

Metadiscourse Use in L2 Student Essay Writing: A Longitudinal Cross-Contextual Comparison¹

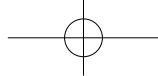
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Abstract

This paper investigates developmental patterns of metadiscourse use in Chinese students' EAP writing in an English medium university, in comparison with English majors' EFL writing in mainstream state universities and L1 student writing in UK universities. Taking a longitudinal and cross-contextual perspective, the study explores corpora of L1 and L2 student writing gathered from three sources: EAP essays written by Chinese undergraduate students at an English Medium Instruction (EMI) university; argumentative essays written by English majors in the Written English Corpus of Chinese Learners (WECCL); and academic essays of English L1 students from the British Academic Written English (BAWE) corpus. Hyland's (2005a) model of metadiscourse was adopted to identify interactive and interactional devices in each corpus, and results were compared between different levels as well as across the corpora to reveal developmental features. Findings show marked differences in metadiscourse use between Chinese EMI students' EAP essays and English major students' EFL essays in mainstream state universities, whereas a similar pattern of use occurred in EAP essays and English L1 student academic essays. Significant changes were also found between different year levels in two L2 essay corpora. The findings suggest that metadiscourse use in L2 writing had developmental trajectories distinctive to different institutional contexts, with EAP instruction in the EMI institution having mixed effects on Chinese students' awareness and use of metadiscourse in essay writing.

Keywords: *metadiscourse, EAP, essay writing, corpus, L1 and L2 student writing*

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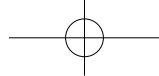
1. Introduction

Research on academic writing has paid considerable attention to the use of metadiscourse in student prose, aiming to reveal how novice members of discourse communities draw on metadiscursive resources to engage with the reader in the academic text (e.g., Adel, 2006; Aull & Lancaster, 2014; Bruce, 2016; Hyland, 2002, 2005a, 2005b, 2012; Lee & Deakin, 2016; Thompson, 2001; Wu, 2007). Current thinking about metadiscourse in student writing is much influenced by Hyland's (2005a) model, which characterizes metadiscourse as a form of interaction between the writer and reader. This model, consisting of interactive and interactional dimensions (Hyland, 2005a), is considered a broad and inclusive approach to metadiscourse, whilst a more restricted, "reflexive" approach is seeing metadiscourse primarily as a form of linguistic reflexivity (Adel, 2006, 2017). Research has shown that, like expert members of academic communities, student writers use both interactive and interactional devices to organize a coherent text as well as to convey their attitudes to what is expressed in the text (e.g., Aull & Lancaster, 2014; Hyland, 2005b; Thompson, 2001).

While all metadiscourse, whether interactive or interactional, is essentially interpersonal, as it takes account of "the reader's knowledge, textual experiences and processing needs" (Hyland, 2005a, p. 41), most research studies have primarily focused on the interactional dimension in student writing (Aull & Lancaster, 2014; Hong & Cao, 2014; Hyland, 2004, 2005b; Lee & Deakin, 2016; Wu, 2007). Such studies aim to reveal the extent to which student writers explicitly engage dialogic interaction with readers in the text (Thompson, 2001), by examining patterns of engagement features (e.g., Hyland, 2005b; Wu, 2007), linguistic markers for constructing stance (e.g., Aull & Lancaster, 2014; Bruce, 2016; Lee, 2015), or occurrences of hedges, boosters and attitude markers (e.g., Lee & Deakin, 2016) in university student writing.

A distinctive characteristic of metadiscourse research into student writing is comparative approaches that were adopted in most studies. Drawing on different types of learner corpora, researchers have concentrated on the frequency and distribution of metadiscourse use by comparisons between successful and less successful student writers (e.g., Intaraprawat & Steffensen, 1995; Lee & Deakin, 2016; Wu, 2007), between L2 student writers and English L1 student writers (e.g., Adel, 2006; Crismore, Markkanen, & Steffensen, 1993; Hyland & Milton, 1997; Lee & Deakin, 2016; Leedham & Cai, 2013), and between undergraduate student texts and published research articles (Aull & Lancaster, 2014; Hyland, 2005b). Such cross-sectional comparative studies have uncovered the patterns of use, overuse or underuse of metadiscourse devices for performing interactive and interactional functions in argumentation in undergraduate student writing.

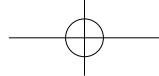
However, what has been thin in current research is longitudinal studies which track developmental trajectories of metadiscourse in texts written by the same students. A longitudinal approach can be revealing about developmental patterns and complexities of metadiscourse use in student academic writing, which would be hidden in cross-sectional comparative studies. This line of research will have valuable implications for teaching academic English to L2 students, who, owing to the global spread of English Medium Instruction (EMI)



in disciplinary learning, increasingly choose to read degree courses in institutions where the ability of English academic writing is essential to their success in university study. So far, there is little research with regard to metadiscourse use of novice L2 academic writers during their transition to the EMI context. The present study aims to fill in the gap by exploring metadiscourse use in Chinese students' EAP essay writing at a Sino-UK joint venture university where English was the medium of instruction for all degree programmes. The study took a longitudinal approach, examining a corpus of students' essays that were written during their EAP course. The study also made cross-contextual comparisons with English major students' EFL essays written at mainstream state universities in China as well as English L1 student essays in UK universities. Such comparative analysis is important to advance the understanding of the contextual impact of EAP instruction on metadiscourse use in student essay writing. A longitudinal and cross-contextual investigation will reveal distinctive features of developmental trajectories of metadiscourse use in university student writing. Findings of the study will also shed light on the current debate on shifting College English teaching to EAP instruction in reforming ELT at Chinese universities (e.g., Cai, 2013; Wang & Yao, 2013).

2. Metadiscourse in L2 student academic writing

Research studies on metadiscourse have looked into similarities and differences between proficient and less proficient L2 student writers, seeking to reveal L2 writers' use, overuse or under-use, so as to guide academic English teaching and help them develop metadiscourse competence in academic writing (Intaraprawat & Steffensen, 1995; Lee & Deakin, 2016; Wu, 2007). In an early study of good and weak ESL essays, Intaraprawat and Steffensen (1995) showed a higher density and wider range of metadiscourse features in better ESL essays and concluded that metadiscourse was a facet of written texts varying with the quality of ESL writing. More recently, Lee and Deakin (2016) investigated interactional metadiscourse in undergraduate student writing, by drawing on successful and less-successful essays written by Chinese ESL writers and successful essays by high-rated L1 student writers. The comparative analysis showed greater instances of hedge devices in L1 and L2 writers' successful essays than in less-successful L2 writers' essays. In addition, ESL students were found to be overwhelmingly reluctant to establish an authorial identity in writing. This lack of authorial presence was considered a salient feature in university student writing, owing to the misconception that academic discourse is uniformly impersonal in style (Hyland, 2002). Interestingly, in researching interactional metadiscourse in young EFL learner writing, Hong and Cao (2014) revealed that Chinese learners at the beginning stage of English learning frequently used self-mentions and engagement markers, displaying "a higher degree of writer visibility" (p. 211). This contrast in writer presence between young EFL learner writing and undergraduate academic writing suggests that in developing English L2 academic literacy and rhetorical sophistication in university writing, due attention needs to be paid to students' prior linguistic repertoire. L2 academic writers from cultures that emphasize respect for authority tend to have little incentive to assert an authorial stance or engage with readers (Hyland, 2005b,

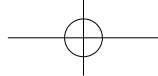


p. 376). It has been argued that teaching academic writing to L2 students should develop their awareness of the options available to them for explicit self-mention in constructing academic argument (Hyland, 2002).

Other research studies have explored the use of metadiscourse in Chinese ESL students' writing (e.g., Hong & Cao, 2014; Lee & Deakin, 2016; Leedham & Cai, 2013; Li & Wharton, 2012; Xu, 2001). With a focus on disciplinary and contextual variation, Li and Wharton (2012) compared metadiscourse in English academic writing of Chinese undergraduates studying literary criticism and translation in a state university with Chinese students studying the same courses in a UK university. Both similarities and differences in metadiscourse use were found in student writing between two contexts. Transitional markers were the most frequent interactive devices in both groups, whereas salient contextual differences were found in interactional metadiscourse, such as self-mentions, engagement markers and boosters. The research concluded that in accounting for patterns of metadiscourse use, educational context was a stronger factor than discipline, and that academic literacy should be seen as "a locally situated practice" (p. 353). In comparing Chinese and British students' writing in UK universities, Leedham and Cai (2013) discovered that a key difference was Chinese students' higher use of linking adverbials, functioning as transitions or frame markers for organizing propositional contents in their academic writing. By examining English learning materials at Chinese secondary schools, the researchers argued that Chinese undergraduates' overuse of linking adverbials and the mixing of formal and informal features in academic writing can be attributed to the influence of their English learning at secondary schools. In an early investigation of hedges and boosters in exam scripts written by Hong Kong school leavers and British school leavers, Hyland and Milton (1997) found that Chinese students in Hong Kong used simpler constructions and a more limited range of devices, but tended to overuse certainty markers and express stronger commitment. The study suggested that language proficiency played a large part in the results, and L2 students' unfamiliarity with metadiscourse conventions of academic genres in English might be detrimental to their academic performance.

Recent studies have also compared metadiscourse use in university writing between lower and higher levels. For example, Aull and Lancaster (2014) examined metadiscursive stance in essays written by first-year undergraduates in comparison with upper-level undergraduates at two American universities as well as the writing of published academics. Three types of metadiscourse, including hedge and boosters, code glosses, and adversative/contrast connectives, were selected for analysis as they emerged as "developmentally meaningful" (p. 159), because they either incrementally increased or decreased from first-year student writing to upper-level student writing to published academics' writing. A key finding is that there appeared to have a developmental trajectory in the use of the three types of metadiscourse, with greatest distinctions emerging between first-year writers and the more advanced writers. Specifically, first-year writers used more boosters and fewer hedges, whereas the more advanced students writers used hedges and contrast connectors more frequently.

In sum, previous studies suggest a number of factors influencing metadiscourse use in



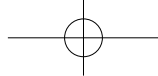
university student writing. Variation could be attributed to L2 language proficiency, English L1 or L2 academic writing, study level, disciplines, or instructional contexts. These studies have drawn on the analysis of student writing corpora that were either open access (e.g., Aull & Lancaster, 2014; Leedham & Cai, 2013) or small-scale self-constructed ones (e.g., Lee & Deakin, 2016; Li & Wharton, 2012). While these corpus-based studies were revealing about metadiscourse use in student writing, a common issue is that there is little evidence so far showing diachronic patterns of development in L2 students' metadiscourse use. This may be due to the lack of longitudinal data in corpus analyses of L2 student writing, as it is very difficult to track text samples written by a large group of students over a period of time. An exception is an early study conducted by Shaw and Liu (1998), who, by adopting pre-test and post-test design, examined changes in metadiscourse in academic essays written by overseas students who took an EAP course prior to their degree study at a UK university. Though an interesting analysis, the study was based on a limited dataset, with a text sample of less 80,000 words in total, which makes its findings less comparable to other corpus-based analyses. The present research, therefore, aims to fill the gap of longitudinal studies on metadiscourse by exploring student writing gathered during a two-year period of university study. The study will examine the developmental trajectories of metadiscourse use in L2 students' EAP writing in an English medium university in China, and also make comparisons with Chinese students' EFL essay writing in mainstream state universities and English L1 student writing in UK universities. The study intends to address two research questions:

- 1) What are the similarities and differences in metadiscourse use in Chinese EMI students' EAP essay writing in comparison with English majors' EFL essay writing in mainstream state universities and L1 student academic writing in British universities?
- 2) What are the developmental patterns of metadiscourse use in Chinese EMI students' EAP essay writing compared with English majors' EFL essay writing and English L1 student writing?

3. Methodology

3.1 Corpora of student essays

The study explored corpora of L1 and L2 student essays from three sources: EAP essays written by Chinese undergraduate students during their first two years at an EMI university; argumentative essays of English major students from the Written English Corpus of Chinese Learners (Wen, Wang, & Liang, 2005); and academic essays of English L1 students in Arts and Humanities and Social Sciences disciplines from the British Academic Written English corpus (Nesi, 2011). Two important decisions were made to ensure controlled comparisons. The study explores the use of metadiscourse in students' essays because essays are the most common genre of university student writing for both L2 students and English L1 students. For L2 students, learning to write English essays with a three-part structure constitutes a key



component of EAP and EFL writing courses. Furthermore, the study investigated university student writing at the same level of study in the Chinese and UK institutions.

The corpus of EAP essays was comprised of 816 assessed assignments written by 272 Chinese undergraduates at three different points of a 2-year EAP course at a Sino-UK English medium university. The university taught general EAP in Year 1 and discipline-related EAP in Year 2, with the aim to develop students' academic literacy and to prepare them for the study of subject courses that were taught in English from the second year on. The EAP class in Year 1 and Year 2 focused on developing English academic writing skills, especially essay writing. There was no requirement of subject knowledge in their writing assignments, though the topics were broadly relevant to their studies of disciplinary areas, mostly in social sciences and business studies. The collected texts were coursework assignments written by 272 students at three different points of their EAP course: at the end of Semester 1 Year 1, Semester 1 Year 2, and Semester 2 Year 2. The students were given the same topics each time for the coursework assignments. For example, Year 1 essays were discussing human activities and climate change, and Year 2 coursework involved discussing and evaluating of a general issue broadly related to disciplinary learning to form an argument, such as business marketing strategies and crisis management.

The argumentative essays were drawn from the Written English Corpus of Chinese Learners (Wen et al., 2005), which is a large-scale college-level EFL writing corpus constructed based on essays written by Chinese English major students from 9 state universities. For the purpose of comparison, the section of untimed argumentative essays written by students in Years 1, 2 and 3 were extracted from the corpus. The reason for including Year 3 students' essays was to observe a developmental picture, as Year 3 essays represented the highest year level of untimed writing in the WECCL corpus. Another consideration was the difference between Chinese and British university systems. In Chinese universities, it takes four years to complete undergraduate degrees compared to three years in British universities. Year 1 in Chinese universities is often considered the foundation year in the UK system, and Years 2 and 3 are considered as equivalent to Year 1 and Year 2 respectively. Argumentative essays were written in response to prompts which presented an issue that students were asked to state their own opinions, e.g., "*Some people think that education is a lifelong process, while others don't agree. Write an essay to state your own opinion*"; "*Which skill of English is the most important to Chinese learners? Write an essay to state your own opinion*" (Wen et al., 2005). The topics were concerned with general issues that Chinese college students were familiar with in their university life, such as value of university degrees, computer games, and tradition and modernization, for which they had knowledge and experience to draw on to write an argumentative essay. Students at the same year within the same institution wrote on the same topic, but topics varied from institution to institution. Although these specific topics were not similar to those given to the EAP students, their essays shared the same aim of developing an argument in a three-part structure, of which metadiscourse use is the foundation of their essay writing.

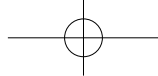
English L1 students' essays were taken from the British Academic Written English

corpus (BAWE) (Nesi, 2011). The BAWE is an open access corpus containing texts from undergraduate students across a range of disciplines and from several UK universities. All texts in BAWE are student assignments graded with “merit” or “distinction,” representing proficient student writing. In order to make controlled comparisons, two sets of student academic writing were selected: Level 1 and Level 2 essays written by English L1 students in Year 1 and Year 2 in the disciplines of Arts and Humanities and Social Sciences. These two disciplines were selected for three reasons. First, essays were the most common genre in the BAWE, and were predominate in undergraduate writing in Arts and Humanities and Social Sciences, with 85% of the essays in the corpus written by students in these two disciplines (Nesi & Gardner, 2012). Second, this was to make the results of the present study more comparable with findings of previous studies on metadiscourse in Chinese and L1 undergraduate writing, which have also chosen to focus on these disciplines (e.g., Aull & Lancaster, 2014; Li & Wharton, 2012). Third, they were also the areas of disciplinary studies of most students in the EAP group, whose essays constituted the EAP essay corpus. Table 1 below summarizes the three corpora.

Table 1. Description of three corpora

	Level	No of text	Avg. length	SD	Word count
Essays from EMI Uni	Y1 S1	272	1072	97	291,750
	Y2 S1	272	1018	66	277,026
	Y2 S2	272	1023	85	280,445
	Total	816	1038	83	849,221
Essays from WECCL	Year 1	393	345	87	136,032
	Year 2	397	293	65	116,574
	Year 3	449	371	103	166,638
	Total	1239	336	85	419,244
Essays from BAWE	Level 1	278	1969	737	547,611
	Level 2	258	2649	1084	710,000
	Total	536	2309	911	1,264,586

As shown in the table, the lengths of texts are typical of English essays written by students in each of the three educational contexts. At the EMI university, a 1000-word essay was the common coursework assignment for Chinese students’ EAP class, preparing them for disciplinary writing in their subject studies. For Chinese English major students studying at state universities, writing a 300-word argumentative essay is one of the learning objectives specified in English curricula. For English L1 students in British universities, writing 2000-



word essays is often adopted as assessment components to demonstrate students' learning outcomes in subject studies. Despite the differences in text length, the essays represent the nature of student writing that Chinese students and English L1 students typically do in their respective institutional contexts. The comparative analyses of metadiscourse use across the three corpora would reveal contextual influences as well as the developmental patterns at different levels in the course of university student writing.

3.2 Classification and identification of metadiscourse

Among the different models of metadiscourse (Adel, 2006; Crismore, 1984; Hyland, 2005a), this study adopted Hyland's classification scheme, which makes the distinction between the interactive dimension and the interactional dimension. Interactive metadiscourse concerns ways of organizing discourse, rather than experience, and reveals how the text is constructed through textual devices. Interactive metadiscourse is comprised of five broad categories: transitions, frame markers, endophoric markers, evidentials, and code glosses. Interactional metadiscourse concerns the ways writers conduct interaction by overtly expressing their perspective on the propositional information and directly engaging with readers. Interactional metadiscourse also consists of five broad categories: hedges, boosters, attitude markers, self-mentions, and engagement markers. Owing to the nature of student writing this study intended to explore, two categories of interactive metadiscourse – endophoric markers and evidentials – were not included in the analysis. These two categories are expressions that refer to other parts of the text or an idea from another source in the discipline, and are prominent in the genres of research articles and dissertations, where writers draw on earlier materials or sources to the literature to provide support for arguments by building on existing knowledge. University student essays, however, share the general aim of developing an argument through a three-part structure of introduction followed by a logical sequence of arguments and a conclusion (Nesi & Gardner, 2012). Explicit referencing to sources in the literature or materials is not an essential element, especially in L2 student essays at the level of Years 1 and 2. The study focuses on the other types of interactive metadiscourse, e.g. transitions and frame markers, which are viewed as the main component of teaching the three-part essay structure to L2 students.

Table 2. An interpersonal model of metadiscourse (adapted from Hyland, 2005a)

Category	Function	Examples
Interactive	Help to guide the reader through the text	
Transitions	Express relations between main clauses	<i>also, but, therefore</i>
Frame markers	Refer to discourse acts, sequences or stages	<i>firstly, in sum, subsequently</i>
Code glosses	Elaborate propositional meanings	<i>for example, in other words, namely</i>

to be continued

Table 2. continued

Category	Function	Examples
Interactional	Involve the reader in the text	
Hedges	Withhold commitment and open dialogue	<i>might, could, probably,</i>
Boosters	Emphasize certainty or close dialogue	<i>definitely, must, in fact</i>
Attitude markers	Express writer's attitude to proposition	<i>important, unfortunately, agree</i>
Self-mentions	Explicit reference to author(s)	<i>we, I, our, my</i>
Engagement markers	Explicitly build relationship with reader	<i>should, you, consider</i>

Based on the taxonomy in Table 2, the study used the software WordSmith Tools 6.0 (Scott, 2015) to search for instances of interactive and interactional metadiscourse in the three corpora. After the concordance lines of the metadiscourse items were extracted from the corpora, a manual checking process was carried out to identify whether the occurrences of items had a metadiscoursal function in text. For example, “*and*” is by far the most frequently occurring item across the three corpora, but in most cases, it was used to connect two lexical words or two phrases, rather than as a transition marker in discourse. Such instances were excluded from the frequency count.

Then, the frequencies of each metadiscourse item and the cumulative frequencies of each type were first calculated according to the level of study in each corpus, before normalization per 10,000 words. To examine the developmental trajectories of metadiscourse use in L2 and English L1 student writing, the study made comparisons of each type of interactive and interactional metadiscourse across the different levels of study in each corpus. Further comparisons were made among the overall occurrences of the metadiscourse features across the three corpora in order to reveal contextual differences.

4. Results

4.1 Comparisons of occurrences of metadiscourse across the corpora

This section reports the findings on the overall frequencies of occurrence of metadiscourse features across the three corpora. After normalizing raw frequencies per 10,000 words, the occurrences of metadiscourse items are 1416 in the EFL essays, 731 in the EAP essays, and 740 in the English L1 essays. Table 3 shows the results of overall frequencies of metadiscourse use across the three institutional contexts. The frequencies of metadiscourse occurrences are similar between the corpora of EAP essays and English L1 essays, and these numbers are also close to the results of other studies on metadiscourse use in Chinese and L1 student academic writing (Aull & Lancaster, 2014; Li & Wharton, 2012). However, the overall use of

metadiscourse by English major student writers is twice as much as their peers' EAP essays and English L1 student essays. The employment of chi-square test indicates that this difference is statistically significant ($chi-sq = 320.8, p = 0.000$).

Table 3. Overall frequencies of metadiscourse use in three corpora (per 10,000 words)

	Chinese English majors	Chinese EMI students	English L1 students
Engagement markers	315	127	98
Boosters	175	62	92
Attitude markers	76	34	34
Hedges	150	113	165
Self-mentions	284	9	56
Frame markers	118	103	67
Transition markers	259	237	189
Code glosses	37	46	40
Total	1416	731	740

The distribution of each category of metadiscourse was also compared across the three contextual corpora. As shown in Figure 1, there are notable differences between the three institutional contexts. First, the English majors' EFL essays used nearly all categories of metadiscourse (except for code glosses) more frequently than the EAP writers and English L1 student writers. This is especially the case with regard to interactional devices, of which the most prominent categories are engagement markers, self-mentions, and boosters. The greatest difference is the use of self-mentions across the three corpora. In English majors' EFL essay writing, first-person pronouns and possessive adjectives have a high frequency of occurrence, second only to the category of engagement markers. By contrast, first-person pronouns and possessives were used minimally in the EAP essays written by Chinese students in the EMI context. The occurrence of self-mentions in English L1 student writing is similar to that in graduate student writing as revealed in other studies (Hyland, 2005a, p. 57). This contrasting pattern between the EFL essays and the EAP essays suggests that the EFL and EMI institutional contexts had a strong influence on the degree of explicit author presence or absence in Chinese undergraduate English writing. Striking differences were also found in the use of engagement markers and boosters, with EFL essay writers using more than twice as many of these as EAP essay writers and English L1 student writers.

Second, there are similarities in the distribution of metadiscourse use between Chinese students' EAP essays and English L1 students' essays. For example, transitional markers are

the most frequently occurring category in both corpora, followed by hedges, engagement markers and frame markers. Similar patterns also emerged in the occurrences of the less frequent categories, including boosters, code glosses and attitudes markers. The occurrence of interactive metadiscourse appears to be higher in Chinese students' EAP essays than in English L1 essays, while hedges, boosters and self-mentions are the only categories that have higher frequencies of occurrence in English L1 essays than in Chinese EAP essays. Overall, there are shared pattern of metadiscourse use between Chinese EAP essay writers and English L1 academic writers, with less difference deriving from the two educational contexts.

In sum, salient cross-contextual differences lie in the use of self-mentions, engagement markers, and boosters. English major students at Chinese universities used these interactional devices more frequently than EAP students in the EMI university and L1 students in UK universities. The prominent difference is the extremely high frequency of self-mentions in EFL essays, in contrast to a minimal use in EAP essays. With regard to interactive metadiscourse, Chinese students in both EAP and EFL contexts used more transitions and frame markers than L1 students in essay writing.

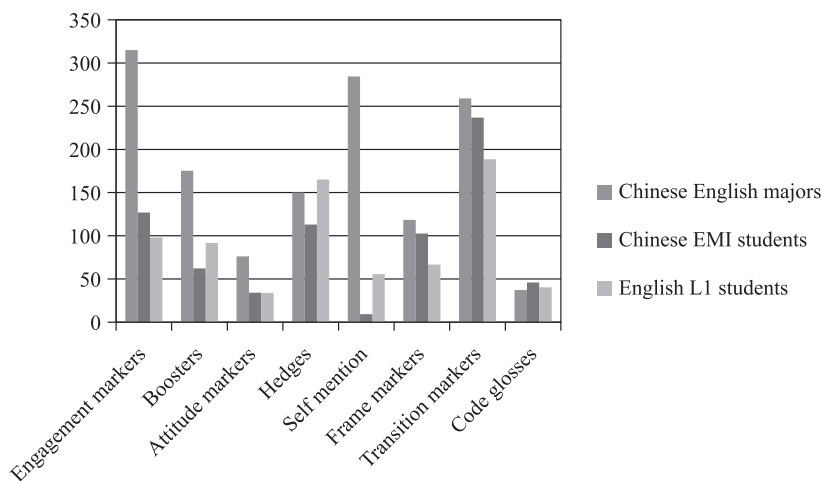
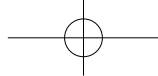


Figure 1. Distribution of metadiscourse devices across three corpora (per 10,000 words)

4.2 Developmental patterns at different levels of study

This section reports the findings on the distribution of each category of metadiscourse across different levels in three educational contexts. As shown in Table 4, in total, there is a clear trend of decrease in metadiscourse from lower level to higher level in both English majors' EFL essays and EMI students' EAP essays. In the former, the overall use decreased from Year 1 to Year 2, and further down to Year 3 (1573 > 1445 > 1232). The



employment of chi-square test indicates that this difference is statistically significant ($chi-sq = 41.9, p = 0.000$). In EAP essays, metadiscourse use also appears to decline from Y1S1 to Y2S1 to Y2S2 ($763 > 728 > 710$). However, chi-square test shows that this difference is not statistically significant ($chi-sq = 2.0, p = 0.359$). In English L1 essays, there is almost no change in overall metadiscourse use between Year 1 and Year 2, as shown in Table 4. This is a sharp contrast to the overall decrease in metadiscourse use in Chinese students' essays from Year 1 to Year 2 and Year 3. This difference between L2 and L1 student writers suggests that metadiscourse constitutes linguistic and rhetorical repertoire that English L1 students may have already acquired in their academic studies, whereas for L2 students, appropriate use of metadiscourse is the part of second language writing competence they need to develop in English essay writing. A further scrutiny of the occurrences of interactional and interactive features reveals some interesting patterns. First, the overall difference between English majors' EFL essays and EMI students' EAP essays is attributed to the overuse of interactional metadiscourse in EFL essays, whereas any difference in the use of interactive metadiscourse is rather slim between the two corpora. Second, in EFL essays, the decrease trend also occurred consistently in the use of both interactional and interactive resources from Year 1 to Year 2 to Year 3. However, in EAP essays, there are fluctuating patterns of interactional and interactive devices across the three levels: interactional features ($Y2S2 > Y1S1 > Y2S1$), and interactive features ($Y2S1 > Y1S1 > Y2S2$). In addition, the proportion of interactional metadiscourse is higher than that of interactive at the higher level of essay writing (Y2S2), which is opposite to the distribution at lower levels. For English L1 essays, there is no distinction between Level 1 and Level 2 in both interactional and interactive items, though the former is proportionally higher than the latter, which is similar to that of EAP essays at the higher level.

In terms of distribution of specific categories, in the corpus of EAP essays, transition markers are the most frequently used category, whilst engagement markers and hedges occur more frequently than other categories of interactional devices. However, these three categories show mixed patterns of occurrence from Year 1 to Year 2. On the other hand, hedges and boosters appear to have a clear incremental development from Y1S1 to Y2S2, while code glosses tend to have a downward trend from Year 1 to Year 2. The occurrence of self-mentions has been consistently minimal in EMI students' EAP writing at both year levels. In the corpus of English majors' EFL essays, students tended to use engagement markers, self-mentions, and transition markers more frequently, but underuse code glosses. Except for hedges, there appears to be a general decline in interactional features from Year 1 to Year 3, especially the use of self-mentions and engagement markers. On the other hand, interactive metadiscourse does not show a clear trend across the three years. In English L1 student essays, no clear change can be observed, and all metadiscourse categories were evenly used, though transitions and hedges occurred with higher frequencies at both levels.

Table 4. Frequency and distribution of metadiscourse between different levels across three corpora (per 10,000 words)

	Chinese English majors			Chinese EMI students			English L1 students	
	Y1	Y2	Y3	Y1S1	Y2S1	Y2S2	Y1	Y2
<i>Interactional</i>	1136	1021	847	359	309	374	445	444
Engagement markers	352	327	265	150	113	120	96	100
Boosters	194	173	159	59	56	72	96	87
Attitude markers	89	76	64	33	31	39	34	34
Hedges	168	137	146	103	103	135	167	164
Self-mentions	333	308	213	14	6	8	52	59
<i>Interactive</i>	437	424	385	404	419	336	296	296
Frame markers	126	125	105	99	112	98	66	68
Transition markers	275	259	244	240	261	210	189	188
Code glosses	36	40	36	65	46	28	41	40
Total	1573	1445	1232	763	728	710	741	740

4.3 Occurrences of the most frequent metadiscourse items across the corpora

The study further examined the most frequently used items of each metadiscourse category in the three corpora. Table 5 shows the ten most frequent items of interactional features across three corpora. For engagement markers, six common items occurred most frequently in both EAP essays and English L1 essays (*should, use, order, set, increase, do not*), with their frequencies being slightly higher in EAP essays. On the other hand, only three of the 10 most frequent items appear in both EFL essays and EAP essays (*should, use, develop*), and four of the top ten items in EFL essays are person pronouns and possessive (*you, your, one's, we*), with high frequencies of occurrences. None of these pronouns, however, appeared in the EAP essays, and only *you* in English L1 essays. The engagement marker *should* occurred far more frequently in the EFL essays than in the other two corpora. As noted in the above section, boosters were less often used in the EAP essays, and this is also the case in the list of the top ten items. Most of the ten frequent items in this category are common across the three corpora, and they were used to emphasize certainty and boost writers' expressions of stance (*must, really, certain, always, never, clear*). Two distinctive items in the EFL essays, that is, *think* and *of course*, are common features of spoken language (i.e., *I think*).

The occurrences of the top ten attitude markers are quite similar across the three corpora,

in terms of semantic meaning of the lexical items and their frequency (with the exception of the high frequency of *important* in EFL essays). Student writers in all three contexts tended to rely on the sets of adjectives and adverbs to indicate their affective attitude to propositions (e.g., *important/importantly*, *essential/essentially*, *appropriate/appropriately*, *fortunately/unfortunately*). The most frequent hedges are also similar between the three corpora, in terms of the occurring frequencies and the choices of items. Both Chinese L2 students and English L1 students commonly used modal verbs of probability (*may*, *might*, *would*, *could*) and approximative adverbs (*about*, *maybe*, *almost*, *perhaps*) to express their modulated viewpoints on propositional contents. An exception is the frequent occurrence of the formulaic phrase “*in my opinion*” in English majors’ EFL essays, used to explicitly present writers’ subjective position, whereas in English L1 students’ essays, the frequent use of *suggests*, a nuanced lexical verb, is to imply that a statement is based on the writer’s plausible reasoning rather than certain knowledge. As discussed in the above section, the use of self-mentions shows the salient difference between the three corpora. They had the lowest occurrences in the EAP essays, in contrast to their extremely high frequencies in the EFL essays.

Table 5. Top ten items of each interactional category across three corpora (per 10,000 words)

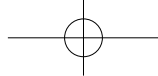
	Chinese English majors		Chinese EMI students		English L1 students	
Engagement markers	<i>you</i>	83.1	<i>should</i>	24.3	<i>use</i>	10.6
	<i>should</i>	46.4	<i>use</i>	18.5	<i>state</i>	10.3
	<i>your</i>	27.9	<i>order</i>	7.4	<i>should</i>	7.9
	<i>one’s</i>	16.9	<i>increase</i>	7.2	<i>order</i>	7.7
	<i>use</i>	13.1	<i>set</i>	5.3	<i>see</i>	5.8
	<i>go</i>	9.3	<i>pay</i>	4.8	<i>you</i>	4.9
	<i>see</i>	9.2	<i>develop</i>	4.3	<i>set</i>	3.8
	<i>we</i>	8.3	<i>need to</i>	4	<i>do not</i>	3.3
	<i>develop</i>	8	<i>contrast</i>	3.8	<i>increase</i>	2.8
	<i>have to</i>	7.6	<i>do not</i>	3	<i>key</i>	2.4
Boosters	<i>think</i>	39.8	<i>must</i>	4.7	<i>must</i>	9.2
	<i>know</i>	21.5	<i>find</i>	4.5	<i>found</i>	6.3
	<i>must</i>	16.8	<i>always</i>	3.8	<i>certain</i>	4.5
	<i>find</i>	11.2	<i>found</i>	3.5	<i>true</i>	4.1
	<i>always</i>	10.1	<i>obvious</i>	2.8	<i>thought</i>	3.5
	<i>really</i>	7.1	<i>showed</i>	2.8	<i>never</i>	3.5
	<i>of course</i>	6	<i>know</i>	2.2	<i>always</i>	3.4
	<i>true</i>	5.7	<i>really</i>	2.1	<i>shows</i>	3.3
	<i>never</i>	5.7	<i>certain</i>	2.1	<i>clear</i>	3.3
	<i>certain</i>	5.1	<i>shows</i>	2	<i>indeed</i>	3

to be continued

Table 5. continued

	Chinese English majors		Chinese EMI students		English L1 students	
Attitude markers	<i>important</i>	39.2	<i>important</i>	11.1	<i>even</i>	10.1
	<i>even</i>	16.1	<i>even</i>	8.4	<i>important</i>	8.2
	<i>essential</i>	6.9	<i>appropriate</i>	2.9	<i>essential</i>	1.7
	<i>agree</i>	3	<i>essential</i>	2	<i>expected</i>	1.3
	<i>prefer</i>	2.8	<i>expected</i>	1.8	<i>appropriate</i>	1.2
	<i>interesting</i>	1.6	<i>prefer</i>	1	<i>essentially</i>	1.1
	<i>correctly</i>	0.8	<i>unexpected</i>	0.6	<i>interesting</i>	1.1
	<i>expected</i>	0.4	<i>unfortunately</i>	0.5	<i>agree</i>	1
	<i>unfortunately</i>	0.4	<i>fortunately</i>	0.5	<i>dramatic</i>	0.8
	<i>importantly</i>	0.4	<i>inappropriate</i>	0.4	<i>importantly</i>	0.6
Hedges	<i>may</i>	22.8	<i>about</i>	19.1	<i>would</i>	23.7
	<i>about</i>	17.2	<i>may</i>	15.2	<i>could</i>	15.3
	<i>would</i>	14.1	<i>would</i>	12	<i>may</i>	14.5
	<i>could</i>	10.3	<i>could</i>	11.5	<i>about</i>	9.8
	<i>in my opinion</i>	9.4	<i>around</i>	3.9	<i>often</i>	7.2
	<i>maybe</i>	7.7	<i>seems</i>	3.6	<i>perhaps</i>	5.8
	<i>often</i>	7.3	<i>possible</i>	3.6	<i>possible</i>	5.5
	<i>sometimes</i>	6.9	<i>mainly</i>	3.5	<i>seems</i>	5.4
	<i>feel</i>	5.2	<i>might</i>	2.8	<i>suggests</i>	4.1
	<i>seems</i>	3.9	<i>almost</i>	2.3	<i>might</i>	3.2
Self-mention	<i>we</i>	118.1	<i>we</i>	2.8	<i>we</i>	19.7
	<i>I</i>	63.4	<i>us</i>	2.4	<i>I</i>	15.6
	<i>our</i>	49.6	<i>our</i>	2	<i>us</i>	7.2
	<i>my</i>	25.7	<i>I</i>	1.4	<i>our</i>	7.1
	<i>us</i>	20	<i>my</i>	0.3	<i>my</i>	3.7
	<i>me</i>	7.5	<i>mine</i>	0.3	<i>me</i>	2.1
	<i>mine</i>	0.3	<i>me</i>	0.1	<i>mine</i>	0.1
	<i>ours</i>	0.2	<i>ours</i>	0	<i>ours</i>	0

Table 6 shows the ten most frequent items of interactive metadiscourse across three corpora. Frame markers signal text boundaries or elements of schematic text structure (Hyland, 2005a, p. 51). As can be seen, a majority of the top ten frame markers are identical across three corpora, but there is a decreasing trend from the EFL essays to the EAP essays to L1 student academic essays. In addition, the specific functions of the top ten markers appear similar in the three sub-corpora. Five to six markers are used to sequence parts of the text (*first, then,*



second, last, firstly, secondly, third). Others indicate topic shifts (*with regard to, now, return to*), or announce discourse goals (*purpose, focus, want to*). Transition markers signal additive, causative and contrastive relations between stretches of discourse (Hyland, 2005a, p. 50). Of the top ten items, Chinese students tended to use them more frequently than L1 students, and *but* and *so* are particularly frequent in EFL essays. Some of these transition items signal contrast in discourse (*but, however, still, although, while*), while others indicate consequence relations (*because, since, therefore, so, thus*), or addition (*also, another*). Code glosses are used to rephrase, explain or elaborate what has been said in the text, and a broad distinction of this category is between reformulation and exemplification (Hyland, 2007). As shown in Table 3, overall this category occurred much less often than frame and transition markers, and there is a similar pattern of occurrence between the three corpora. This is also reflected in the list of the most frequently used items. However, while both Chinese and L1 students used the same items for exemplification (*for example, such as, for instance*), there is a clear difference in employing reformulation strategies. Chinese student writers used formulaic markers more frequently than L1 student writers to paraphrase a point (*that is, that is to say, which means, that means, in other words*).

Table 6. Top ten items of each interactive category across three corpora (per 10,000 words)

	Chinese English majors		Chinese EMI students		English L1 students	
Frame markers	<i>with regard to</i>	19.9	<i>first</i>	16.6	<i>first</i>	10.3
	<i>want to</i>	14.3	<i>with regard to</i>	12.2	<i>then</i>	9.6
	<i>then</i>	13.4	<i>then</i>	8	<i>with regard to</i>	7
	<i>first</i>	12.6	<i>second</i>	7.4	<i>now</i>	4.5
	<i>now</i>	10.4	<i>now</i>	5.6	<i>return to</i>	4.5
	<i>return to</i>	10.4	<i>return to</i>	5.6	<i>second</i>	3.7
	<i>last</i>	4.9	<i>last</i>	4.9	<i>focus</i>	2.2
	<i>second</i>	4.7	<i>firstly</i>	4.1	<i>third</i>	2
	<i>purpose</i>	3.7	<i>focus</i>	3.9	<i>last</i>	1.7
	<i>secondly</i>	2.6	<i>secondly</i>	3.7	<i>firstly</i>	1.5
Transitions	<i>but</i>	66.8	<i>also</i>	35.4	<i>but</i>	27.3
	<i>so</i>	33.9	<i>but</i>	20.7	<i>also</i>	23.5
	<i>also</i>	30.5	<i>however</i>	19.4	<i>however</i>	21.3
	<i>because</i>	21.8	<i>because</i>	17.5	<i>because</i>	12.9
	<i>however</i>	14.6	<i>still</i>	9.9	<i>therefore</i>	11.5
	<i>while</i>	11.9	<i>while</i>	9.1	<i>thus</i>	7.8

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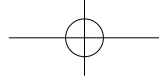
Table 6. continued

	Chinese English majors	Chinese EMI students	English L1 students
	<i>still</i> 9.2	<i>another</i> 8.5	<i>although</i> 7.3
	<i>therefore</i> 5.8	<i>so</i> 8.3	<i>another</i> 6.4
	<i>in order to</i> 5.7	<i>since</i> 8	<i>so</i> 6
	<i>another</i> 5.2	<i>therefore</i> 7.7	<i>still</i> 5.7
Code glosses	<i>for example</i> 8.3	<i>such as</i> 13.8	<i>such as</i> 11.3
	<i>such as</i> 6.9	<i>for example</i> 8.3	<i>for example</i> 6.5
	<i>especially</i> 6.7	<i>especially</i> 5.4	<i>in fact</i> 2.5
	<i>in fact</i> 3.6	<i>for instance</i> 3.4	<i>particularly</i> 2.5
	<i>called</i> 2.2	<i>called</i> 3.1	<i>especially</i> 2.5
	<i>for instance</i> 1.6	<i>which means</i> 2.2	<i>called</i> 1.9
	<i>that is,</i> 0.7	<i>in fact</i> 1.8	<i>in particular</i> 1.4
	<i>that is to say</i> 0.7	<i>in other words</i> 0.9	<i>for instance</i> 1.3
	<i>in other words</i> 0.7	<i>particularly</i> 0.7	<i>e.g.</i> 1.2
	<i>as a matter of fact</i> 0.5	<i>that means</i> 0.5	<i>known as</i> 1

5. Discussion

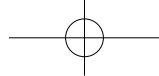
This study explored the use of metadiscourse resources in university student writing across three institutional contexts and at different levels of study in each context. Drawing on the comparisons of student essays in three corpora, the study has shown similarities and differences in metadiscourse use among Chinese English major students' EFL essays, Chinese EMI students' EAP essays and English L1 student essays, as well as the developmental patterns at different levels of study in each institutional context. This section discusses the findings in relation to the two research questions posed at the end of Section 2.

In response to the first research question, the study revealed that the most salient contextual differences occurred between EFL essays in China's state universities and EAP essays in the EMI university, with the former using twice more metadiscourse than the latter. The overuse of metadiscourse in EFL writing is primarily attributed to the high proportion of interactional devices. Chinese EFL writers tended to overuse engagement markers, and the most frequent markers include second person pronouns (*you, your*), inclusive *we*, and modal verbs (*should, have to*). They also used certain types of boosters more frequently, like *think, always, of course, really*. In addition, first person pronouns and possessive had extremely high frequencies, compared to EAP writers and English L1 writers. The overall high frequencies and the choice of these interactional features suggest that there is a high degree of writer/reader



visibility in Chinese English major students' EFL essay writing, and a tendency of overusing certainty markers and express stronger commitment (Hyland & Milton, 1997). Chinese EFL writers tend to use the interactional resources to make assertive claims and to explicitly address the reader in their writing, indicating "a writer's dialogic awareness" of texts and readers (Hyland, 2005b, p. 365). On the other hand, the findings also suggest that EFL writers appear to conflate spoken register with written register in essay writing (Adel, 2006; Crossley & McNamara, 2011; Hong & Cao, 2014). These distinctive interactional features corroborate with previous corpus-based studies on Chinese EFL writing in mainland China (Hong & Cao, 2014), but are distinct from the findings of studies on UK or US-based Chinese student writers studying in English medium institutional contexts (Lee & Deakin, 2016; Li & Wharton, 2012). The study also identified similar patterns in the use of interactive metadiscourse between EFL essay writing and EAP essay writing. The occurring frequencies of transition markers, frame markers, and code glosses are quite close between two corpora, and the most frequently used items are also similar in each category.

The study revealed both similarities and differences in metadiscourse use between Chinese EMI students' EAP writing and English L1 student writing. The overall frequencies were found to be similar between the two groups of student writers. Furthermore, the most frequently used items in each category appear to be the same, and except for self-mentions, their frequencies in two corpora tend to be close. However, there is a striking difference in the proportions of interactive and interactional metadiscourse. Chinese EMI students' EAP writing made more use of interactive resources, but less interactional resources than English L1 student writers. Transition and frame markers are the more common interactive devices in Chinese EAP writers, whereas English L1 writers used hedges, self-mentions, and boosters more often in their academic writing. These findings are consistent with other studies on metadiscourse use in L2 and L1 student writing (Adel, 2006; Aull & Lancaster, 2014; Hyland & Milton, 1997; Li & Wharton, 2012). An important distinction between L2 and L1/expert academic writing is that textual organizing devices, for instance, transition and frame markers, are more commonly used in L2 student academic writing, whereas the frequent use of hedges and boosters is an indication of L1 and advanced academic writing. These findings suggest the effects of L1 and L2 institutional contexts on the use of metadiscourse in university student writing. Hedges and boosters are stance features that student writers in UK and US universities are guided to employ in academic writing to express their attitude or commitment to propositional contents (Aull & Lancaster, 2014; Li & Wharton, 2012). However, for Chinese students studying in an EMI context, EAP teachers typically focuses on teaching students how to use interactive devices to construct a logical and coherent text, and interactive metadiscourse, in particular transition and frame markers, is well covered in writing instruction for Chinese students (Chiang, 2003; Leedham & Cai, 2013; Li & Wharton, 2012). This is because logical organization is seen as a major challenge for Chinese students to write long essays. Less instructional attention has been paid to the importance of hedging and the expression of writer's stance in L2 academic writing. The minimal use of self-mentions in Chinese students' EAP essays is another indication of the effect of EAP instruction on L2 student academic writing. As Hyland (2002) pointed out, academic discourse

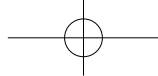


is often treated as objective and uniformly impersonal, and EAP teachers direct L2 students to remove their own presence from the texts, and avoid the use of first person pronouns in their academic writing. The phenomenon of impersonality in EAP essays reflects the influence of the institutional EAP instruction on the Chinese students' academic writing. It also indicates Chinese students' preference to maintain an impersonal and detached writing style and discomfort with taking on a stronger writer identity in academic writing (Lee & Deakin, 2016).

The second research question concerns the developmental patterns of metadiscourse use at different levels of study in each institutional context. Results of our analysis show a clear decline in the English majors' EFL essays from Year 1 to Year 3. The use of engagement markers and self-mentions, tends to decrease most along with students' progression to the higher level of study. For Chinese students who studied in the EMI institutional context, variation in metadiscourse use occurred at the three stages of the EAP course. Though no distinctive patterns of development emerged from Year 1 to Year 2, the occurrences of self-mentions have been consistently minimal in the EAP essays throughout the two-year course. A notable increase is the use of hedges and boosters in the essays written at the end of Year 2 semester 2, while the use of transition and frame markers appears to be fluctuating during the two-year EAP course. In English L1 student writing, the occurrences of metadiscourse devices have been consistently even and stable, with little difference in all categories across the two levels of study. This finding is different from previous research that suggested a developmental trajectory in metadiscourse use in university student writing, with the greatest distinctions between first-year writers and more advanced writers (Aull & Lancaster, 2014). Shaw and Liu (1998) compared the use of metadiscourse in students' essay writing after two months of EAP instruction and found an increased use of transitions and engagement markers, but a reduction in self-mentions. Xu (2001) found that Chinese university students used more formally complex interactive metadiscourse in their final two years of study, but used fewer self-mentions and fewer hedges and attitude markers. The present study, however, reveals a rather complex picture of the developmental trend of metadiscourse use in L2 student writing, which may be attributed to the different institutional contexts. It is argued that measuring the developmental trajectory of metadiscourse in university student writing is a complex and multifaceted issue. This study has shown a clear distinction in metadiscourse use between L2 student writing and English L1 student writing. For developing L2 student writers, Chinese EMI university contexts transmit different institutional expectations of their academic literacy, compared with mainstream state institutions. Finally, the effects of EAP instruction seem to be mixed on the use and development of metadiscourse in student writing. Chinese student writers begin to use metadiscourse resources like hedges to construct an academic stance, and meanwhile they developed a misperception about an impersonal style of academic writing and avoided the presence of first person identity in their texts.

6. Conclusion

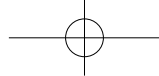
The study has revealed cross-contextual similarities and differences as well as developmental



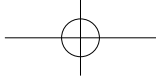
trends in the use of metadiscourse in university student writing. The findings suggest that institutional contexts may account for differences in metadiscourse use across EFL essay writing, EAP essay writing and English L1 academic writing. The developmental trends were found to be complex at different academic levels. The study has important implications for teaching EFL and EAP writing to Chinese undergraduate students. With a focus on developing general English skills, Chinese students studying in EFL institutional contexts may lack the breadth of academic reading required to develop an awareness of sophistication of metadiscourse strategies in academic writing. To enable EFL students to develop academic literacy, explicit instruction on how to use metadiscourse in English essays should be part of their English curriculum. On the other hand, EAP writing instruction in EMI contexts, which is a transition phrase to disciplinary writing, should shift the focus on teaching interactive metadiscourse to interactional metadiscourse, especially hedging and stance features used to express the writer's stance in the text. EAP students' overuse of textual organizing features and minimal use of self-mentions may be the consequence of inappropriate input of metadiscourse knowledge in the instruction. Writing in general EFL classes and EAP classes is the foundation for the development of Chinese L2 students' language proficiency and English academic literacy, but if increasing numbers of students choose to study disciplinary subjects in EMI institutions, whether going abroad or in mainland China, writing as a means of learning disciplinary content and conventions also has to be recognized in the curriculum. It has been argued that owing to the significant role played by writing in university students' academic success, a close alignment between general EFL writing, EAP writing, and disciplinary writing is a key issue for reforming English language learning and teaching at Chinese higher institutions (Ruan & Chen, 2017). In this regard, effective teaching of metadiscourse is an important means of achieving the educational goals inherent to second language writing.

References

- Adel, A. (2006). *Metadiscourse in L1 and L2 English*. Amsterdam/Philadelphia: John Benjamins.
- Adel, A. (2017). Remember that your reader cannot read your mind: Problem/solution-oriented metadiscourse in teacher feedback on student writing. *English for Specific Purposes*, 45, 54-68.
- Aull, L. L., & Lancaster, Z. (2014). Linguistic markers of stance in early and advanced academic writing: A corpus-based comparison. *Written Communication*, 31, 151-183.
- Bruce, I. (2016). Constructing critical stance in university essays in English literature and sociology. *English for Specific Purposes*, 42, 13-25.
- Cai, J. (2013). On college English education standards framework in Shanghai (jiedu 'Shanghaishi daxue yingyu jiaoxue cankao kuangjia'). *Foreign Languages in China (zhonguo waiyu)*, 10(2), 4-10.
- Chiang, S. (2003). The importance of cohesive conditions to perception of writing quality at the early stages of foreign language learning. *System*, 31, 471-484.
- Crismore, A. (1984). *The case for a rhetorical perspective on learning from texts: Exploring metadiscourse* (p. 26). Indiana University. ED257035.
- Crismore, A., Markkanen, R., & Steffensen, M. S. (1993). Metadiscourse in persuasive writing: A study of



- texts written by American and Finnish university students. *Written Communication*, 10, 39-71.
- Crossley, S. A., & McNamara, D. S. (2011). Shared features of L2 writing: Intergroup homogeneity and text classification. *Journal of Second Language Writing*, 20, 271-285.
- Hong, H., & Cao, F. (2014). Interactional metadiscourse in young EFL learner writing: A corpus-based study. *International Journal of Corpus Linguistics*, 19, 201-224.
- Hyland, K. (2002). Authority and invisibility: Authorial identity in academic writing. *Journal of Pragmatics*, 34, 1091-1112.
- Hyland, K. (2004). Disciplinary interactions: Metadiscourse in L2 postgraduate writing. *Journal of Second Language Writing*, 13, 133-151.
- Hyland, K. (2005a). *Metadiscourse: Exploring interaction in writing*. London: Continuum.
- Hyland, K. (2005b). Representing readers in writing: Student and expert practices. *Linguistics and Education*, 16, 363-377.
- Hyland, K. (2007). Applying a gloss: Exemplifying and reformulating in academic discourse. *Applied Linguistics*, 28, 266-285.
- Hyland, K. (2012). Undergraduate understandings: Stance and voice in final year reports. In K. Hyland & C. Sancho Guinda (Eds.), *Stance and voice in written academic genres* (pp. 134-150). New York, NY: Palgrave Macmillan.
- Hyland, K., & Milton, J. (1997). Qualification and certainty in L1 and L2 students' writing. *Journal of Second Language Writing*, 6, 183-205.
- Intaraprawat, P., & Steffensen, M. S. (1995). The use of metadiscourse in good and poor ESL essays. *Journal of Second Language Writing*, 4, 253-272.
- Lee, J., & Deakin, L. (2016). Interactions in L1 and L2 undergraduate student writing: Interactional metadiscourse in successful and less-successful argumentative essays. *Journal of Second Language Writing*, 33, 21-34.
- Lee, S. H. (2015). Evaluative stances in persuasive essays by undergraduate students: Focusing on appreciation resources. *Text & Talk*, 35, 49-76.
- Leedham, M., & Cai, G. (2013). Besides... on the other hand: using a corpus approach to explore the influence of teaching materials on Chinese students' use of linking adverbials. *Journal of Second Language Writing*, 22, 374-389.
- Li, T., & Wharton, S. (2012). Metadiscourse repertoire of L1 Mandarin undergraduates writing in English: A cross-contextual, cross-disciplinary study. *Journal of English for Academic Purposes*, 11, 345-356.
- Nesi, H. (2011). BAWE: An introduction to a new resource. In A. Frankenberg-Garcia, L. Flowerdew, & G. Aston (Eds.), *New trends in corpora and language learning* (pp. 213-228). London: Continuum.
- Nesi, H., & Gardner, S. (2012). *Genres across the disciplines: Student writing in higher education*. Cambridge, England: Cambridge University Press.
- Ruan, Z., & Chen, J. (2017). Students' perceptions and practices in L2 disciplinary writing at an English medium university in Mainland China. In H. Reinders, D. Nunan, and Z. Bin (Eds) *Innovation in language learning and teaching: the case of China* (pp. 197-222). London: Palgrave Macmillan.
- Scott, M. (2015). *Oxford WordSmith Tools* (Version 6.0). Oxford: Oxford University Press.
- Shaw, P., & Liu, E. (1998). What develops in the development of second language writing? *Applied Linguistics*, 19, 225-254.



- Thompson, G. (2001). Interaction in academic writing: Learning to argue with the reader. *Applied Linguistics*, 22, 58-78.
- Wang, S., & Yao, C. (2013). Some thoughts on English for academic purposes (guanyu xueshu yingyu jiaoxue de jidian sikao). *Foreign Languages in China (zhonguo waiyu)*, 10(4), 4-10.
- Wen, Q., Wang, L., & Liang, M. (2005). *Spoken and written English corpus of Chinese learners*. Beijing, China: Foreign Language Teaching and Research Press.
- Wu, S. M. (2007). The use of engagement resources in high- and low-rated undergraduate geography essays. *Journal of English for Academic Purposes*, 6, 254-271.
- Xu, H. (2001). *Metadiscourse: A cross-cultural perspective*. Nanjing: Southeast University Press.

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