After identifying the salient patterns of DMs across different modes, the chapter goes on to discuss some less clear-cut cases in the dynamics of a language classroom. By comparing the modes, section 5.4 reveals how the use of DMs varies in different micro-contexts. In order to ensure the validity and reliability of the study, section 5.5 conducts a deviant case analysis. Examples of delineated and multi-functional DMs are presented and discussed to avoid an overgeneralisation from individual patterns.

Lastly, the use of computer software Transana demonstrates its advantages in assisting qualitative analysis through creating time sequence maps of DMs in classrooms chronologically (Section 5.6). The synergy of tripartite analyses (CL, CA and L2 classroom modes analysis), together with computer assisted software packages like WordSmith Tools and Transana provides a powerful methodological tool to uncover the multi-functional nature of DMs in L2 classroom interaction.

5.2. Corpus analysis

Before proceeding to examine DMs using a multi-layered analytical approach, it will be necessary to readdress the procedure of how to realise a full degree of integration in data analysis and interpretation (Chapter 3). The four integrative strategies that the current study uses in effect reflects the discussion of mixed-method data analysis by Caracelli and Greene (1993) (see previous discussion in Section 3.2). The process of integration can be reflected in the following representations:

- In data transformation, quantitative and qualitative datasets are transformed to each other. In this study, CA's transcription of interaction are numerically coded and included in CL analysis. The recurring DMs that CL analysis identifies are examined with a CA perspective;
- Typology development enables one typology yielded from one type of data analysis to be used in analysing another data type. For instance, the classification of modes and functional categories is applied in both CL and CA methods. The same dataset undergoes three layers of analyses equally;
- Joint data reviews are consolidated or merged in the data interpretation process for analysis. In the data analysis phase, the corpus findings are linked to the CA analysis in a mode-by-mode manner. In addition, salient patterns of DMs across the modes are discussed in relation to interactional features and classroom pedagogy using L2 classroom modes analysis;
- Studies of extreme cases can refine the original explanation. The study also conducts a deviant case analysis to ensure the validity of the findings.

As discussed previously, the multi-layered analysis proceeds in a non-linear and iterative manner. Taking an overview of how quantitative and qualitative methods are integrated in this study, the multi-layered analysis follows the procedure of Modes→CL→Modes→CL→CA→Modes:

- L2 classroom modes analysis enables the researcher to establish and differentiate four types of micro-contexts or modes as the basis for data analysis (Section 4.5);
- CL identifies the salient DMs that are quantitatively distinct (Section 5.2);
- In each of the four modes, the analytical procedure went from CL to CA (see discussion in Section 4.9 and 5.3);
- The findings of CL, CA and L2 classroom modes analysis are linked in the data analysis and interpretation process (Section 5.3);
- The results of multiple analyses are compared across the modes (Section 5.4 and 5.7);
- Deviant cases with a contrastive perspective are discussed (Section 5.5).

Having reviewed the procedure of the analytical approach, the next section 5.2.1 conducts a general CL analysis on DMs in Chinese college EFL teacher talk. CL analysis depicts the grammatical and lexical patterns of DMs using three basic analytic techniques: frequency, keyword and concordance analysis.

5.2.1 *Overall frequency and distribution*

Generating frequency lists is "the most straightforward approach to working with quantitative data" (McEnery and Wilson, 1996: 82). Frequency calculation classifies and displays items in rank order of frequency or in alphabetic order (McEnery and Wilson, 1996; Evison, 2010). The importance of frequency data is "underlined by the range of frequency information that is available" (Evison, 2010: 125). In addition, comparing the rank order of items across different corpora can be useful to bring out the words or phrases that are over- or underused (Evison, 2010; McEnery and Hardie, 2011).

Table 12 gives us an overview of the word count and relative frequency of individual classes as well as the four sub-corpora established by modes. As previously mentioned in section 4.3, a sub-corpus of nine hours of video recordings from the Beijing database was chosen. The total word count of the sub-corpus of CCECC is about 60,000 (59,959) words.

Altogether six teachers participated (teachers A-F, two males and four females), each of whom contributes two classes (45 minutes per class). In the corpus, the total word count of teacher talk is 51770, or 86% of the corpus.

The selected classes cover a wide range of Chinese college EFL class types designed to teach the basic language skills of reading, writing, and speaking (Lam, 2005). In terms of class types, there are three intensive reading classes (teacher D, E, F) which takes up 60.2 % of the corpus, two academic writing classes (teacher A and B, 33.6%), and one oral debating class (C) which has the least percentage (6.2%).

Class type	Teacher	Managerial	Materials	Skills and systems	Classroom context	Word count of teacher talk	Word count	Relative frequency
Academic writing	A	1057	3032	1464	3983	6975	9,536	15.9%
	B	1293	2505	5486	1320	9107	10,604	17.7%
Oral debating	C	3625	115	0	0	3631	3,740	6.2%
Intensive reading	D	978	7350	1457	2501	11390	12,286	20.5%
	E	332	5257	5769	269	10347	11,627	19.4%
	F	712	5936	2815	2703	10320	12,166	20.3%
Word count	6	7997	24195	16991	10776	51770	59,959	100%
Relative frequency	-	13.3%	40.4%	28.3%	18%	86.3%	100%	-

Table 12. Distribution of individual classes and modes in CCECC

In terms of the frequency and distribution of DMs, there are all together 5187 (8.7% of the sub-corpus) DMs discovered in Chinese college EFL teacher talk in the corpus (see Table 13). It is apparent from this table that materials mode has the highest occurrence of DMs (2073, 40%) among all the modes. The discussion in section 2.3.4.1 suggests that in materials mode, classroom activities mainly concentrate on teaching materials like textbooks. Considering the fact that intensive reading class takes up about 60% the corpus, it is more likely that materials mode exceeds other modes in terms of word count. The second most frequent mode is skills and systems mode with a percentage of 27.3%. Classroom context mode ranks the third place with 10776 word count (18.1%). Taking up only 13.3% of the whole corpus (Table 12), managerial mode has the least occurrence of DMs (755, 14.6%). This result, however, is not surprising as managerial mode functions more like an "enabling mode" within the three other modes (McCarthy, 2003; Walsh, 2006).

Teacher	Managerial	Materials	Skills and systems	Classroom context	Total	Relative frequency
A	100	329	159	257	845	16.2%
B	93	172	313	64	642	12.4%
C	356	22	0	0	378	7.3%
D	81	553	77	270	981	18.9%
E	21	361	425	26	833	16.1%
F	104	636	442	326	1508	29.1%
Total count	755	2073	1416	943	5187	100%
Relative frequency	14.6%	40%	27.3%	18.1%	100%	-

Table 13. Distribution of DMs in L2 classroom modes

In the sub-corpus of CCECC which comprises nine hours of video recordings, the total teacher talking time (TTT) is 417 minutes which takes up about 77% (intensive reading class 89%, academic writing class 80% and oral debating class 37%). On average, the Chinese college EFL teachers in this study produce 12.4 DMs per minute in class. The occurrence of DMs in Chinese college EFL teacher talk is remarkable. This finding accords with Jucker and Smith's (1998) early observation, which shows a similar rate of occurrence in casual English conversation (13.4 DMs per minute).

Based on the results from table 12 and 13, figure 11 further suggests that the trend in the distribution of DMs aligns with the distribution of different modes. In other words, there is a positive correlation between the amount of talk that Chinese college EFL teachers produce in class and the amount of DMs in their talk. The more utterances language

teachers produce, the more DMs occur in their talk. As shown in figure 11, materials mode is the most frequent mode for DMs to occur, followed by skills and systems mode and classroom context mode. Managerial mode has the least frequency. Accordingly, DMs in materials mode have the most occurrence which takes up about 40%. DMs in skills and systems mode are the second most frequent (27%), followed by classroom context mode (18%). Managerial mode has the lowest occurrence (15%).

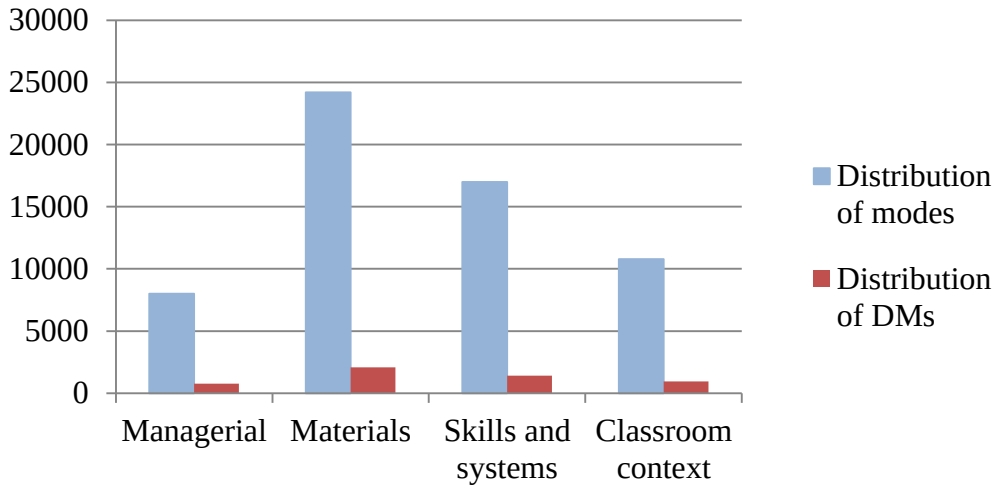


Figure 11. Distribution of modes and DMs in CCECC

So far, frequency analysis of the modes and DMs both demonstrates a high distribution in materials mode compared to other modes. Nevertheless, considering the impact of the constitution of the corpus, it is necessary to probe into the proportion that DMs contribute to each mode (figure 12). The most striking result to emerge from figure 12 is the significant amount of DMs that constitutes managerial mode. Despite the fact that managerial mode has the lowest occurrence in terms of word count (13.3%, table 10), as well as the number of DMs (755, 14.6%, table 11), it consists of the highest percentage of DMs, 9.4 % in total. This finding, as shown in figure 12, indicates that Chinese college EFL teachers use DMs the most in their talk, when dealing with classroom management activities, including the opening, transition and closing of a class. Figure 12 shows that classroom context mode has a relatively high percentage of DMs (8.8%), which ranks the second after managerial mode. Those results provide empirical support for early observation made by Sinclair and Coulthard (1975) and Walsh (2006, 2011) that DMs are important interactional features in meta-statements. Materials mode and skills and systems mode share a similar percentage in that the former contains about 8.5% of DMs and the latter 8.3%. However, the differences across the four modes are relatively small, with the range being only from 8.3% to 9.4%.

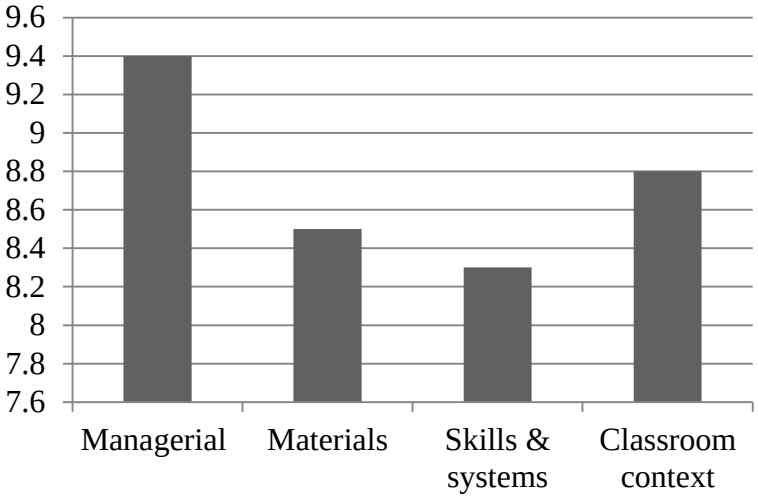


Figure 12. Percentage of DMs that constitute each mode

The amount of DMs occurring in both managerial mode and classroom context mode indicates that there is an interrelationship between the use of DMs and the interactional organisation in L2 classrooms. Of the two modes with radically different speech exchange systems (see previous discussion in Section 2.3.4.1), managerial mode is patterned with extended teacher procedural talk and instructions, whilst classroom context mode has the fewest teacher turns to encourage content-centred interaction (Kasper, 1985). The fact that DMs constitute more than 9% of the managerial reveals much about their uneven distributive patterns in interactional practices which intuition cannot sufficiently describe (Carter and McCarthy, 2001). By examining their distributions in the functional paradigm, figure 13 further reveals that DMs display a consistent and high frequency in the interpersonal category across the four modes. Among the 5187 DMs that appear in the corpus, there are overall 2180 DMs (42%) located in the interpersonal category, which ranks the highest. What is of great interest in figure 13 is that this high occurrence of DMs in the interpersonal function also can be found in each mode: managerial mode has 264 DMs (35%) performing on the interpersonal level, which is the highest among the five categories; materials mode 873 (42.1%); skills and systems 595 (42%); classroom context mode 448 (47.5%). The structural category is the second highest with 1268 DMs (24.5%), followed by referential (984, 19%) and the multi-functional category (446, 14.5%). The least frequent DMs are found concerning the cognitive category (309, 6%).

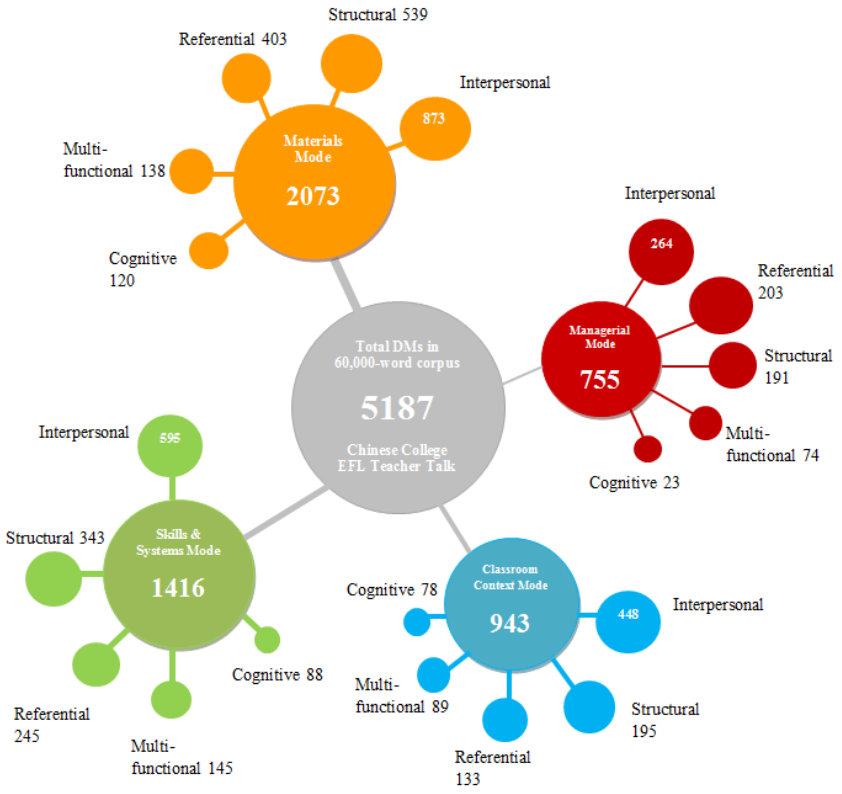


Figure 13. Distribution of DMs in the functional paradigm

From the above figure, it can be seen that in language teacher talk, there is a great emphasis on interpersonal communication yet a low level of reflection in the cognitive domain. This finding confirms the prior ideas in the literature (Section 2.3.2) that DMs in lecturers' talk function as interactional devices to reduce social distance between teachers and learners (Dalle and Inglis, 1990; Grant, 2010). The low appearance of DMs in the cognitive category support Maschler's (1998: 50) claim that:

> "our consciousness of the cognitive processes taking place during verbalisation is probably lower than the degree to which we are conscious of referential and interpersonal matters during verbal interaction".

Taken together, the results from the frequency analysis display an uneven distribution of DMs across different L2 classroom modes. Quantitatively, DMs have a great contribution (5187, 8.7%) in the corpus. Their distributions in each L2 classroom mode suggest that materials mode has the highest occurrence of DMs (2073, 40%), partially due to the composition of the corpus. Further examination reveals that DMs contribute most to managerial mode (9.4%) and there is a high occurrence of DMs in the interpersonal category across the four modes.

5.2.2 *Keyword and concordance analysis*

The keyword list shows the rankings and numbers of different lexical items in a corpus. According to Baker (2010: 134), "a keyword is a word which occurs statistically more frequently in a single text or corpus than in another text or corpus". Compared to frequency analysis, keyword analysis reveals certain lexical items with higher or lower positions (McEnery and Wilson, 1996; Scott, 2010).

Table 14 scales the top 20 words from CCECC up to a bigger (reference) corpus using the Cambridge and Nottingham Corpus of Discourse in English (CANCODE), a five-million-word corpus of spoken English (McCarthy, 1998). Due to the limitation of corpus design and computer software, non-DMs cannot be eliminated from the computer-generated lists. As shown in table 14 (below), the most frequent words in the two corpora both suggest a high frequency and similar lexical choices of DM items in spoken discourse. In CCECC, DM words *and*, *ok/okay*, *right*, *so* and *yeah* are among the most frequent words. Taken from O'Keeffe et al (2007: 35), the word list of CANCODE indicates a high frequency of DM words including *and*, *yeah*, *but*, and *so* (Adolphs and Carter, 2013). Both corpora suggest that *yeah* is among the most frequent words in spoken English (Carter, 2007).

CCECC				CANCODE corpus		
No.	Word	Freq.	%	No.	Word	Freq.
1	the	2.810	4.83	1	the	169,335
2	you	1.707	2.93	2	I	150, 989
3	to	1.432	2.46	3	**and**	141, 206
4	of	1.277	2.19	4	you	137,522
5	**and**	1.155	1.98	5	it	106,249
6	a	965	1.66	6	to	105,854
7	**okay**	888	1.53	7	a	103,524
8	is	825	1.42	8	**yeah**	91,481
9	**right**	795	1.32	9	that	84, 930
10	I	736	1.26	10	of	78,207
11	in	722	1.24	11	in	62,796
12	that	691	1.19	12	was	50,417
13	**so**	654	1.12	13	it's	47,837
14	we	641	1.10	14	know	46,601
15	have	571	0.98	15	is	45,448
16	this	513	0.88	16	mm	44,103
17	it	491	0.84	17	er	43,476
18	**yeah**	477	0.82	18	**but**	41,534
19	know	430	0.74	19	**so**	40,071
20	what	369	0.63	20	they	38,861

Table 14. Top 20 words sorted by frequency in CCECC and CANCODE

Table 15 then compares the top 20 words from CCECC against a smaller scaled reference corpus collected in educational settings, i.e. the Michigan Corpus of Academic Spoken

English (MICASE) (Simpson et al, 2002). MICASE was chosen because both corpora share similar registers (academic spoken discourse) in order to reach a high comparability with the current spoken corpus. A sub-corpus of MICASE was selected as the most suitable point of comparison, in terms of word count (95,000 words), class form (higher education classroom interaction) and length (11-hour small lectures by NS teachers).

CCECC				MICASE			
No.	Word	Freq.	%	No.	Word	Freq.	%
1	the	2.810	4.83	1	the	4,445	5.02
2	you	1.707	2.93	2	of	2,207	2.49
3	to	1.432	2.46	3	**and**	2,172	2.45
4	of	1.277	2.19	4	to	1,903	2.15
5	**and**	1.155	1.98	5	a	1,847	2.08
6	a	965	1.66	6	you	1,823	2.06
7	**okay**	888	1.53	7	I	1,795	2.03
8	is	825	1.42	8	that	1,715	1.94
9	**right**	795	1.32	9	in	1,625	1.83
10	I	736	1.26	10	it	1,340	1.51
11	in	722	1.24	11	is	1,283	1.45
12	that	691	1.19	12	this	1,021	1.15
13	**so**	654	1.12	13	**so**	780	0.88
14	we	641	1.10	14	what	659	0.74
15	have	571	0.98	15	have	602	0.68
16	this	513	0.88	16	**but**	595	0.67
17	it	491	0.84	17	it's	587	0.66
18	**yeah**	477	0.82	18	he	529	0.60
19	know	430	0.74	19	know	524	0.59
20	what	369	0.63	20	**or**	506	0.57

Table 15. Top 20 words with comparison in MICASE

Looking at the table above, we can see that among the most frequent single words, there is again a high representation of DM words in both corpora. However, there is a discrepancy in lexical choice between Chinese college EFL teachers and NS teachers. In MICASE, the most frequent items include *and, so, but* and *or*. NS teachers seem to use a great number of DMs in structuring discourse. Compared to the frequent textual use of DMs in MICASE, CCECC on the other hand contains a great amount of backchannel words (Beach, 1993; Knight, 2009; McCarthy, 2003), including *okay*, *right* and *yeah*. The results from the two word lists correspond with Allwood's (1996) claim that DMs are among the top ten word forms in conversation, as an important feature of both daily and academic spoken discourses. Both NS and NNS teachers deploy *and* and *so* as the most frequent DMs. According to Halliday and Hasan (1976), words like *and, so, now, but, first* can be referred to as *cohesive devices* in connecting discourse units. In Fung and Carter (2007), those words are closely related to the referential category that connects preceding and following discourse segments in meaning (see previous discussion in Section 2.4).

As mentioned previously, the unedited frequency lists produced by software can be distinguished and overlapped as the functions DMs carry vary in different contexts (Fung and Carter, 2007). Therefore, table 16 illustrates the computer-generated top 10 DM words in CCECC along with a more accurate list of the coded DMs. Though mistakes are inevitable in any type of text-processing procedure, the computer-assisted analysis with human effort to cross-check annotation maximises the efficiency and accuracy when dealing with large corpora. This common practice is regarded as a fundamental part of the process of constructing and designing corpora in terms of quality control and reliability (Sinclair, 2004b). As McCarthy and Carter (2004: 16) state, "it is useful to gain a perspective on how the high-frequency clusters relate to the distribution of single words in the corpus".

Top 10 DMs list				Modified Top 10 DMs list		
No.	Word	Freq.	%	No.	Word	Freq.
1	and	1.155	4.83	1	okay	876
2	okay	888	2.93	2	right	628
3	right	795	1.37	3	so	543
4	so	654	1.12	4	and	530
5	yeah	477	0.82	5	yeah	435
6	you know	331	0.57	6	you know	263
7	or	282	0.48	7	but	167
8	but	226	0.39	8	because	158
9	because	202	0.35	9	all right	133
10	now	190	0.33	10	now	92

Table 16. Top 10 single and two-word DMs

The results from table 16 suggest a similar lexical choice of the most common single and two-word DMs though with different frequency rank-order. Excluded from other grammatical functions, the top five DMs in the modified list include *okay, right, so, and, yeah*. *Okay* exceeds *and* as the most frequently occurring DM in corpus. The fact that *okay* (876) and *right* (628) are the two most frequent DMs is partially because of their high flexibility which allows them to either be in declarative or interrogative form (Schleef, 2008). The phenomenon that the two-word cluster *you know* is one of the most frequent lexical items with greater frequency than other single-word DMs (McCarthy and Carter, 2004) also appears in CCECC, ranking in the sixth place with 263 tokens. DM *you know* is identified with a notable frequency (263) while *you see* does not feature. The asymmetrical distribution further evidences that the priority to build on shared space (*you know*) rather than to introduce new information (*you see*) is core to classroom interaction (Walsh and O'Keeffe, 2007). *But* (167), *because* (158), *all right* (133) are less frequently occurring DMs. The least frequent DM is *now* with an occurrence of 92.

After examining the frequency and rank order of single words, it is useful to sort different items into groups as clusters. As Walsh and O'Keeffe (2011) emphasise, word combination analysis provides additional description of linguistic patterns of vocabulary association such as multi-word unit (MWU). Clusters are important clues as units of interaction to exhibit pragmatic integrity (McCarthy and Carter, 2004). On closer examination, a co-occurrence of two DMs appears as the most common combination in the data, which can be shown in table 17.

No.	Cluster	Freq.
1	and then	138
2	okay so	123
3	right okay	104
4	right yeah	83
5	okay and	64
6	right so	61
7	yeah so	54
8	yeah and	47
9	right and	43
10	okay yeah	36

Table 17. Top 10 most frequent two-word DM clusters

The above table suggests that the most frequent DM clusters can be divided into two groups. One group seems to be a two-word combination among three prevalent backchannel words including *yeah*, *right*, and *okay*. Of the clusters with over one hundred occurrences, cluster *right okay* (104) is the third most frequently occurring DM cluster in the spoken corpus. *Right yeah* (83) and *okay yeah* (36) also rank in the top cluster list with similar functions. The multiple uses of backchannel words link to active listenership in the classroom (Knight and Adolphs, 2007). The other group of DM clusters is typical devices to signal when interactants tend to move from one topic or activity to another. They are associated with a textual function which can be referred to as either transaction boundary markers (Sinclair and Coulthard, 1975) or change-of-activity tokens (Gardner, 2001). Cluster *and then* is the most frequently occurring DM cluster with 138 occurrences. In this case, *and then* is viewed as a high-frequency co-occurrence with weak collocation between the components rather than collocations (McCarthy and Carter, 2004). Compared to acknowledgement token clusters, this group has a more fixed lexical bundle structure: *acknowledgement token + logical connector*. Examples include *okay so* (123), *okay and* (64), *right so* (61), *yeah so* (54), *yeah and* (47), and *right and* (43).

The cluster analysis has highlighted the structural and interpersonal use of DMs as MWU. Table 17 has shown how Chinese college EFL teachers use clustering to reinforce the phatic function of DMs. According to Aijmer (2004: 186),

> "the possibility for markers to cluster suggests that they have little function in themselves. Both learners and native speakers use clusters of markers to get more time for planning what to say next, to make a new start, or to reformulate what they have just said".

After scoping out the frequency and word lists of DMs in the spoken corpus, it is necessary to examine the contexts more closely. A concordancer is a useful analytical technique in WordSmith Tools to further explore the local environment of how the selected lexical items are used (Hunston, 2002). Having identified DMs that are quantitatively distinctive, a concordance search on *right*, for example, brings the analysis closer to the texts. In figure 14, the concordance lines for *right* reveal its two different forms, i.e. declarative (*right*) and interrogative (*right?*). Schleef (2008) observes that though both forms occur in university lectures, *right?* seems to have a wider usage including expressing correctness, progression check and modal question tag.

294	a good order. That kind of thing. Okay?	<M2C3>Right.	Like uh uh what is erm	45,824,031 00% 037%
295	.° Couldn't act. That kind of thing. Okay.	<M2C5>Right	anyway so what's the	45,586,007 14% 037%
296	inside. They are they are both fruits.	<M2C3>Right.	So there are- yeah?,	46,279,095 00% 038%
297	computer. For you that's incomparable.	<M2C3>Right.	That's like the	46,195,086 00% 038%
298	(1) Comparison and contrast, obviously	<M2C3>right?	Ss: Hmmm. T: So it	46,104,069 00% 038%
299	preview part and: the uh conclusion part	<M2C3>right?	You need to: summarize	42,018,540 00% 030%
300	, either you want to rescue someone,	<M2C3>right?	or you want to	38,461,118 00% 073%
301	, right? yeah you'll be given a mission,	<M2C2>right,	either you want to rescue	38,455,118 50% 073%
302	games, they are designed as role play,	<M2C3>right?	yeah you'll be given a	38,450,117 00% 073%
303	(.) Clear here? means actually left,	<M2C3>right?	It has left the the launch	38,518,129 00% 074%
304	longer an adjective. it's used as an verb,	<M2C3>right?	so what's the meaning of	38,500,124 00% 073%
305	will tell you that mission completed,	<M2C3>right?	yeah. Now? and it has	38,484,120 00% 073%
306	and it's usually harder, it's tougher,	<M2C3>right?	yeah, we cannot say	38,397,110 00% 073%
307	T: okay? mission is more important,	<M2C3>right?	and it's usually harder,	38,393,109 00% 073%
308	this is the 25th mission of the NASA,	<M2C3>right?	and erm what's the	38,359,104 00% 073%
309	, right? it is with great significance,	<M2C3>right?	mission. And: I	38,434,115 00% 073%
310	to do, and it is with great significance,	<M2C3>right?	it is with great	38,429,114 00% 073%
311	we cannot say homework is a mission,	<M2C3>right?	It's only a task. It's only	38,404,111 00% 073%
312	, this, this spacecraft is very very big,	<M2C3>right?	because you cannot see	38,976,176 00% 074%
313	our university to Qinghua University,	<M2C3>right?	so probably, this is the	38,946,173 00% 074%

Figure 14. Sample concordance lines of *right*

Figure 14 shows that the words frequently coming after *right/right?* include *yeah*, *and*, and *so*. In the above examples, r*ight* without a question mark is found to combine with DMs like *anyway* (line 295), *so* (line 296) and signal a move towards new information or activities. On the other hand, *right* with a question mark (*right?*) seems to perform as a tag question to check students' understanding before shifting the frame/focus (e.g. line 298, 305). DM clustering reinforces the transition function they perform. From an initial examination of the local co-text, there is a need to further uncover the use of DMs in detail with marked prosodic features that CL cannot sufficiently describe.

5.2.3 *Summary*

CL analysis suggests that there seems to be a reflexive relationship between language teachers' use of DMs, classroom interaction and pedagogical purpose. The results from frequency analysis show an even distribution of DMs across different interactional contexts. DMs constitute a significant proportion of TTT (10%) as well as the whole spoken corpus (8.7%). The trend in the distribution of DMs in effect corresponds with that of L2 classroom modes. It is found that DMs occur mostly in the interpersonal category.

Cluster analysis and concordance searches further reveal that DMs often appear in chunks, most of which can be marked either as backchannel words or transition boundary markers. As Aijmer (2004: 185) argues, when markers cluster, this is a sign that they have a similar function, which is because "unlike collocations, there is no internal ordering between the words in clusters". In CCECC, the fact that DMs cluster in two or multiple units reinforces the phatic function they perform. The high-frequency of two-word backchannel words like *okay, right, yeah* demonstrates that in these EFL classrooms, there is a strong emphasis placed by language teachers on maintaining the conversation flow and providing feedback (Knight, 2009). In the top DM cluster list, the backchannels also co-occur with the so-called logical connectors (Celce-Murica and Larsen-Freeman, 1983), such as *and, so,* to mark boundaries and link segments in organising the discourse.

As discussed above, the findings of a general CL analysis have provided us with a bird's eye view of DMs in Chinese college EFL teacher talk by "taking the pulse" of their linguistic patterns (Adolphs et al, 2004: 25). The next section 5.3 is going to examine the salient DMs in a mode-by-mode manner, combing CL, CA, and L2 classroom modes analysis.

5.3 Analysing DMs in the SETT model

Seedhouse (2004: 101) suggests that "a variable perspective which conceives of multiple sub-varieties, or L2 classroom contexts, each with its own basic pedagogical focus and corresponding organisation of turn taking and sequence is necessary". In this section, an integrated perspective that combines CL, CA and L2 classroom modes analysis is used to examine DMs on a mode-to-mode basis. The tripartite analysis follow the procedure of CL→CA→Modes in an iterative manner as previously discussed in section 4.9 and 5.2.

Before analysing DMs in each mode, it is important to define the basic genres of teacher-student interaction namely *monologue* and *dialogue* (Davis, 2007). Sometimes, a teacher produces multi-turn units without giving much floor to the students (*monologue*). At other times, teachers and students equally contribute to the construction of sequence organisation (*dialogue*). In dialogue, contributions from both interactants are relatively equal and texts are created in concert. Even though procedural talk is obligatory in every L2 classroom context (Seedhouse, 2004), it is dialogic interaction that is claimed to facilitate learning and serves as the basis for turn-by-turn analysis (Feller, 2012).

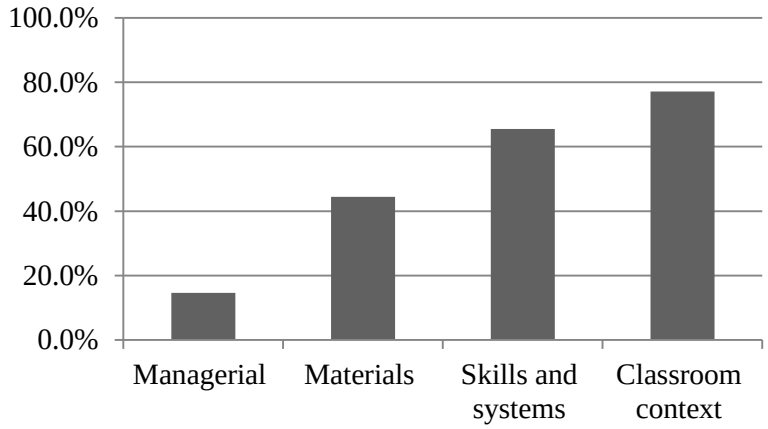


Figure 15. Proportion of teacher-student dialogic interaction across the modes

The proportion of teacher-student dialogue varies from mode to mode (Figure 15). Managerial mode has the lowest ratio of 15%, mainly because its pedagogical goal is subject to the setting up of the learning environment (Section 5.3.1). In contrast, classroom context mode has the highest percentage of 77%. It is by no means surprising to find shorter teacher turns in this mode, since one of its pedagogical goals is to promote interaction and discussion (Sections 2.3.4.1 and 5.3.4). Though skills and systems mode and materials mode share similar proportions at around 50% (66% and 44% separately), they have different pedagogical orientations in topical discussion in that the former focuses on form-and-accuracy while the latter mainly on content comprehension.

5.3.1 *Managerial mode*

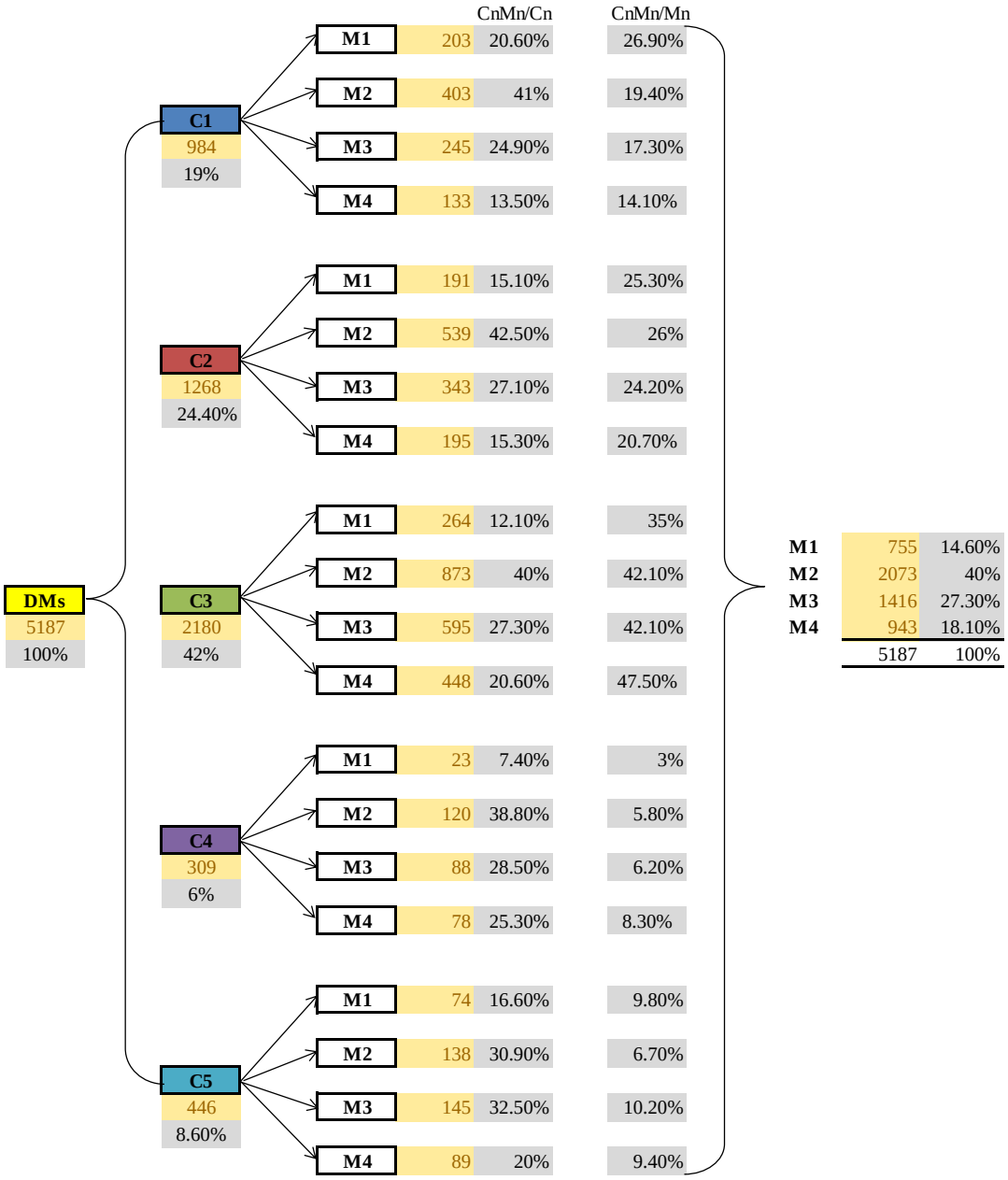
In Goffman (1981), a lecture is regarded as an institutionalised, extended holding of the floor of the speaker's views or *text* on a particular subject. Changes of footing appear in three places: keyed passages of prosodic features, text brackets involving introductory and closing comments, and parenthetical remarks of momentary changes through qualifying, elaborating, digressing, hedging and so on (Goffman, 1981: 181). Among the three, parenthetical remarks are of great interactional interest as a mediator between the text and the audience at the very moment they are used. Featuring extended teacher turns and use of transition markers, managerial mode often occurs at the beginning, transition or end of a university lecture (Walsh, 2006, 2011). Teachers' main activity in this mode is to manage learning through formulating talk (Hellermann 2007) to transmit procedural information. Rather than monologue, procedural talk in effect involves teachers' awareness of the audiences, and therefore needs to be viewed as a jointly constructed process (Seedhouse, 2004).

5.3.1.1 *CL analysis*

Previously, CL-based analysis has provided us with a general view of the linguistic patterns of DMs in terms of frequency, distribution, keyword lists and concordance analysis. In his study of L2 classrooms, Seedhouse (2004) argues that the interactional organisation varies depending on the pedagogical focus. Therefore, to investigate and compare DMs in different classroom micro-contexts can benefit our understanding of the relationship between language use, interaction and classroom pedagogy.

In order to answer the research questions regarding the use of DMs in the L2 classroom (Section 1.2), it is useful to conduct the multi-layered analysis of DMs in a mode-by-mode procedure. Therefore, in this section (5.3), each L2 classroom mode is subject to a tripartite analysis that combines CL, CA, and L2 classroom modes analysis.

What follows is an account of the results obtained from preliminary CL analysis across the modes. Figure 16 summarises the detailed distribution of DMs in modes and functions. It shows an exhaustive list of the occurrence and relative frequency of DMs in different combinations. In addition, by comparing the word lists of DMs across the four modes, table 18 further shows that *okay* is the most frequent DM throughout the different modes. In the next sections, those CL results will be discussed and linked to CA analysis in relation to interaction and pedagogy under each mode.



DMs	Discourse Markers
C1	Category 1 Referential
C2	Category 2 Structural
C3	Category 3 Interpersonal
C4	Category 4 Cognitive
C5	Category 5 Multi-functional
M1	Mode Type 1 Managerial
M2	Mode Type 2 Materials
M3	Mode Type 3 Skills and Systems
M4	Mode Type 4 Classroom Context
129	Frequency of Occurrence
20%	Relative Frequency

Figure 16. Distribution of DMs in L2 classroom modes and functional categories

Managerial mode				Materials mode				Skills and systems mode				Classroom context mode			
No.	DMs	Freq.	%	No.	DMs	Freq.	%	No.	DMs	Freq.	%	No.	DMs	Freq.	%
1	okay	139	1.81	1	okay	325	1.40	1	okay	216	1.33	1	okay	196	1.89
2	and	118	1.58	2	right	291	1.24	2	right	189	1.20	2	so	101	0.95
3	so	71	0.92	3	so	246	1.06	3	yeah	156	0.96	3	right	98	0.92
4	now	68	0.88	4	and	221	0.91	4	so	124	0.74	4	and	84	0.79
5	right	48	0.62	5	yeah	161	0.68	5	and	106	0.65	5	yeah	76	0.72
6	yeah	42	0.55	6	you know	101	0.43	6	you know	71	0.43	6	you know	71	0.67
7	all right	34	0.42	7	because	75	0.32	7	but	52	0.32	7	because	29	0.27
8	you know	25	0.32	8	but	66	0.29	8	yes	41	0.25	8	but	26	0.24
9	but	24	0.31	9	like	54	0.23	9	now	34	0.21	9	kind of	25	0.23
10	first/first of all	18	0.23	10	all right	48	0.20	10	all right	34	0.21	10	like	25	0.23

Table 18. Top 10 DMs across the four modes

As previous CL results suggest, managerial mode has the least frequent occurrence, taking up 13.3% of the corpus. Nevertheless, it has the highest ratio of DMs (9.4%). In table 19 (below), there are 755 DMs distributed in this mode, of which 35% appear in the interpersonal category (264). Referential (26.9%) and structural category (25.3%) share a similar percentage. DMs are also found to have a high distribution in the multi-functional category (9.8%) while the least is in the cognitive category (3%).

Code	Functional paradigm	Freq.	%
C1	Referential	203	26.9
C2	Structural	191	25.3
C3	Interpersonal	264	35.0
C4	Cognitive	23	3.0
C5	Multi-functional	74	9.8
Total		755	100

Table 19. Distribution of DMs in the functional paradigm in managerial mode

The process of categorisation raises the issue of methodological challenges in research design (see discussion in Section 4.6.2). According to Maschler (2009: 39):

> "every languaging is constantly constrained by the various contextual realms shaping discourse, and discourse markers are no exception. There are, of course, many affinities and interrelations among the various contextual realms, but they are not fixed and depend on the particular utterance in question".

The results from table 18 reveal that the rank order of the most frequent DMs differs from mode to mode. It is hence important to explore the keyword list in each mode. From the table (20), it can be seen that, in managerial mode, the top five DMs are *okay, and, so, now* and *right*. DMs o*kay* (139) and *and* (118) prevail in managerial mode. The distributions of two forms of *okay* (*okay* and *okay?*) have a similar share. There are 77 *okay?*s which take up 55% and 62 *okay* (45%). *Now* exceeds *right* and *yeah* ranking in the fourth place. Other DMs include *yeah, all right, you know, but* and *first/first of all*, among which structural signpost *now*, contrastive marker *but* and logical connector *first/first of all* have unusually high frequencies compared to other modes (Table 18). According to Halliday and Hasan (1976), those DMs in the list including *and, so, now, but, first/first of all* can be referred to as *cohesive devices* to link between discourse units. In addition, the absence of other related logical connectors such as *secondly, thirdly* or *finally* suggests an asymmetrical lexical choice in managerial mode.

No.	DMs	Freq.	%
1	okay	139	1.81
2	and	118	1.58
3	so	71	0.92
4	now	68	0.88
5	right	48	0.62
6	yeah	42	0.55
7	all right	34	0.42
8	you know	25	0.32
9	but	24	0.31
10	first/first of all	18	0.23

Table 20. Top 10 DMs in managerial mode

The frequency analysis and word list searches display an extensive application of DMs in the interpersonal category and an emphasis on cohesion in managerial mode, hence it is important to examine the instances of their prototypical collocates. Figure 17 lists the examples of concordance lines of DM *okay?* in the corpus.

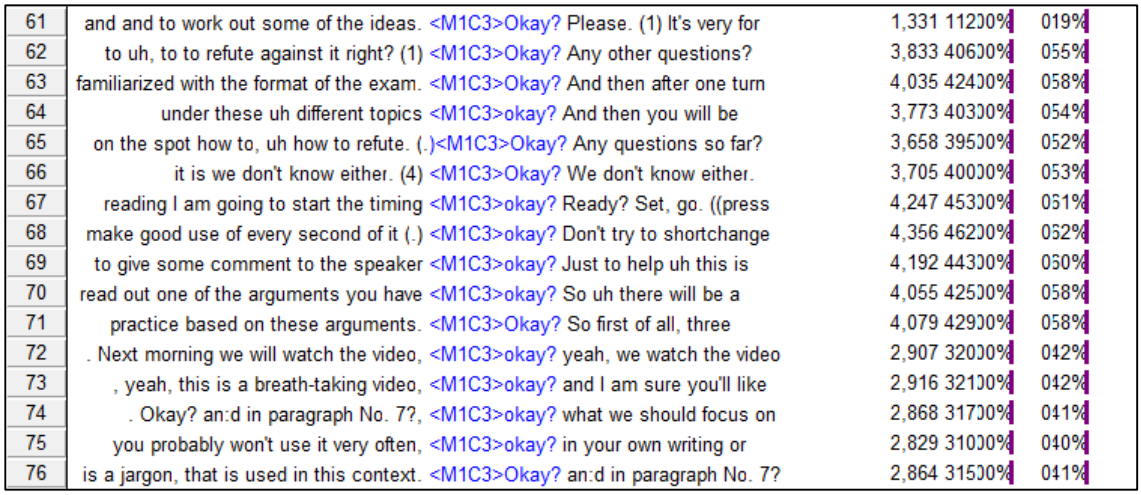


Figure 17. Sample concordance lines of *okay?*

The above concordance searches of *okay?* reveal that in teacher procedural talk, *okay?* constantly appears at different stages of information to mark a progression or confirmation check (Othman, 2010). *Okay?* also frequently occurs in multiple units like *and then* (line 63, 64), *so* (line 70, 71), and *yeah* (line 72). Concordance analysis further suggests that textual collocates of *okay?* include *so* and *and* which often occur in succeeding position. These MWU together reinforce and signpost a need for transition to a new topic/activity.

Logical connector *first/first of all* shares similar features with *okay?* in that it is often found in turn-middle position with few examples as turn initiator. However, unlike the extensive use of DM *okay?* and *first/first of all* appears mostly in statements rather than questions except in one instance (see figure 18). Furthermore, in most cases it appears in single unit form though there are few instances in which DMs like *you know* (line 13) co-occur with

it. It is worth noticing that the succeeding content does not contain other follow-up logical connectors such as *secondly, then, next*. Instead, in managerial mode, there is a significant emphasis on the preliminary step in organisational talk.

4	based on these arguments. Okay? So <M1C1>first of all, three minutes. (1)	4,079	430	7% 058%
5	round? (2) Yeah third round. Again? <M1C1>first of all one student read out	4,753	51211%	068%
6	¤T: All right, stop? and uh:: rebuttal? <M1C1>first. ¤((Ss continue)) ¤T: All	5,621	60700%	080%
7	, shall do shall do two things. <M1C1>First, tell us the expositive	6,600	72511%	094%
8	to: the speaker (2) Because it's uh <M1C1>first of all you have to you have	4,782	51351%	068%
9	. I am sorry, fourth round of rebuttal, uh <M1C1>first of all, please (1) read out	5,052	53956%	072%
10	, you need to answer several questions, <M1C1>first, look at the questions first?	2,155	22436%	031%
11	questions, first, look at the questions <M1C1>first?. (2) Erm:, most of them	2,159	22400%	031%
12	mind. Now today? we will start wou-, <M1C1>first of all, (1) uh the discussion	1,223	10226%	017%
13	part to your papers. I want you:, <M1C1>first of all you know to go	1,313	11118%	019%
14	go to the language points, okay? we will <M1C1>first of all, study the language	2,382	25023%	034%
15	, there will be five. (1) There will be five. <M1C1>First of all, migration of rural	3,467	373	8% 050%
16	everyone of these topics and uh uh (1) <M1C1>first of all, get- get uh also	3,755	40359%	054%

Figure 18. Sample concordance lines of *first*

So far, in managerial mode, CL analysis displays a great amount of DMs entailing teachers' endeavour to maintain communication on the interpersonal level and cohesion on the textual level. In this mode, the functional category in which DMs appear the most is the interpersonal category (35%), followed by the referential (26.9%) and the structural (25.3) categories. The most frequent DM is *okay* with an equal distribution in both declarative and interrogative forms. DMs r*ight, yeah, all right* and *you know* also occur with a high frequency. Despite the fact that managerial mode features extended teacher turns, DMs play an important role in drawing students' attention, especially when there is a transition between frames (Sinclair and Coulthard, 1975). DMs in managerial mode also show how segments of spoken discourse are linked logically through coordination (*and*), consequence (*so*), contrast (*but*), opening (*now*), and directional guidance in chronological sequence (*first/first of all*). These so-called cohesive devices (Halliday and Hasan, 1976) or discourse connectors largely constitute the meta-discourse in academic monologue that reifies the demands of communicative techniques (Pérez-Llantada, 2013).

5.3.1.2 *CA analysis*

After identifying the linguistic patterns of DMs in managerial mode, the next step is to probe into the sequential environment where DMs are situated and their relevant pedagogical impacts. L2 classrooms consist of a series of various micro-contexts co-constructed through the process of language socialisation, which needs to be unpacked and analysed in detail (Arminen, 2005; Walsh and O'Keeffe, 2007).

It has been demonstrated in previous discussions (section 3.4) that, as a study of the institution of conversation, CA focuses on the procedural basis of social interaction underlying the structural organisations of practices (Heritage, 2008). CA's analytical interest involves "both an inductive search for patterns of interaction and an explication of the emic logic that provides for their significance" (ten Have, 2007: 120).

As discussed in chapter 3, a number of different types of interactional organisation are presented as the objects of continuing investigation, namely turning-taking, sequence, repair, turn design, and preference organisation (Sacks et al, 1974). In CA analysis, how and why DMs are used by Chinese college EFL teachers will be explored in different interactional contexts mode by mode.

The implementation of L2 classroom modes analysis complements CA's structural analysis of social action in relation to the macro-level social process of pedagogical realisation. According to Heritage (2008), the fundamental notion of CA is the assumption that social interaction is informed by institutionalised structural organisations of practices. This structural assumption, however, as Heritage (2008: 303) states:

> "informs, in fact mandates, the basic CA imperative to isolate organisations of practices in talk without reference to the sociological or psychological characteristics of the participants".

As explained earlier in section 4.9, the process of linking corpus findings with a CA perspective and L2 classroom modes analysis contains the following steps:

1. Selecting one L2 classroom mode;
2. Scoping out the recurrent DMs from CL analysis;
3. Selecting the sequences in which DMs occur and building a collection of interactional episodes in the mode;
4. Examining the talk-in-interaction using CA techniques;
5. Examining DMs under L2 classroom modes;
6. Linking the results from multiple analyses;
7. Comparing the patterns across the modes;
8. Carrying out deviant case analysis.

According to Aijmer and Simon-Vandenbergen (2011), different uses of DMs have been shown to possess various prosodic features like intonation and stress which have been largely neglected in recent approaches. CL limits its analysis to identifying declarative and interrogative forms. Discussions on associated prosody therefore can yield interesting insights into how they affect DMs' functions (Aijmer, 2004). Through building up a collection of interactional episodes in each mode, DMs can be examined in a much closer and systematic micro-analytical perspective.

In managerial mode, DMs frequently appear at the beginning and closing of extended teacher turns, and particularly at transitional moments between different classroom activities. Table 21 presents the contextual pattern of DMs in managerial mode:

<table>
<tr><th>Position</th><th>Pattern</th><th>Function</th></tr>
<tr><td>opening</td><td rowspan="3">turn-prefaced DMs+ instruction+ pre-closing DMs</td><td>turn-prefaced DMs: instruction initiator and attention getter</td></tr>
<tr><td>transition</td><td rowspan="2">pre-closing DMs: instruction finaliser and assurance seeker</td></tr>
<tr><td>closing</td></tr>
</table>

Table 21. Pattern of DMs in managerial mode

In the opening of a lesson, multiple DMs routinely co-exist with teacher instruction in turn initial position to signal the coming of a new stage and to draw the audiences' attention interpersonally. After teacher instruction is introduced and elaborated to the students, DMs occur towards the end of a teacher turn to seek a confirmation check of students' comprehension and a move to the new.

Similarly, the pattern of *turn-prefaced DMs+ instruction+ pre-closing DMs* occurs in transitional position, to indicate the end of the current stage and the beginning of the next. Pre-closing DMs are particularly favoured by teachers to close the lesson. Examples include a multiple use of tag-positioned DM?s to check students' progress and signal completion of the lesson at the same time. When managerial mode occurs at the end of a lesson, there is normally no new action/topic followed. Therefore, two types of DMs, namely turn-prefaced and pre-closing DMs, are identified to perform multi-functionally in managerial mode.

Turn-prefaced DMs: instruction initiator and attention getter

In the compound of extended teacher turns, DMs often appear in turn initial position. Structurally, DMs preface teacher turns to initiate the starting of the lesson or instruction. At the same time, these DMs are found prosodically marked with rising intonation (↑*DM*), stress (*DM*) and (micro-) pause to signpost different stages of learning and attempt to draw students' attention. Turn-initial DMs help exhibiting while shifting (Jefferson, 1983). In other words, the multi-functionality of turn-prefaced DMs not only aids teachers to signal that a new topic/change is coming but also secures the students' attention toward the teacher (Maschler, 2009). DMs o*kay, all right, now* and *so* are found as the most prototypical ones, which corresponds with the observation made by Hellermann and Vergun (2007). Also, they often co-occur in MWUs such as *okay all right* or *so now*, particularly when the classroom undergoes a certain level of chaos (Schleef, 2008). Excerpt 5.1 is taken from the beginning of an intensive reading class. In the excerpt, the teacher starts the lecture and introduces the learning objective, i.e. a continuation of the second part of discussion of the material.

Excerpt 5.1

```
1   T:   ↑okay let's get started (1) uh:: ↑well (.) we got
2        uh got to the beginning of uh our text confessions
3        of a: of a miseducated man (.) today we will dis-
4        continue our discussion of this uh lesson (1) uh::
5        we: got to the first second part actually (.) I
6        told you the text (.) uh: can be roughly divided
7        into three parts (.) first paragraph is the (.)
8        first part it's just uh (.) some kind of
9        introduction the author made his point in this
10       paragraph (.) and ↑then for the following two parts
11       he's going to: discuss his ideas and he's going to
12       present or argue for his idea (.) now uh:: we start
13       from the second paragraph second part (.) of course
```

In excerpt 5.1, turn initial ↑*okay* with raising intonation (line 1) followed by "let's get started" opens up the start of the lesson within a structural focus (Cuenca, 2008). In addition, it also exhibits the students' attention and readiness for the new content (Beach, 1993). ↑*Well* (line 1) accompanied with *uh::* and micro-pause (.) performs as hesitation devices to formulate talk during monologic mode (Fung, 2003). In pre-closure position, DM *now* is phonologically marked with micro-pause and stress (line 12) to signal the end of instruction and introduce a sub-instruction to refer the students to the second part of the material. Here is another example of how Chinese college EFL teachers use DMs in MWUs

to transition between classroom activities. Excerpt 5.2 is taken from a transitional moment of an oral debating class (teacher C).

Excerpt 5.2

((Ss discuss))

```
1   T:   ((looks around the room))↑all right are you ready
2        for the second uh round of practice? (1)((looks
3        around the room )) ↑okay now (.) change: uh change
4        roles. (.) to the second students reading (12.) of
5        the argument (.) okay? (.)((looks around the room))
6        now (.)↑start reading the argument now ((looks
7        around the classroom))
```

In the above excerpt, DM *all right* (line 1) with a rise in tone interrupts the current activity (group discussion) and prefaces a query which checks students' progress. *Okay* and *now* (line 3) project the first instruction of changing roles, followed by a confirmation check *okay?* in the end (line 5). Teacher C is observed from the video recording to look around the room before initiating the two progressive signals. DMs *okay?* (5) and two *now*s (6) as pre-closing devices terminate the instructional informing. The associated act of looking around together with marked prosodic features of rising intonation, pause and stress is constantly deployed by C to get students' attention and check whether the class stays together. Finally the use of two *now*s suggests that this activity is happening at this moment. In the following excerpt 5.3, managerial mode appears at the very end of an intensive reading class. Multiple turn-initial DMs are applied by D to close the lesson.

Excerpt 5.3

```
1   T:   ((bell rings))↑okay all right (.)((moving from
2        centre to the front and looking at the book)) keep
3        reading the text and: for the- for the following
4        uh: paragraphs please (.) when you are reading (.)
5        the paragraph by yourself please also do this kind
6        of summary (.) of the main ideas and see ↑how the
7        uh thoughts are organised (.)okay?(.) ((looking at
8        the students)) and: for those who hav- haven't
9        finished the exercises (.) please finish them
10       (.)before (.)our: next: meeting (.) okay?
```

Okay and *all right* co-occur (line 1) as the class undergoes chaos when approaching the end. Prosodic features like rising intonation and micro-pause added to DMs stress the necessity for students to concentrate on teacher D. The instruction is introduced and terminated by two *okay?*s (line 7, 10) to mark the end of his point and simultaneously check whether the students understand his instructions by looking at the students without necessarily expecting a verbal response (Othman, 2010).

Pre-closing DMs: instruction finaliser and assurance seeker

DMs in interrogative form appear frequently towards the end of teacher turns in managerial mode as instruction finalisers and assurance seekers. The most frequently occurring example that can be retrieved from the CL analysis is upward-intoned and tag-positioned *okay?* (77). DMs *all right?* and *right?* also display similar usage but with fewer instances. The use of pre-closing DMs signal the closing of teacher instructions as well as a check to ensure that teachers and students are together at this moment. Excerpt 5.4 is taken from an extensive reading class (teacher E).

Excerpt 5.4

```
1   T:    ↑now uh next paragraph (.) uh last ↑time I told you
2         to discuss these questions in pairs remember? I'd
3         like you to: have a look at these questions again
4         (.) and keep them (.) in (.) your mind (.) okay?
5         ↑so ((looks at PowerPoint slides)) let's take a
6         look at these questions uh for the fou- (.) the
7         second parts
```

In excerpt 5.4, the instructional information is delivered and terminated by *okay?* (line 4) to seek a confirmation from students before moving to the next content. Then *so* (line 4) further closes up the instruction and prefaces the new task with the teacher directing her gaze towards the slides. There is an orientation shift after *okay?* from instruction delivery to task performance, through which the current speaker (teacher E) is inviting the hearer (students) to participate. This is evidenced from the transition from *I* and *you* (line 2) to *let's* (4). *Okay?* in pre-closing position is often companied with a micro or longer pause. The pause is necessary to segment discourse and allow time for the students to move together. In excerpt 5.5, taken from an academic writing class, teacher A is organising the class to have a five-minute discussion about how to write an introduction.

Excerpt 5.5

```
1   T:    so before you discuss try to recall what we said last
2         time about uh introductions (1) right? about
3         introductions

      ((Ss discuss))
```

Teacher A uses the tag-positioned *right?* in line 2, followed by a same-turn self-repeat of "about introduction" (line 2-3) to check if students understand him correctly before moving on to the next activity. Similar to *okay?*, *right?* is situated at the end of instructions to check for mutual understanding between A and students of what they are going to do next.

Logical connector first/first of all: directional guidance

Frequency analysis indicates that there is a high amount of DMs (25.3%) used in the structural category. In addition, word list and concordance searches reveal an unusual occurrence of *first/first of all* in the top ten DMs. Discussed as discourse signalling cues in Jung (2003), logical connectors are useful meta-linguistic devices to offer directional guidance in L2 listening comprehension. In managerial mode, *first* is widespread either in free-standing form or as *first of all* on the structural level. According to Fung and Carter (2007), DMs like *firstly, secondly, then* are used frequently in class to signal and segment the logical sequence of talk. Compared to other succeeding logical connectors, only the initial step *first*/*first of all* is emphasised in managerial mode. The high frequency of appearance of *first/first of all* in fact projects, initiates and connects the sequence of teacher instructions. In excerpt 5.6, multiple DMs preface the instruction of directing the students' concentration from previous content comprehension onto the language points.

Excerpt 5.6

```
1   T:    ↑okay so right (.) now let's go to the language
2         points okay? we will first of all (.) study the
3         language points in first three paragraphs erm any
4         volunteer to read the first three paragraphs any
5         volunteer? (1) any volunteer? (1) any volunteer?
6         mm: (4) S10 mhm
```

First of all (line 2) segments the instruction and refers the students to the first three paragraphs. It effectively signals the direction of the teacher instruction, signposts the upcoming information and indicates the relationship between the content of the text and how the students should organise it. In the succeeding content after the excerpt, the class finishes the discussion and shifts to the next paragraph. The follow-up instructions of teacher B are observed without using subsequent logical connectors like *secondly*, *thirdly* etc. Instead, multiple DMs *okay, now* and *right* are identified to preface new instructions. One possible reason may be that, in extended teacher turns, other sequential connectors are often lost or replaced by DMs with more flexibility such as *okay* and *now*, especially when the class undergoes a transitional chaos between different learning stages. In the excerpt, B segments and isolates her current point by *first of all*. The chronological sequence connector *first of all* serves as an important navigational aid for the listeners to "locate learning in time and space" (Walsh, 2011: 208).

5.3.1.3 *Interactional features in relation to pedagogical agenda*

The use of DMs in teacher talk reflects the awareness of teachers of the presence of the students, the necessity of classroom interaction, and an alignment with current pedagogical orientation. Managerial mode occurs most often in the opening, transition and completion stages of a lesson. In this mode, there is more of formulating talk in interaction, or in other words "saying-in-so-many-words-what-we-are-doing" (Garfinkel and Sacks, 1970: 351). It consists of a metastatement which refers to some future time when what is described will occur (Sinclair and Coulthard, 1975). DMs play an important part in metalinguistic talk as punctuation marks in order to help the learners to navigate their way, particularly in lecture comprehension (Breen, 1998). Therefore interaction features associated with DMs in managerial mode include:

- The use of DMs in the opening, transition and pre-closing of teacher turns
- DM-prefaced teacher instructions in a single, extended turn
- The use of confirmation checks in turn final position

In managerial mode, the pedagogical goals include transmitting information regarding the management of learning, referring learners to specific materials, introducing or concluding an activity and moving from alternative forms of learning to another (Walsh, 2006). The pattern of *turn-prefacing DMs+ instruction+ pre-closing DMs* therefore corresponds with the following pedagogical purposes:

- To introduce or conclude a topic/activity
- To refer learners to specific materials
- To change from one mode of learning to another
- To seek assurance from the learners

DMs in metastatements help students to understand the structure of the lesson, locate where they are going and the purpose of a subsequent exchange. Turn-prefaced DMs with identifiable prosodic features like stress and rising intonation assist the teacher to draw students' attention to him/herself in the opening of the class. Micro or longer pauses along with DMs provide extended wait-time to segment teacher instructions, refer learners to the current material, and signpost different learning stages from mode to mode. Turn-final DM?s seek further confirmation and assurance that "we are all in this together" at this moment before shifting/ending current activity (Walsh, 2011: 198). The use of fixed tags is to confirm that the action is agreed (Carter and McCarthy, 2006).

5.3.1.4 *Summary*

In managerial mode featuring long stretches of teacher talk, DMs contribute to assist teachers' metalinguistic talk in multi-functional domains. DMs in teacher talk take up 9.4% of managerial mode, which ranks the highest among the four modes. CL analysis indicates a high distribution of DMs in the interpersonal category, followed by the referential and structural categories. The top ten most frequent DMs include *okay, and, so, now, right*.

In this mode, DMs often accompany teacher instructions following the pattern of *turn-prefaced DMs + instruction + pre-closing DMs*. CA reveals two types of DMs performing different functions. They can be deployed in turn-initiating position serving as instruction initiators and attention getters, as well as in turn final position to signal the closing of instructions and to seek a confirmation check from the students. Multi-modal observation further discovers that turn-initial DMs are often accompanied with recognisable prosodic features like eye gaze, rising intonation, stress and pause. Upward-intoned DM?s in questioning form feature the pre-closure of teacher turns. In pre-closing moments, recurrent placement of turn-final *okay?*s are useful interactional devices to confirm that the class is staying together at this moment for the next move.

Both CL and CA methods reveal an uneven use of DM *first/first of all* in managerial mode on the structural level. As Jung (2003) notes, logical connectors are important meta-linguistic devices in L2 listening comprehension for signposting the text organisation, cueing the relationship between instructions and lecture discourse, and providing directional guidance for students to understand the instructional structure.

5.3.2 *Materials mode*

Turning now to the examination of materials mode. In this mode, teacher-student interaction largely depends on the target materials like tapes and textbooks used in the classroom. The prototypical interactional organisation of materials mode follows the IRF exchange structure (Sinclair and Coulthard, 1975) determined by the materials and managed through the firm control of the teacher (Walsh, 2011). Similar to skills and systems mode, limited interactional space or choice of topics is allocated to the learners. The object of communication is to understand the target content through classroom activities. Learner production (LP) is therefore subject to teacher evaluation through the use of display questions, clarification requests and the like (Walsh, 2011). As the pedagogical goals of materials mode vary, so the patterns of DMs in the sequential organisation vary.

5.3.2.1 *CL analysis*

As previous CL analysis (table 12) suggests, materials mode has the highest occurrence (40.4%) of the four modes. Meanwhile, the distributive frequency in figure 16 also suggests that there are 2073 DMs located in materials mode, which has the highest percentage (40%) of the total DMs (5187). Unlike their relatively balanced distributions in functions in managerial mode, table 22 shows that DMs in materials mode occur mostly in the interpersonal category (42.1%), followed by the structural (26%), referential categories (19.4%) and multi-functional (6.7%). The least frequent domain is the cognitive category (5.8%).

Code	Functional paradigm	Freq.	%
C1	Referential	403	19.4
C2	Structural	539	26
C3	Interpersonal	873	42.1
C4	Cognitive	120	5.8
C5	Multi-functional	138	6.7
Total		2073	100

Table 22. Distribution of DMs in the functional paradigm in materials mode

Table 23 displays the top ten DMs in materials mode. Compared to managerial mode, the most frequent DMs list in materials mode shares a similar lexical choice including *okay, right, so, and,* and *yeah*. In terms of distribution, however, DMs that Chinese college EFL teachers use to centre on the materials have a wider range in terms of quantity and variety. 60% of the most frequent DMs have over one hundred occurrences (Table 23). The search results also rank *okay* as the most frequent DM, followed by *right* in the second place with

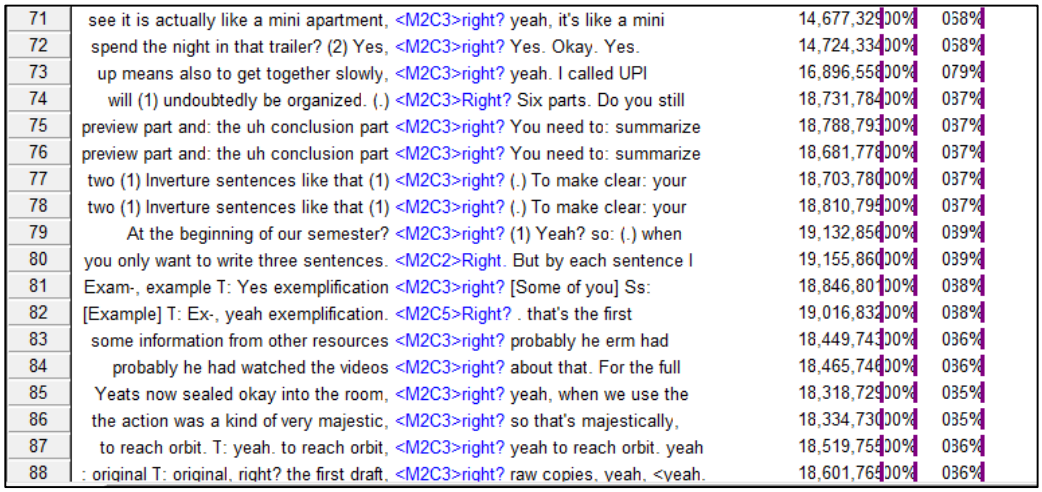
291 occurrences in materials mode. The declarative and interrogative forms of *okay* are evenly distributed here in that each shares about 50% of the total frequency of *okay* (*okay?* 168 and *okay* 157). Interestingly, DM *right* also appears in both declarative and interrogative forms like *okay*. In contrast, the questioning form of *right?* takes up most of the distribution. Among the 291 *right* discovered, 87.6% (255) are found as *right?* with a question mark. Therefore, DM *right* is mainly deployed in interrogative form rather than in declarative form in materials mode.

No.	DMs	Freq.	%
1	okay	325	1.40
2	right	291	1.24
3	so	246	1.06
4	and	221	0.91
5	yeah	161	0.68
6	you know	101	0.43
7	because	75	0.32
8	but	66	0.29
9	like	54	0.23
10	all right	48	0.20

Table 23. Top 10 DMs in materials mode

The rest of the DMs include *so* (246), *and* (221), *yeah* (161), *you know* (101), *because* (75), *but* (66), *like* (54) and *all right* (48). DMs *so, and, yeah, you know* all have extremely high frequencies in the four modes. In addition, though the interrogative form can be found in these above-mentioned DMs, compared to the extensive application of *okay?* and *right?*, their occurrences are rather limited (26 *so?*, 26 *yeah?*, 7 *you know?*, 16 *all right?*). It is also worth noticing that unlike in other modes where it hardly appeared, the exemplifier *like* has 54 occurrences on the cognitive level in materials mode.

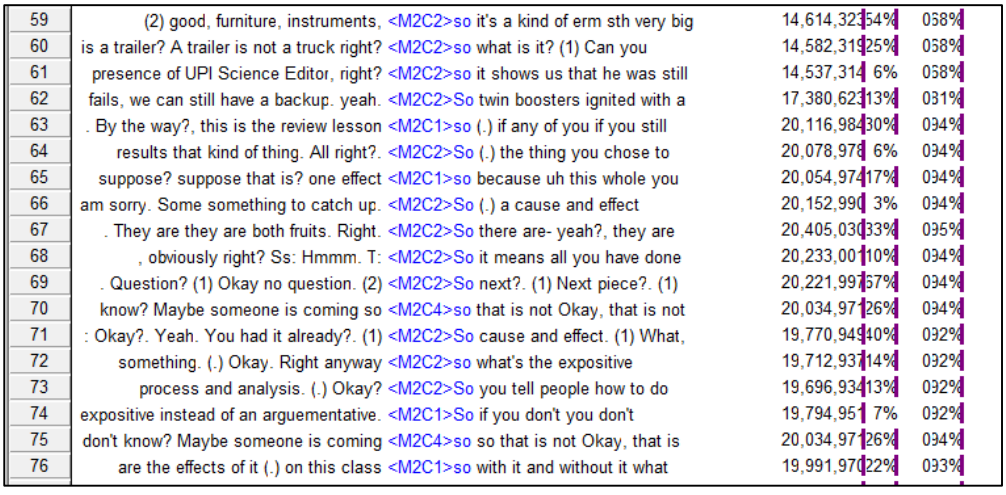
Concordance searches further reveal the surrounding texts of the recurrent DMs from the list. In the following figure 19, tag-positioned *right?* succeeds teacher explanation and precedes other DMs such as *yeah* (line 71, 73, 79, 85, 87), *so* (line 79, 86) in MWUs. Patterns in the sample concordance lines suggest there seems to be a recurrent dual combination of *right?* and *yeah* in materials mode. Othman (2010) differentiates the use of *okay?* and *right?* in that the former marks a progression or confirmation check whilst the latter signals a sense of shared knowledge between the lecturer and the students. Therefore clustering *right?* and response token *yeah* in combination functions interpersonally to reconfirm mutual understanding and agreement on the target content.



71	see it is actually like a mini apartment, <M2C3>right? yeah, it's like a mini	14,677,329 00%	058%
72	spend the night in that trailer? (2) Yes, <M2C3>right? Yes. Okay. Yes.	14,724,334 00%	058%
73	up means also to get together slowly, <M2C3>right? yeah. I called UPI	16,896,558 00%	079%
74	will (1) undoubtedly be organized. (.) <M2C3>Right? Six parts. Do you still	18,731,784 00%	037%
75	preview part and: the uh conclusion part <M2C3>right? You need to: summarize	18,788,793 00%	037%
76	preview part and: the uh conclusion part <M2C3>right? You need to: summarize	18,681,778 00%	037%
77	two (1) Inverture sentences like that (1) <M2C3>right? (.) To make clear: your	18,703,780 00%	037%
78	two (1) Inverture sentences like that (1) <M2C3>right? (.) To make clear: your	18,810,795 00%	037%
79	At the beginning of our semester? <M2C3>right? (1) Yeah? so: (.) when	19,132,856 00%	039%
80	you only want to write three sentences. <M2C2>Right. But by each sentence I	19,155,860 00%	039%
81	Exam-, example T: Yes exemplification <M2C3>right? [Some of you] Ss:	18,846,801 00%	038%
82	[Example] T: Ex-, yeah exemplification. <M2C5>Right? . that's the first	19,016,832 00%	038%
83	some information from other resources <M2C3>right? probably he erm had	18,449,743 00%	036%
84	probably he had watched the videos <M2C3>right? about that. For the full	18,465,746 00%	036%
85	Yeats now sealed okay into the room, <M2C3>right? yeah, when we use the	18,318,729 00%	035%
86	the action was a kind of very majestic, <M2C3>right? so that's majestically,	18,334,730 00%	035%
87	to reach orbit. T: yeah. to reach orbit, <M2C3>right? yeah to reach orbit. yeah	18,519,755 00%	036%
88	: original T: original, right? the first draft, <M2C3>right? raw copies, yeah, <yeah.	18,601,765 00%	036%

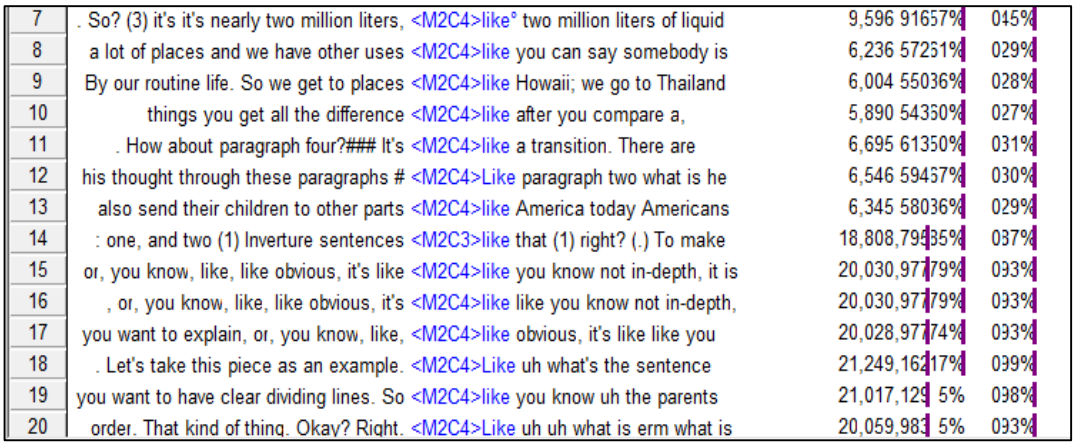
Figure 19. Sample concordance lines of *right?*

Previous cluster analysis (see table 17 in section 5.2.2) has suggested an extensive use of *acknowledgement token + and/so* in the most frequent two-word DM clusters. Figure 20 evidences the above mentioned findings in materials mode, with the patterning of *okay/right/yeah + so* in the following sample lines of DM *so*. Rather than marking referential connections, in these examples, DM *so* focuses more on pre-facing utterances to launch new conversation matters (Bolden, 2006). For instance, in line 68, *so* is used in turn-initial position to open teachers' talk. In addition, in line 72, so occurs with multiple DMs *okay*, *right*, and *anyway* to signal a topic shift in transition (Fung and Carter, 2007). Described as "emergence from incipiency", *so* conveys the following content that is on the speaker's agenda (Bolden, 2006: 663). Again, these examples demonstrate that DMs cluster together in MWUs as change-of-activity tokens in the interpersonal and structural categories in order to make an efficient move.



59	(2) good, furniture, instruments, <M2C2>so it's a kind of erm sth very big	14,614,323 54%	058%
60	is a trailer? A trailer is not a truck right? <M2C2>so what is it? (1) Can you	14,582,319 25%	058%
61	presence of UPI Science Editor, right? <M2C2>so it shows us that he was still	14,537,314 6%	058%
62	fails, we can still have a backup. yeah. <M2C2>So twin boosters ignited with a	17,380,623 13%	031%
63	. By the way?, this is the review lesson <M2C1>so (.) if any of you if you still	20,116,984 30%	034%
64	results that kind of thing. All right?. <M2C2>So (.) the thing you chose to	20,078,978 6%	034%
65	suppose? suppose that is? one effect <M2C1>so because uh this whole you	20,054,974 17%	034%
66	am sorry. Some something to catch up. <M2C2>So (.) a cause and effect	20,152,990 3%	034%
67	. They are they are both fruits. Right. <M2C2>So there are- yeah?, they are	20,405,030 33%	035%
68	, obviously right? Ss: Hmmm. T: <M2C2>So it means all you have done	20,233,001 10%	034%
69	. Question? (1) Okay no question. (2) <M2C2>So next?. (1) Next piece?. (1)	20,221,997 67%	034%
70	know? Maybe someone is coming so <M2C4>so that is not Okay, that is not	20,034,971 26%	034%
71	: Okay?. Yeah. You had it already?. (1) <M2C2>So cause and effect. (1) What,	19,770,945 40%	032%
72	something. (.) Okay. Right anyway <M2C2>so what's the expositive	19,712,937 14%	032%
73	process and analysis. (.) Okay? <M2C2>So you tell people how to do	19,696,934 13%	032%
74	expositive instead of an arguementative. <M2C1>So if you don't you don't	19,794,951 7%	032%
75	don't know? Maybe someone is coming <M2C4>so so that is not Okay, that is	20,034,971 26%	034%
76	are the effects of it (.) on this class <M2C1>so with it and without it what	19,991,970 22%	033%

Figure 20. Sample concordance lines of *so*



7	. So? (3) it's it's nearly two million liters,	<M2C4>like°	two million liters of liquid	9,596 91657% 045%
8	a lot of places and we have other uses	<M2C4>like	you can say somebody is	6,236 57231% 029%
9	By our routine life. So we get to places	<M2C4>like	Howaii; we go to Thailand	6,004 55036% 028%
10	things you get all the difference	<M2C4>like	after you compare a,	5,890 54350% 027%
11	. How about paragraph four?### It's	<M2C4>like	a transition. There are	6,695 61350% 031%
12	his thought through these paragraphs #	<M2C4>Like	paragraph two what is he	6,546 59457% 030%
13	also send their children to other parts	<M2C4>like	America today Americans	6,345 58036% 029%
14	: one, and two (1) Inverture sentences	<M2C3>like	that (1) right? (.) To make	18,808,795 35% 037%
15	or, you know, like, like obvious, it's like	<M2C4>like	you know not in-depth, it is	20,030,977 79% 093%
16	, or, you know, like, like obvious, it's	<M2C4>like	like you know not in-depth,	20,030,977 79% 093%
17	you want to explain, or, you know, like,	<M2C4>like	obvious, it's like like you	20,028,977 74% 093%
18	. Let's take this piece as an example.	<M2C4>Like	uh what's the sentence	21,249,162 17% 099%
19	you want to have clear dividing lines. So	<M2C4>like	you know uh the parents	21,017,129 5% 098%
20	order. That kind of thing. Okay? Right.	<M2C4>Like	uh uh what is erm what is	20,059,983 5% 093%

Figure 21. Sample concordance lines of *like*

As was pointed out in the keyword list of DMs in materials mode, DM *like* has 54 occurrences. The above figure 21 therefore presents the sample concordance lines of *like* in this mode. From the figure, we can see that DMs *like* and *you know* often appear closely in clusters (line 15, 16, 19). The combination of *like* and *you know* in those examples are used together to make an exemplification or an explanation. Teachers use *like* and *you know* to single a change of stance and provide new information to the students. Fuller (2003) suggests that DM *like* indicates looseness of meaning or introduces salient or new focus, and the basic meaning of *you know* is to invite addressee inferences (Fox Tree and Schrock, 2002). According to Jucker and Smith (1998), *like* is a speaker-oriented information-centred presentation marker while *you know* is addressee-oriented. The clustering use of DMs *like* and *you know* therefore focus on the existing propositional meanings through elaboration and exemplification and invite the addressees to contribute simultaneously.

Having discussed the corpus findings in materials mode, it is now necessary to link these results and probe into the detailed context from a CA perspective.

5.3.2.2 *CA analysis*

In materials mode where classroom activities are centred on the use of materials, DMs are found affiliated to transition moments and tag questions. Identified in Walsh (2006), the classic IRF exchange system is the canonical organisation to progress interaction economically. Teacher turns in IRF function both anaphorically to respond to learner's contribution and cataphorically to initiate another sequence (Walsh, 2006). The sequential pattern in which DMs occur can be summarised as follows:

1.	T:	initial transition relevance place (TRP) DMs+ display question	(I)
2.	S:	learner production (LP)	(R)
3.	T:	third-turn repeats/extension+ tag-positioned DM?s	(F)

Sequence initial DMs such as *and, so* are common turn-entry devices especially in transitional places to mark the coming of the new information. At the same time, initial TRP DMs preface teachers' use of display questions to accomplish a next-speaker selection with or without addressing techniques. Therefore, initial TRP DMs possess dual functions in that they signal a transition in sequential organisation as transition markers as well as allocating the turn to the listeners as response inviters. In the response move, students can either be nominated by the teacher or self-selected to offer their interpretations of the target content. It is discovered that in materials mode, explicit assessments in teacher response are optional. In the feedback move (F), teachers are found to usually agree/confirm with the learners by providing third-turn repeats (Park, 2013) or extensions to prior LP, followed by upward-toned and tag-positioned DM?s. In contrast to initial TRP DMs, DMs in one-word tag questions, alongside eye gaze, only serve as a first pair-part to check students' understanding anaphorically, without much requirement of the teacher to plan ahead.

Initial TRP DMs: transition marker and response inviter

Previous frequency analysis shows that DMs *and* (246) and *so* (221) are among the top five lexical items (Table 23). As Sacks et al (1974) note, a class of words namely *appositional beginnings* including words like *so, and, but, well* are of particular interest to satisfy the constraints to begin with a beginning. They have important turn-organisational uses to initiate the turn. There are a number of DMs found in initial TRP position including *so* and *and* to mark a transition in discussion and to link questions in a teacher's elicitation agenda. A closer CA analysis displays their multi-functionality in making transitions and prefacing display questions. See the following excerpt 5.7 from an academic writing class (teacher B).

Excerpt 5.7

```
1   T:   and ↑then what are- what is or is what is the
2        standard (.) for classification

3   Ss:  their attitude ((***)) towards their children

4   T:   ↑okay (.) their attitude towards their children
5        okay? so is this standard consistent?

6   Ss:  yeah

7   T:   do you find another standard

8   Ss:  no::

9   T:   you don't use double standard (.) okay? use one
10       standard (.) to classify (.) the subjects (1) okay?
```

In excerpt 5.7, sequence-initial DMs *and then* (line 1) initiate and develop the discussion of a classification standard in the academic writing class. *And then* opens up the topic and invites a student response without nomination. Teacher B responds to students' choral responses (Ko, 2014) in line 3 with a rising *okay* (4) as an acknowledgement token. B's repeats of LP in line 4, followed by a comprehension check *okay?* (5), confirm the students' contribution and emphasises the key concept in the materials. *So* (5) prefaces another follow-up display question and allocates the turn to the students again. Here *so* prefacing demonstrates the status of upcoming questions as a marker of "emergence from incipiency" (Bolden, 2008: 984). Similarly, in excerpt 5.8, teacher D inserts a side sequence (line 3-5) to ask about the noun form of the word *fail* (4) while discussing how education has disappointed the author. DM *and* (4) with stretching initiates an inquiry on the linguistic form and signals a request for an answer from the students (Schiffrin, 1987).

Excerpt 5.8

```
1   T:   ((looking at the students)) what my education
2        failed to do (.) I am sure you still remember:
3        succeed in doing right? (.) succeed in doing and
4        fail: (1) to do (.) and: what's the noun of ↑fail

5   S5:  failure ((***))

6   T:   failure huh? failure (.) failed to do: my education
7        didn't successfully (.) do was: to: teach me (1)
8        that the principal the: (1)((reading the text))
9        most significant probably (.) significance the
10       chief (.) the chief significance of such
11       differences ((looking up))so wha- why (.) why was I
12       ↓taught uh so much difference (.) between cultures
13       right?

((Ss nodding))
```

Tag-positioned DM?s in teacher feedback: anaphoric comprehension check

As mentioned earlier, the application of tag-positioned DM?s in managerial mode is in turn termination position as exit devices or post completers. Their function is to seek an assurance before moving to the next classroom activity. The frequency analysis suggests that in managerial mode, the most frequently occurring DM is *okay* (139, 77 *okay?*). However, in materials mode, tag-positioned DM?s are found mostly in the teacher feedback move to check students' comprehension of prior content. Rather than an extensive use of *okay?*, CL analysis (Table 23) reveals a predominate usage of *right?* (255) in materials mode. Accompanying eye gaze is observed, which indicates that the teacher uses tag-positioned DMs, particularly *right?*, to seek a sense of mutual understanding of shared general knowledge, yet with no intention to allocate the interactional space to the students. As Othman (2010) states, though their functions overlap, there is a subtle difference between the use of *okay?* and *right?* in that the former signals a readiness to move forward while the latter marks an understanding of the preceding content. The teacher confirms with the learners by repeating or extending LP and then checks their understanding using tag-positioned DM?s. Unlike in skills and systems mode, an explicit evaluation or assessment token *yeah/yes* is optional in materials mode. Excerpt 5.9 (teacher E) and 5.10 (teacher F) are two examples from intensive reading classes.

Excerpt 5.9

T: ((looking around the room)) okay you are waving your head so (.) so what's the meaning of story ↓here

Ss: [report]

[report]

T: report **right?** it's a report yeah it's a report (.) **okay?** ((reading the text)) launch story to UPI computer erm (1) UPI's computer and Trott ↓now (.) called it up on: his screen (.) ((looking up)) we have learned a lot of usages of call (.) we have already formed a lot of phrasal erm verbs like call:: on **right?**

(.)

S11: call for

T: call:: for **right?** (.) ((reading the text)) and ↓here what's the meaning of call it ↑up (.) what's the meaning of call it ↑up on his screen. (.) so you can imagine the situation

In excerpt 5.9, teacher E uses DM *so* (line 2) to introduce the topic of the meaning of *story* (2) and invite the class to respond. The floor is open to the students who then nominate themselves to answer ("report", line 4 and 5). Teacher E agrees with students' multiple responses (Ko, 2014) using third-turn repeats (Park, 2013), followed by *right?* and *okay*? in tag questions (6-7). The video recording shows that the teacher keeps her eye gaze towards the class during interaction. Tag-positioned DM?s to a large extent function interpersonally to reach a mutual understanding of the meaning of "story" between the teacher and the students. This is evidenced by an immediate change of gaze direction towards the text in line 7. From line 7 onwards, teacher E progresses to the next content and decides to focus on the verb *call* (line 10). *Right?* (12) marks E's assumption that the students are familiar with the relevant usage and phrasal verb combinations. Though E still keeps the turn, S11 self-selects herself and treats the tag-questioned *right?* with micro-pause as an invitation to respond. The teacher agrees with her example by repeating it and uses another *right?* to ensure that the class hears and understands her explanation. In excerpt 5. 10 when S13 gives an incorrect answer "simile" to the question, teacher F repeats the error, adjusts its intonation (Lyster and Ranta, 1997), and allocates the turn to the class (line 9). After a two-second silence, S14 takes the floor by answering *metaphor* (line 11). Teacher F acknowledges the correct answer by repeating the word, adding rising intonation, and using the tag-positioned *right?* (12). *Right?* appears again at the end of exemplification (14) to check if students understand what she has just explained.

Excerpt 5.10

```
1   T:    ((reading the text)) off to the side (.) a
2         brilliant tongue: of orange ↑flame so this time
3         ↑class what's the (.) figure of speech used in: the
4         context (.) tongue: of orange flame (.) ((looking
5         at the students)) so what's the figure of speech
6         (.) what's the figure of speech

7         (1)

8   S13: simile

9   T:    simile? ((looking around the room))

10        (2)

11  S14: metaphor

12  T:    ↑metaphor right? you have changed your idea because
13        (.) if it is a simile you'll have to have words
14        like (.) like (.) right? like (.) as (.)and he-
15        this is a metaphor ((looking at the text))
```

Like you know: content negotiator

In materials mode, a number of words such as *like, you know, I mean* appears in clusters. The keyword list suggests a wider use of DMs *you know* (101) and *like* (54) in materials mode compared to other modes. *Like* works cognitively as an exemplifier in elaboration (Fung and Carter, 2007). On the other hand, *you know* invites the learners to accept the relevance and implications of the focus (Jucker and Smith, 1998). The combination of DMs *like you know* serves both in cognitive and interpersonal domains. They are used in MWUs to negotiate the content meaning between the participants with interactional consequences. In other words, the cluster *like you know* marks a change of footing in order to perform interactional work (Goffman, 1981). The following two instances (excerpts 5.11 and 5.12) illustrate how DMs are exploited as content negotiators to reformulate, repair and exemplify what has been said and highlighted in utterances.

Excerpt 5.11

```
1   T:   but by each sentence I don't mean the random
2        sentences with comma (.) with numerous commas in
3        between (.)I mean (.) normal sentences (.)so it's
4        like uh you know(.)every uh pa- every example is
5        like this short(.) okay?
```

Teacher B in Excerpt 5.11 explains what she means *by each sentence* (line 1) in an academic writing class. *I mean* (line 3) reformulates her previous explanation as normal sentences. DM cluster *like you know* (4) further exemplifies her point to write short examples. *You know* signals to the learners to cooperate/accept the propositional content as mutual background knowledge (Östman, 1981). DM *like* again appears in line 5 to exemplify the length of each example *like this short* (5).

Excerpt 5.12

```
1   T:   so if you don't know anything about other cultures
2        (.) if you haven't studied like you know
3        comparative culture ↑okay geography: anthropology
4        (.) other people's- you would be surprised in two
5        ways
```

Similarly in the above excerpt 5.12, *like you know* (line 2) is used by Teacher E to introduce comparative culture as an example of cultural studies, followed by a more specific subject list such as geography and anthropology (line 3). It marks a change in stance from establishing common ground to introducing something new.

5.3.2.3 *Interactional features in relation to pedagogical agenda*

Materials mode features interactional aspects like the predominance of the IRF pattern, extensive use of display questions, form-focused feedback, correct repair, and the use of scaffolding (Walsh, 2006). The sequential pattern associated with DMs, therefore, contributes to the talk-in- interaction in terms of the IRF pattern:

- Sequence initial DMs mark TRP
- Display question is prefaced by DMs
- The use of tag-positioned DMs in content feedback
- Content negotiators in reformulation/exemplification

In this mode, DMs mark and preface display questions, especially when teachers move/develop to another IRF sequence. After LP, DMs also appear in teacher feedback moves as tag questions to check students' comprehension of what has been discussed. In this move, a direct assessment or evaluation is often avoided by teachers. In other words, as part of content feedback, teachers tend to use scaffolding followed by comprehension checks rather than assessing students directly, which is considered to be more face-threatening. Tag-positioned DMs are used at the end of each different focus point to check for language use and content comprehension.

It can be noted that the pedagogical goals that DMs assist to realise in materials mode are found mostly in the interpersonal domain (see the following list). Initial TRP DMs not only mark a transition in topic development but also invite the class to respond spontaneously. Tag-positioned DMs in content feedback aim to signal the teachers' efforts to reach mutual understanding in relation to the material. Again, the use of DMs negotiates the content alongside other scaffolding strategies like reformulation/exemplification. The following list displays the relevant pedagogical purposes that DMs assist to realise:

- To elicit responses in relation to the material without allocating the next speaker
- To check students' comprehension of the target content
- To reach a mutual understanding of the background knowledge
- To clarify by reformulation/exemplification when necessary

5.3.2.4 *Summary*

A mixed CL, CA and L2 classroom modes analysis clearly demonstrates DMs' performance in relation to the micro-context where the pedagogical focus is on the materials. CL analysis reveals that materials mode has the highest number of DMs (40%), most of which occur in the interpersonal category. Compared with managerial mode, keyword list searches demonstrate a similar lexical choice of DMs in this mode, yet with different distributions and functions. Though so far *okay* is still the most frequent DM, *right?* precedes *okay?* with over 200 occurrences. In addition, DM cluster *like you know* seems to have a higher occurrence compared to other modes.

CA analysis further evidences those initial CL findings discovered in IRF sequential organisation, particularly in the I (initiation) and F (feedback) moves. Initial TRP DMs perform simultaneously on structural and interpersonal levels as transition markers and response inviters. Teachers repeat and/or extend part of LP, followed by tag-positioned DM?s as comprehension checks along with eye gaze. Together they function interpersonally to see if students understand what has been previously discussed without the intention of nominating students to answer.

The pedagogical goals that DMs assist are found to concentrate on the understanding of the materials. In the content learning environment, direct evaluation or explicit correction rarely happens (Lyster and Ranta, 1997). Rather, language teachers use DMs to preface display questions and to check comprehension in content feedback. Content negotiators such as *like you know* not only demonstrate DMs' multi-functionality in cognitive and interpersonal categories but also further suggest teachers' endeavour in language classrooms to reach a mutual agreement with the students.

5.3.3 *Skills and systems mode*

In skills and systems mode, the interactional focus shifts to the linguistic forms of LP. Kasper (1985) differentiates two types of foreign language (FL) classroom activities: language-centred and content-centred interaction. In her words, "while the language-centred phase focussed exclusively on formal correctness, the content-centred phase aims at developing the learners' ability to express their ideas about some content matter in FL" (Kasper, 1985: 209).

Defined as *form-and-accuracy* context in Seedhouse (2004), there is no personal or real world meaning in this sub-context. The pedagogical goals are typically to provide language practice of the target language skills and assess the correctness of the strings of utterances that learners produce. Though LP is subject to the teacher's evaluation, the primary focus is on the accuracy of linguistic forms rather than an understanding of the content. In terms of interactional strategies, teachers tend to use a more variable combination of strategies like scaffolding and repair. Since one of the pedagogical aims is to help learners realise their error, teacher feedback in this mode is often provided with great endeavour to avoid face-threatening acts towards the learners (Seedhouse, 2004; Walsh, 2006). In this mode, DMs are discovered as useful interactional devices that contribute to the effectiveness of corrective feedback (Ellis, 2001).

As previous table 4 in section 2.3.4.1 shows, though with different pedagogical goals, skills and systems mode and materials mode share similar interactional features such as teachers' extensive use of display questions, repair, teacher feedback, and the use of scaffolding (Walsh, 2006, 2011). As the main classroom activities in skills and systems mode focuses mainly on learners' acquisition of language skills, it is often the case that teacher feedback in this mode largely deals with repair organisation in order to help students achieve form and accuracy in their LP.

5.3.3.1 *CL analysis*

CL analysis in section 5.2 has suggested that the occurrence of skills and systems mode is 28.3%, which ranks the second highest of the four modes (Table 12). As to the distribution of DMs, it contains 1416 DMs (27.3%), following materials mode (40%) (see Figure 16). Figure 12 in section 5.2.1 also suggests that in terms of the proportion of DMs that constitute each mode, skills and systems mode (8.3%) shares a similar percentage with materials mode (8.5%).

The following table 24 displays the general distribution of DMs in the functional paradigm in skills and systems mode. Previous frequency results conclude that DMs in this mode have the second highest occurrence (about one third). Over 42% of DMs function interpersonally, followed by the structural (24.2%), and referential (17.3%) categories. The multi-functional category ranks fourth (10.2%) with the cognitive category last (6.2%).

Code	Functional paradigm	Freq.	%
C1	Referential	245	17.3
C2	Structural	343	24.2
C3	Interpersonal	595	42.1
C4	Cognitive	88	6.2
C5	Multi-functional	145	10.2
Total		1416	100

Table 24. Distribution of DMs in the functional paradigm in skills and systems mode

Table 25 reveals the top ten DMs that appear the most in skills and systems mode. Again, *okay* ranks the highest among other DMs. CL analysis in managerial and materials modes suggests a relatively equal distribution of *okay* in both interrogative and declarative forms. In contrast, in this mode, about two thirds (64.4%) of *okay* is found in statement form whereas *okay?* only has 77 occurrences (35.6%). Other top five DMs include *right*, *yeah*, *so* and *and*. Similar to materials mode, among the 189 *right*, *right?* takes about 77.8% (147). It is interesting that there are two evaluation markers in the word list, namely *yeah* (156) and *yes* (41). Of the two DMs, only a few instances are found in question form (11 *yeah?* and 8 *yes?*). Other high frequency DMs include *you know* (71), *but* (52), *now* (34) and *all right* (34).

No.	DMs	Freq.	%
1	okay	216	1.33
2	right	189	1.20
3	yeah	156	0.96
4	so	124	0.74
5	and	106	0.65
6	you know	71	0.43
7	but	52	0.32
8	yes	41	0.25
9	now	34	0.21
10	all right	34	0.21

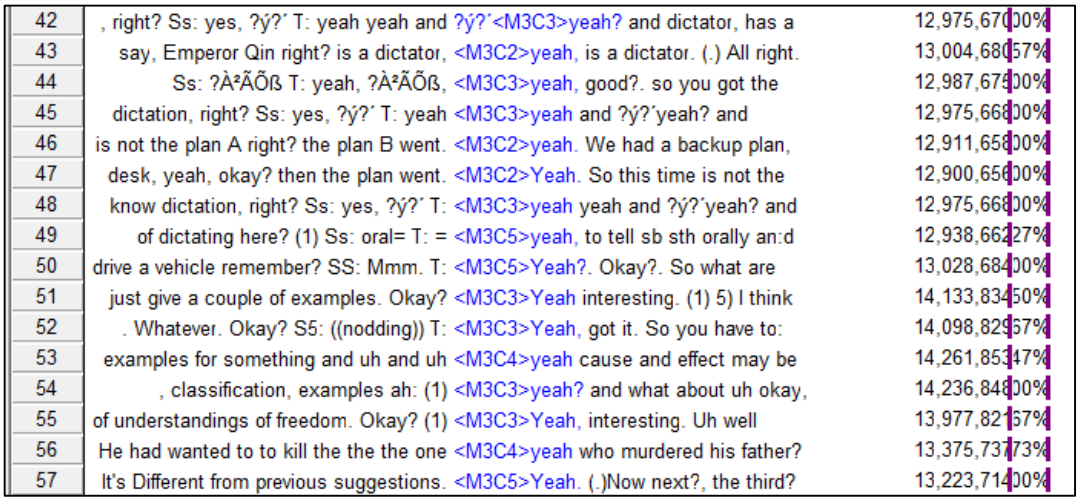
Table 25. Top 10 DMs in skills and systems mode

The allocation of *okay* in functional categories in this mode is similar to that of materials mode, except that materials mode has more occurrences (51%) in the interpersonal category. Whilst in skills and systems mode, *okay* is mainly found in declarative form. Figure 22 displays the selected concordance samples of *okay* with various functions. In the sample lines, statement *okay* occurs in extended teacher turns (line 47-50). Defined in Schleef (2008) as elaboration markers, *okay* can be used referentially between segments when the speaker develops the same topic in his/her extended turns. In addition, figure 22 demonstrates its multi-functionality in interpersonal and structural categories. In line 51, 54, 57, turn-initial *okay* not only functions as an acknowledgement token in response to the previous student's turn but also helps teachers gain the floor back and direct the topic. With a few instances (line 56, 57, 59), interrogative *okay?* occurs in teacher talk to function interpersonally yet with different usages. *Okay?* in line 56 seeks a comprehension check from the students. Whilst in line 59, the use of *okay?* signals a progress check as well as a readiness to move to the next activities.

47	please be watching out for yourself. Uh, <M3C4>okay, I am sorry, that's it, on	10,727,326	20%	075%
48	Okay. to prepare sth for coming danger, <M3C2>okay, alert sb to sth. Pay	10,472,303	54%	073%
49	, means be understood, be understood, <M3C2>okay, or to sink in, in is an	10,321,281	21%	072%
50	never use it in passive voice, all right? <M3C5>okay. Obviously, your advice	10,299,278	00%	072%
51	in, you should, mmm, told him again. T: <M3C3>okay, yes?. Settle in, in is an	10,281,276	00%	072%
52	danger, to draw one's attention to. <M3C2>Okay. to prepare sth for	10,466,303	9%	073%
53	Ss: (***) T: Okay, yes?(2) to notify, <M3C3>okay, sb of approaching danger,	10,457,302	25%	073%
54	to sth means to? (1) Mhm? Ss: (***) T: <M3C3>Okay, yes?(2) to notify, okay,	10,455,301	00%	073%
55	this wire is a wire to the news press. <M3C2>Okay. when it still firmly on the	11,869,477	13%	033%
56	differently under the three situations. (1) <M3C3>Okay? Get the whole idea?	13,423,748	00%	034%
57	.° Couldn't act. That kind of thing. T: <M3C5>Okay?. In the introductory	13,393,744	00%	034%
58	and delayed? and delayed and delayed. <M3C4>Okay.° Couldn't act. That kind	13,387,741	00%	034%
59	statement? Anyway, we shall move on <M3C3>okay? But uh but uh (2) you	13,743,796	00%	036%

Figure 22. Sample concordance lines of *okay*

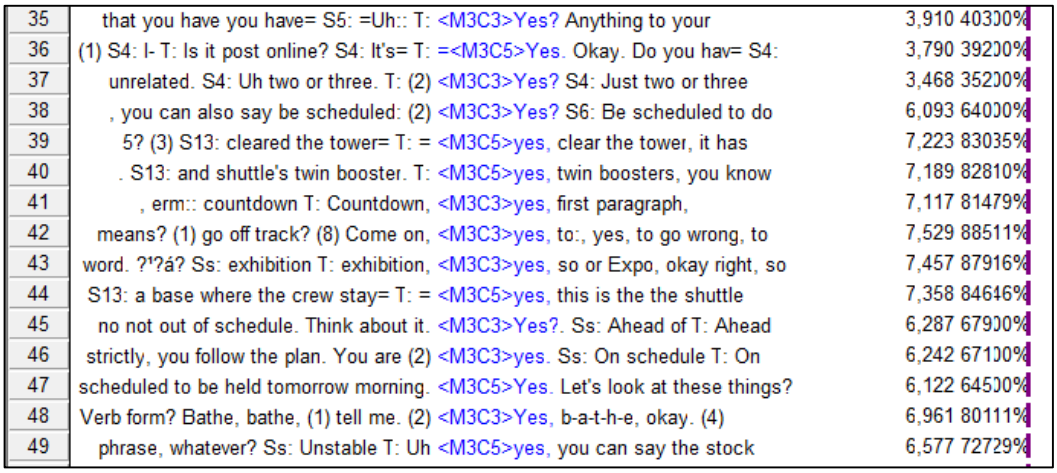
Among the great amount of objects that constitute the class of acknowledgement tokens, DMs *yeah* or *yes* are massively associated with topic shifts (Jefferson, 1983). Demonstrated in the following figure 23, the concordance examples suggest that *yeah* is often associated with the opening of teacher turns as well as with the response to the previous student's turn. Similar instances can be found in lines 42, 45, 48, 49, 50, 52. In line 53, *yeah* occurs with pause fillers like *uh* (Fraser, 1988) at clear breaks in teacher monologue which could be seen as an embedded hesitation on the cognitive level (Schleef, 2008). From line 54 to 57, DM *yeah* functions interpersonally to mark an involvement of the students in extended teacher turns.



42	, right? Ss: yes, ?ý?´ T: yeah yeah and ?ý?´<M3C3>yeah? and dictator, has a	12,975,67[illegible]00%
43	say, Emperor Qin right? is a dictator, <M3C2>yeah, is a dictator. (.) All right.	13,004,68[illegible]57%
44	Ss: ?À²ÃÕß T: yeah, ?À²ÃÕß, <M3C3>yeah, good?. so you got the	12,987,67[illegible]00%
45	dictation, right? Ss: yes, ?ý?´ T: yeah <M3C3>yeah and ?ý?´yeah? and	12,975,66[illegible]00%
46	is not the plan A right? the plan B went. <M3C2>yeah. We had a backup plan,	12,911,65[illegible]00%
47	desk, yeah, okay? then the plan went. <M3C2>Yeah. So this time is not the	12,900,65[illegible]00%
48	know dictation, right? Ss: yes, ?ý?´ T: <M3C3>yeah yeah and ?ý?´yeah? and	12,975,66[illegible]00%
49	of dictating here? (1) Ss: oral= T: = <M3C5>yeah, to tell sb sth orally an:d	12,938,662[illegible]27%
50	drive a vehicle remember? SS: Mmm. T: <M3C5>Yeah?. Okay?. So what are	13,028,68[illegible]00%
51	just give a couple of examples. Okay? <M3C3>Yeah interesting. (1) 5) I think	14,133,83[illegible]50%
52	. Whatever. Okay? S5: ((nodding)) T: <M3C3>Yeah, got it. So you have to:	14,098,82[illegible]57%
53	examples for something and uh and uh <M3C4>yeah cause and effect may be	14,261,85[illegible]47%
54	, classification, examples ah: (1) <M3C3>yeah? and what about uh okay,	14,236,84[illegible]00%
55	of understandings of freedom. Okay? (1) <M3C3>Yeah, interesting. Uh well	13,977,82[illegible]57%
56	He had wanted to to kill the the the one <M3C4>yeah who murdered his father?	13,375,73[illegible]73%
57	It's Different from previous suggestions. <M3C5>Yeah. (.)Now next?, the third?	13,223,71[illegible]00%

Figure 23. Sample concordance lines of *yeah*

Similar to the use of *yeah*, in the following selected lines (Figure 24), teachers use a *yes*-preceded shift to offer positive assessments, take over the turn and move into speakership (line 35, 36, 39, 40, 44, 49). *Yes*-preceded turns are also found to co-occur with an interruption (=) of a student turn (line 36, 39, 44).



35	that you have you have= S5: =Uh:: T: <M3C3>Yes? Anything to your	3,910 40300%
36	(1) S4: I- T: Is it post online? S4: It's= T: =<M3C5>Yes. Okay. Do you hav= S4:	3,790 39200%
37	unrelated. S4: Uh two or three. T: (2) <M3C3>Yes? S4: Just two or three	3,468 35200%
38	, you can also say be scheduled: (2) <M3C3>Yes? S6: Be scheduled to do	6,093 64000%
39	5? (3) S13: cleared the tower= T: = <M3C5>yes, clear the tower, it has	7,223 83035%
40	. S13: and shuttle's twin booster. T: <M3C5>yes, twin boosters, you know	7,189 82810%
41	, erm:: countdown T: Countdown, <M3C3>yes, first paragraph,	7,117 81479%
42	means? (1) go off track? (8) Come on, <M3C3>yes, to:, yes, to go wrong, to	7,529 88511%
43	word. ?'?á? Ss: exhibition T: exhibition, <M3C3>yes, so or Expo, okay right, so	7,457 87916%
44	S13: a base where the crew stay= T: = <M3C5>yes, this is the the shuttle	7,358 84646%
45	no not out of schedule. Think about it. <M3C3>Yes?. Ss: Ahead of T: Ahead	6,287 67900%
46	strictly, you follow the plan. You are (2) <M3C3>yes. Ss: On schedule T: On	6,242 67100%
47	scheduled to be held tomorrow morning. <M3C5>Yes. Let's look at these things?	6,122 64500%
48	Verb form? Bathe, bathe, (1) tell me. (2) <M3C3>Yes, b-a-t-h-e, okay. (4)	6,961 80111%
49	phrase, whatever? Ss: Unstable T: Uh <M3C5>yes, you can say the stock	6,577 72729%

Figure 24. Sample concordance lines of *yes*

DM *yeah/yes* functions on the structural and interpersonal levels to mark a change of speaker while acknowledging the previous LP. These results have evidenced Jefferson's (1983: 4) observation that *yeah/yes* "exhibit a preparedness to shift from recipiency to speakership". According to Jefferson (1983), in the class of acknowledgment tokens, there is a systematic distinction between the use of *mm hm* (or *mm*) and *yeah* (or *yes*) in that the former exhibits active speakership while the latter are associated with a display of passive recipiency. The following section will evidence the corpus findings of DMs observed in skills and systems mode from a CA perspective.

5.3.3.2 *CA analysis*

Defined as a modification of trouble sources, repair is an important activity in FL teaching and communication (Kasper, 1985). Different preferences for repair patterns may vary with the type of classroom activity. According to Liddicoat (2007), with questions, there is an overwhelming preference for agreement and contiguity in the answers. In language classrooms, to examine whether the teacher marks LP as preferred or dispreferred can be seen in the mechanism of *uptake* that tells if the student has contributed to the solution of the problem (Greenleaf and Freedman, 1993). Preferred responses are differentiated from dispreferred ones in that they are taken up by the teacher and become the resources to help the class move along. In skills and systems mode, the use of DMs in effect reflects how preference organisation shapes conversation. Three situations where DMs occur in this mode can be found as follows:

When a student produces a correct or preferred answer, teachers usually use third-turn receipt DMs like *yeah/yes* as an immediate assessment to confirm with the student and take up LP through repetition and exemplification/reformulation/extension:

(a) with preferred responses (correct):

T: third-turn receipt DMs + repetition + scaffolding

However, if the LP is not what the teacher has expected (dispreferred), other-initiated and self-completed repair is introduced in a step-by-step procedure as the predominant structure in language classrooms (McHoul, 1990). As shown in type (b), teachers often use non-initial turn construction unit (TCU) DMs as part of the cueing technique in repair initiation. Learners then modify their answers in order to correct what seems erroneous. If the modification is correct (a), the teacher then confirms the repair-completion (Kasper, 1985). It is often the case that in actual communication, teachers use a great amount of other-initiations to assist students to find the answer.

(b) with dispreferred responses (approximation):

1. T: other-initiation+ non-initial turn construction unit DMs (elicitation)
2. S: self-completion (response)

…

In the few cases where the LP is completely incorrect, DM *oh/no* appears in third-turn position to indicate student error directly and precede the giving of clues:

(c) with dispreferred responses (incorrect):

T: DM *oh/no*-prefaced other-initiation

Third-turn receipt DMs: assessment marker and extension preface

In the first type of preference organisation when a preferred second pair part is produced, DMs serve as third-turn receipt tokens in teacher feedback to mark an assessment and seek turn extension. DMs like *okay/yeah/yes* signal a positive evaluation of LP. The third-turn receipt DMs are often used in MWUs to stress the common ground of understanding, which is co-constructed by the participants in that the teacher provides an immediate and positive evaluation once the student answers correctly.

Discussed in Sinclair and Coulthard (1975), realisations of teacher evaluation include features like words and phrases (*yes*, *no, good*, *fine*) commenting on the quality of the reply, intonation, and repetition of the student's reply. In the preferred organisation, DMs are clues in combinations of "*okay/yeah/yes* + movement toward fuller turn" that bid for movements like repetition and scaffolding to extend current sequences (Beach, 1995). Since the conversation is tightly controlled by the teacher, DMs function to mark a change of speakership and pre-figure forthcoming and fuller turns. In excerpt 5.13, taken from an extensive reading class (teacher F), the sequence is centred on the linguistic usage of *alert to* (line 1).

Excerpt 5.13

1 T: alert somebody to ↑something alert somebody to
2 something ↑means (6) alert somebody to something
3 alert can be an adjective right okay you have to
4 stay: alert (.) cautious (.) you have to stay alert
5 now- it's it's a ↑verb alert somebody to something
6 means ↑to (1) mhm?

7 S12: to notify

8 T: **okay** ↑**yes** (2) to notify **okay** somebody of
9 approaching danger to draw one's attention to (.)
10 okay to prepare something for coming danger (.)
11 okay alert somebody to something pay attention to
12 the collocation here alert somebody (.) to
13 ↑something for ↑example (1) what he said: alerted
14 me to the potential difficulties of the job (.)okay
15 I thought this was a perfect job but he: told me
16 something I was alerted (.) to the potential
17 difficulties of the ↑job

From line 5-6, teacher F asks a display question to elicit the meaning of *alert to* in the first pair part. S12 produces a response to the teacher (*to notify*, line 7). In the third-position part, *okay* and *yes* with an upward pitch movement are combined to assess the correctness of S12's LP (line 8). The teacher then provides third-turn repeats and confirms with the

class through paraphrasing (line 9-10) and exemplification (line 11-17) while completing the on-going topical development in full.

Here is another example (Excerpt 5.14), in which teacher E tries to explain the meaning of *hit* (line 2) to the students in an extensive reading class.

Excerpt 5.14

```
1   T:   mhm I was writing for afternoon newspapers that
2        would hit the streets yeah (.)((reading the text))
3        what's the meaning of hit ↓here? (1) hit ((look
4        around the class))

5   S7:  reach

6   T:   okay reach yeah (.) arrive yeah ↑arrive the street
7        for sale (.) and: if you go to buy: an album
8        probably on the cover of that album it will be (.)
9        ten: hits of Maria Carry right? yeah ten hits it
10       means ten: most important or: erm most popular:
11       okay? erm work of arts right? yeah or: piece of
12       musical work ↓okay hits erm hit the street the
13       following afternoon yeah
```

In the above excerpt, the first pair part question (line 3) is introduced without allocating the next speaker. Then S7 volunteers herself to answer the question (line 5). Teacher E responds her with multiple DMs *okay yeah* with a micro-pause in line 6 to offer a positive evaluation to the student, alongside third-turn repeats of LP *reach* (line 6), a paraphrase *arrive* (line 6) and an example sentence (line 7-11).

From the selected excerpts, it is worth noticing that when the LP is the correct or preferred answer, third-turn receipt DMs cluster frequently in teacher feedback as overt positive evaluations (Griffin and Humphrey, 1978). Interpersonally, along with strategies like repetition and scaffoldings, DMs provide immediate confirmations towards LP. In contrast to the early observation made by Sinclair and Coulthard (1975), DMs in classrooms are accompanied with prosodic features including pauses and upward intonation rather than a high fall intonation. Structurally, DMs aid teachers to take the floor, preface additional information, and pave the way for the next-positioned matters (e.g. repetition, extension, exemplification). They are markers of active speakership (Jefferson, 1983) and pre-figure the forthcoming fuller turn to extend current topics or activities.

Non-initial TCU DMs: mitigation and repair initiation

In language-centred phases where the main learning object is the target language, DMs are associated with the *repair trajectories* (trouble + initiation + correction) (Schegloff et al, 1977). When a speaker produces a dispreferred answer, there is a need to design the turn with extra conversational work. As Greenleaf and Freedman (1993) note, teacher evaluation and preference organisation are separate dimensions in classroom discourse. With or without negative/positive evaluation, dispreferred responses are those that are neither taken up nor revised by the teacher as lesson resources to add new information. In the repair trajectories when LP is dispreferred, teacher feedback normally includes non-initial TCU DMs to mitigate and initiate the repair. In excerpt 5.15 from an intensive reading class, teacher F tries to elicit space terminology from the textbook that they have just learned.

Excerpt 5.15

1 S13: erm (2) maybe the (.) vertical motion
2 T: vertical ↑motion ↑**okay:**
3 (1)
4 S13: I think it refer to the lift-off
5 (1)
6 Tf: erm: what else?
7 S13: hmmm
8 (2)
9 T: vertical motion not <u>really</u> **because** (.) it **just** er:
10 S13: and shuttle's twin booster=
11 T: =yes twin <u>boosters</u> you know RSB twin boosters
12 beginning in the fourth paragraph near the ↑end
13 <u>twin</u> <u>booster</u>

To respond to S13's production *vertical motion* (line 1), teacher F repeats LP and uses DM *okay* with raised pitch and stretches, followed by a one-second pause (line 2-3). Though teacher F provides a positive evaluation by repeating LP (line 2), we can see that S13's production is dispreferred since it is not up taken by F as a new resource, evidenced by a delayed response (line 3). *Not really* further overtly marks the lexical wrongness of LP (9). In the other-initiated repair, DMs *because* and *just* are used by F to mitigate and give an explanation. Discussed as a hedge in Grice (1975), DM *just* is connected with negative

politeness to modify the assertion. Excerpt 5.16 illustrates a similar action from an academic writing class. Teacher B asks S15 to comment on a piece of writing which has no thesis statement in the introductory paragraph.

Excerpt 5.16

T: yeah S15 (1) how do you like this plan?

S15: er I agree with it and=

T: =how do you ↑like it (2) **you think** (.) it's: **you know** (.) **I mean** unique **or:** I don't know (.) **whatever**

S15: er I think it is a unique way to organise like this

In the first pair part (line 1), teacher B asks S15's opinion using a referential question. S15's initial answer (line 2) is interrupted and considered as dispreferred by the teacher as B repeats her initial question and requests a clarification from S15. DMs like *you think, you know, I mean* (line 3-5) with pauses forewarn of the upcoming adjustments to what has just been said (Fox Tree and Schrock, 2002). Using DMs to reformulate her previous referential question, teacher B initiates and encourages S15 to complete the repair. As Kasper (1985) claims, learners are supposed to repeat their original responses without any changes yet teachers' intervention can have a negative impact. Excerpt 5.17 demonstrates a repair caused by a hearing problem from an extensive reading class (teacher E).

Excerpt 5.17

S23: 2009 (1) erm october 1st is a: pregnant day (.) to our nation

T: I am sorry I- I **just** couldn't hear you ((laughter)) **okay** can you speak louder ↑**please**

(2)

S23: october 1st erm 2009 (.) is a pregnant er date to our nation

T: october 1st 2009 (.) is a pregnant date (.)to our nation ((smiles)) yes you- you- you talk about this day is very meaningful to our nation but (.) pregnant is just not used in that way I am sorry I should have made it more er ↑clear

In the above excerpt, teacher E asks S23 to speak louder due to hearing problem (line 3-5). In the repair initiation (line 3-4), the use of a number of DMs (*just, okay, please)* and laughter suggests the teachers' interactional work to avoid/soften the face-threatening act of requesting or criticising (Aijmer, 2002).

DM oh/no-prefaced other-initiation

In a few instances where the LP is incorrect, multiple sayings of *oh* or *no* with intonation contours are produced in third-turn position to initiate the other-initiated self-repair. In Stivers (2004), multiple sayings are a resource speakers have to display that their turn is addressing an in progress course of action. In excerpt 5.18 teacher D initiates a series of *oh* (line 3) as one change-of-state token (Heritage, 1984) in response to S22's misspelling.

Excerpt 5.18

```
1  T:   how do you spell essential (.) S22
2  S22: ◦hm◦ e s s i=
3  T:   =oh: oh oh oh oh.
4  S22: >er er ↑er< e s s ↑e n t i a l
5  T:   ↑okay e s s E n not an i n all right? (1) essential
6       (.)essential fact of our time
```

In excerpt 5.18, rather than an *oh*-receipt to acknowledge prior repair initiation (Heritage, 1984), here teacher B uses DM *oh* in multiple units with stretch, emphasis and falling intonation to initiate the repair and to suggest his orientation to the students. Apart from non-discourse marking use on the proposition level, there is a separate sense of DM *no* functioning as third-position repair initiator (Schegloff, 1992; Lee-Goldman, 2011). Similarly, excerpt 5.19 shows a multiple sayings of DM *no* (line 6) to suggest that S11's LP is incorrect therefore dispreferred. Accompanied with gestures like laughter (line 6) and prosodic features such as stress and micro-pause, *no* starts the repair initiation and prefaces a clarification request (7) till S12 answers correctly (line 8-9).

Excerpt 5.19

```
1  T:   okay ↑what is the opposite to on schedule (.)if you
2       do ↑something before the ↑deadline you ↑are:: (2)
3       you do something before the (.) time limit before
4       the deadline you are: (2) just-
5  S11: out of
6  T:   no (.)((laughter)) no not out of schedule (.)
7       ↑think about it (.) yes?
8  S12: ahead of
9  T:   ahead of schedule that's right (.)
```

5.3.3.3 *Interactional features in relation to pedagogical agenda*

Skills and systems mode is a language-centred phase featuring teachers' tight control of turns. Therefore, no topic development can be observed (Seedhouse, 2004). Turn-taking and topics are centred on the target language on accuracy rather than fluency. Teacher-student interaction therefore follows a lockstep structure and IRF sequence (Walsh, 2006). Playing an important role in terms of preference and repair organisation, DMs contribute with other interactional strategies in corrective feedback. Interactional features of DMs in this mode therefore differ according to the preference organisation. When LP is correct or preferred, teacher feedback involves a large amount of DMs in third-turn position as overt positive evaluations. Repetition and scaffolding are the predominant strategies to take up learners' contributions as resources in class:

- Third-turn receipt DMs provide overt positive evaluations
- DMs preface extended teacher turns
- Teachers take up LP as resources in class

However, in response to learners' approximate or dispreferred answers, DMs occur in non-initial TCU position to mitigate and initiate the repair. Negative feedback requires more interactional work to handle the error and avoid loss of face (Walsh, 2006). Other-initiated repair helps learners make more effort to build their answers in order to achieve what the teacher has in mind (preferred). Teacher-initiated repair is designed to be completed by learners and confirmed by the teacher:

- Non-initial TCU DMs occur in other-initiated self-repair
- DMs mitigate and cue other initiation
- Repair-completion is confirmed by teachers

As discussed above, the interactional features of DMs are oriented towards learners' accurate mastery of the target language in terms of linguistic forms. The occurrence of DMs in this mode is related to preference organisation, repair and corrective feedback. Therefore, the use of DMs is in effect in line with the following pedagogical goals of skills and systems mode:

- To encourage learners to produce correct forms by other initiation
- To enable learners to manipulate the target language
- To provide corrective feedback
- To provide learners with practice in sub-skills
- To assess/evaluate learner production

5.3.3.4 *Summary*

In skills and systems mode, the occurrence of DMs is determined by local interactional organisation and related classroom pedagogy. CL analysis suggests that most DMs in this context occur in the interactional category (42.1%). Keyword list searches and concordance analysis suggest that more DMs are found as evaluation markers (*yeah/yes*). In this mode, DM *okay* still ranks in the first place with the highest occurrence (216), of which 64.4% is distributed in declarative form rather than interrogative form.

In the CA analysis, the use of DMs is largely connected with preference and repair organisation. LP is subject to teacher evaluation in terms of linguistic skills. The use of DMs is in a tightly-controlled turn-taking system. In cases when LP is correct or preferred, multi-unit DMs appear in third-turn position to offer overt positive evaluations. What's more, the teacher then takes up the preferred answer through repetition and scaffolding to add new resources. Nevertheless, if LP is considered as dispreferred by the teacher in the sense that it is close to but not what the teacher has in mind (approximation), non-initial TCU DMs function to initiate and mitigate the other-initiated learner-repair. There are instances when learners produce incorrect answers. It is found that DM *oh/no* prefaces other-initiated repair in multiple sayings. In this case, DMs play an important part to clue the learners to find the correct answers with a hedging function to mitigate face threatening acts (Aijmer, 2002).

To sum up, the use of DMs in teacher feedback reflects teachers' endeavour in helping learners to build their contributions towards accuracy. It is in teachers' handling of repair organisation that the learners realise the problems and this thus arguably contributes more to SLA (Walsh, 2006).

5.3.4 *Classroom context mode*

After discussing the patterns relating to DMs in managerial, materials and skills and systems mode, this section now moves on to the last mode: classroom context mode. In this mode, as the main pedagogical aim is to maximise the opportunities for interaction, the pedagogical focus shifts to the expression of personal meaning and promotion of fluency (Seedhouse, 1996). In contrast to skills and systems mode, the management of turns and topics in classroom context mode is determined by the local context (Walsh, 2006, 2011). Therefore, in this mode, there is a major change towards a less narrow and rigid interactional organisation. Learners are given more interactional space to talk about their "immediate environment, personal relationships, feelings and meanings, or the activities they are engaged in" (Seedhouse, 1996: 118).

Compared to other modes, the role that the teacher plays in classroom context mode is less prominent, in order to ensure that sufficient space is allocated to the students. The teacher attempts to listen and support the students (Walsh, 2006). The appearance of DMs in classroom context mode is situated in the interaction which resembles ordinary conversation more in terms of sequence organisation.

5.3.4.1 *CL analysis*

Similar to the previous distributional patterns of DMs in other modes (Figure 16), DMs in classroom context mode occur mostly in the interpersonal category (47.5%), followed by the structural (20.7%) and the referential (14.1%) categories (see Table 26). The multi-functional category has 9.4%. The cognitive category has the smallest percentage (8.3%). Considering the fact that DMs occurring in classroom context mode account for only about 18% of their total occurrences, DMs contribute significantly (47.5%) on the interpersonal level, compared to other modes.

Code	Functional paradigm	Freq.	%
C1	Referential	133	14.1
C2	Structural	195	20.7
C3	Interpersonal	448	47.5
C4	Cognitive	78	8.3
C5	Multi-functional	89	9.4
Total		943	100

Table 26. Distribution of DMs in the functional paradigm in classroom context mode

The keyword searches in table 27 present the most frequent DMs in classroom context mode. DM *okay* is the most frequent with 196 occurrences, among which 54% (106) is in

declarative form while 46% is in interrogative form. DM *so* ranks in the second place (101). The other top five DMs include *right* (98), *and* (84), and *yeah* (76). It is found that about 95% of DM *right* is in interrogative form (93). The other DMs are *you know* (71), *because* (29), *but* (26), *kind of* (25), and *like* (25). Notice that from DM *because*, there is a fall in numbers to fewer than 50 occurrences. In classroom context mode, there are only seven occurrences of *yes* as opposed to 41 in skills and systems mode. All together, the results from keyword lists in this mode parallel that of materials mode, in terms of lexical choice, word rank, and distribution in different forms (see Table 18).

No.	DMs	Freq.	%
1	okay	196	1.89
2	so	101	0.95
3	right	98	0.92
4	and	84	0.79
5	yeah	76	0.72
6	you know	71	0.67
7	because	29	0.27
8	but	26	0.24
9	kind of	25	0.23
10	like	25	0.23

Table 27. Top 10 DMs in classroom context mode

Concordance analysis further displays the multi-functionality of DMs with a closer examination of the co-contexts. Take DM *okay* for example (Figure 25). As the previous discussion in managerial mode reveals (Section 5.3.1.1), *okay?* appears constantly in teacher procedural talk in MWUs to check progress or comprehension. However, in classroom context mode, the concordance examples demonstrate a different application of *okay?*. The samples lines of *okay* (line 72, 73, 75, 76, 79, 82) involve the participation of both sides (teacher and student) in a turn transitional environment (Beach, 1995). The recipient's (teacher) *okay* to a large extent serves as an acknowledgement token to respond to previous turns. It signals the presence of the teacher as a listener without necessarily taking the floor and possesses an important interpersonal function.

71	S23: Uh several kinds. T: Several kinds. <M4C3>Okay, that's classification= S23	9,300,043 8%
72	fish then that's our classification. T: <M4C5>Okay?. So you classify ways	9,284,039 00%
73	T: [process] S22: Yeah process. T: <M4C5>Okay?. So that's process and	9,365,056 00%
74	are used. So classification?, definition. <M4C3>Okay. Go on. S22: And then	9,349,053 00%
75	go on to the definition of each kind. T: <M4C5>Okay?. So, that counts.	9,332,048 00%
76	we use definition and uh contrast. T: <M4C5>Okay. So two expositive	6,787 776 00%
77	is pessimist and what is opti (.)mist. T: <M4C3>Okay?. S14: And we use	6,778 774 00%
78	you?. Now next. S14: Uh I I (...) T: <M4C3>Okay. S14: Our topic is about	6,764 772 00%
79	define the pessimist and optimists. T: <M4C5>Okay. okay. So the definition	7,118 801 00%
80	and some people will blablabla. Hhhh T: <M4C3>Okay. S14: And then, likewise,	7,058 797 00%
81	and comparison and contrast. <M4C3>Okay. S14: Yes and uh our	6,795 779 00%
82	be included in the examples. T: O:kay?. <M4C3>Okay so you will- you will add	6,609 743 9%

Figure 25. Sample concordance lines of *okay*

5.3.4.2 *CA analysis*

CL analysis observes a different use of DMs, especially *okay*, in different types of interactional organisations. This section therefore seeks to examine DMs more closely in the context. In conversation, participants are observed to attempt to maintain the conversation flow by routinely using self-oriented comments to demonstrate their active, supportive and polite listenership (Svennevig, 1999). The listeners' responses are often referred to as acknowledgment tokens or backchannels. Gardner (2001) distinguishes four sub-classes of backchannels, namely continuers (e.g. *mm, uh huh*), acknowledgment tokens (e.g. *mm, yeah*), newsmakers and change-of-activity tokens (e.g. *okay, right*). In Jefferson (1983), *yeah* exhibits a readiness for speakership while *mm hm* signals a display of passive recipiency.

In classroom context mode where *meaning-and-fluency* is the focus, free-standing DMs with upward tones (e.g. ↑*okay* and ↑*yeah*) occur frequently at TRPs to signal the recipient's recognition and management of interpersonal relations. Recipients' DMs function as more effective response tokens with a greater variety of pragmatic discursive functions than vocalisations like *mm hm* (Knight, 2011). Therefore, stand-alone DMs are used in TCUs as minimal contributions to mark active listenership desiring the learner's floor-holding to continue (McCarthy, 2003; Knight, 2009; 2011)

Free-standing TCU DMs: acknowledgement and floor-yielding tokens

To demonstrate how DMs perform in classroom context mode, the following excerpts 5.20 and 5.21 are chosen from two academic writing classes:

Excerpt 5.20

1	T:	okay (.) very interesting uh any ↑question (1) any
2		question (3) any ↑question or any comment (1)
3		↑comment (1) any ↑comment (.) yes
4	S3:	there is some- some problem
5	T:	↑**okay**
6	S3:	uh with uh their classification
7	T:	↑**okay**
8	S3:	of animals uh the insects is not the uh the- the- I
9		mean the (.) the the standard is not consistent
10		(.)
11	T:	↑mhm how

Excerpt 5.21

1 T: now your group (1) yeah

2 S5: uh (2) uh our task is to uh mix (2) cause and
3 effect

4 T: ↑**okay**

5 S5: uh with uh some other methods uh we choose the
6 topic of volunteer work uh:(2)uh doing volunteer
7 work has uh has the following uh three effects (.)
8 and uh first of all I want to uh make a definition
9 of volunteer work (.) [at the] very beginning

10 T: [**okay**]

11 T: ↑**yeah**

12 S5: and then in the: in the following part I want to
13 add some examples to support the uh the effect:

14 T: ↑**okay**

15 S5: to the readers

In the above excerpts, DMs are used as bridges between units. Upward-toned o*kay*/*yeah* appear free standing to signal passive recipiency. DMs do not occur anywhere but at the boundaries of TCUs to demonstrate that one unit has been received and that another is now awaited. Learners treat it as a signal to continue (Beach, 1995). Though stand-alone DMs function in a similar way as *mm hm*, they also appear to prefigure a movement towards a fuller turn, which corresponds with Beach's (1995) observation of next speaker's treatment of *okay* as attempts at closure. Excerpt 5.22 is from an extensive reading class by teacher F.

Excerpt 5.22

1 S1: it describes the (.) explosion of the space shuttle
2 challenger (.) and and the (.) the catastrophic (.)
3 failure

4 T: ↑**okay**

5 S1: and the author's uh: (1) sorrow about this=

6 T: =okay first of ↑all it's about: the catastrophic
7 failure (.) of the space shuttle challenger and
8 also (.) it's about the writer's ideas right? (.)

In excerpt 5.22, the teacher uses *okay* in line 5 to make her next contribution on hold before moving towards her full elaboration (line 6-8). The free-standing *okay* signals a momentary solution that teacher F withholds before achieving next-positioned matters (Beach, 1995).

5.3.4.3 *Interactional features in relation to pedagogical agenda*

In contrast to the form-and-accuracy context examined previously in skills and systems mode, the use of DMs in classroom context mode demonstrates different patterns in sequential organisation as classroom pedagogy shifts. It is clear that, in this mode, more interactional spaces are allocated to the learners in order to maintain a genuine communication (Walsh, 2006). One of the pedagogical goals is to maximise the opportunities for interaction. The role of the teacher is hence less prominent and more supportive, which can be reflected in the following interactional features that DMs are associated with:

- Free-standing TCU DMs as minimal responses in teacher talk
- Extended learner turns are acknowledged and encouraged by DMs
- DMs demonstrate active and supportive listenership
- Short teacher turns with little or no intention to take over the floor

Free-standing TCU DMs have an important interpersonal function as acknowledgement tokens, with higher speakership incipiency than non-lexical utterances like *mm* (Lambertz, 2011). DMs serve as minimal responses to demonstrate engaged or active listenership. In the dynamic environment of language classrooms, they are effective recognitions to signal teachers' comprehension and orientation towards the learners. The affiliated pedagogical goals therefore include the following aspects:

- To enable learners to talk about feelings, emotions, experience, attitudes, reactions, and personal relationships
- To maintain genuine communication
- To promote oral fluency

Little or no teacher intervention ensures that students feel free and invited to talk about their personal meanings. Teacher feedback is more about appreciation of LP rather than evaluation. Minimal responses encourage learners to keep the floor while maintaining a supportive interpersonal relationship. The goal of developing the oral fluency of the students is promoted and achieved through the co-construction of interactional space between teacher and student.

5.3.4.4 *Summary*

To sum up, in classroom context mode where meaning and fluency is the focus, the use of DMs aligns with the pedagogical aims. Among the four modes, classroom context mode has the highest percentage of DMs representing the interpersonal category (47.5%). Though keyword lists display a similar lexical choice to that of materials mode, concordance and CA analyses uncover the divergent functions they perform in micro-contexts.

In the CA analysis, one reoccurring pattern discovered is upward-toned DMs as free-standing TCUs in minimal responses. They serve as acknowledgement and floor-yielding tokens linked to active listenership. Observed in Sinclair and Coulthard (1975), acknowledgement tokens are realised by a set of acts including DMs *yes/okay*, vocalisations *mm* and certain non-verbal gestures. In classroom context mode, DMs are effective response tokens performing in multiple domains. Appearing mostly at the TRP as backchannels, DMs not only ensure an engaged communication with teachers' orientations towards the students, but also signal null intention to take over the conversational floor.

Therefore, the use of DMs in classroom context mode has a positive impact on realising its interactional features and pedagogical goals. DMs acknowledge and encourage extended learner turns while minimising teacher contributions. Through creating an active and supportive interpersonal relationship, DMs in minimal responses make the students feel free to talk about their personal meanings. The interaction is designed in such a way that it reflects teachers' endeavour to keep conversation flowing and promote the oral fluency of the students.

So far section 5.3 has described the results obtained from a multi-layered analytical approach (see the section summary in Table 28). It began by investigating DMs from a lexical-grammatical perspective using CL and arguing that there is a reflexive relationship between teachers' use of DMs, interactional organisation and classroom pedagogy. It went on to suggest that the use of DMs in Chinese college EFL teacher talk varies in different micro-contexts by conducting a tripartite analysis on the salient DMs in a mode-by-mode manner. In the next section, it will be further argued that teachers' use of DMs, classroom interaction, and pedagogical purpose are interwoven and closely related to each other.

5.4 Modes compared

So far, the characteristics of DMs in different micro-contexts have been identified in terms of lexis and grammar (CL), interaction (CA) and classroom pedagogy (L2 classroom modes analysis). Marking each mode's characteristic fingerprints, DMs have displayed their multi-functionality in classroom interaction. Comparing the results from different modes, it can be seen that there is a systematic deployment of DMs by Chinese college EFL teachers, which is largely affected by factors like registers, teaching strategies, interactional organisation and classroom pedagogy.

Quantitatively, the trend in the distribution of DMs is in line with that of the modes (Figure 11, Section 5.2.1). As the word count of modes increases, so does the number of DMs. As previous figure 16 (Section 5.3.1.1) shows, materials mode has the highest amount of DMs. However in terms of mode constitution, it is the managerial mode, which deals largely with classroom management activities, that has the highest proportion of DMs. These results hence provide empirical evidence to the discussion of DMs as important transition or boundary markers in the literature (Sinclair and Coulthard, 1975; Walsh, 2006). In contrast to Maschler's (1998) observation that DMs have the largest occurrence in the referential-textual category in casual Israeli Hebrew conversation, DMs are mostly employed by Chinese college EFL teachers in the interpersonal category (Figure 16). By comparing the patterns of DMs in different classes, this section reveals how factors like teaching strategies and interactional organisation can affect the application of DMs. In CCECC, two teachers (teacher E and F) in the corpus happened to teach the same reading material, i.e. "Lesson 14 Space Shuttle Challenger" from *Contemporary College English* (Yang, 2009). Though both teachers taught the same material with a similar teaching progress, figure 26 shows two heterogenic pedagogical orientations reflected in their use of DMs.

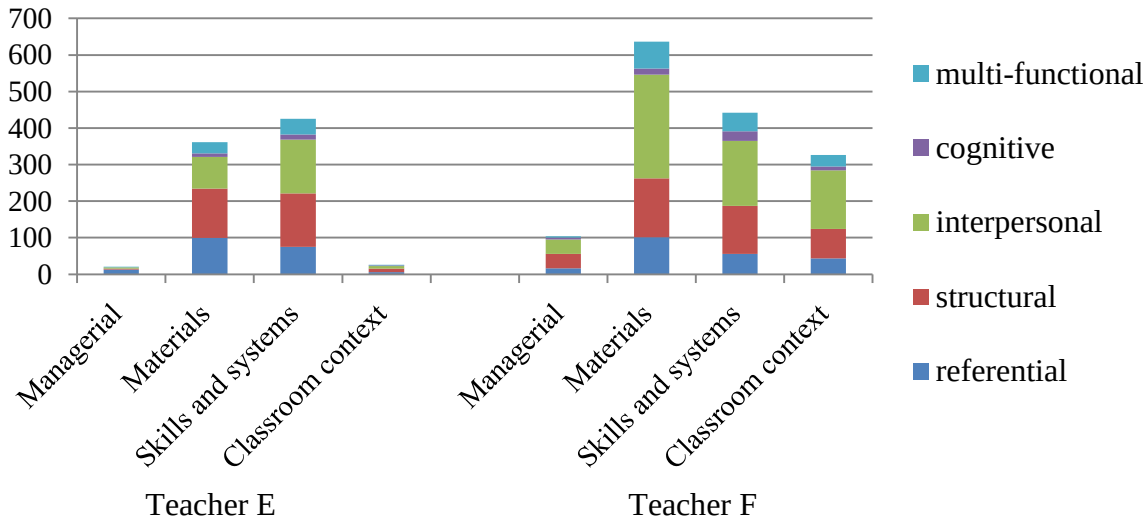


Figure 26. Comparing distributions of DMs in two intensive reading classes

The occurrences of DMs that teacher E and F deploy are 833 and 1508 separately. As figure 26 shows, the number of DMs that teacher F uses is almost twice that of teacher E. Given the same amount of lesson time (90 minutes), it is obvious that the utterances that teacher F has produced are significantly higher than teacher E. Most DMs used by E are in skills and systems mode (51.1%), followed by materials mode (43.3%). In other words, in E's class, DMs contribute mostly to help learners practice language skills, which is also the main pedagogical focus of her class. Therefore, in E's class, there is little space left to maintain a genuine communication in classroom context mode (3.1%). However, in teacher F's class, there is more variation in the functional distributions of DMs. 42.1% are found in materials mode, and 29.3% in skills and systems mode. To F, developing an understanding of the teaching materials is central in class. In addition, DMs help open more interactional spaces (classroom context mode, 21.6%). In the following excerpts 5.23 and 5.24, CA analysis shows how teachers E and F demonstrate the target content of *orbit* to their students with divergent pedagogical orientations.

Excerpt 5.23

1 T: what is it orbiter? (1) you have orbit (.) you have
2 orbiter (.) what is an orbiter

3 (3)

4 S13: a base where the crew stay=

5 T: =**yes** this is the the: shuttle orbiter where the
6 crew stay (.) the orbiter

Excerpt 5.24

1 T: ↓**now** (.) erm: what does it refer to here (.) it
2 took for a shuttle (.) to reach orbit (.) it refers
3 to: (2) erm: (1) erm S27 it refers to:

4 S27: erm refers to the shuttle to reach orbit

5 T: **yeah** to reach orbit **right? yeah** to reach orbit **yeah**

In excerpt 5.23, teacher E focuses on the noun form of the lexis. Her referential question is to seek the meaning of *orbiter* from the students. Teacher E then evaluates S13's answer as correct (*yes*, line 5) and takes up LP. Though having the same material, teacher F's prompt in excerpt 5.24 is to ask after their understanding of what *it* (line 1) refers to in the paragraph. The DMs in her feedback move (line 5) acknowledge S27's production while checking the understanding of the whole class. Despite their similar functions in both structural and interpersonal categories in above excerpts, DMs are used by two teachers to realise different pedagogical goals through different types of interactional organisation.

5.4.1 *The case of okay*

The study has demonstrated that the relationship between form and function of DMs is not so clear-cut due to their high multi-functionality in interaction. However, "in many cases specific forms do have a tendency of adopting one function more frequently than others" (Knight, 2009: 50). Considering both quantitative and qualitative aspects, this section takes DM *okay* as an example to demonstrate how its form and function vary by comparing different L2 classroom modes.

Figure 27. Distributions of *okay* and *okay?* in the spoken corpus

The total occurrence of *okay* in CCECC is 876. CL and CA results both suggest that there are two forms of *okay*, i.e. declarative *okay* and interrogative *okay?*. As figure 27 (above) shows, the two forms share a similar percentage in use. *Okay* in statement form takes over half of the total number (53%) while *okay* with a question mark (*okay?*) has 47%. According to Beach (1993: 132), further investigation into the application of upward-intoned and tag-positioned *okay?* needs to be carried out, as it "possesses a different phenomenal status, occurring frequently, and are variously ordered in their own right".

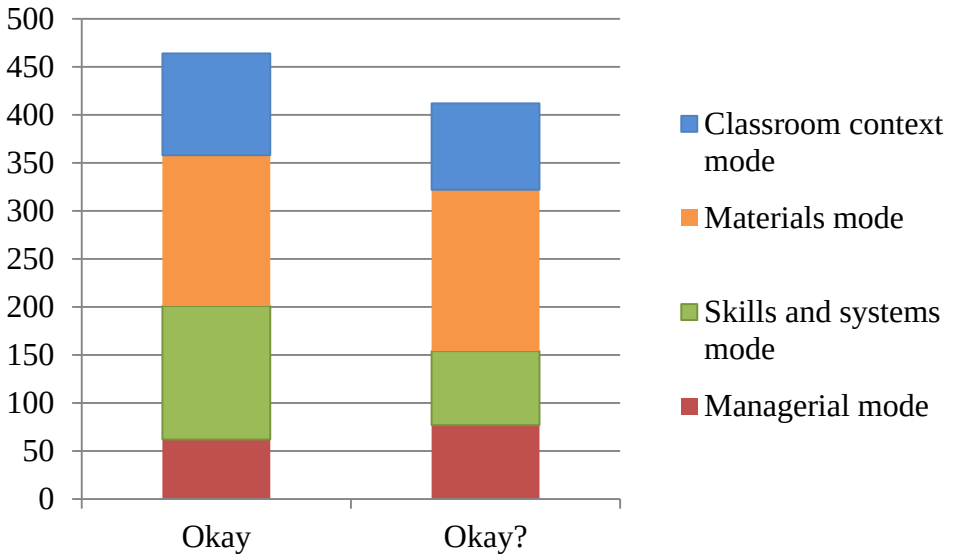


Figure 28. Comparing distributions of *okay* and *okay?* across the modes

Figure 28 reveals the dispersed distributions of the two forms of *okay* in different modes. The comparison shows that both forms are largely located in materials mode (157 and 168 occurrences separately). It shows that in Chinese college EFL classrooms, DM *okay* is largely applied by teachers to interact with students in order to work on the comprehension of the target materials. Statement *okay* has a relatively balanced distribution in materials (157) and skills and systems mode (139). *Okay?* has a greater amount of occurrences in managerial mode (77) than *okay* (66) (see detailed discussion in section 5.3.1). Compared to interrogative *okay?* (90), *okay* appears more in classroom context mode (106). In classroom context mode, *okay* in statement form serves as an explicit acceptance indicator in teacher response or feedback to signal the students to continue with the turns and encourage their production (Section 5.3.4).

All in all, CL analysis suggests an apparent distributive difference between the two forms of *okay* in the modes. The following content then probes into how their functions vary by comparing the two forms in different L2 micro-contexts.

Okay? in materials mode

CL results indicate that interrogative *okay* with a question mark (*okay?*) mostly occurs in materials mode (41%). In this mode, typical features include extended teacher turns and a large amount of DMs. *Okay?* functions as a confirmation check for comprehension as part of the characteristics of modified interaction (Kumaravadivelu, 2006). In excerpt 5.25, two *okay?* are applied in teacher D's explanation on how the author compares his education to the process of construction.

Excerpt 5.25

```
1  T:   that's the two steps (.) first (.) you clear the
2       ground (.) and then (.) you (.) build (0.1) the thing
3       (.) in your: (0.1) mind okay? You build the thing (.)
4       in your mind (.) so the author means (.) he- here is-
5       is an- an aNALOGY (.)Remember analogy? >some kind of
6       comparison< analogy: okay? uh he is comparing: his
7       uh education to: >the two steps of his education< to:
8       you know (.) °uh building something (.) on (.) the
9       ground
```

Okay? (line 3, 6) signals a comprehension check and partition of information stages (Othman, 2010). The pedagogical purposes associated with tag-positioned *okay?* are to help learners understand the target material and to maintain a constant rapport between teacher and student, by checking students' understanding.

Okay in classroom context mode

The precious excerpt demonstrates how integrative *okay?* is used in tag position as an anaphoric comprehension check. In classroom context mode, statement *okay* occurs more often as minimal responses, signalling an acknowledgement as well as a state of readiness to transition (Beach, 1995). The following excerpt 5.26 is one example:

Excerpt 5.26

1	S1:	when I was in high school I went to travel in
2		the Mongolia (.)in some of the location (.) and
3		people there who live in the countryside (0.2)
4		have houses made on uh mud
5	T:	↑**okay** in the Mongolia (.) I thought Mongolians
6		(.) they always live in tents
7	S1:	they are not nomad people (.) they are peasants=
8	T:	=↑**okay** >all right all right< (.)

In this excerpt, the teacher connects the "outside world" beyond the classroom with the concept of *mud huts* in the textbook, i.e. a traditional house that African people used to live in, and invites the students to contribute their personal experience. S1 then narrates her personal story of seeing people living in mud huts in Mongolia (line 1-4). The teacher uses two upward-toned ↑*okay*s (line 5, 9) at S1's possible turn completion position. Interpersonally, ↑*okay* marks an acknowledgement of S1's production without necessarily agreeing with her. Structurally, it helps the teacher to gain the floor and get the topic back on track. The second ↑*okay* (line 9) with DM *all right* interrupts S1's further contribution (line 7-8) and closes up the possible continuation of the current topic.

DMs *okay* and *okay?* both distribute equally in the spoken corpus (each about 50%), though with various functions in different micro-contexts. The functions of the two forms overlap yet differ from each other. *Okay*? functions more as a comprehension check in materials mode whilst *okay* serves largely as an acknowledgment token in classroom context mode.

As has been discussed in the literature, DMs do not form a unified syntactic or grammatical class but are rather linguistic expressions gathered from different classes (Fraser, 1999; Schiffrin, 1987).The traditional division of grammatical and pragmatic competence in the use of DMs therefore needs to be questioned (Ariel, 1998). The interplay between form and function of DMs, observed by Ariel (1998), is not opaque or arbitrary but a well-motivated and related specialisation. As Schleef (2008: 81) points out, the use of DMs in lecturers' speech in effect depends on "the academic tasks performed and the ways that different content is mediated when instructors present a lecture in fresh talk."

5.5 Deviant cases

The practice of deviant case analysis has been stressed in the methodology of CA (Hutchby and Wooffitt, 2008; Sacks, 1992; ten Have, 2007). The examination of deviant cases is a procedure for analysing any instances that do not fit into the normative pattern, as an important part of "analytic induction" (ten Have, 2007: 37). Identifying deviant cases is hence essential for assessing the validity and generality of the phenomenon studied.

According to Maschler (2009), all utterances are simultaneously constrained by the context. DMs are no exception. There are a number of ambiguous instances in the corpus that pose problems for identification. Particularly in procedural talk without next-turn evidence, "a speaker may carry on a metalingual dialogue with himself" (Maschler, 2009: 204). In excerpt 5.27, an 18-second pause (line 2) is observed in teacher A's talk in his academic writing class.

Excerpt 5.27

```
1   T:   and: finally (.) let me move on to something uh
2        (18) ((looks for PowerPoint)) probably I didn't
3        save it in the last minute (.) therefore some some
4        of the things were missing (.)↑okay(.)I am sorry
5        (1) but what I was going to say here is a few
6        things
```

In this excerpt, the teacher holds the floor while looking for the missing slides. In this transitional phase, DM *okay* with rising intonation (line 4) has a cognitive aspect as part of the self-dialogue and brings the prior actions of searching to a closure. Yet there is no prior speaker to whom this token responds. *I am sorry* (line 4) follows to apologise to the students. Due to their multi-functional nature, DMs can often be ambiguous instances especially when performing across different contextual realms. These instances are therefore "instructive for understanding the connections between the functions" (Maschler, 2009: 193). A similar example can be found in the following excerpt 5.28 taken from an extensive reading class:

Excerpt 5.28

```
1   T:   and how was the report sent wire to the agencies
2        (.) to the auditors on line (.) on the wire
3        (20) ↑okay and then uh uh:: how about (.) uh how
4        did they edit the story I mean how did they edit
5        through running a running copy
```

In the above excerpt, a 20-second pause (line 3) suggests a failure of teacher E's first pair part question to elicit a response from the students. She then reformulates and moves to

another question prefaced by *okay and then*. DMs here perform in multiple dimensions including responding to the previous silence, marking a transition, and signalling a cognitive process of formulating the upcoming utterances followed by *uh uh::* (line 3). In situations when multiple DMs cluster, it can be difficult to separate and decide the grouping, especially in multiple sayings. Excerpt 5.29 displays an example of different DMs in MWUs. The lack of continuousness of utterances as well as LP makes it difficult to cluster the DMs in line 2 and line 6-7. The decision is therefore subject to the researcher's judgement based on marked prosodic features and classroom observation.

Excerpt 5.29

1 T: Nelson Mandela (.)right? he is also a firm leader
2 >**yeah yeah yeah**< **because** you cannot please all the
3 people all the time so you have to be firm in what
4 you believe in (.) what you think is right right?
5 you can only (.) you can only please some people
6 (.) and: some of the time (.) **right?** (.) **yeah** ↑**okay**
7 **now** (.) **but** erm: there were no such problems today
8 yeah?

Finally, there are a few occasions when the use of DMs can be contradictory and divergent from the pedagogical goals. In excerpt 5.30 taken from an academic writing class, teacher A and S1 are having a discussion about S1's methodology section.

Excerpt 5.30

1 S1: and how uh how do you do with these figures or some
2 other get to that=

3 T: =**yeah** you take yourself as an example **right?** the
4 ben- benift of the entire class **and:** try to tell us
5 (.) **now** how your understanding of this should be
6 approached

7 S1: my methodology is totally a failure ((laughs))

8 T: why so?

9 S1: uh you said that uh: ((laughs))

10 T: it's not what I said (.) **please** (.) tell us (.) **now**

Yeah (line 3) interrupts S1's question and redirects S1 to elaborate her personal understanding of the methodology instead. The use of imperative with *and*, *now* (line 4-5) detaches the teacher's turns from his pedagogical goal in classroom context mode. It is treated as a face threatening act towards S1 evidenced by *my methodology is totally a failure* in line 7. Though teacher A attempts to reallocate the floor through mitigation, S1's LP is interrupted and asked to resume by the teacher's use of *please* and *now* (line 10).

5.6 Sequence maps of DMs in EFL teacher talk

Previous discussions of DMs in Chinese college EFL teacher talk have covered both the micro and macro contexts. When working with verbatim transcripts, however, there seems to be a lack of description that depicts larger patterns of DMs across a series of interactional episodes. Transana provides a platform for facilitating the transcription and analysis (See Section 4.4.2). This section therefore explores a dynamic representation of the chronological distribution of DMs in EFL teacher talk using Transana.

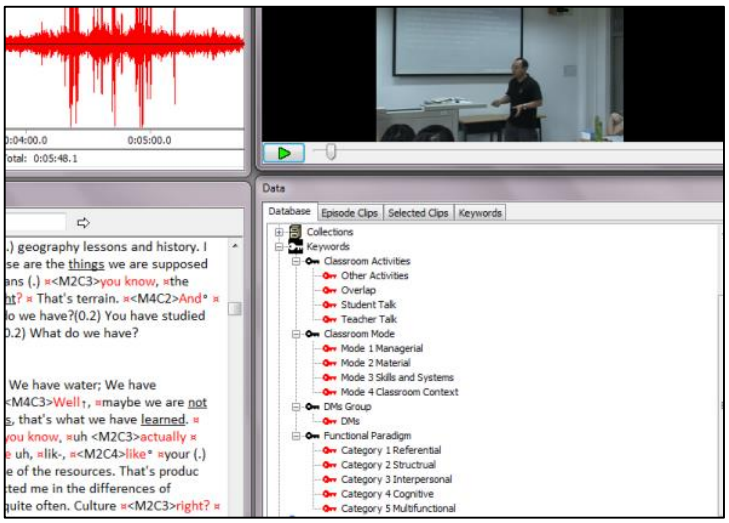


Figure 29. Snapshot of keyword creation in Transana

By creating keywords and applying those keywords to clips, Transana makes sequence maps to present a visual display of keywords for episodes. In order to create the keyword maps of DMs along other features of the EFL classroom, a series of related keywords is coded using a sample of a 45-minute intensive reading class (see Figure 29). The creation of keywords aims to include dynamic information such as classroom activities (teacher talk, student talk, and other activities), modes, DMs, and their distributions in the functional paradigm. The keyword maps generated by Transana can be seen in the following figure 30:

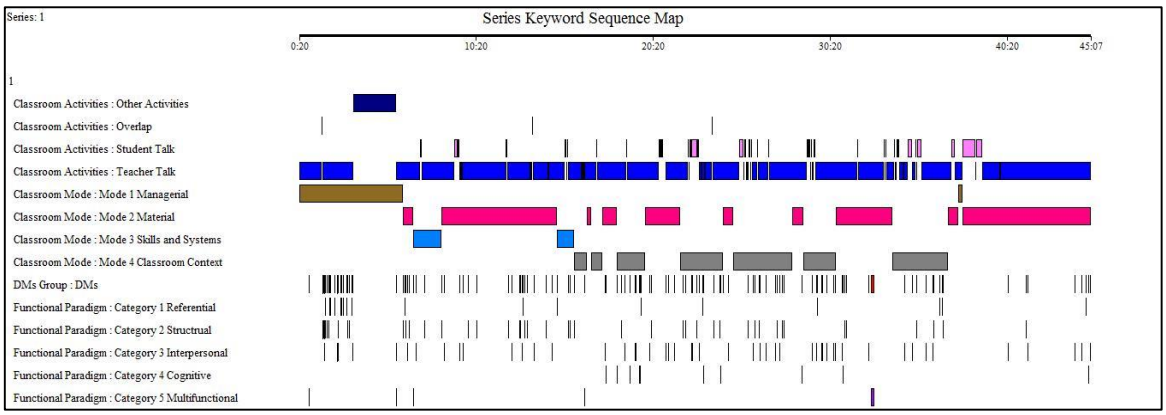


Figure 30. Series keyword sequence map of the sample class

The horizontal timeline corresponds to how keywords are applied to each clip, which is represented by a coloured bar. The maps are interactive in that they can be zoomed in to see short clips. The detailed information on the sample sequence map can be found in appendix H. Figure 31 displays an example of the distribution of DMs in managerial mode (brown coloured bar) at the beginning of the sample class. As the episode timeline of the teacher talk (dark blue coloured bar) stretches (0:10-3:20, 5:40-6:10), DMs occur evenly throughout the episode, particularly the beginning and end of the teacher's turn. This map supports previous CA findings in managerial mode that DMs perform in multiple realms, notably in turn-preface and pre-closing positions (Section 5.3.1).

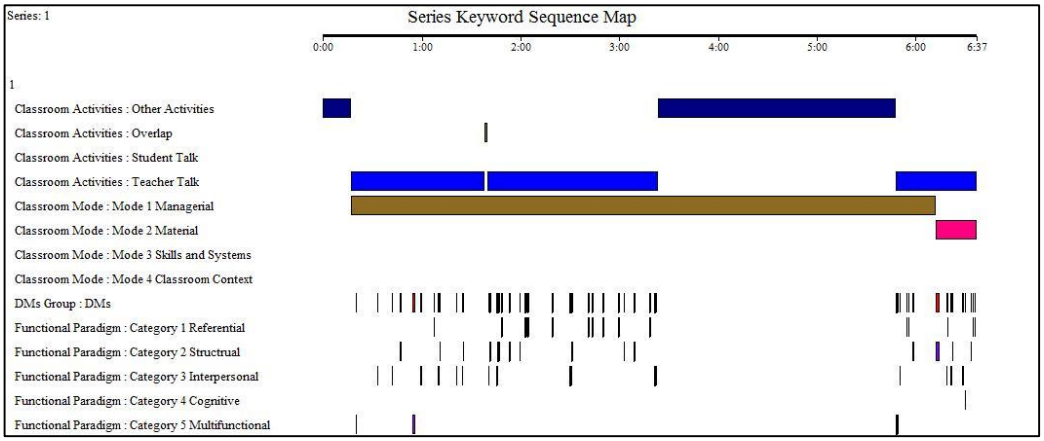


Figure 31. Sequence map sample of DMs in managerial mode

The keyword map then demonstrates a different representation of DMs in materials mode. In figure 32, materials mode is coloured as the pink bar with student talk as purple and teacher talk as dark blue. As the materials mode episode progresses, the occurrence of DMs distributes relatively unevenly in a large chunk, immediately before and after student talk. The observation indicates that in this mode, the use of DMs seems to be orientated towards the students, particularly in I (initiation) and F (feedback) moves of teacher talk. This visual presentation therefore further supports the previous micro-analysis's results of two canonical types of DMs found in materials mode, namely Initial TRP DMs and tag-positioned DMs in IRP sequence organisation (Section 5.3.2).

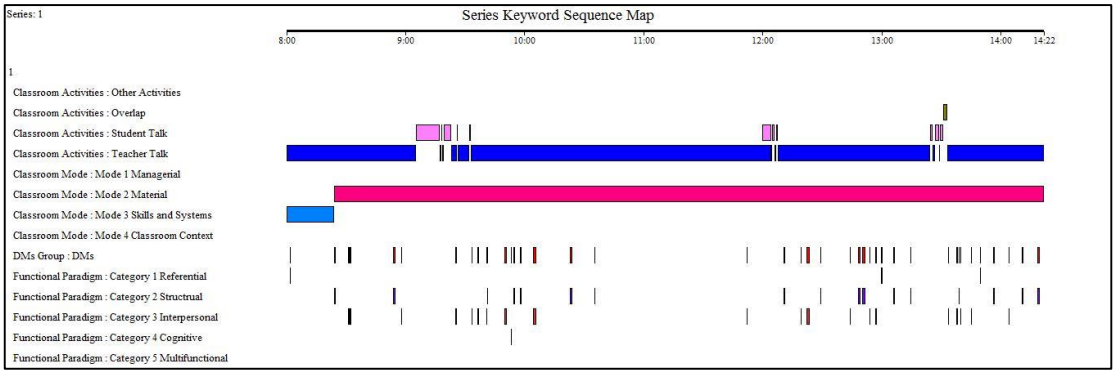


Figure 32. Sequence map sample of DMs in materials mode

In skills and systems mode (light blue bar), the keyword map in figure 33 shows a less persistent pattern of DMs compared to other modes. In this one-minute discussion, teacher talk (dark blue coloured) takes up most of the episode. DMs appear mostly in clusters rather than standing alone. There are DMs observed in teacher talk before and after student talk (purple coloured), as well as during the continuous teacher talk (Section 5.3.3). Yet the occurrence of DMs is not as frequent as that of other modes.

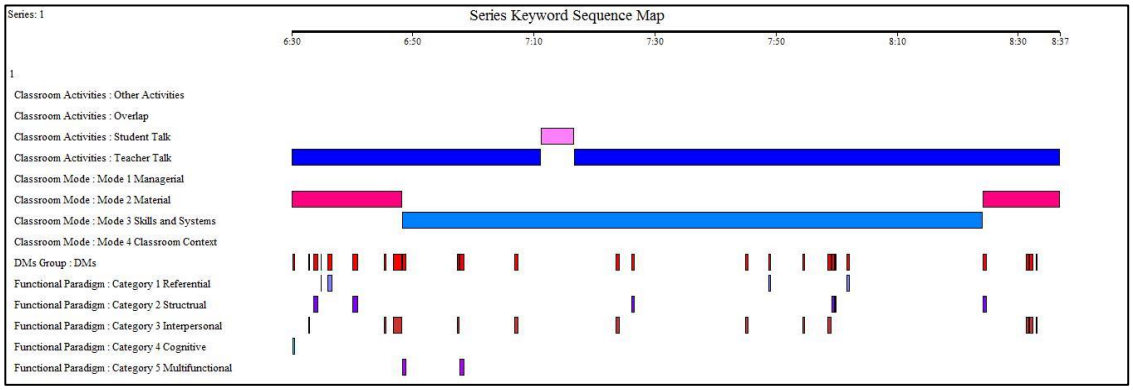


Figure 33. Sequence map sample of DMs in skills and systems mode

Lastly, figure 34 reveals the variety of DMs in classroom context mode represented by a grey-coloured timeline bar. DMs occur with more intensity and quantity throughout teacher talk. Most of the clustering points occur near the end of student talk. In the timeline of student talk (purple coloured), there are immediate appearances of DMs in teacher talk as soon as student turn ends. Supported by CA analysis, free-standing TCU DMs are found as the canonical reoccurring pattern in this mode (Section 5.3.4).

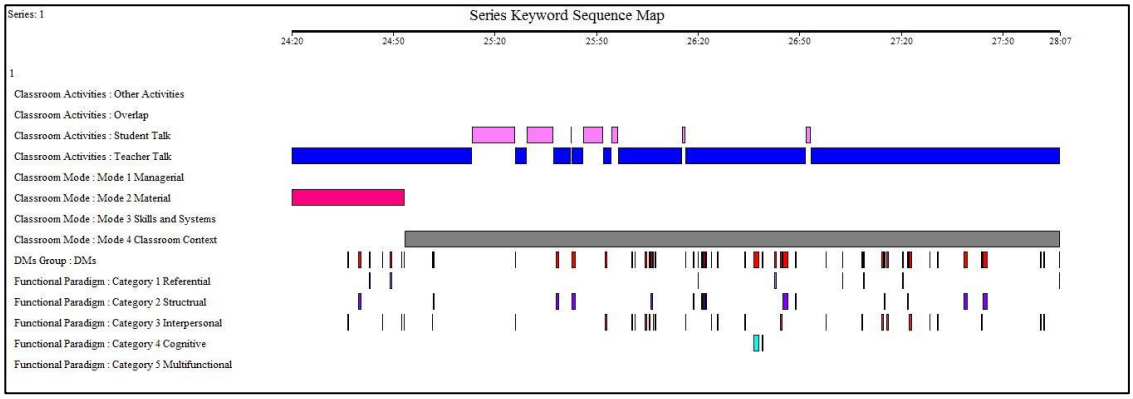


Figure 34. Sequence map sample of DMs in classroom context mode

In sum, the use of Transana and its sequence map presents the patterns of DMs in a larger stretch of talk chronologically, which allows us to examine and interpret complex phenomena over time and space. As has been discussed before, with the development of technology and computer software, an in-depth exploration and presentation of subtle relationships in the data becomes available to the researchers.

5.7 Chapter summary

This chapter has given a detailed account of DMs used in Chinese college EFL teacher talk. Marking each mode's fingerprints, DMs have demonstrated their multi-functionality in different micro-contexts. The following table 28 provides a summary to characterise the contextual patterns of DMs through the SETT model in relation to interactional features and pedagogical goals. From the analyses in this chapter, it can be seen that DMs play a positive role in helping realise teachers' interactional and pedagogical intentions, and therefore contribute significantly to FL teaching and learning.

So far the findings from the multi-layered analytical approach have provided a comprehensive description of DMs in Chinese EFL teachers' spoken discourse. The synergy of CL, CA and L2 classroom modes analysis has demonstrated its advantages as a powerful methodological tool to enhance our understanding of the dynamic nature of classroom interaction.

The following chapter moves on to the discussion of the results. It gives an overview of how a multi-layered analytical approach can benefit further research and discusses its pedagogical implications for EFL teacher training and education.

Mode	Patterns of DMs	Functions	Interactional features	Pedagogical goals
Managerial	Turn-prefaced DMs+ instruction+ pre-closing DMs	Turn-prefaced DMs: instruction initiator and attention getter Pre-closing DMs: instruction finaliser and assurance seeker	• DM-prefaced teacher instructions in a single, extended turn • The use of DMs in the opening, transition and pre-closing of teacher turns • The turn-final use of confirmation checks	• To introduce or conclude a topic/activity • To refer learners to specific materials • To change from one mode of learning to another • To seek assurance from the learners
Materials	I: initial TRP DMs+ display question R: learner production (LP) F: third-turn repeats/extensions+ tag-positioned DM?s	Initial TRP DMs: transition marker and response inviter Tag-positioned DM?s in feedback: anaphoric comprehension check	• Sequence initial DMs mark TRP • Display question are prefaced by DMs • The use of tag-positioned DMs in corrective feedback • Content negotiators in reformulation or exemplification	• To elicit responses in relation to the material without nomination • To check students' comprehension of the target content • To reach a mutual understanding of the back ground knowledge • To clarify by reformulation/exemplification when necessary
Skills and systems	(a) with preferred responses: T: third-turn receipt DMs + repetition + scaffolding (b) with dispreferred responses: T: other-initiation+ non-initial TCU DMs S: self-completion	Third-turn receipt DMs: assessment marker and extension preface Non-initial TCU DMs: mitigation and repair initiation	(a) • Third-turn receipt DMs provide overt positive evaluations • DMs preface extended teacher turns • Teachers take up LP as resources in class (b) • Non-initial TCU DMs occur in other-initiated self-repair • DMs mitigate and cue other initiation • Repair-completion is confirmed by teachers	• To encourage learners to produce correct forms by other initiation • To enable learners to manipulate the target language • To provide corrective feedback • To provide learners with practice in sub-skills • To assess/evaluate learner production
Classroom context	Free-standing TCU DMs	Acknowledgement and floor-yielding tokens	• Free-standing TCU DMs as minimal responses in teacher talk • Extended learner turns are acknowledged and encouraged by DMs • DMs demonstrate active and supportive listenership • Short teacher turns with little or no intention to take over the floor	• To enable learners to talk about feelings, emotions, experience, attitudes, reactions, and personal relationships • To maintain genuine communication • To promote oral fluency

Table 28. Characterising DMs in Chinese college EFL teacher talk through the SETT framework

Chapter 6. Discussion

6.1 Introduction

This chapter re-examines the major findings of chapter 5 and highlights the important contributions the study has made to methodology and pedagogy in the literature. This part of the thesis addresses the following research aims that have been discussed previously in section 1.2:

- A comprehensive description of how DMs are used in the language classroom, Chinese college EFL teacher spoken language in particular;
- An in-depth exploration of the use and functions of DMs in classroom interaction with the fulfilment of pedagogical purposes;
- The synergy and appropriateness of combining qualitative and quantitative methods as a powerful methodological tool to investigate classroom discourse;
- An understanding of the relationship between language, interaction and learning.

There are five sections in this chapter. The introductory section 6.1 provides a brief overview. Section 6.2 characterises DMs in Chinese college EFL teacher talk, by linking the results from multiple analyses with the literature. Then in section 6.3, the methodological advantages and challenges of using a multi-layered analytical approach are presented. Section 6.4 probes into the pedagogical implications of this study with two sub-sections. The first sub-section 6.4.1 emphasises the contributions of DMs to the realisation of classroom interactional competence (CIC) in language classrooms, by addressing the relationship between language, interaction and learning. Sub-section 6.4.2 focuses on the implications of this study in terms of future EFL teacher training and education. Finally, section 6.5 summarises the chapter.

6.2 Characterising DMs in Chinese college EFL teacher talk

The current study demonstrates the salient patterns of DMs in Chinese college EFL teacher talk across different L2 classroom modes. It facilitates the descriptions of DMs in the language classrooms in a number of ways:

- It depicts the range and variety of DMs used by Chinese college EFL teachers in different interactional contexts;
- It offers a detailed characterisation of DMs in talk-in-interaction in relation to interactional and pedagogical intentions;
- It proposes a novel multi-layered analytical approach as a powerful methodological tool, by revealing a reflexive relationship between language teachers' use of DMs, classroom interaction and pedagogical purpose.

6.2.1 *Form and function*

The research findings in chapter 5 have presented the multi-functional nature of DMs in the dynamics of language classrooms. In the previous section 5.3, core functions of DMs in relation to classroom pedagogy are identified and discussed in different micro-contexts.

By studying both the linguistic forms and discursive functions of DMs, the research results re-emphasise different types of interactional work DMs perform in language teachers' spoken discourse. As an essential feature of spoken discourse, DMs play an important role in establishing conversational coherence and mutual understanding through interaction between participants (Lenk, 1998).

6.2.1.1 *In response to research question one*

The results from CL analysis (Sections 5.2, 5.3.1.1, 5.3.2.1, 5.3.3.1, 5.3.4.1) aim to address the first research question (Section 1.2): ***what are the range and variety of DMs used in college EFL teacher talk in China?***

In terms of frequency and distribution, a general CL analysis in section 5.2 shows that there are 5187 DMs occurring in 417 minutes of Chinese college EFL teacher talk. The overall word count of DMs takes up about 10% of teacher talk and 8.7% of the spoken corpus. On average, Chinese college EFL teachers in this study produce 12.4 DMs per minute in class. Compared to other forms of discourse, the appearance of DMs in EFL teacher talk is remarkable. This result accords with Jucker and Smith's observation (1998:176), which shows that the absolute frequency of DMs in casual English conversation is "roughly one DM every four to five seconds". In Jucker and Smith's (1998) study, 2811 DMs are identified in three and a half hours of semi-controlled conversations between friends and strangers recorded at California State University, Long Beach. In their study, DMs have a similar frequency of 13.4 occurrences per minute.

The frequency results are only a representation of the average frequency of DMs in Chinese college EFL teacher talk. Various social constraints like individual repertoires, social distance, speech types, and contexts may also affect the use of DMs. In the study of bilingual speakers of Anglophone Montreal French, Sankoff et al (1997) observe that an average of 4.35 DMs per minute is produced in an English interview, which has much fewer occurrences compared to DMs in teacher talk. Jucker and Smith (1998) also note the average number of DMs in conversation between friends is slightly higher than between strangers.

Keyword lists (Table 14, 15) provide evidence that DMs constitute the core vocabulary for spoken communication as top ranking word items (McCarthy, 1999). *Okay* turns out to be the most frequently occurring DM in Chinese College EFL teacher talk, which resonates with the observation made by Biber (2006) that *okay* has a high distribution as a common device in spoken university registers like classroom teaching and management. Other frequent DMs include *and, okay, right, so* and *yeah.* DMs *okay, yeah, right* are referred to as *reception markers* in Jucker and Smith (1998), who claim that they "are used to signal a reaction to information provided by another speaker" (Müller, 2005: 44).

CL analysis reveals that there seems to be a reflexive relationship between language teachers' use of DMs, classroom interaction and pedagogical purpose. The discussion in section 5.2.1 suggests a positive correlation between the amount of teacher talk and that of DMs. As the word count of EFL teacher talk increases, so does that of DMs. A lexical comparison of the four modes in section 5.3 suggests that the frequency and lexical choice of DMs in Chinese college EFL teacher talk do not happen randomly but are affected by teacher-student interaction as well as the pedagogical goals of the local context (Table 18). The distributive patterns (frequency, distribution and keyword) of DMs change accordingly in different micro-contexts. These results provide enhanced descriptions of the important role that DMs play in spoken interaction, as most of the previous studies simply address their frequencies without comparison.

Finally, CL analysis emphasises the great amount of quantitative work of DMs in teacher talk to fulfil transactional needs as well as the interpersonal plane of discourse (McCarthy, 2003). Throughout the different L2 classroom modes, there is a consistency of a high occurrence of DMs in the interpersonal category (see Figure 16 in Section 5.3.1.1). In addition, when investigating the percentage of DMs that corresponds to each mode, it is the managerial mode, even though it has the smallest word count (13.3%), that has the highest proportion of DMs (9.4%), followed by classroom context mode (8.8%).

The high occurrence of DMs in structural and interpersonal categories therefore falls into the so-called *informative* and *participation* planes in Schiffrin's (1987) discourse coherence model (see discussion in Section 2.2.1). In other words, DMs are applied the most by Chinese college EFL teachers as useful resources when dealing with classroom management and interpersonal relationships. Information state focuses on how the participants organise and manage their knowledge (what they know) and meta-knowledge (what they assume themselves and others to know). As observed by Schiffrin (1980: 216), organisational metatalk:

> "acts as a discourse bracket that initiates or terminates slots in the discourse, providing an environment in which to label the material inserted and to indicate its relationship or other materials in the discourse".

In managerial mode, *formulating talk* or *metatalk* (Hellermann, 2007: 91) is one of the prototypical features in teacher-to-class interaction. The large accumulation of DMs in this mode reflects the initial observation in Sinclair and Coulthard (1975). In their study, a class of small words like *right, well, okay, now* recurred frequently in the speech of all the teacher participants. Sinclair and Coulthard (1975: 22) labelled those lexical items as *frame* to indicate boundaries in the lesson. In their words, "teachers vary in the particular word they favour but a frame occurs invariably at the beginning of a lesson, marking off the settling-down time" (Sinclair and Coulthard, 1975: 22).

Another functional domain in which DMs occur often is the interpersonal category, or *participant framework* between the speaker and the hearer (Schiffrin, 1987). As figure 13 in section 5.2.1 shows, among the 5187 DMs found in CCECC, the interpersonal category has the highest occurrence of 2180 (42%). The second largest is structural category- 1268 occurrences or 24.4%. The disparity of the distribution of DMs does not align with Maschler's (1998) study on DMs in casual Israeli Hebrew conversation, in which textual-referential category has the largest occurrence (40%) whilst interpersonal category is the second most employed (34%). The fact that over 40% of DMs in teacher talk relate to interpersonal matters highlights the role of DMs in building social relationships between interlocutors in class, which has not been sufficiently described in the literature (Müller, 2005). The high occurrence of DMs on the interpersonal plane supports Hellermann and Vergun's (2007: 176) observation that DMs used by teachers are "more likely to be used to establish more local, interpersonal relationships in an interaction".

The above CL analysis supports the findings in the literature that DMs have more of the characteristics of useful interactional and organisational resources in academic discourse (Evison, 2009). The fact that DMs make the greatest contribution in the interpersonal category rather than the cognitive domain reflects *interactiveness* as a key nature of spoken academic discourse (Cummings, 2010; Evison, 2009; Fairclough, 1995; McCarthy, 2013), which will be further explained in section 6.2.2.

6.2.1.2 *In response to research question two*

After scoping out the frequency and distribution of DMs, the following findings from the CA analysis look into the micro-contexts where DMs occur (Sections 5.3.1.2, 5.3.2.2, 5.3.3.2, 5.3.4.2), in order to respond to the second research question (Section 1.2): ***what are the functions of DMs in teacher-led classroom interaction in this context?***

In managerial mode (Section 5.3.1), DMs are found as attentiveness cues in discourse transition which contribute largely to the efficacy of L2 learners' comprehension in academic lectures (Chaudron and Richards, 1986; Jung, 2003). DMs are often accompanied by teacher instructions following the format of *turn-prefaced DMs + instruction + pre-closing DMs*. Examples of turn-prefaced DMs include *okay, all right, now* and *so.* Pre-closure DMs like *okay?* occur frequently towards the end of teacher turns as instruction finalisers and assurance seekers. One of the main functions of DMs is to organise the discourse, especially in the opening and closing phases, which is often facilitated by items like *(all) right, now, so, well* (Carter and McCarthy, 2006: 214). In the openings of talk-in-interaction, according to Hellerman (2007: 90), prefatory talks are "contact signals for social interaction". The beneficial effect of DMs signalling academic speech has been indicated in the discussion in section 2.3.2. A lack of cues in discourse may lead to a misunderstanding of information for L2 learners. In Jung (2003), the experimental group listening to a lecture with signalling cues performed significantly better in recall of both high- and low-level information than the control group.

In materials mode where the classic IRF exchange system is observed (Section 5.3.2), DMs appear both in teachers' initiation (I) and feedback (F) moves. Initial TRP DMs like *and, so* are common turn-entry devices marking the coming of the new information. Tag-positioned *right?* is used as a prototypical TCU in first pair-parts to check students' comprehension. The use of DMs often provide information about TRPs in conversation, which allows the "the current speaker to reach a possible completion point (Schiffrin, 1987: 174). These findings accord with the discussion of a class of constructions namely *appositional beginnings*, e.g. *so, and, but, well* in Sacks et al (1974). To address their importance in conversation, Sacks et al (1974: 719) state:

> "Appositionals, then, are turn-entry devices or PRE-STARTS, as tag questions are exit devices or POST-COMPLETERS. Appositionals and tag questions are heavily used devices, though the basis for their use is by no means self-evident linguistically. We are proposing that they are to be understood as devices with important turn-organisational uses."

In skills and systems mode where linguistic skills are at the centre of instructional practice (Section 5.3.3), DMs are associated with corrective feedback (Ellis, 2001) in preference organisation. When LP is correct or preferred, third-turn receipt DMs like *yeah/yes* are used as an explicit positive assessment. In situations when LP is approximating the correct answer (therefore dispreferred), teacher feedback normally includes non-initial TCU DMs to mitigate and initiate teacher-initiated repair implicitly. In a few instances when LP is completely incorrect, teachers tend to use multiple sayings of *oh/no* in third-turn position to signal the change of state (Heritage, 1984) while initiating other-initiated self-repair. In the discussion of the effectiveness of corrective feedback, Russell and Spada's study (2006) recognise DMs' beneficial effects in L2 learning.

Classroom context mode identifies free-standing TCU DMs as acknowledgement and floor-yielding tokens (Section 5.3.4). Examples include upward toned ↑*okay* and ↑*yeah.* In contrast to the analysis in Jefferson (1983), teachers' use of free-standing DMs share similar features like *mm hm* to signal passive recipiency rather than active speakership. Those minimal responses are useful conversational devices to suggest active listenership without intention to take the floor (Knight, 2009; McCarthy, 2003).

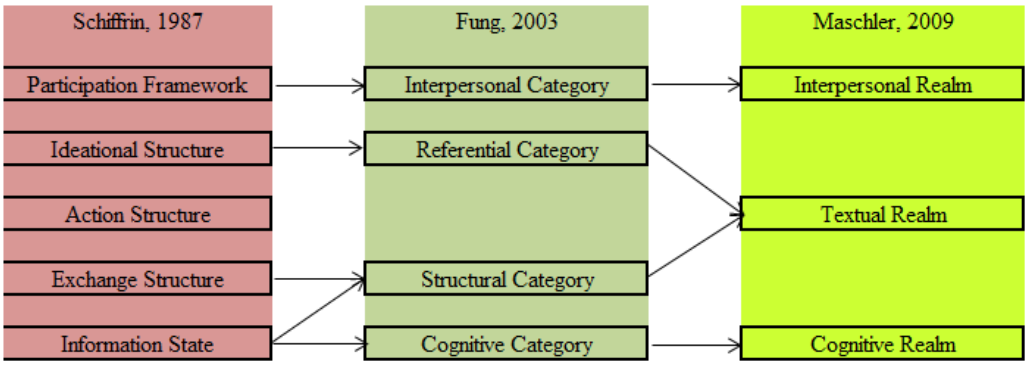


Figure 35. Comparison among three categorisations of DMs

Linking previous major frameworks on categorising DMs, figure 35 suggests similar features of DMs those studies share in textual and interpersonal categories. A mode-by-mode CA analysis shows how teachers constantly engage on the interpersonal as well as transactional plane in classroom interaction. By introducing a broader range of speech exchange systems, a conversational analytical perspective has "understood classroom talk as a type of institutional talk that is empirically distinct from the default speech exchange system of ordinary conversation" (Markee, 2004: 492).

6.2.1.3 *EFL teachers' use of DMs and classroom pedagogy*

The present study discusses the interactional features of DMs in relation to pedagogical agenda in different L2 classroom modes (Sections 5.3.1.3, 5.3.2.3, 5.3.3.3, 5.3.4.3). These sections link the use of DMs in teacher talk with classroom pedagogy, which has been rarely described in the literature (Section 2.3). The work that DMs perform to help teachers realise pedagogical goals can be summarised as follows:

1. DMs work as punctuation marks in teachers' metalinguistic talk in order to help students to navigate their way, without which there may be miscomprehension in class (Breen, 1998). Academic speech in classrooms is heavily signalled and signposted (Swales, 2001). In Goffman's (1981) discussion, one place where footing may change is text brackets involving introductory and closing structure. DMs in managerial mode are found in the opening, transition and pre-closure position which assist in obtaining students' attention and in locating time and space in classroom interaction (Walsh, 2011).
2. DMs are important multi-functional and interactional resources available for teachers. They reflect the interactive nature of academic speech by showing teachers' awareness of the presence of the students in both teacher monologue and dialogue (Morton, 2012). DMs are part of those interactional strategies that teachers choose including inclusive *we* structures and idiomatic language to project interpersonal closeness (Cummings, 2010; Evison, 2009; Seedhouse, 2004). For instance, in materials mode, tag-positioned DMs constantly appear at different focus points to check for the understanding of L2 learners towards the content.
3. The use of DMs in teacher talk signals politeness and personal stances, particularly in corrective feedback. DMs work together with other strategies like third-turn repeats (Park, 2013) to provide explicit/implicit feedback in preference organisation. Third-turn recipient DMs work as overt positive evaluations to preferred student responses and non-TCU DMs as mitigation and repair initiation to dispreferred responses.
4. The set of response tokens like *yeah*, *okay* frequently occurring as single-word responses "play a key role in how competent listeners act verbally and attend to the on-going interactional concerns of participant relationships" (McCarthy, 2003: 8). In classroom context mode where meaning-and-fluency is the focus, free-standing TCU DMs as minimal responses serve as effective recognitions to signal teachers' comprehension and orientation towards the students and leave more interactional spaces to the speaker.

6.2.2 *Examining the findings*

Following the discussion of section 6.2.1, this section re-examines the key findings of the study in relation to the literature. First, the study demonstrates that there seems to be a reflexive relationship between EFL teachers' use of DMs, classroom interaction and pedagogical purpose at different levels of discourse. As Maschler (1998: 14) points out, DMs "do not occur randomly throughout interaction". The linguistic and contextual patterns of DMs across different classroom micro-contexts suggest that there is a systematic deployment of DMs in Chinese EFL teacher talk, which is largely affected by the interactional and pedagogical intentions. The study hence confirms the findings of Schleef (2008) which observes that DMs used in lecturers' speech depend on the pedagogical tasks performed and the ways that different content is mediated by instructors.

The results then display a great range and variety of DMs used in Chinese college EFL teacher talk, most of which are related to building on discourse organisation and interpersonal relationships. The present study contributes additional evidence to the idea that "DMs are multi-functional, interpersonal and organisational resources available to academic speakers" (Cummings, 2010: 4). It provide empirical evidence to previous studies' observation of DMs and highlights the interpersonal function of DMs in language teachers' spoken discourse (Section 6.2.2.1). The positive impacts that DMs have on realising pedagogical agenda are also found in their contextual patterns.

The last important aspect is that by combining multiple research perspectives, the study is able to discover the complexity of DMs (Section 6.2.2.2). The multi-layered analytical method used for this study sheds new light on future approaches to classroom discourse.

6.2.2.1 *Interpersonal DMs in classroom interaction*

There are an increasing number of studies on the importance of communication that comprises academic talk (Cummings, 2010). The fact that the current findings have pointed to differentiated interactional features of DMs used by Chinese college EFL teachers, which are mostly related to building interpersonal relationships, largely enhances our understanding of the nature of *interactiveness*, as a key characteristic of spoken academic discourse (Cummings, 2010; Fairclough, 1995; McCarthy, 2013).

In higher education classroom discourse, there is a great emphasis on teacher-student interaction rather than reading style lecture delivery (Cummings, 2010). According to Fairclough (1995), the importance of classroom interaction is closely linked to the democratisation of universities and the conversationalisation of discourse practices in classrooms. The interpersonal DMs discovered in this study add to a growing body of

literature on the interactive nature of academic talk, which can be reflected in the various resources associated with interactivity that academics use to project interpersonal closeness including metalanguage, DMs, deixis, idiomatic language, modal items, and interactive words (Aijimer, 2009; Cummings, 2010; McCarthy, 2013).

As Othman (2010) points out, DMs are indispensable conversational devices that contribute to the meta-discourse of lecturers' speech. They are crucial in providing an empowering function for conversation participants to exercise control of talk (McCarthy, 2013). The role that DMs play in academic talk is hence related to the plane of *participant framework* in Schiffrin's (1987) discourse coherence model, which refers to the ways in which speaker (instructor) relates to hearer (student). On the interpersonal level, DMs are used to encode the communicative intentions of speaker (e.g. feelings, attitudes, and stances) and the involvement of listener (Brinton, 1996; Schiffrin, 1987).

In Chinese college EFL classrooms, the basic meanings of DMs are applied by language teachers in the service of communicating interpersonal involvement. The empirical findings in this study provide a new understanding of how DMs contribute to the social relationship between teacher and student. This observation is also evidenced in Hellerman and Vergun's (2007) study that the percentage of DMs in the upper level classes is greater partially because teachers rely less on a foreigner talk register to interact with students in these class levels. For any communication, there is a necessary for the participants to obtain a certain degree of sociolinguistic, discourse and strategic competence, which may manifest themselves in the use of DMs (Müller, 2005). The interactive nature of spoken academic discourse can be reflected in various classroom micro-contexts:

- Attentiveness cues in teachers' instructions
- Compression checks in content feedback
- Mitigation and repair initiation in corrective feedback
- Acknowledgement tokens and minimal responses

The interpersonal functions of DMs the study has identified assist in our understanding of the role of classroom interaction in which teachers use different linguistic features to interact with students. DMs therefore help realising the following communicative demands in academic talk (see Section 6.4.1 for further discussion):

- Teachers' awareness of the presence of learners
- The process of shaping and encouraging LP
- Convergence of language use and pedagogical goals
- Participant relationships and active listenership
- The need for interactional time and space

6.2.2.2 *Multi-functionality of DMs*

By using nine hours of video recordings in language classrooms, the present findings improve upon the previous literature on describing the multi-functional nature of DMs (Fischer, 2006; Jucker and Ziv, 1998; Schiffrin, 2003). As it is discussed in section 6.2.1, there is an interwoven and non-exclusive relationship between form and function of DMs. The notion of multi-functionality can be demonstrated in three ways:

First, one DM can have different forms. With different prosodic features such as pause, intonation and stress, a single DM can exhibit more than one forms such as declarative form (e.g. *right.*, ↑*right*, *right::* and *right)*, interrogative form with a question mark (e.g. *okay?*) and multiple sayings (e.g. *oh oh oh*).

Second, one DM can perform in different functional categories, depending on the interactional moment and pedagogical requirement. The same function can also be realised by more than one DM (MWUs). According to Georgakopoulou and Goutsos (2004: 95), "a DM can convey meanings and relationships in more than more discoursal component". In this study, the same DM can be found functioning in different domains including interpersonal, referential, structural, and cognitive categories (Sections 2.4.2, 5.3 and 5.4).

Third, DMs are multi-functional, operating on several contextual levels *simultaneously*. (Jucker and Ziv, 1998). Referred to as *multi-functional* DMs in this study, DMs that function at more than one category are found to be viewed as forms which can establish textual, cognitive and interpersonal relations at different levels of discourse (Georgakopoulou and Goutsos, 2004; Maschler, 1998). In the analysis, multi-functional DMs takes 8.6% of total DMs (Figure 16, Section 5.3.1.1) and occur in each L2 classroom mode such as DMs in the beginning and end of a teacher's turn, initial TRP DMs and free-standing DMs (Table 28, Section 5.7). The phenomenon of DMs having multiple meanings simultaneously can be related to the linguistic ambiguity of DMs as well as the multiple communicative purposes in talk-in-interaction.

The present study provides an in-depth understanding of DMs' multi-functionality, by adding an additional multi-functional category and expanding the current functional framework in Fung and Carter (2007) (Table 11, Section 4.8). In the dynamic of classrooms, DMs perform multiple or ambiguous functions, especially between the interrelated realms. As Maschler (1998: 39) states, "every act of languaging is constantly constrained by the various contextual realms shaping discourse, and discourse markers are no exception. [Those realms] are not fixed and depend on the particular utterance in question."

6.3 Methodological considerations

In chapters 3 and 4, a novel, multi-layered analytical approach is proposed to explore the dynamics of DMs in L2 classroom context. There are clear advantages as well as challenges in using a multi-layered analysis in this study. Three particular beneficial features that multiple analyses offer in this study are as follows:

- Multiple perspectives: a multifaceted understanding towards complexity
- Use of real-time spoken data
- Use of computer software Transana

Adopting a multi-layered analytical approach by combining CL, CA, and L2 classroom modes analysis has shown how different approaches can synergise together and offer multiple perspectives on the complexity of classroom talk (Morton, 2012; Schegloff, 2006). Using a large database, quantitative studies often fail to describe the interactional details. On the other hand, micro-analytical studies of discourse "have found it difficult to yield comparative findings and generalisations" (Androutsopoulos and Georgakopoulou, 2008: 461). Therefore, by combining different methodological domains, a combined CLCA analysis provides a more comprehensive and fine-grained perspective that neither of the single approaches is capable of generating (Carter and McCarthy, 2001).

In terms of data collection, this study uses real-time classroom interactions rather than artificial settings such as laboratories (Section 4.2). The sub-corpus of CCECC contains 59,959-word/nine-hours of video-recordings of Chinese college EFL classes. As a data-driven approach, CA recommends that recordings "catch natural interaction as fully and faithfully as is practically possible" (ten Have, 2007: 68). Video-recording thus provides an extremely rich source for researchers to examine the interactional organisation in detail (Sidnell, 2010).

Despite the use of video-recording, the discussion in section 5.6 and 4.5.2 also shows how computer technology assists qualitative analysis to locate interactive patterns in time and space. The analytic techniques in Transana allow the researchers to create and anchor keywords to the video clips of the transcripts. By analysing a 45-minute sample class, Transana generates a dynamic representation of the chronological distribution of DMs in Chinese college EFL teacher talk (see discussion in Section 5.6). The clustering of DMs in the sequence map clearly displays DMs located in teacher's spoken discourse chronologically, which provides further evidence to support the previous results from multiple analyses.

According to Androutsopoulos and Georgakopoulou (2008), there are paradigmatic tensions between quantitative studies which involve large amounts of data and qualitative contextually sensitive studies. Despite the methodological contributions, challenges also appear at different stages of the research design, which include:

- Compatibility and integration of mixed methods
- Practical problems in operation
- Linking results from multiple analyses in data analysis and interpretation

When the research questions call for both quantitative and qualitative methods, the compatibility and legitimacy of integrating different paradigms can be problematic. Morse (2003) points out the importance of maintaining methodological congruence when using mixed methods. A *dialectical* perspective is proposed by studies like Greene and Caracelli (1997) to view the existing differences between paradigms. As has been discussed in section 3.2, the multi-layered analytical approach merges CL, CA and L2 classroom modes analysis at the level of full integration, i.e. integration throughout both analysis and interpretation (Section 3.2). The research design and analysis of this study therefore accords with the integrative strategies for mixed-method data analysis reviewed by Caracelli and Greene (1993). In data transformation, the functions of DMs and their occurrences in the corpus are numerically coded. However, as DMs are inherently multi-functional, it is methodologically challenging to yield a neat classification of the interactional system (Section 4.6.2). In typology development, the difficulty lies in how to produce a transcription that fits the requirements of both quantitative and qualitative research (see Chapter 4). In research design, the video-recordings have undergone several layers of manual data treatment including transcription, annotation and final refinement for micro-analysis, which all requires a great amount of time, commitment and effort from the researcher. Lastly, how to link the results from multiple perspectives can be problematic in terms of data analysis, interpretation, and presentation. It is hence necessary to treat the data and each method in a balanced and dialectical manner so that the findings can be cross-examined and presented equally without bias.

To sum up, despite the methodological challenges, the use of multi-layered analytical approach is effective in offering multiple perspectives that a pure quantitative or qualitative analysis cannot aspire to on its own. As Cohen et al (2013: 22) argues:

> "mixed methods research recognises, and works with, the fact that the world is not exclusively quantitative or qualitative, it is not an either/or world, but a mixed world, even though the researcher may find the research has a predominant disposition to, or requirement for, numbers or qualitative data."

6.4 Pedagogical implications

The present study has significant implications in pointing the way to new areas of inquiry in terms of classroom interactional competence (CIC) and EFL teacher education. The interactional work performed by DMs in educational settings needs to be emphasised so as to raise teachers' awareness of language in use for future language teaching and learning.

6.4.1 *DMs and classroom interactional competence (CIC)*

McCarthy (2013) has spoken of the characteristics of "conversationalisation" (Fairclough, 1995) in academic discourse. According to McCarthy (2013), there is a cline of conversational features in spoken academic contexts including metalanguage, DMs, modal items, and interactive words. In his study of the basic vocabulary for spoken communication, McCarthy (1999) observes that high-frequency DMs like *yeah, well, right* are among the top words in a 3-million-word sample corpus of CANCODE. DMs are, as McCarthy (1999: 10) puts it,

> "an important feature of the non-propositional elements in any discourse, and, for conversational participants, they provide a resource for exercising control; they have an empowering function, the absence of which in the talk of any individual conversation participants leaves him/her potentially disempowered and at risk of becoming a second-class participant."

Apart from the quantitative findings, studies also suggest that DMs are highly related to *communicative competence*. In Müller (2005), he emphasises that besides grammatical competence, it is necessary for any communication to obtain a certain degree of sociolinguistic, discourse and strategic competence, which may manifest themselves in the use of DMs.

The stress on communicative competence, however, narrowly focuses on "features of *individual* performance that lie at the heart of communicative competence" (Walsh, 2011: 160). More recently, a number of studies propose the notion of *interactional competence*, which focuses on the relationship between interactants' "employment of linguistic and interactional resources and the contexts in which they are employed" (Young, 2008: 100). Interactional competence is highly context specific and concerns the ways in which participants construct meaning *collaboratively* using different resources rather than individual displays of knowledge or language skills.

Defined as "teachers' and learners' ability to use interaction as a tool for mediating and assisting learning" by Walsh (2006: 132), classroom interactional competence (CIC) is recognised as an important fifth skill in addition to speaking, listening, reading and writing

to enhance learning and teaching in classrooms (Hall and Doehler, 2011; Walsh, 2006, 2011). Summarised in Walsh (2011:165-174), the main features of CIC include:

- Convergence of language use and pedagogical goals
- The need for interactional space
- The process of shaping learner contributions by scaffolding, paraphrasing etc.
- The use of extended wait time, pauses of several seconds
- The use of requests for clarification
- Minimal response tokens
- Evidence of content feedback

Previous research findings (see Table 24) have demonstrated the positive effects of DMs in assisting teaching strategies and pedagogies. As a fundamental part in spoken interaction, DMs are useful interactive conversational resources in academic spoken discourse (Othman, 2010). According to the above list in Walsh (2011), DMs are found to be closely related to the concept of CIC in classroom discourse. The detailed features of how DMs in teacher talk contribute to CIC include the following aspects:

- Teacher instructions initiation/finalisation. Referred to as appositionals, DMs are often used as turn-entry devices/pre-starters as well as exit devices/post-completers to help teachers organise discourse (Sacks et al, 1974);
- Attentiveness cues. Multiple sayings of DMs are observed particularly in transitional position of managerial mode with prosodic features like raising intonation and emphasis to draw students' attention;
- Mitigation and repair initiation. DMs are highly context specific and indexed to attitudes, participants and text. Together with other interactional strategies like scaffolding and repetition, they contribute to corrective feedback in shaping learners' production in skills and systems mode;
- Transition and floor-yielding signals. DMs signpost, mark transitions and highlight key concepts to help learners navigate the discourse (c.f. Breen, 1998);
- Comprehension checks in content feedback. In materials mode, tag-positioned DMs signal teachers' awareness of the presence of the learners and partition of different learning stages;
- Minimal response tokens. Free-standing DMs in classroom context mode mark active listenership and create more interactional space for the learners.

From the above illustrated contributions, it becomes obvious that DMs are important features for developing teachers' CIC in order to maintain the effectiveness of communication. According to Schiffrin (1987), DMs play an essential role in understanding discourse and information progression. DMs are "sequentially dependent" in that they mark intended meanings in some way and highlight the speaker's intended pragmatic meaning (Schiffrin, 1987: 31). They have discourse functions on both textual and interpersonal levels, which therefore must be described in terms of contexts that extend beyond turn boundaries (Aijmer, 2002).

Developing a closer understanding of DMs in classroom interaction can offer some insight into the complex inter-relationship between language, interaction and learning. As has been discussed in the literature (Section 2.3), it is common for NNS to misuse/overuse DMs, which may impede communication. McCarthy (1999) argues that DMs are ubiquitous markers in the conversation of educated NSs. Sankoff et al. (1997) also state that the use of DMs is an ideal indicator of the extent to which an L2 speaker desires to be integrated into the local community. The more contact L2 speakers have with the target language culture, the more likely it is that they will use DMs in their speech (Liao, 2008). For any language teacher or learner, an appropriate use of DMs with prosodic features (e.g. pause, intonation, and emphasis) helps to create coherence in discourse, organise speech at different levels, and maintain interpersonal relations. On the contrary, an overuse or restricted use of DMs may lead to incidences like incoherent interpretation, communicative misunderstanding, and comprehension problems.

According to Bernstein (1971), the interaction of different pedagogical discourses forms what he calls the *pedagogic device*, i.e. a discourse of classroom interaction marking the social relationships between teacher and student. Pedagogy, as Bernstein (1971) argues, functions through the operation of pedagogical devices. After all, "pedagogical discourse serves to shape consciousness, differentially distributing knowledge and experience" (Christie, 2007: 7). In L2 language classrooms where the activities are mainly goal-oriented (Walsh, 2006, 2011), the use of DMs has been shown to have a positive impact on the realisation of teachers' interactional and pedagogical intentions (see discussion in Chapter 5). The form and function of DMs vary according to different types of interactional organisation and classroom pedagogy. Together with other strategies, DMs assist the knowledge transmitter, i.e. teacher, in constructing not only the target knowledge and skills to be acquired, but also particular social identities and orientations to meaning for students (Bernstein, 1971).

6.4.2 *DMs in EFL teacher training and education*

There are three implications for future EFL teacher training and education:

- It raises teachers' awareness of the quality of teacher talk;
- It addresses the necessity of including DMs in EFL teacher training programmes;
- It emphasises an enhancement of CIC of language teachers.

The first implication calls attention to the quality of teacher talk (Ellis and Shintani, 2014). There are significant pedagogical implications for teacher educators on pre and in-service courses, which can be designed to raise teachers' discourse awareness and facilitate effective communication through reflecting on their use of DMs. On the textual level, a proper use of DMs can improve discourse coherence, cohesion and logic. Interpersonal DMs help to strengthen the social relationship between participants. Too many DMs may distract learners' attention while few or limited use of DMs may hinder communication.

It has been found that teacher talk has a limited range of grammatical and lexical features which may affect LP (Ellis and Shintani, 2014; Kasper and Rose, 1999). According to Kasper and Rose (1999: 96), studies of teacher-fronted classroom discourse have demonstrated a number of features, including a narrower range of speech acts, a lack of politeness marking, shorter and less complex openings and closings, monopolisation of discourse organisation and management, with consequently a limited range of DMs, and a much reduced use of affective particles in teacher talk. As Ellis and Shintani (2014) emphasise, the discourse adjustments that arise in teacher talk help to make specific linguistic forms prominent and encourage learning to take place. Therefore, it is the *quality* of teacher talk rather than *quantity* that matters in classroom interaction. In Grundy's (2002: 90) words, "it isn't the teacher, or even the learner, who teaches language to learners- rather it is language that teaches language to learners." The importance of teacher talk, especially in L2 classrooms, points to a need for educators/practitioners to raise their awareness of the quality of language use.

Traditionally, EFL teacher education programmes do not provide what Ellis and Shintani (2014: 161) called the *internal* view of language pedagogy, which describes teaching as a process of classroom communication and includes how teachers might overcome limitations by reflecting a general tendency to view teaching in aspects like materials, instructional activities, and teaching procedure. Grundy (2002) criticises the lack of *linguistic reflexivity* in the kinds of descriptive and pedagogic grammars available to language teachers. The fact that teacher education programmes often use invented or idealised examples is particularly problematic since "speech is permeated by reflexive

activities as speakers remark on language, report utterances, index and describe aspects of the speech event, invoke conventional names and guide listeners in the proper interpretations of their utterances" (Lucy, 1993: 11). Those reflexive properties of the language are particularly true in the realisation of the *metalinguistic function* of DMs in discourse organisation and participation framework (Schiffrin, 1987).

Numerous studies (for example, Fung, 2003; McCarthy, 1999; Müller, 2005) have noticed that DMs are often neglected in materials and curriculum design. Aijmer (2009: 205) explains that, to establish the teaching of spoken grammar on the agenda takes much effort partially because "many language teachers are reluctant to accept that learners of English should actually be taught forms and structures of spoken English such as left dislocations and discourse markers." As DMs are often not part of the traditional classroom curriculum, L2 speakers generally acquire DMs outside classrooms (Hellermann and Vergun, 2007). Considering the fact that college EFL teachers are often L2 learners themselves, it is necessary to include and address the importance of DMs particularly in EFL teacher training programmes. Possible suggestions include courses on how to improve spoken language from the aspects of coherence and cohesion, lectures on the use of DMs in language teaching, and a development of teaching materials through corpus-based research (McCarthy, 1998).

The last implication suggests various possibilities for enhancing CIC of educators/practitioners through gaining a closer understanding of the interactional architecture in language classrooms (Seedhouse, 2004) and improving the way that the interaction is managed (Walsh, 2011). Modern college teacher education needs to develop specific strategies or tasks in order to improve teachers' pedagogical techniques and the efficacy of classroom communication. As Walsh (2011: 180) reminds us, CIC can be greatly enhanced by adopting interactional strategies as follows:

- the need for teachers to create space for learning
- the importance of jointly created understandings
- the value of shaping learner contributions
- the need to engage and involve learners in dialogue

In their recent study, Lefstein and Snell (2014) propose a balanced *dialogic* pedagogy through the use of video recordings to develop teachers' sensitivity and judgement in their professional teaching practice. Suggested by Ellis and Shintani (2014), one practical resolution is to encourage teachers to reflect on their own practice by preparing transcriptions of lessons and examining them in terms of pre-determined features of teacher talk like amount of teacher talk, rate of speech, linguistic and discourse modification.

6.5 Summary

This chapter has re-examined the research findings of chapter 5 in response to the research questions. By characterising DMs in Chinese college EFL teacher talk, it reveals a complex relationship between form and function of DMs in teacher-led classroom interaction.

The findings observed in this study mirror those of the previous studies that have examined the effect of DMs in classrooms (e.g. Hellermann and Vergun, 2007; Sinclair and Coulthard, 1975; Walsh, 2006, 2011), and at the same time challenge our intuition towards certain common phenomena of the language (Sinclair, 1991). Through a multi-layered examination of the dynamics of DMs in the language classroom, this study not only extends our current understanding of DMs in spoken interaction, but also has important implications for developing a multi-perspective towards classroom discourse. Given the discussion in chapter 6, it can be seen that DMs to a large extent contribute to the concept of CIC, which needs to be emphasised in further language teacher training and education.

Based on these discussions, the following chapter provides the conclusion of the thesis.

Chapter 7. Conclusion

7.1 Introduction

The final chapter will conclude the study with regard to the research questions and results presented in earlier chapters (Section 7.2). It then highlights the significant contributions of the study (Section 7.3) and provides critical reflection on current research (Section 7.4). Lastly, limitations (Section 7.5) and suggestions for further studies (Section 7.6) will be discussed.

7.2 Thesis overview

This study proposes a multi-layered analytical approach to investigating DMs in Chinese college EFL teacher's spoken discourse, in order to answer the following two research questions (Section 1.2):

1. What are the range and variety of DMs used in college EFL teacher talk in China?
2. What are the functions of DMs in teacher-led classroom interaction in this context?

In the literature review (Chapter 2), a research gap was identified to the effect that despite the extensive research on language learners' acquisition of DMs, few studies have been conducted to discover how DMs perform in EFL teacher talk. A better understanding of DMs in spoken interaction can largely enhance FL teaching and learning.

In response to the above research needs, chapter 3 and 4 propose a fine-grained, multi-layered analytical approach. In chapter 3, the methodological advantages and challenges of combining CL, CA and L2 classroom modes analysis were evaluated. Chapter 4 further explored the practical issues raised in the data preparation, treatment and analysis phases of research design.

Chapter 5 presented the analysis and results using a multi-layered analytical approach to examine the ways that DMs perform in Chinese college EFL teacher talk. In this chapter, the study used CL analysis first as the initial examination to show the linguistic patterns of DMs and then an in-depth tripartite mode-by-mode analysis was carried out. In the general CL analysis, it is argued that there is a reflexive relationship between teachers' use of DMs, interactional organisation and classroom pedagogy. It is in the interpersonal category that DMs mostly appear with the highest frequency across the four modes. In section 5.3, multiple analyses identified canonical characteristics of DMs in different micro-contexts. The mode-by-mode analysis further demonstrated that there is a systematic deployment of

DMs in Chinese college EFL teacher talk, which is largely affected by interactional and pedagogical intentions (see Table 24).

Managerial mode takes up the least percentage (13.3%) among all the modes, yet with the highest contribution of DMs (9.4%, Section 5.3.1). In this mode featuring extended teacher turns, DMs are found to assist teacher metalinguistic talk following the format of *turn-prefaced DMs + instruction + pre-closing DMs*.

With the highest occurrence of DMs (40%), materials mode is characterised by the IRF exchange structure determined by the materials and managed through the firm control of the teacher (Section 5.3.2). CA analysis identifies EFL teachers' use of DMs in the structural and interpersonal categories located in IRF sequential organisation, namely sequence initial DMs in I (initiation) move and tag-positioned DMs in F (feedback) move. In addition, it is found that DM clusters such as *like you know* work as content negotiators in reformulation/exemplification of content feedback.

In skills and systems mode where interaction is centred on form-and-accuracy (Section 5.3.3), the use of DMs is closely related to preference and repair organisation in teacher prompts. LP in this mode is subject to teacher evaluation in terms of language skills. DMs are found either in third-turn receipt position to provide overt positive evaluations or in non-initial TCU position to initiate other-initiated self-repair.

Finally, in classroom context mode where meaning and fluency is the focus (Section 5.3.4), DMs occur mostly in the interpersonal category (47.5%). The CA analysis reveals one reoccurring pattern of the use of upward-toned DMs serving as acknowledgement and floor-yielding tokens linked to active listenership.

The analysis chapter (Chapter 5), demonstrated that the synergy of combining CL, CA, and L2 classroom modes analysis is a powerful methodological approach to uncover the multi-functionality of DMs. Through illustrating the linguistic and contextual patterns, the study highlights the interpersonal and structural functions that DMs perform in language teachers' talk and their positive impacts on classroom pedagogy.

Chapter 6 further extended the discussion by linking the current findings with the literature and suggested important pedagogical implications in the development of CIC and EFL teacher training/education. It is argued that the relationship between form and function of DMs is not so clear-cut but rather a well-motivated one affected by context.

7.3 Contributions of the study

In general, the present study makes several noteworthy contributions in terms of knowledge extension, application of existing knowledge and pedagogical implications:

- Knowledge extension. The present research extends our knowledge of classroom discourse by providing new empirical findings on the use and functions DMs in the language classroom. It fills the research gap that few studies have examined DMs in college EFL teacher talk and their performance in teacher-led language classrooms. The research findings confirms previous observation of the important role that DMs play in classroom interaction, and at the same time contributes additional evidence that suggests the interactiveness of academic talk. Uncovering the patterns of teachers' use of DMs enhances our discourse awareness in future language teaching and learning.
- Application of existing knowledge. The study demonstrates the researcher's ability to design and implement a novel approach which provides new insights into the complex phenomena of DMs and spoken academic discourse. In terms of methodological innovation, a multi-layered analytical method is proposed by synergising multiple research perspectives and strengthening the reliability and validity of different research instruments in terms of data representation and legitimation. It emphasises both the methodological advantages and challenges in conducting mixed methods research, with significant practical implications in future classroom-related studies.
- Pedagogical implications. The multiple analyses of this study connect the findings with current classroom pedagogy. As there is no ready-made pedagogical space for DMs, this study has important pedagogical implications for future research regarding curriculum design, EFL teacher training programmes and education, specifically in its potential to help teachers achieve their pedagogical goals. It suggests future materials design to include DMs as an important interactional recourse, which has a positive impact on effective communication and classroom practices. In addition, the study hopes to raise teachers' awareness of their language use in teacher-student interaction and shed some light on the importance of classroom interactional competence in the L2 classroom. The findings of the research is of particular importance to a better understanding of the relationship between language, interaction and learning.

7.4 Critical reflection on current research

The use of reflection in language classroom education has emerged as an effective means of connecting research with practice (Osborn, 2000). According to Walsh (2011: 144), "reflection and action result in a kind of *emergent understanding*, an on-going process of enhanced awareness." This section provides a discussion of critical reflection on the present study in terms of research and teacher education.

In the development of research, by critically evaluating different perspectives towards DMs and classroom observation, the researcher identifies a research gap and develops her own research questions of DMs in teacher talk. The discussion of literature review poses the researcher's understanding of the complexity of DMs. In response to the dynamics of DMs and language classrooms, classroom interaction data are collected and analysed through a multi-layered analytical approach that the researcher develops. As numerous studies point out the importance of exploring teacher talk about classroom talk (Hellerman and Vergun, 2007; Morton, 2012; Othman, 2010), other reflective practices such as stimulated recall and personal interviews need to be considered in future research to gain lecturers' perspectives towards their own talk and teaching practices (see Section 7.6 for further discussion). Based on the evidence of the data, reflection results in a change in practice (Walsh, 2011). In discussing the findings and pedagogical implications, the present study suggests a range of interactional and reflective strategies in EFL teacher training programmes and education.

Taken together, the research suggest a role for an appropriate metalanguage in studying the language classroom. The establishment of SETT (Walsh, 2006; 2011) and functional categories (Fung and Carter, 2007) is not intended to generalise interactional patterns, rather serving as a meta-language for teacher educators to understand DMs in L2 classroom discourse and to discuss reflective practices of language teaching. The application of the two conceptual frameworks allows the researcher to carry out, test, modify and evaluate the research in practice at both the higher and lower levels of classroom discourse. As Walsh (2011) points out, teachers need a metalanguage to discuss their reflections and generate dialogue between colleagues. The effectiveness of the teacher-classroom-based research can be further enhanced if there is a collaboration of research teams such as teacher educators, practitioners and language researchers, in order to reinvigorate inquiry in language education (Osborn, 2000). Furthermore, teachers can be researchers of their own teaching practice through critical and collaborative research. The methodological and pedagogical implications discussed in the study therefore may be applied to other classroom research to further facilitate reflection and action.

7.5 Limitations of the study

There are a number of limitations that study needs to recognise:

- An extension of the functional paradigm and L2 classroom micro-contexts. Considering the multi-functional nature of DMs and the dynamics of classroom interaction, it is potentially dangerous to use a limited number of functional categories and modes to generalise human interaction. The debate over the codability of interaction raises the researchers' awareness when dealing with methodological tension particularly in mixed methods research. There are certainly other embodied interaction features and social actions to discover. The coding scheme in terms of modes and functions hence needs to be further improved and developed.
- An exploration of DMs used by language learners in interaction. By concentrating on teachers' perspectives on the use of DMs, the current study inevitably lacks an in-depth description of the performance of DMs in LP. Considering the fact that meanings are co-constructed by both sides in interaction, there is an apparent need for a detailed examination of LP in data triangulation and analysis.
- A more large-scale spoken database. The scale of the current nine-hour or 60,000-word CCECC is relatively small compared to other spoken corpora. The selection of the corpus depends on the accessibility of resources and time constraints in order to ensure the utility and integrity of research data. However, with a small sample size in a higher education context, caution must be applied, as the findings might not be transferable to other educational settings like primary or secondary schools.
- A balanced proportion of corpus representation. The generalisability of the results is subject to the proportion of different class types that constitute the spoken corpus (Sinclair, 2004b). As table 10 in section 5.2.1 suggests, the selected sub-corpus comprises three distinct class types in which intensive reading class accounts for about 60% (36,079 out of 59,959) whilst oral debating only 6%. Furthermore, the division of four sub-corpora according to L2 classroom modes results in the uneven distribution of corpora with materials mode taking up about 40% and managerial mode 13.3% (Table 10). Therefore, it is not unreasonable to expect that one particular class may have influenced the representation of the spoken corpus as a whole. In future research, a balanced proportion of different class types needs to be carefully assigned in order to achieve corpus representativeness.

7.6 Further research

The current study has thrown up various questions in need of further investigation. It is recommended that further research be undertaken in the following areas:

- Comparative studies
- Multi-modal analysis of associated prosodic features including pause, intonation, gesture, and eye gaze
- Social variables like gender, power, discipline and context

Future research could concentrate on comparative studies of DMs in Chinese EFL teachers and NS lecturers in academic spoken discourse. As explained earlier (Section 6.4.1), the knowledge of DMs is part of discourse and strategic competence to create the coherence of discourse, to appeal for the hearers' understanding and to serve interpersonal functions (Müller, 2005). Language teachers need to recognise the important role that DMs play in the development of L2 proficiency in order to enhance teaching efficacy.

Recent comparative or contrastive studies on DMs often conduct corpus-based research on the occurrences and meanings of DMs across languages (Jucker and Ziv, 1998). In the field of SLA, issues like the fossilisation of learners' interlanguage pragmatic competence during language transfer may be relevant for the results concerning DMs in NNS's speech (Müller, 2005; Romero-Trillo, 2002). However, as Müller (2005: 23) argues, "research on DMs and research on language learners of English overlap only to a very small degree". Therefore, further empirical studies on DMs in academic spoken discourse used by both NS and NNS teachers will enhance our understanding of the pragmatic aspects of teacher spoken language. Through comparison, NNS teachers of English are able to reflect on their language use and to control a wider range of interactional devices in future teaching practice.

More research is needed to better understand how interaction is closely associated with non-verbal communication. In the analysis of chapter 5, the study has raised the important issue that there is a lack of detailed analysis describing the prosody and multi-modality accompanied with DMs in interaction. This view is supported by Aijmer and Simon-Vandenbergen (2011), who emphasise that different uses of DMs have shown important prosodic features such as intonation and stress that have been largely neglected in recent studies.

There is evidence that DMs are often accompanied with prosody and body gestures to reinforce the effects of the speakers' communicative intentions. Knight (2011) carries out a corpus-based investigation into the multi-modality and active listenership of

backchannels. In her study, spoken DMs, nods, and backchannels are found to co-occur collaboratively across speakers to jointly construct discourse and maintain social relationships between participants. Those non-verbal features are important aspects not only relevant to the diagnostic features of DMs (Section 2.2), but also their functional performance in interaction (Beach, 1993).

According to Bezemer and Jewitt (2010), multi-modal approaches to the study of linguistics have drawn researchers' attention to the range of different resources people use to make meaning beyond language such as speech, gesture, gaze, image, and writing. Conducting a case study from the research project "The Production of School English", Bezemer and Jewitt (2010: 188) use a *social semiotic approach* to address the research question: "What does English become when it is interactively constructed in classrooms marked by social cultural and linguistic diversity?". Originating from Halliday (1978), a social semiotic approach to multimodality provides different scales of analysis by moving from individual's use of semiotic resources to social principles at work. It is through these new insights into interaction that our understanding of human meaning making can be widened.

More broadly, research is also needed to address the impact of social variables that may affect the use of DMs by EFL teachers in language classrooms, which include factors like gender, power, discipline, and context. From the previous discussion in section 5.4, it is apparent that there is a dispersed distribution of the use of DMs between teacher E and F, even though both were teaching the same material. What is of interest, therefore, is to explore why and how the use of DMs differs across individuals. In the literature, previous studies have reported that teachers' and learners' linguistic behaviour alters depending on discipline, context, and conversational role. In Schleef (2004), he uses examples of DMs *okay*, *right*, *like* and *you know* to demonstrate how various social factors influence their use and sociolinguistic distribution in English academic discourse. Future studies on DMs will have to keep those contextual constraints in mind and trigger new research perspectives.

7.7 Summary

In conclusion, this study has filled the research gap by giving a comprehensive account of the use of DMs by Chinese college EFL teachers in academic spoken discourse. It sets out to explore the effects of DMs in teacher-led classroom interaction. In response to the research questions and the dynamics of the classroom, a novel, multi-layered analytical approach is proposed, by synergising the analytic techniques used in CL, CA and L2 classroom modes analysis.

The use of a multi-layered analytical approach has demonstrated a reflexive relationship between language teachers' use of DMs, classroom interaction, and pedagogical purpose at different levels of discourse. Both quantitative and qualitative findings have pointed to differentiated features of DMs in Chinese college EFL teacher talk across L2 classroom micro-contexts, highlighting the interpersonal function DMs carry out in talk-in-interaction, and suggesting their positive impacts on pedagogical realisation.

Taken together, these findings have great significance in terms of knowledge extension, methodological innovation and pedagogical implications. The integration of multiple analyses serves as a powerful methodological tool by providing a multidimensional research angle towards the complexity of real-world phenomena.

Appendices

Appendix A. Approval of data authorisation

北京外国语大学
BEIJING FOREIGN STUDIES UNIVERSITY

Approval of Data Authorization

With the aims of improving f researches on foreign language teacher development and sharing academic resources, I approve that Miss Shanru YANG, PhD candidate at School of Education, Communication and Language Sciences, Newcastle University, UK, is authorized to use part of the data from China National Social Science Granted Project "EFL Classroom Discourse Research and Teacher Development" (Ref. No. 07BYY032), directed by Professor ZHANG Lian, School of English and International Studies, Beijing Foreign Studies University, China, to complete her PhD thesis. The user should acknowledge the source and protect all the participants' personal information strictly under Data Protection Policy when she uses the data. In addition, the data cannot be used for other purposes than for completing the aforementioned PhD thesis (such as but not limited to paper-based, electronic or network) without authorization.

This approval is effective from the date of signature/stamp.

07/09/2011

Authorizer: ZHANG Lian
University: Beijing Foreign Studies University, China
Signature/Stamp:

北京外国语大学 英语学院

User: Shanru YANG
University: Newcastle University, UK
Signature/Stamp:

Appendix B. Transcription conventions

The following glossary of transcript symbols is adapted from Jefferson (2004: 24):

[ ]	Square brackets mark the start and end of overlapping speech. They are positioned where the overlap occurs.
↑ ↓	Vertical arrows precede marked pitch movement, over and above normal rhythms of speech. They are used for notable changes in pitch beyond those represented by stops, commas and question marks.
Underlining	indicates emphasis; the extent of underlining within individual words locates emphasis and also indicates how heavy it is.
CAPITALS	mark speech that is louder than surrounding speech. This is beyond the increase in volume that comes as a product of emphasis.
°↑I know it,°	'Degree' signs enclose obviously quieter speech.
(0.4)	Numbers in round brackets measure pauses in seconds (in this case, 4 tenths of a second). If they are not part of a particular speaker's talk they should be on a new line. If in doubt use a new line.
(.)	A micro pause, hearable but too short to measure.
(( ))	Additional comments from the transcriber, e.g. about features of context or delivery.
she wa::nted	Colons show degrees of elongation of the prior sound; the more colons, the more elongation.
hhh	Aspiration (out-breaths); proportionally as for colons.
.hhh	Inspiration (in-breaths); proportionally as for colons.
y'know?	Question marks signal stronger, 'questioning' intonation, irrespective of grammar.
Yeh.	Full stops mark falling, stopping intonation ('final contour'), irrespective of grammar, and not necessarily followed by a pause.
bu-u-	Hyphens mark a cut-off of the preceding sound.
>he said<	'greater than' and 'lesser than' signs enclose speeded-up talk. Occasionally they are used the other way round for slower talk.
solid.= =We had	'Equals' signs mark the immediate 'latching' of successive talk, whether of one or more speakers, with no interval.

Appendix C. Sample of a raw transcript

Academic writing class by teacher B

T: classification ↓yeah (3) and:? (1) and:?

Ss: °how- how to°

S3: eh the process and (1) analyses

T: was- there- someone al- already said that (.) without without looking at your books okay? (.) what's what's the other type? (2) what's the other- other type?

Ss: definition

(2)

T: mhm:: let- let's have uh: uh >the the the< S1 (.) telling us all the six types

(3)

S1: uh first uh process analysis=

T: =process and analysis ↑okay

S1: uh contrast and comparison contrast=

T: =comparison and ↑contrast

S1: and: uh mmm (.) uh classification

T: ↑classification

(4)

S1: definition.

T: ↑definition

S1: uh:: (4) oh cause and effect

T: cause and effect (1) okay? wha:t is the last one?

((laughter))

S1: so:: (1) what's the °last°=

T: =what's the one she left (2) what's the one she- (1) definition?

Ss: exem- exemplification

T: ↑yeah [exem-]

Ss: [example]

T: ex-yeah exemplification (.)↓right (1) that's the first expositive methods that we have learned (1)↓all right (.) so now can I ask uh: (.) I want you to: read the six pieces of ↑writing in the hand-out (1) and: identify (.) the typical- the most typical expositive methods that is used in ↑each one (.) that is to ↑say (.) everyone features one expositive method (.) and I want you to identify them (1) (.) okay? (4) you can read silently or you read aloud (1) you can have ↑discussion: (.) raise your ↑hands (.) you know (.) >anywhere< you don't understand just ask me (.) or: ask each other (2) let me give you five minutes (1) you need to hurry up a little bit (4) uh: if you haven't finished (.) you raise your hands let me see (2) If you haven't finished (.) raise your hands (.) no? if you haven't finished (.) raise your hands (2) ↑okay

Appendix D. Examples of transcribed, coded and annotated transcripts

Coding scheme:
M1=Managerial mode (red); M2=Materials mode (orange); M3=Skills and systems mode (green); M4=Classroom context (blue); C1= Referential; C2= Structural; C3=Interpersonal; C4=Cognitive; C5=Multi-functional

Extensive reading class by teacher F

T: <M1C2>↓**okay** <M1C2>**so** (.) after we have talked about some general understanding about uh soft news (.) hard news and: news feature (1) <M1C2>**so** <M1C2>**right now** let's go to the structure of the text (1) <M2C2>**so** what's the structure of the text? (1) how many parts are there? (2) how many parts are there? S3 (.) how many parts are there?

S3: uh I think there are: erm: three parts in this part

T: <M2C5>**okay** (.) three parts (1) how about the first part?

S3: from the first paragraph to the third paragraph

T: <M2C3>↑**okay**

S3: it- it uh introduces preparation of this launch of- of this aircraft

T: ↑mhm

S3: erm: and then (1) from the uh fourth paragraph (.) to- to uh twentieth paragraph

T: mhm

S3: twentieth paragraph (.) I think it uh describes >the the< pro- process (1) process of this- (.) this aircraft=

T: =mhm

S3: and third third part is twentyoneth- twentyfirst paragraph (1) it introduces uh:: the- the writer's feeling about this catastrophe

T: <M2C5>↑**okay** <M2C2>**so** <M2C4>**I think** it <M2C3>probably uh it's the right division of the text (1) <M2C1>**then** (.) if we are talking about how S3 (1) <M2C3>**okay?** <M2C3>**just** divided the text (1) what kind of order <M2C3>**okay?** did she follow?

Ss: time

T: time (.) <M2C3>**right?** <M2C2>**so** it's a <M2C3>**kind of** chronological order (1) <M2C2>**so** the first part is about: things happened before:: the launch (.) <M2C1>**and** we are talking about things happened during the launch (.) <M2C1>**and** after the launch, <M2C1>**and:** we can see that (.) all over the text (.) the writer is talking about: the great event and his involvement in the text (1) <M2C1>**so** we can see that this time the writer somehow uh gave us a very strong

impression of witness (.) <M2C3>**right?** I am a witness (.) <M2C1>**so** <M2C1>**so** <M2C3>**you see** that it's not only a <M2C3>**kind of** uh: quite objective (.) detached description of the text (1) it's a <M2C3>**kind of** human being's reflection as a witness (.) <M2C3>**right?** <M4C2> **yeah** (.) <M4C2>**so** <M4C3>**you see** that uh: (1) <M4C3>**actually** if we want to move on (.) my last question will be how did you feel after you read the text (2) S4 (1) <M4C2>↓**so** what might be your feeling (1) after you uh have finish reading the text?

S4: I think it's very com- uh: complex,

T: <M4C5>↑**okay** (.) very complex (1) a mixture of different <M4C3>**kind of** feelings (2) <M4C3>**right?=**

S4: =yeah

T: <M4C2>**so** what are they?

S4: mm: may be surprised (1) may be shocked (.) may be sad (1) sad=

T: =s:::ad

S4: sad sad (.) I feel sad

T: mhm

S4: because uh the tragic happened

T: M4C3>**okay** (.) tragic <M4C5>**yeah** (1) <M4C2>**so** it- it's a <M4C3>**kind of** tragic feeling (.) <M4C3>**right?** <M4C5>↑ **okay** (.) erm:: in that case (.) erm:: any other opinions (.) this time (1) erm:: (1) S5 (.) shall any other (.) any other feelings? <M4C2>**yeah** (1) besides shock (.) sorrow (.) mhm: (1) anything else?

S5: I think it is surprise (.) because the writer itself- himself=

T: =mhm

S5: witnessed the preparation of uh lift-off=

T: =mhm

S5: and explosion of the shuttle=

T: =mhm

S5: and ↑then uh:: uh tells us his feeling about the astronaut (.) the disaster=

T: =mhm

S5: so uh this surprise and sorrow

T: ↑mhm (.) anything else (1) anything else?

Appendix E. Sample of a sub-corpus with multi-layered annotation

Skills and systems mode (M3):

T: <M3C5>↑**okay** erm:: S22, have you found anything <M3C4>**okay** in the dictionary?

S22: er: hard-working

T: hard-working (.) hard is not a noun

S22: oh: sorry

T: heh heh ((laughs)) anything else?

S21: the- the poverty-stricken area

(3)

T: poverty-stricken area <M3C3>**yeah** it's very similar (.) erm:: <M3C1>**however**, poverty-stricken, stricken is a past participle (.) <M3C3>**right?** <M3C5>**yeah** <M3C2>**okay** it's not an ing form (1) <M3C1>**but** (.) <M3C1>**but** you are getting very close (1) <M3C3>**okay?** <M3C1>**and**: ↑S23

S23: job-hunting

(2)

T: job-hunting (.) <M3C3>**yeah** job-hunting (.) job-hunting (.) <M3C1>**however**, job-hunting is a noun (1) <M3C3>**okay?** <M3C3>**yeah** (.) job-hunting <M3C3>**right?** <M3C3>**yeah** (.) it's a noun (1) It's not an adjective

S24: water-running nose

T: mhm?

S24: water-running nose

T: water-running (.) <M3C3>↓**right** water-running nose (1) mhm:: good (.) anything else?

(5)

((looks around the classroom))

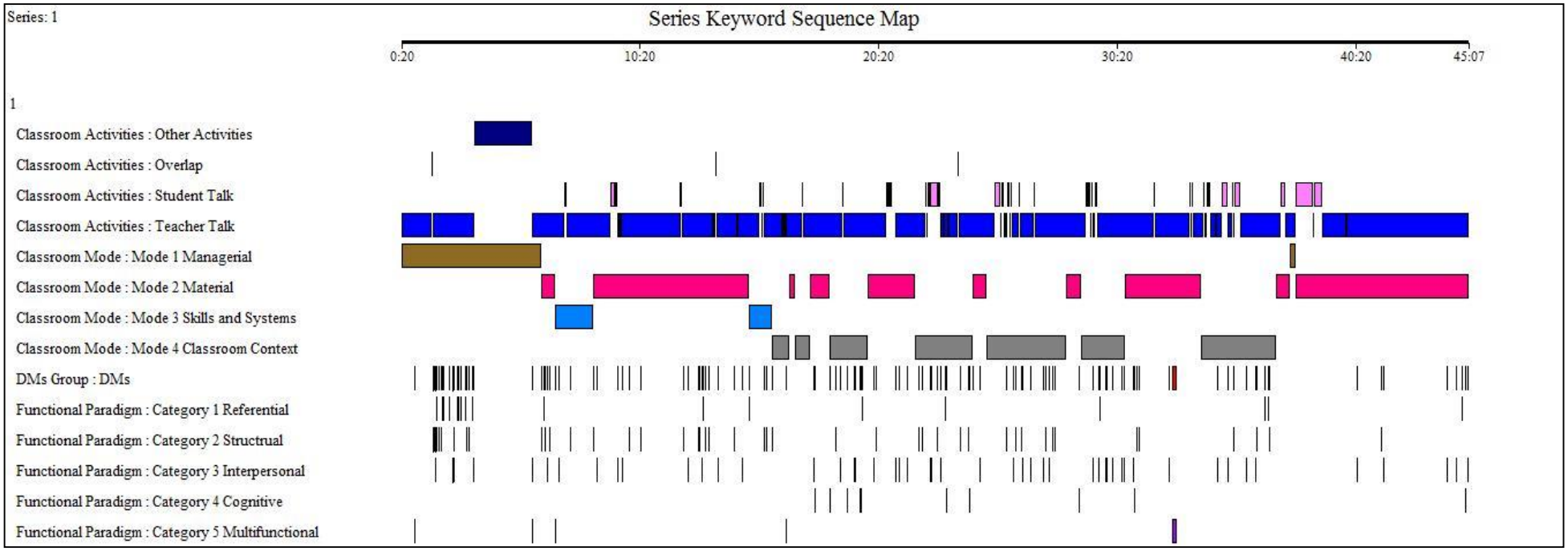
Appendix F. Comparison of modes identified by colleague and researcher

Excerpt 4.1	**Modes identified by colleague**		**Modes identified by researcher**	
No.	**Line**	**Modes**	**Line**	**Modes**
1	1-4	Mainly classroom context Some Materials The teacher is explaining about why people choose to be vegetarians. It is an idea that extends from the textbook.	1-4	Classroom context Some managerial Teacher explanation centres on reasons why people are vegetarians. In line 4, the teacher concludes the paragraph.
2	5-15	Materials The teacher tries to ask students' comprehension towards the paragraph.	5-16	Materials Classroom activities are based on a mutual understanding of the textbooks.
3	16	Managerial The teacher makes an conclusion of paragraph three	16-19	Managerial The teacher signals a clear move from paragraph three to paragraph four, and asks S18 to read out the following content.
4	17-19	Managerial The teacher gives an instruction to the students to moves on to the next paragraph.		

Appendix G. Comparison of functional categories identified by colleague and researcher

Excerpt	Line	DMs	Functions identified by colleague	Functions identified by researcher
4.2	1	okay	Mainly Structural Some interpersonal *Okay* is used to preface the display question and to invite students to respond.	Structural The teacher uses *okay* to mark a shift to a sub-topic from the main topic.
	5	so	Multi-functional *So* helps the teacher to gain the floor back and signals an understanding of S15 by providing a summary.	Structural The teacher uses *so* to organise the discourse and summarises the topic for S15.
	5	right?	Interpersonal The teacher uses *right?* to seek a confirmation from the student.	Interpersonal *right?* with a question mark signals a confirmation check from S15.
4.3	1	all right	Multi-functional The teacher uses *all right* and *okay* as a MWU to organise the classroom transition (managerial) and emphasise that the class is moving onto the next activity (interpersonal).	Multi-functional The use of DM cluster *all right okay* together signals a shift from the end of one learning stage to another (structural), as well draw the students' attention onto the teacher (interpersonal).
	1	okay		

Appendix H. Series keyword sequence map of the sample class



Other activities

Student talk

Teacher talk

Managerial mode

Materials mode

Skills and systems mode

Classroom context mode

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