

**METADISCOURSE IN ACADEMIC WRITING: AN
INVESTIGATION OF
GRADUATE STUDENTS' MA THESES IN TAIWAN**

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ABSTRACT

This research is intended to examine the metadiscourse features of eight MA theses published by the graduate students of National Taiwan University (TU), National Taiwan Normal University (NU), National Chengchi University (CCU), and National Tsing-Hua University (TSU), each providing two theses on literature and linguistics respectively. It reports that Taiwanese graduate student writers (TGSW) use much more textual features (68.63%) than interpersonal features (31.37%) and English academic writers (EAW) in Hyland's research also use more textual features (55.10) than interpersonal features (44.90). However, the discrepancy between TGSW and EAW in the use of textual features and interpersonal features seems to boil down to a conclusion that TGSW use more textual features than EAW by 13.53% and less interpersonal features by 23.73%. It further indicates that the first three ranked subcategories are logical connectives, hedges, and code glosses for TGSW and hedges, logical connectives, and code glosses for EAW. All of these have actually provided some pedagogical implications for the instruction of academic writing.

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1. Introduction

Recognized as discourse about discourse (Crismore, 1989; Vande Kopple, 1985; Williams, 1989), metadiscourse refers to (1) those aspects of a text that logically organize the discourse and link the ideas and (2) those that indicate the writer's attitude toward the content and readers. The first part aims to direct the writer to achieve a well-organized text so that the readers could better comprehend a text. The second part is to guide the writer to clarify his/her attitude toward the content and the readers so that the readers could better comprehend the writer's point of view and perceive the writer's expectation of them. Metadiscourse thus involves all the devices that help the readers to comprehend, interpret, and evaluate the meaning of a text.

To illustrate, the notion of metadiscourse perfectly fits in with Halliday's functional theories of language: (1) ideational function; (2) textual function; and (3) interpersonal function. First, the ideational indicates the content or the meaning of a text, "concerned with the content of language, its function as a means of the expression of our experience" (Halliday 1973:66). Second, the textual refers to the logical organization of a discourse that "has an enabling function, that of creating text" and that "enables the speaker to organize what he is saying in such a way that it makes sense in the context and fulfills its function as a message" (66). Third, the interpersonal points to the writer's attitude toward the content and the reader, which includes "all that may be understood by the expression of our own personalities and personal feelings on the one hand, and forms of interaction and social interplay with other participants in the communication situation on the other hand" (66). To sum up, only through the textual and the interpersonal features can the content or the meaning of a text be decoded.

Since the term "metadiscourse" was coined by Harris (1970), other terms have been used to cover the area of metadiscourse. Crismore, Markkanen, and Steffensen (1993) reviewed the following:

In connection with written texts, Lautamatti (1978) discussed "non-topical material" and Enkvist (1978)

“meta-text” and the “modalities of texts.”... Tiittula (1990) limited the term “metadiscourse” to refer only to what was above described as textual metadiscourse. In addition, the concept of “modality,” particularly its epistemic type (the type involving personal attitudes toward truth conditions and knowledge), comes close to interpersonal metadiscourse, at least when modality is defined broadly, for example by Biber and Finnegan (1989), Perkins (1983), and Stubbs (1986). (40-41)

The excerpt indicates that the area of metadiscourse develops discretely in its own kind and then constitutes a more sophisticated system we have had today: textual and interpersonal metadiscourse. In comparison, interpersonal metadiscourse is not less significant than textual metadiscourse in a text since it clarifies how the writer interprets the text content and what he/she expects of readers. In Taiwan, this part of metadiscourse we have seldom taught to our students explicitly in our writing, not to mention the academic writing, in which the writer has to establish his credibility and persuade his readers. Prudent teachers of academic writing, who have not been taught the interpersonal metadiscourse in the earlier years, do not even encourage their students to use attitude markers, relational markers, and person markers which will be elaborated on below.

However, in our students’ theses, such interpersonal features have been used in a certain proportion to the more frequently used textual features. For the pedagogical cause, it is urgent that we first investigate students’ use of metadiscourse in their theses and then compare results with those of a research conducted by the an English native speaker on the use of metadiscourse in academic writing, so that our writing instructors will be able to know how to fill in gaps. Such a comparison, according to Crismore, Markkanen, and Steffensen (1993), will help detect our students’ problems that may arise from the culture literacy in the use of metadiscourse in academic writing. They found the following:

Some metadiscourse categories are used very little or not at all in the mother tongue but are used frequently in the

foreign language. Or it may be that the linguistic devices used for some types of metadiscourse are very different in the two languages . . . another cause of difficulties for both foreign- and native-language learners is the multifunctionality of many metadiscourse items, items that may perform more than one function simultaneously in the same context. (41-42)

However, before the exploration of our students' use of metadiscourse in their theses, we should have a general review of the related literature on the use of metadiscourse in academic writing.

2. Literature Review

Little research has been done on metadiscourse and writing until 1990s. Previous researches on metadiscourse, as Burns (2004) describes, have been spreading thin on three types of genre: (1) English for specific purposes (ESP): experimental research articles (Hyland 1996a, 1996b, 1997a, 1998b, 1999a), university lectures, master of science dissertation (Crismore & Farnsworth 1990; Harris 1991), business letters (Hyland 1998), textbooks (Hewings 1990; Hyland 1999a; Love 1993; Mauranen 1993; Myers 1992; Swales 1995; Valero-Garces 1996), medical articles (Thomas & Hawes, 1994; Webber, 1994); legal case report; (2) genre-based educational linguistics grounded in systematic functional linguistics developed by Michael Halliday (1985): jokes, letter to the editor, job application, lab reports, appointment making, anecdotes, weather reports, interviews and so on; and (3) new rhetoric studies emphasizing ethnographic description as their analytical base, as well as situational context and social action: speech act theory (Beauvais 1989), cross-culture pragmatics, composition studies, and professional writing (Bhatia 1993).

Currently, researches on metadiscourse and writing are still in the burgeoning stage, with their emphasis on English writing instruction in the English teaching community. Researches on the use of metadiscourse to improve student writing were done by Cheng (1994), and Cheng and Steffensen (1996). Some other

researches on metadiscourse and persuasive writing were done by Crismore and Steffensen (1993), Hyland (1997c, 1998a, 2000), Intaraprawat (1988), and Swales (1990). As to the researches related to academic writing, Intaraprawat investigates metadiscourse in English native speakers' and ESL students' academic writing; Swales focuses his discussion on English in academic and research settings; Crismore and Steffensen analyze metadiscourse in academic texts written by American and Finnish university students; and Hyland puts emphasis on the pragmatics of academic metadiscourse.

Interestingly, both Intaraprawat and Crismore & Steffensen are working on a comparison of metadiscourse in English native speakers' and ESL students' academic writing whereas Swales and Hyland make an attempt to provide meaningful patterns for readers. In terms of rhetoric devices, the former seems to focus on the textual metadiscourse while the latter goes beyond the textual dimension to the interpersonal aspect, which, Swales and Hyland claim, a good writer should achieve. Without either of them, a writer would undoubtedly not be able to achieve his/her communicative purpose effectively.

Here, a variety of metadiscourse schemata have been proposed by Beauvais (1989), Crismore et al. (1993), Highland (1998a), Lautamatti (1978), Mauranen (1993), Schiffrin (1980), Swales (1990), and Valero-Garces (1996), Vande Kopple (1985), and Williams (1981). Among them, some are complementary, constituting a more comprehensive one in sequence. For instance, Lautamatti and Williams' suggestions are projected into Vande Kopple's schema, which is then developed into Crismore et al.'s schema, which is further modified into Hyland's schema. According to the functions of metadiscourse in academic texts, Hyland's schema is categorized as (1) textual metadiscourse: logical connectives, frame markers, endophoric markers, evidentials, and code glosses, and (2) interpersonal metadiscourse: hedges, emphatics, attitude markers, relational markers, and person markers. The specific functions of all these subcategories will be illustrated below.

Now that little research has been done on metadiscourse in

academic writing, especially in its pedagogical application, it is necessary to explore the metadiscourse features of Taiwanese students' academic writing to help enhance their research paper writing proficiency. To be specific, this research falls into two major aspects: (1) What are the textual metadiscourse features of Taiwanese graduate students' academic writing? (2) What are the interpersonal metadiscourse features of their academic texts? This writer will then compare the results of this research with those of Ken Hyland's research on metadiscourse in the academic disciplines of biology, astrophysics, applied linguistics, and marketing (1998a). This comparison would make it possible to provide us some pedagogical implications in the teaching of metadiscourse.

3. Method

As mentioned earlier, this writer collected eight copies of theses from four national universities (see Appendix I), which contains a total of 153,749 words, with quotations excluded in the word count of the texts. In examining these written texts, Ken Hyland's schema (1998a), a modified version of Crismore et al's schema, was adopted, providing a better mechanism for analysis—the clearer distinction between textual and interpersonal dimensions. To begin with, four copies of theses on literature were investigated, and then another four copies of theses on linguistics. Throughout each thesis, each distinct metadiscourse item was identified and marked, and then grouped into categories as proposed below by Hyland. However, to ensure the free-of-error identification of each metadiscourse item, a pilot study was conducted.

To begin with, this writer and an invited researcher collaborated on the study, reviewing Hyland's schema, including each subcategory under the binary system, i.e., textual and interpersonal, and all the items proposed for each subcategory. Then, in a series of sessions, they did the same copy of thesis and found the possible reasons for the discrepancies in the identification of metadiscourse items.

Disagreement often arose not so much in the textual items as

in the interpersonal items. In the section of interpersonal items, hedge and emphatic markers are difficult to identify, e.g., *quite* (emphatic/hedge); *impossible/impossibly* (emphatic); *inevitable/inevitably* (emphatic); *we know/we think* (emphatic); *rare/rarely* (hedge); *likely/unlikely* (hedge); *may/might* (hedge); *apparent* (emphatic)/*apparently* (hedge); *essential* (emphatic)/*essentially* (hedge); *given that* (emphatic)/*provided that* (hedge); *necessarily* (emphatic)/*not necessarily* (hedge); *couldn't* (emphatic)/*could* (hedge); *wouldn't* (emphatic)/*would* (hedge). Sometimes, hedge and attitude markers are confusing, e.g., *usually* (hedge)/*unusually* (attitude); emphatic and attitude markers are in dispute too, e.g., *must* (emphatic)/*have to* (attitude). However, not until this disagreement was resolved did this writer and the invited researcher proceed with the remaining task in the following session.

As a result, an inter-rater reliability of 0.83 (Kappa) was obtained for this investigation, indicating a high degree of agreement. After the plot study was finished, this write alone proceeded to do the rest of other theses. Basically, this is a descriptive research based on the treatment of frequency, percentage, and ranking. Now, it is imperative that we present the textual and interpersonal items proposed by Hyland for this research.

3.1. Textual metadiscourse

Textual metadiscourse is meant to organize a coherent text— a genre intended for a particular audience and special purpose. It involves five subcategories. The first is logical connectives, which usually refer to conjunctions (*and/but*), adverb (*therefore/thus/nevertheless/accordingly*), adverbial phrases (*even if/above all*) and prepositional phrases (*in addition/on the other hand*). The second is frame markers, which indicate logical boundaries in the discourse. These include the words that point to sequence, e.g., *first, second, finally, 1, 2, 3*; mark the moving-on stage, e.g., *to sum up, in sum, to conclude*; state the text goal, e.g., *The present study aims to.../The purpose of the thesis is to...*; and announce topic shifts, e.g., *well, now,*

now that. The third is endophoric markers that refer to other parts of the text, like *as mentioned earlier*, *listed as follows*, *see figure 4.1*. The fourth is evidential markers, which identify the source of textual material, like *X claims/proposes/argues/* and *according to*. Finally, code glosses are intended to explain or interpret some propositional messages, like *such as/ e.g./ that is/ i.e./ in other words/ take... for example/for instance*, etc. Listed below are all the items for the subcategories of textual metadiscourse proposed by Hyland.

Logical connectives

accordingly also although and
as a result / the result is/ result in because besides but
consequently/as a consequence equally
even though /though furthermore hence however
in addition in contrast /by contrast leads to likewise
moreover nevertheless/nonetheless on the contrary
on the other hand since similarly so so as to
therefore/ thereby thus whereas/while yet

Frame markers

sequencing

to start with/to begin first(ly) next second(ly), etc.
last(ly) finally subsequently 1,2,3, etc. a,b,c, etc.

label stages

to conclude/in conclusion to sum up/in sum/ to summarize
overall on the whole all in all so far /by far/ thus far
to repeat

announce goals

my purpose/the aim I intend I seek I wish
I argue I propose I suggest I discuss I would like to
I/we will focus on/emphasize my goal is in this section /in
this chapter here I do this/I will

topic shifts

Well now so to move on to look more closely
to come back to in regard to/with regard to to digress

Endophoric markers

see/noted/discussed below see/noted/discussed above

see/noted/discussed earlier see/noted/discussed later
 see/noted/discussed before Section X Chapter X
 Fig./Figure X Table X Example X page X

Evidentials

(date) according to cite quote established
 said says X points out/to X indicates X argues
 X claims X believes X suggests X shows X
 proves X demonstrates X found that
 studies/research/literature

Code glosses

for example/ say/for instance e.g. i.e. that is/that is to say
 namely in other words this means/which means ()
 -- in fact viz. specifically such as or X
 put another way known as/defined as called

3.2. Interpersonal metadiscourse

While textual metadiscourse is used to deal with the propositional information, the interpersonal metadiscourse is the rhetoric device used to express the writer's own views towards the propositional information and his/her attitude towards the readers. In other words, we could see, in interpersonal metadiscourse, the interaction between the writer and the text and that between the writer and readers. This part also falls into five subcategories. First, hedges suggest a comparatively lower degree of certainty or commitment a writer wishes to make, like *It seems that/It is unlikely to/It is impossible to/might/perhaps*. Second, emphatics indicate a higher degree of certainty or commitment a writer wishes to convey like */obviously/clearly/undoubtedly/in fact/as a matter of fact*. Third, attitude markers show the writer's affective attitude toward textual information, expressing *surprise/amazement/interest/importance/obligation/imperativeness/annoyance/disappointment/agreement*. Next, relational markers are the rhetoric device used to draw the readers' attention or to engage the readers as participants in the discourse, e.g., *consider/ note /imagine/recall/you see*. Finally, person markers indicate the degree of writer presence in the discourse, i.e., the frequency of occurrence of first person pronouns and possessive adjectives,

like *I/my/we/our*. All of these markers above could help the writer build up an effective and persuasive discourse. Listed below are the items for the subcategories of interpersonal metadiscourse proposed by Hyland.

Hedges

about	a certain X	admittedly	almost	(not)
always	apparently	appear to be	approximately	
argue	around	assume	assumption	basically
believed	certain	extent/amount/level		conceivab(ly)
conjecture	consistent	with		contention
could/couldn't	deduce	discern	doubt	essentially
estimate	evidently	formally		frequently
generally/in	general	guess		hypothesize
hypothetically	ideally	(we) image		implication
imply	indicate	infer	interpret	largely
likely				
little/not	understood	mainly	may	maybe
might				
more or less	most/mostly	my/our belief		normally
not necessarily	occasionally	often		ostensibly
I believe	I/we claim	often	partly	partially
perceive	perhaps	plausible		possible(ly)
possibility	postulate	predict		prediction
predominantly	presumably	presume		probable (ly)
probability	provided that	propose	open to question	
questionable	quite	rare(ly)	rather	relatively
seen (as)	seem	seemingly	seldom	(general)
sense	should	shouldn't	somewhat	sometimes
speculate	suggest	superficially	suppose	surmise
suspect	technically	tend	tendency	in theory
theoretically	typically	uncertain	unclear	unlikely
unsure	usually	virtually	would/wouldn't	

Emphatics (boosters)

actually	always	apparent	assured(ly)	I believe
certain that	certainly	certainty	clearly/it is clear	
conclude	conclusive(ly)	confirm	convince	
convincingly	couldn't	decided(ly)	definite(ly)	
demonstrate	determine	doubtless	essential	

Metadiscourse in Academic Writing

establish evidence evidently expect in fact/the
 fact that find/found that given that impossible(ly)
 improbable(ly) indeed inevitable(ly) (we) know
 it is known that/to (at) least manifest(ly) more than
 must necessarily never no/beyond doubt
 obvious(ly) of course particularly patently
 perceive plain(ly) precise(ly) prove
 (without) question quite reliable(ly) show
 sure(ly) surmise (we) think true unambiguous(ly)
 unarguably undeniable(ly) undoubtedly
 unequivocal(ly) unmistakable(ly) unquestionable(ly)
 well-known will/won't wouldn't wrong(ly)

Attitude markers

! admittedly I agree amazingly appropriately
 correctly curiously disappointing disagree even x
 fortunately have to hopefully important(ly)
 interesting(ly) like (prefer) glad pleased
 must (obligation) ought (obligation) prefer/preferable
 remarkable should (obligation) surprisingly
 unfortunate(ly) unusually understandably

Relational markers

() ? incidentally by the way determine
 consider find imagine Let x = y Let's/let us
 note (that) notice our (inclusive) recall
 us (includes reader) we (includes reader) you/your
 one/one's assume think about

Person markers

I we me my our mine

Based on the textual and interpersonal items listed above as criteria, this research is conducted with prudence. However, the items proposed by Hyland could not possibly be exhaustive; some items from students' theses are also categorized and added to the word count. Indicated below are the results of this investigation.

4. Results

The results fall into three parts: (1) a breakdown of metadiscourse in theses on literature (Table 1); (2) a breakdown of metadiscourse in theses on linguistics (Table 3); and (3) a breakdown of metadiscourse in theses on literature and linguistics (Table 5). Each one of the above is followed by a subpart reporting the total metadiscourse in literature (Table 2), linguistics (Table 4), and literature and linguistics combined (Table 6) respectively. At the end of this section are reported the ranked metadiscourse categories combined (Table 7).

Table 1: Metadiscourse in Theses on Literature

Category	School							
	TU		NU		CCU		TSU	
	N	%	N	%	N	%	N	%
Textual metadiscourse								
1.Logical connectives	622	86.03	1322	81.90	1017	73.27	654	61.76
2. Frame markers	6	0.83	52	3.22	38	2.74	23	2.17
3.Endophoric markers	3	0.41	8	0.5	8	0.58	0	0
4. Evidentials	14	1.94	76	4.71	97	6.99	31	2.93
5. Code glosses	78	10.79	156	9.67	228	16.42	351	33.14
Totals	723	100	1614	100	1388	100	1059	100
Interpersonal metadiscourse								
1. Hedges	86	34.13	354	51.01	311	53.53	218	41.76
2. Emphatics	151	59.92	202	29.11	87	14.97	146	27.97
3.Attitude markers	15	5.95	30	4.32	38	6.54	41	7.86
4.Relational markers	0	0	1	0.14	1	0.17	1	0.19
5. Person markers	0	0	107	15.42	144	24.79	116	22.22
Totals	252	100	694	100	581	100	522	100

Table 1 focuses on the metadiscourse in the theses on literature written by the graduate students of National Taiwan University (TU), National Taiwan Normal University (NU),

National Chengchi University (CCU), and Tsing-Hua University (TSU). It indicates a tendency that the textual metadiscourse predominates over interpersonal metadiscourse in the number of items. And logical connectives and hedges are prominent in the textual metadiscourse and the interpersonal metadiscourse respectively.

Table 2: Total Metadiscourse in Theses on Literature

Category	Total no. of items	Items per 1000 words	% of total metadiscourse
Textual	4,784	31.12	70.01
Interpersonal	2,049	13.33	29.99
Total	6,833	44.45	100.00

*A total of 153,749 words with quotations excluded in the text of eight theses

Table 2 sums up the total number of items for the textual metadiscourse and the interpersonal metadiscourse in the theses on literature, and the items per 1,000 words for each of them. It shows the textual metadiscourse is exactly 40% more than the interpersonal metadiscourse in the frequency of occurrence. Now, let's turn to the linguistics part below.

Table 3: Metadiscourse in Theses on Linguistics

Category	School							
	TU		NU		CCU		TSU	
Textual metadiscourse	N	%	N	%	N	%	N	%
1.Logical connectives	297	47.90	607	62.51	385	56.79	873	71.15
2. Frame markers	93	15.00	61	6.28	53	7.82	58	4.73
3.Endophoric markers	65	2.88	28	2.88	56	8.26	51	4.15
4. Evidentials	76	12.26	42	4.33	34	5.01	64	5.22
5. Code glosses	89	14.36	233	24.00	150	22.12	181	14.75
Totals	620	100	971	100	678	100	1227	100
Interpersonal metadiscourse								
1. Hedges	215	49.77	222	52.11	116	48.54	366	57.37
2. Emphatics	80	18.98	102	23.94	38	15.90	76	11.91
3.Attitude markers	37	8.56	16	3.76	25	10.46	53	8.31
4.Relational markers	5	1.16	17	3.99	8	3.34	9	1.41
5. Person markers	93	21.53	69	16.20	52	21.76	134	21.00
Totals	432	100	426	100	239	100	638	100

Basically, Table 3 concentrates on the metadiscourse in the theses on linguistics written by the graduate students of the four universities mentioned above. Here, the textual metadiscourse also tends to be predominant over the interpersonal metadiscourse. And just as we find in Table 1, logical connectives and hedges are prominent among all the features of metadiscourse.

Table 4: Total Metadiscourse in Theses on Linguistics

Category	Total no. of items	Items per 1000 words	% of total metadiscourse
Textual	3,496	22.74	66.83
Interpersonal	1,735	11.28	33.17
Total	5,231	34.02	100.00

Table 4 presents the total number of items for the textual metadiscourse and the interpersonal metadiscourse in the theses on literature, and the items per 1,000 words for each of them. It concludes that the textual metadiscourse is 33.66% more than the interpersonal metadiscourse in the frequency of occurrence. Now, with literature and linguistics done separately, we should further get the value of them in combination.

Table 5: A Breakdown of Metadiscourse in Theses on Literature & Linguistics

Category	School							
	TU		NU		CCU		TSU	
	N	%	N	%	N	%	N	%
Textual metadiscourse								
1.Logical connectives	919	64.43	1929	74.62	1402	67.86	1527	66.80
2. Frame markers	99	7.37	113	4.37	91	4.40	81	3.54
3.Endophoric markers	68	5.06	36	1.39	64	3.10	51	2.23
4. Evidentials	90	6.70	118	4.57	131	6.34	95	4.16
5. Code glosses	167	12.44	389	15.05	378	18.30	532	23.27
Totals	1,343	100	2,585	100	2,066	100	3,286	100
Interpersonal metadiscourse								
1. Hedges	301	44.01	576	51.43	427	52.07	584	50.35
2. Emphatics	233	34.06	304	27.14	125	15.25	222	19.14
3.Attitude markers	52	7.60	46	4.11	63	7.68	94	8.10
4.Relational markers	5	0.73	18	1.61	9	1.10	10	0.86
5. Person markers	93	13.60	176	15.71	196	23.90	250	21.55
Totals	684	100	1,120	100	820	100	1,160	100

Table 5 presents the combined results obtained from Table 1 and 3. Since Table 1 and 3 share the common results, the findings here in Table 5 would remain consistent with them. That is, the textual metadiscourse is much more frequently used than the interpersonal metadiscourse in the text of the theses. Further,

logical connectives and hedges are most frequently used in the textual metadiscourse and the interpersonal metadiscourse respectively. To obtain the final results, we should move on to the total value of them.

Table 6: Total Metadiscourse in Theses on Literature & Linguistics

Category	Total no. of items	Items per 1000 words	% of total metadiscourse
Textual	8,280	53.85	68.63
Interpersonal	3,784	24.61	31.37
Total	12,064	78.46	100.00

Table 6 provides a grand total of the metadiscourse in theses on literature and linguistics. The textual metadiscourse (68.63%) is evidently much more frequently used than the interpersonal metadiscourse (31.37%) in the theses of our graduate students. What does this mean to their proficiency in the academic writing? Let's further discuss this issue in the conclusion. At this point, however, we should also consider other features of metadiscourse used apart from logical connectives and hedges. A list of the ranked metadiscourse categories combined would suffice to provide some pedagogical implications when compared with Hyland's ranked metadiscourse categories combined in Table 8. This we will discuss in the conclusion.

Table 7: Ranked Metadiscourse Categories Combined

Category	Total no. of items	Items per 1000 words	% of total metadiscourse
Logical connectives	5,777	37.57	47.89
Hedges	1,888	12.28	15.65
Code glosses	1,466	9.54	12.15
Emphatics	884	5.75	7.33
Person markers	715	4.65	5.93
Evidentials	434	2.82	3.60
Frame Markers	384	2.50	3.18
Attitude markers	255	1.66	2.11
Endophoric markers	219	1.42	1.81
Relational markers	42	0.27	0.35
Grand totals	12,064	78.46	100.00

In addition to the logical connectives (47.89%) in the textual metadiscourse and hedges (15.65%) in the interpersonal Metadiscourse, which are found prominent, code glosses (12.15%) in the textual metadiscourse are pretty close to hedges. Though half less used compared with hedges, emphatics (7.33%) in the interpersonal metadiscourse are by no means ignored by our students. Other less used features of metadiscourse are sequenced as person markers (5.93%), evidentials (3.60), frame markers (3.18%), attitude markers (2.11%), endophoric markers (1.81%), and relational markers (0.35). Do all of these figures represent students' doing an academic writing appropriately? Before answering such a question, we should first investigate how our students use all the features of metadiscourse. To do so, we will proceed from the textual metadiscourse with its subcategories, i.e., logical connectives, frame markers, endophoric markers, evidentials, and code glosses to the interpersonal metadiscourse with its subcategories, i.e., hedges, emphatics, attitude markers, relational markers, and person markers.

4.1. Textual features

As shown earlier, the textual features (68.63%) are predominantly present in students' theses in contrast with the interpersonal features (31.37%). Among the total textual features (68.63%), logical connectives (47.89%) are most frequently used to connect the related ideas, such as coordinating connectives (*and/however/but*) and causal connectives (*because/ since/ therefore*).

4.1.1 Logical connectives

There is a much greater variety of logical connectives used in the theses to achieve the functions of a diverse range of textual meanings, which are listed in part of speech.

Adverbs:

accordingly/likewise/therefore/consequently/thus/moreover/ meanwhile/further/furthermore/hence/similarly/besides/also/then/equally

Adverbial phrases:

on the contrary/by contrast/in addition/as a result

Conjunctions:

and/because/but/though/although/while/whereas/since/however/nonetheless/nevertheless/since/yet

Conjunctive phrases:

the former...the latter/so that/so...that/not only...but.../even if/even though/on the one hand...on the other hand/because of

Prepositions:

despite/like/unlike

Prepositional phrases:

in contrast with/in addition to/apart from

Interestingly, in using logical connectives, students seem to use a lot more explicit connectives than professional writers who tend to use implicit connectives instead, thus allowing intelligent readers to construct a semantic structure by reasoning the lexical relations in a discourse. To attend the proficiency of academic writing, however, students should further acquire the skill of

achieving cohesion less explicitly. To show some passages for discussion:

Since O'Hara and Warren have a date at 4 o'clock A.M., the sun already sinks, and there will be no light. **Hence**, no matter how hard the Impressionists try to capture the beauty of the figure and project it onto the painting, it is only a waste of time. **Even if** Claude Monet were alive, he would not complete his *Woman with Umbrella Turned to the Left* at 4 o'clock A.M. **Likewise**, O'Hara also doubts the insight of Marino Marini, who "didn't pick the rider as carefully/as the horse" (Lit., NU, p. 41).

Based upon Raskin's Main Hypothesis, this joke meets the SO (Script Oppositeness) requirement, **for** it involves two opposite scripts: two dogs which cannot talk vs. two dogs which can talk. **According to** Raskin, these two scripts are opposite in the sense of possible vs. impossible, **because** it is impossible for dogs to talk like humans. **Nevertheless**, if dogs are given the human properties of talking, this joke is resolved to some extent. **That is**, this joke still observes the requirement of logical mechanism (Lin. NU, p. 72).

Generally speaking, criticisms on the novel are protest against colonial policies. **Yet, strictly speaking**, a strategy like this should not be equal to positing "Kurtz as a personal embodiment, a dramatization, of all that Conrad felt of Futility, degradation, and horror." **However**, it seems confusing in former criticisms **because** they propose Kurtz is exploitative so Europe is exploitative, or vice versa. This claim is not well validated, especially **since** Conrad made this inference a quite interesting "exception" (Lit. TSU, p. 42).

The high frequency of the explicit connectives used may indicate an evolution of students' learning experience from the incorrect uses of explicit connectives, then the correct uses of them, to the overuse of them. However students should have great potential

for writing less explicitly, achieving cohesion semantically by employing lexical relations.

4.1.2 Code glosses

Second only to the use of logical connectives (47.89), code glosses (12.15) occur also with high frequency, though much lower in percentage than logical connectives, which remain high in use because of their multifunctional purposes. Unlike logical connectives that serve not only a syntactic coordination but a link between ideas, code glosses are only intended to explain or interpret the propositional messages. The code glosses used are categorized as follows.

a. Adverbial phrases

In a word/in other words/that is/i.e./such as/e.g./namely/in short/briefly speaking/to put it another way/for example/for instance

b. Phrasal verbs in active voice

term...as/depict...as/characterize...as/relate to/do(does) not equal to/that means

c. Phrasal verbs in passive voice

(be) interpreted as/(be) seen as/(be) classified as/(be)believed as/(be) labeled as/(be) counted as/(be) conceptualized as/(be) encoded as/(be) represented by/(be) thought of as/(be) stated as

d. Phrasal verbs in either active or passive voice

view...as/(be) viewed as/regard...as/(be) regarded as/consider...as/(be) considered as/refer to...as/(be) referred to as/define...as/(be) defined as/describe...as/(be) described as

Among all kinds of code glosses, adverbial phrases are most frequently used probably because it plays not just the role of explanation but that of connectives as well. This seems to be quite understandable. However, it is found that student writers tend to use two to three adverbial phrases in a row.

In short, jokes making use of the humor of Partial

Resolution generally pass the SO (Script Oppositeness) parameter and an LM (Logical Mechanism) parameter. That is, this class of jokes observe Raskin's Main Hypothesis (Lin., CCU, p. 74).

In other words, those bedtime stories have unconsciously become the "collective memories" of both sisters, who share the same ethnical root. In short, Delicka argues that by structuring her novel on the formal duality of magic realism,...(Lit., CCU, p. 6).

Rather, lying is often Huck's "handiest" way to cope with tight situations, namely, to ward off any impending threat to himself or to Jim. In other words, Huck's lies are "a matter of survival".... In a word, Huck lies under demand ... (Lit., TU, p. 13).

In short, in the politeness view of Brown and Levinson, if one wants to be polite, s/he has to avoid FTAs, i.e., to complain with redressive action if the complaint is really unavoidable (Lin. TSU, p. 10).

The adverbial phrases used in such a manner do not sound natural, again, for their explicitness perhaps.

As to the use of phrasal verbs, students seem to use more in passive voice than in active voice.

Indirect complaint (IC) is defined in her study as the expression of dissatisfaction to an interlocutor about the speaker himself/herself ... (Lin., TSU, p. 21).

Heart is also conceptualized as a container full of feelings through the HEART IS A CONTAINER METAPHOR (Lin., CCU, p. 45).

"Personal Poem" cannot be interpreted as a "laundry list" (Lit., NU, p. 93).

*“Americanization” here can **be viewed as** “assimilation,” which represents the violence of the dominant values in American society that tries to impose itself on a recalcitrant other (Lit., CCU, p. 87).*

Such a practice is fully justified in terms of “information prominent” as contrasted to “author prominent” often applied in evidentials in the textual features.

It is disturbing, however, to note that within a single passage, some phrasal verbs of code glosses (cg) , coupled with some logical connectives (lc) seem to further add up to more explicitness in expressions. To illustrate, consider the following passage:

*When a term is put into both X slots and both patterns are **considered to be** (cg) expressions of a certain emotion by their undergraduate subjects, this term is **regarded as** (cg) a genuine emotional term. **On the other hand** (lc), if a term is put into both X slots **and** (lc) only one or none of the patterns is **considered to be** (cg) an expression of a certain emotion, it is not a genuine emotional term. **For instance**,(cg) “happy” is **considered to be** (cg) a genuine emotional term, **because** their subjects **rate** (cg) both “feeling happy” and “being happy” **as** emotions. **On the other hand**, (lc) a term **like** (cg) “ignored” is not a genuine emotional term, **because** (lc) their subjects **rate** (cg) “feeling ignored” **as** an emotion but not “being ignored” (Lin., CCU, p. 14).*

***Furthermore** (lc), categories can be described along the inclusion principle. Such organization exhibits vertical ordering and horizontal structuring. Vertical ordering is **exemplified** (cg) by the relationship between super-ordinate categories like furniture and their subordinate categories, **such as** (cg) table, chair, etc. **As for** (lc) the horizontal structuring, highly typical members, called prototypes, are the members that represent the*

category, *since* (lc) they possess the greatest number of common and distinctive features (e.g., the prototype ‘robin’ in the bird category). *Informationally speaking* (lc), *however* (lc), prototypes are redundant as the information that various members of the category have in common *is considered* (cg) redundant in that category (Lin., NU, pp. 19-20).

4.1.3 Evidentials

Following the code glosses (12.15%), which is information prominent, the evidentials (3.60%) are author prominent. Note that in the evidentials, students employ a great variety of verbs as follows.

propose/argue/observe/claim/admit/note/contend/assert/state/suggest/assume/remark/comment/put/infer/conclude/explain/explicate/testify/recognize/criticize/reason/figure/predict/hypothesize/believe/speculate/acknowledge

*O’Hara **claims** that his self is vicious, accepting his serpent self*(Lit., NU, p. 47).

*Yu (2003) **believes** that in Western cultures, the mind is the location of thought whereas the heart is the seat of emotions* (Lin., CCU, p. 60).

*Traugott (1978) **pointed out** that some “times” were not metaphorically derived from space* (Lin., TU, p. 20).

*However, he **recognized** that an author was not “holier” than any men under his pen nor should he enjoy that kind of creation* (Lit., TSU, p. 24).

As can be expected, “according to” is as often used as those verbs listed above. In this part, student writers seem to use a greater variety of verbs to introduce evidentials than what Hyland proposes.

4.1.4 Frame markers and endophoric markers

In the textual features, frame markers (3.18%) and endophoric markers (1.81%) are comparatively lower in the frequency of occurrence. In frame markers, students use sequence most frequently, such as *first/first of all/ second/ third/ then /next /finally*, probably because these also serve the purpose of logical connectives in a broader sense. They could also use text stage as they see it fit, like *to sum up/in sum/to summarize/to conclude*. For the thesis and each chapter, they could pronounce the discourse goal, like *The present study aims to/This thesis concentrates on/The main objective of this study is to/This thesis will investigate/The purpose of this chapter is to*. However they seldom use topic shift, such as *well/now/now that*.

Concerning the endophoric markers (1.81%), students could use them when necessary, such as in *Figure.../in Table.../in Section.../as shown in.../as illustrated in.../as indicated in.../as mentioned earlier, etc..* So far, what we have found may boil down to one valid conclusion that logical connectives seem to be students' major tool to achieve cohesion; however, the high frequency of their presence in the theses might not come up to the expectation of the readers of English academic communities.

4.2. Interpersonal features

Compared with the textual features (68.63%), interpersonal features (31.37%) are significantly lower, as shown in ranked subcategories, i.e., hedges (15.65%), emphatics (7.33%), person markers (5.93%), attitude markers (2.11%), and relational markers (0.35%). We will discuss all these subcategories separately as follows.

4.2.1 Hedges

Among so many hedges proposed by Hyland, the items below are more frequently used by our students, e.g., *appear to be/argue/assume/could/couldn't/generally/less/likely/mainly/may/might/maybe/more/most/often partly/possibility/ possible /rather/seem (to)/ seemingly/ should/ shouldn't/ similar to/ somehow /sometimes/somewhat/tend (to)/usually/would*. And they are also

used appropriately.

*Thus, although the statuary in a public place is lifeless, it still **seems to** have the ability to have the ability to intimidate the lovers and make them behave themselves (Lit., NU, p. 36).*

*When the primacy of moving time is involved in the temporal processing, switching the perspectives **might** not necessarily be revealed in reaction time (Lin., TU, p. 61).*

*Thus, some mappings **tend to** be universal, though there are still some mappings that are culture specific (Lin., CCU, p. 26).*

*Above all, Huck's Taoist features are even **more** powerfully highlighted by the **most** important "character" in the novel: the Mississippi River (Lit., TU, p. 72).*

However, student writers are highly recommended to use many other hedges listed in Appendices II and III, which are an easy access to the proper use of hedges. With the appropriate use of the hedges, a writer can precisely indicate a comparatively lower degree of certainty or commitment he/she wishes to make. Thus, a reader could have a better grasp of what a writer means.

4.2.2 Emphatics

Student writers use a variety of emphatics as follows: *accurately/exactly/actually/ always/as a matter of fact/ clear(ly) /conclude/(we) find that/(be) found that/impossible/ indeed /evitable/in fact/(at) least/manifest(ly)/more than/must/never/no doubt/beyond doubt/no wonder/obvious(ly)/prove/will.*

***In fact**, Huck's social position as an untutored son of the town drunkard creates a considerable distance between himself and his society (Lit., TU, p. 9).*

***No doubt**, O'Hara must have been threatened by the New York police, facing a belligerent reaction against*

Chi-yee Lin

homosexuality (Lit., NU, p. 8).

*This complaint is usually addressed to the hearer (H), whom the Sp holds, **at least** partially, responsible for the offensive action* (Lin., TSU, p. 23).

*If we can view departure as an action caused by some agent (e.g., drivers), it is thus **obvious** why we often personify death as drivers* (Lin., CCU, p. 31).

However, there are still more options that can be chosen in the use of emphatics, as shown in Appendices II and III. The more options a writer chooses, the better he/she would be able to convey a higher degree of certainty or commitment as he/she wishes.

4.2.3 Person markers

Just a little bit second to emphatics, student writers use such person markers as *we/I/us/my/me*, among which *we* and *me* are most frequently used. They use them to engage readers and express themselves.

We must admit that every perspective is partial and allow the equal right for the voice of the Other (Lit., CCU, p. 45).

*What **I** disagree with Achebe is that in the text I cannot find out any theme of racism as Conrad's intention* (Lit., TSU, p. 27).

*To **me**, however, it is O'Hara's particular experience in 1959 that makes "Personal Poem" so enduring* (Lit., NU, p. 93).

*In **my** study, **I** find that these three factors affect the choice of the complainer most strongly* (Lin., TSU, p. 52).

In this research, we find that student writers do not seem to see the author presence in the text as a taboo as it used to be in 1960s. In a sense, metadiscourse schema evolves as time goes.

4.2.4 Attitude markers

Student writers use a great range of attitude markers to indicate their affective attitude toward the text content, expressing (1) feelings: indebtedness, amazement, disappointment, annoyance, interest, surprise and sadness; (2) agreement and disagreement; (3) intention and obligation; and (4) comments.

4.2.4.1 Feelings:

Student writers express feelings to show their attitude toward the text content, e.g., *(be) indebted to/ amazing/ disappointing/annoying/interesting/intriguing/It comes as no surprise/surprising/surprisingly/to my surprise/bothering/sadly/I feel.*

*To begin with, I **am much indebted** to J. Hillis Miller who works genuinely in his essay “Heart of Darkness Revisited” (Lit., TSU, p. 91).*

*Cultural differences always give people fresh experience; sometimes it is **amazing**, exotic, but sometimes it can also be **disappointing**, even **annoying** (Lit., CCU, p. 88).*

*Therefore, it would be **interesting** to see the results of novel TIME metaphors (Lin., TU, p. 104).*

*In the joke above, there exists no incongruity, as it **comes as no surprise** that the logical or expected response to the question is either ‘yes’ or ‘no’ (Lin., NU, p. 30).*

Instead of indicating the epistemic attitude toward the text content by using hedges and emphatics, student writers provide readers their perspectives of the text content. As indicated in the examples above, the perspectives could be varied depending on the text content and the individual writer’s feelings about it.

4.2.4.2 Agreement/disagreement

Agreement and disagreement are frequently used attitude markers, e.g., *agree with/I can’t agree more/disagree with/I don’t think it is...*

Chi-yee Lin

Thus, I cannot agree with Caleb Crain, who says, “An outsider might not ‘get’ the story behind this glib, chatty, undirected monologue. (Lit., NU, p. 92)

Do you not agree that the scene of their meeting is full of uncanny and scary phenomenon that, in my opinion, I do not think it incidental (Lit., TSU, p. 13).

In conformity to the expressed feelings, a writer may also take a position to defend his/her theory, which would not hold up without indicating agreement or disagreement. As it is so important to persuade the reader in academic writing, this indication is indispensable.

4.2.4.3 Intention and obligation

To show intentions and obligation, student writers use such attitude markers as *I don't mean to/I don't intend to/prefer I have to admit that/It should be admitted that/I need to confess that/I am reluctant to comment that/I would rather argue/I feel obliged to/I would like to comment that.*

By referring to the authority of the author, I do not mean to accuse Tan of being an imperialist, but merely suggest that when she writes the novel, she has in her mind the American public as her imagined readers (Lit., CCU, p. 70).

Therefore, I am reluctant to comment the principle as dead ended while questioning it. (Lit., TSU, p. 84)

No one can jump out of himself to view an event objectively; we must admit that every perspective is partial and allow the equal right for the voice of the Other. (Lit., CCU, p. 45)

To talk about the language of art, I feel obliged to first elaborate upon O'Hara's relation to the New York art world (Lit., NU, p. 30).

In the attitude markers here, there may be some overlap between categories. The attitude markers of intention like *I don't mean to/I don't intend to* may possibly be considered as emphatic markers. Likewise, those of obligation like *must admit/feel obliged to* may also be seen as emphatic markers. For such a polypragmatic aspect of language, a reader may have to make the meaning from the context; otherwise, he/she won't have any hard evidence to prove a writer's intention.

4.2.4.4 Comments

To make comments on the text content, student writers use a great variety of attitude markers, e.g., appropriately/correct/even X/imperative/important/it is ironic that/it is logical and expected that/it is proper to say/it is reasonable to/unusually/ worth + Ving.

*It is not **correct** like someone saying that "evil is African in Conrad's story; if it is also European (Lit. TSU, p. 31).*

*To scrutinize Huck's Taoist attributes, it is **imperative** to take a look at Chuang-tzu's portrait of the Taoist in "The Great and Venerable Teacher" (Lit., TU, p. 63).*

*It is now **reasonable** to separate personality from emotion (Lin., CCU, p. 13).*

*It is also **worth mentioning** that the large number of paraphonic words used in cold joke are likely to lead to phonological change of the language in question (Lin., NU, p. 56).*

Among the four subcategories of attitude markers, comments are ranked the first in the frequency of occurrence, followed by feelings, intention and obligation, and agreement/disagreement. It seems quite natural that comments are most frequently used since they are the typical way of indicating a writer's affective attitude toward the text content.

4.2.5 Relational markers

Finally, relational markers (0.35%) are least used, such as *consider/note that/it should be noted/it needs to be noted/it has to be noted*. Unlike person markers, which “refer to the degree of explicit author presence in the text measured by the frequency of first person pronoun and possessive adjectives,” relational markers “focus more on reader participation and include second person pronouns, imperatives, question forms, and asides that interrupt the ongoing discourse” (Hyland, 2000, p. 113). It is found here that the student writers prefer to use imperatives in passive voice most.

To sum up, interpersonal features, though much less used than textual features for intrinsically less demand in a discourse, turn out varied, especially in attitude markers in students’ academic writing. Now, we will draw a conclusion from this research on textual and interpersonal metadiscourse.

5. Conclusion

Historically speaking, the education of academic literacy in Taiwan has stuck to a formal view that academic writing is expected to communicate ideas objectively, where interpersonal features like attitude markers and person markers are simply considered as a taboo in the academic writing. Such a situation seemed to remain the same in English speaking communities early in 60s and 70s. Hyland (2000) stated:

A purely formal view of academic writing tended to dominate early practice in English for Academic Purposes (EAP). This was a view which largely took for granted the academy’s perception of its texts as objective, rational and impersonal, and set out to provide students with the generic skills they needed to reproduce them.

Textbooks and materials thus emphasized “common core skills” such as describing, summarizing, expressing causality, and so on as general principles of a universal academic literacy. (4)

This indicates that textual skills used to be dominant in the

academic writing even in other lands. However, the academic writing in genres is also evolutionary in that interpersonal features began to be considered important after 70s when interactional view came into language theory. To this date, Taiwanese graduate students in this study have used 68.63% of textual features in academic writing and ventured to use 31.37% of interpersonal features (see Table 4), though with much lower frequency. Meanwhile, Hyland's research (1998a) also reports 55.1% of textual features and 44.9% of interpersonal features used in academic writing.

Table 8: Hyland's Ranked Metadiscourse Categories (combined disciplines)

Category	Total no. of items	Items per 1000 words	% of total metadiscourse
Textual	5,721	35.7	55.1
Interpersonal	4,666	29.1	44.9
Subcategory			
Hedges	2,417	15.1	23.3
Logical connectives	2,045	12.8	19.7
Code glosses	1134	7.1	10.9
Evidentials	1109	6.9	10.7
Frame markers	796	5.0	7.6
Endophoric markers	637	4.0	6.1
Attitude markers	634	4.0	6.1
Person markers	629	3.9	6.0
Emphatics	627	3.9	6.0
Relational markers	359	2.2	3.5
Grand totals	10,387	64.8	100.00

The results show that the practice of interpersonal skills seems to play an increasingly important role in academic writing. It would be very interesting to compare the proportion between textual features and interpersonal features in the present study and

Hyland's.

This study indicates that Taiwanese graduate students use much more textual features (68.63) than interpersonal features (31.37), implying that they attach importance to the textual aspects of syntactic coordination and linked ideas much more than the pragmatic aspects of discourse. In the academic writing, Taiwanese student writers tend to use much fewer interpersonal skills than the English speaking communities, which seem to maintain a fairly good proportion in the use of textual skills (55.1%) and interpersonal skills (44.9%). With all of these differences in mind, we may have to start considering the following two questions: (1) Why are textual features so particularly prominent in our graduate students' academic writing and how can this problem be solved? (2) What are the possible reasons for using interpersonal features much less in our graduate students' academic writing and what should we do about it?

For the first question, the prominence in textual features, as shown in Table 5, refers to the overuse of logical connectives (47.89%) among textual features (68.63%). In the traditional EFL writing class, students have been taught in a mechanical way, with the input of a topic sentence, support sentences, and cohesive ties to develop a well organized paragraph. Let's consider the passage below:

***But** as the result turns out, Kwan's treatment cannot eliminate her "delusion"; **instead** they set her tongue freely "bragging about the world of Yin" (17). **As** Kwan recalls: "All that electricity loosened my tongue so I could no longer stay silent as a fish" (17). **Furthermore**, the therapy arouses some mysterious side effects on Kwan's body. After the treatment, Kwan begins to carry electricity within her body, **so** she cannot get near to electronics such as radio, television and watch. **Besides**, she becomes very good at pointing out the technical problems of those electronics. (Lit., CCU, p. 25)*

Such an overuse of logical connectives is not the common practice of English academic communities. Here, the pedagogical implications would be to teach students how to use more

semantic, lexical relations to achieve the logical connections instead of using a heavy load of logical connectives explicitly. It would not be particularly difficult to teach lexical relations to achieve the logical connections if it is so planned or decided, since we read Chinese texts every day, in which “the occurrences of Chinese connectives are governed by semantic relatedness and discourse structure of the connected discourse units” (Yu 1990: ii).

For the second question, we should admit that neither any parts of writing textbooks are designed to teach interpersonal skills, nor do writing teachers teach those skills explicitly or implicitly. Basically the textbooks we have had are author-centered and content-based, independently of all the interpersonal elements, involving (1) the writer’s indication of “degree of commitment, certainty and collegial deference a writer wishes to convey” (Hyland, 2000:112) by using hedges and emphatics, focusing on the proportional meaning of text content itself; (2) the writer’s indication of his/her affective attitude toward the text content by using attitude markers to express feelings, agreement/disagreement, intention and obligation, and comments, stressing the pragmatic meaning of text content; (3) the writer’s engagement with readers by using relational markers, calling their attention and including them as discourse participants, and (4) the writer’s indication of degree of author presence in the text. It should be noted that neither publishers nor teachers have so far been aware of the functional roles of interpersonal skills in the academic writing of English communities.

It is recommended that interpersonal skills be incorporated into the writing curriculum and taught explicitly. An understanding of the discrepancy between this study and Hyland’s research (1988a) in the frequency of interpersonal skills used would help shape the future curriculum planning for the instruction of interpersonal skills. To sum up, this research reports the ranked categories of hedges (15.65%), emphatics (7.33%), person markers (5.93%), attitude markers (2.11%), and relational markers (0.35%) while Highland’s research provides those of

hedges (25.3%), attitude markers (6.8%), emphatics (6.3%), person markers (5.2%), relational markers (3.8%). The comparison clearly indicates that native speakers use much more hedges than Taiwanese students in academic writing. To underscore the importance of hedges and its high frequency of use in English discourse communities, Hyland (1988a) stated:

The most frequent subcategory however is hedges which constitute over half of all interpersonal uses and are the only non-textual subcategory among the top ranked items. This reflects the critical importance of distinguishing fact from opinion in academic writing and the need for writers to evaluate their assertions in ways that are likely to be persuasive to their peers, presenting claims with both appropriate caution and deference to the views of their discourse community. (445)

Since hedges suggest a comparatively lower degree of certainty or commitment a writer wishes to make, the much less use of hedges may mean the writer's ineffectiveness or inappropriateness in conveying his/her meaning. To teach students how to use hedges appropriately would therefore be another pedagogical problem that lies ahead.

On the other hand, the English native speakers also use more attitude markers to engage their readers than Taiwanese graduate students. Unlike hedges, "distinguishing fact from opinion in academic writing" (Hyland 1988a: 445), attitude markers "tended to reveal the author's opinions or character only through emphasizing what readers should attend to and how the writer would like them to respond to information" (449-450). The lower frequency of attitude markers, though used in variety in Taiwanese students' academic writing, indicates the inadequacy in expressing writers' personal point of view. This deficiency should therefore be seen as another pedagogical problem to be solved.

To conclude, both hedges and attitude markers constitute over half of the interpersonal metadiscourse (55.9%) in the English native speakers' academic writing. Overall, what Taiwanese students have done in their theses seems to be far from

the expectation of English communities. It is hoped that this research will lead publishers, teachers and students to be aware of this and work on something about it.

Future instruction of hedges and attitude markers in academic writing is not an easy task to do. To teach hedges effectively, instructors should collect all the possible hedge items as teaching materials, not just confined to several common practices, such as *seem/seem to/might/might be/(be) likely or unlikely/(be) possible that/(be) impossible for ... to ...*. Here, it would be helpful to consult the list of 106 hedge items proposed by Hyland (2000:188-189). In teaching hedges, instructors should also keep alert on the multi-functionality, due to some cultural factors, of some hedges, e.g., *may, could, might* and *would*.

On the other hand, to teach attitude markers, instructors should also search for all the possible attitude markers as teaching materials. Here, we could adopt the 26 items of attitude markers proposed by Hyland (2000:191-192). However, in an effective teaching, it is suggested to categorize the attitude markers, say, in this study: (1) feelings: indebtedness, disappointment, amazement, annoyance, interest, and surprise; (2) agreement and disagreement; (3) intention and obligation; and (4) comments. Overall, though Taiwanese students use much fewer attitude markers than English native speakers, they do produce a variety of attitude markers, which need further studies from social and cultural perspectives.

In conclusion, among the textual features expressing the propositional meaning, logical connectives are the weakest part for Taiwanese graduate students. On the other hand, among the interpersonal features indicating the writer's point of view of the propositional meaning and his/her engagement with readers, hedges and attitude markers are the parts students have to work on harder. Meanwhile, emphatics, the counterpart of hedge, should be taught explicitly and clearly since there is unavoidably overlap between markers, especially emphatics and attitude markers. It is this researcher's expectation that publishers and teachers could make a joint effort to publish textbooks on academic writing for our graduate students incorporating

Chi-yee Lin

interpersonal skills into them.

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Appendix I: The Titles and Authors of the Investigated Theses

Literature:

1. Oriental Wisdom in a Western Masterpiece: Huckleberry Finn—a Taoist in a Corrupted Word by Pi-Ch'un Wen in 1997. (台大: 溫璧鐔)
(95 pages/full text: 13,185 words)
2. "Anxious Pleasures and Pleasurable Anxiety": Frank O'Hara's Love Poems to Vincent Warren by Kevin Huang-Yu Chen in 2003. (師大: 陳皇宇)
(159 pages/full text: 31,635 words)
3. Ethical Relationship in Amy Tan's The Hundred Secret Senses by How-Ren Chen in 2004. (政大: 陳厚仁) (103 pages/26,007 words)
4. The Uncanny in Joseph Conrad's Heart of Darkness: Heimlich and Unheimlich in the Text and the Criticism by Ching-Hsiang Lo in 2000. (清大: 羅青香)
(124 pages/ full text: 15,360 words)

Linguistics:

1. The Psycholinguistic Processing of Time Perspectives in Mandarin Chinese by Vicky Tzuyin Lai in 2002. (台大: 賴姿吟) (181 pages/ full text: 17,365 words)
2. A Linguistic Analysis of Mandarin Cold Jokes by Hui-Ru Hong in 2003. (師大: 洪慧如) (99 pages/full text: 16,270 words)
3. Cognitive-Semantic Mechanisms Behind Heart Idioms by Hsin-Pin Wang in 2004. (政大: 王信斌) (91 pages/ full text: 13,050 words)
4. Complaints in Chinese: The Case of Elementary School, Junior High School, Senior High School, and College Students by May Huei-Mei Chang in 2001. (清大: 張惠美) (114 pages/full text: 20,877 words)

*word count with quotations excluded.

Appendix II: Metadiscourse in the Theses on Literature**Textual metadiscourse**

Logical connectives	TU	NU	CCU	TSU
accordingly	6	0	0	0
additionally/ in addition (to)	1	9	6	0
also	5	105	69	36
although/ though/ even though	19	68	17	23
and	397	711	631	379
as a result/ the result is/ result in	8	0	1	2
because/ because of	6	54	79	53
besides	3	24	13	5
but	9	48	75	21
consequently/ as a consequence	7	3	1	1
<i>contrary to</i>	0	7	0	0
equally	0	0	0	0
further	7	6	5	9
furthermore	9	5	2	4
hence	1	18	18	0
however	12	48	10	23
in contrast/ by contrast/ on the contrary	7	0	8	3
leads to	8	6	6	5
likewise	16	8	1	0
moreover	15	12	0	1
nevertheless/nonetheless	0	8	0	3
on one hand....on the other hand	16	39	6	9
one.....the other	0	0	0	1
similarly	3	2	0	0
since	4	15	11	9
so/ so as to	5	23	23	25
so that/ so.....that	7	14	12	1
<i>the former...the latter</i>	0	1	0	1
thereby	0	2	1	0
therefore	3	20	6	13
thus	16	41	2	7
whereas	5	5	1	0
while	7	15	11	6

yet	20	5	2	14
<hr/>				
Frame markers	TU	NU	CCU	TSU
----- Sequencing	2	31	27	18
to start with/ to begin				
firs(ly)/ next/then/second(ly), etc.				
last(ly)/finally				
Subsequently/1,2,3, etc./a,b,c, etc.				
----- Label stages				
all in all	0	0	0	0
on the whole	0	0	0	0
overall	0	0	0	0
so far/ by far/ thus far	0	0	1	1
to conclude/ in conclusion	0	0	2	0
to repeat	0	0	0	0
to sum up/ in sum/ to summarize	0	0	1	0
----- Announce goals				
<i>Chapter X is to</i>	3	1	0	0
here I do this/ I will	0	0	0	0
I argue	0	0	0	0
I discuss	0	0	0	0
I intend	0	0	0	0
<hr/>				
I propose	0	0	0	0
I seek	0	0	0	0
I suggest	0	0	0	0
I/we will focus on / emphasize/ aim	0	0	0	0
at				
I wish	0	0	0	0
I would like to	0	0	0	0
in this section/ in this chapter	0	0	0	0
my goal is	0	0	0	0
my purpose/ the aim	0	0	0	0
<i>The present study aims to</i>	0	0	3	0
<i>This thesis concentrates on</i>	1	4	0	0
----- Topic shifts				
<i>As for</i>	0	12	4	0

Metadiscourse in Academic Writing

<i>As regards</i>	0	0	0	0
In (with) regard to	0	0	0	0
now	0	0	0	0
so	0	0	0	0
<i>speaking of</i>	0	3	0	0
to come back to	0	0	0	0
to digress	0	0	0	0
to examine	0	0	0	0
to illustrate	0	0	0	1
to look more closely	0	0	0	0
to more on	0	0	0	0
well	0	0	0	0
<i>When it comes to</i>	0	1	0	0

Endophoric markers	TU	NU	CCU	TSU
	3	8	8	0
Example X/page X				
Fig./Figure X/ Table X				
Section X/ Chapter X				
see/noted/discussed above				
see/noted/discussed earlier				
see/noted/discussed before				
see/noted/discussed below				
see/noted/discussed later				

Evidentials	TU	NU	CCU	TSU
according to	1	27	26	5
cite	0	0	0	0
(date)	0	0	0	0
established	0	0	0	0
quote	0	0	0	0
said/says	0	0	0	0
studies/research/literature	0	0	0	0
X argues	1	0	14	11
<i>X asserts</i>	1	0	8	3
X believes	0	0	0	0
X claims	2	7	8	1
<i>X comments</i>	0	5	3	0
<i>X contends</i>	2	0	1	0
<i>X criticizes that</i>	0	0	0	2
X demonstrates	0	0	0	0
<i>X explicates that</i>	0	0	1	0
X found that	0	0	0	0
X indicates	0	0	1	0
<i>X notes that</i>	5	2	17	1
<i>X observes that</i>	0	0	5	0
X points out/to	2	17	4	3
<i>X proposes that</i>	0	0	5	5
X proves	0	0	0	0
X shows	0	0	0	0
<i>X states that</i>	0	14	0	0
X suggests	0	4	4	2

Code glosses	TU	NU	CCU	TSU
call	0	0	0	0
<i>characterized as</i>	0	0	1	0
<i>consider... as/considered as</i>	2	3	5	2
<i>consider...to be/ considered to be</i>	0	1	0	0
defined as	0	1	1	2
<i>describe...as/described as</i>	0	0	1	3
e.g.	1	0	0	0
for example	1	16	13	15
for instance	4	13	8	3
i.e.	0	3	6	1
<i>in a word</i>	2	0	1	1
<i>in brief</i>	0	0	6	0
in fact	0	2	0	1
in other words	13	7	16	6
<i>in short</i>	1	3	9	1
<i>interpreted as.../interpret...as</i>	0	1	0	0
known as	0	0	0	0
namely	20	1	1	0
or x	24	57	75	71
put another way	0	0	0	1
<i>recognized as</i>	0	0	3	1
<i>refer to as/referred to as</i>	0	6	6	0
<i>regard...as/regarded as</i>	5	4	10	0
say	0	2	0	0
specifically	0	1	0	0
such as	2	17	24	3
that is/ that is to say	2	15	25	7
this means/ which means	0	2	6	2
<i>view....as/(be) viewed as</i>	1	1	11	3
viz.	0	0	0	0

Interpersonal Metadiscourse

Hedges	TU	NU	CCU	TSU
about	0	0	0	1
a certain X	0	0	0	0
admittedly	0	0	0	0
almost	3	20	2	2
(not) always	0	0	31	0
apparently	0	0	1	0
appear to be	2	8	6	0
approximately	0	0	0	0
argue	0	4	2	6
around	0	0	0	0
assume	0	4	6	6
assumption	1	0	0	5
basically	0	0	5	1
believe/believed	2	12	0	1
certain extent/amount/level	0	0	0	0
conceivab(ly)	0	0	1	0
conform	1	0	1	0
conjecture	0	0	0	0
consistent with	0	0	0	0
contend	1	0	0	0
contention	0	0	0	0
<i>correspond</i>	0	1	0	0
could/couldn't	3	20	16	21
deduce	0	0	0	0
discern	0	0	0	0
doubt	0	0	0	2
essentially/ <i>in essence</i>	0	0	1	1
estimate	0	0	0	0
evidently	0	0	0	0
formally	0	0	0	0
frequently	0	2	1	1
generally/in general	1	6	3	5
guess	0	0	0	0

Metadiscourse in Academic Writing

hypothesis	0	0	0	0
hypothetically	0	0	0	0
I believe	0	0	0	0
ideally	0	0	0	0
(we) imagine	0	0	0	0
implication	0	0	0	0
imply	0	0	0	0
indicate	0	0	0	0
infer	0	0	0	1
<i>in part</i>	0	0	0	1
interpret	0	0	0	0
in theory	0	0	0	0
I/we claim	0	0	0	0
largely	0	0	0	0
<i>less</i>	0	13	2	2
likely	0	4	4	0
little/not understood	0	0	0	0
mainly	0	5	5	1
may	9	4	18	15
maybe	0	3	1	9
might	7	14	11	15
<i>more</i>	4	12	27	5
more or less	0	0	1	0
<i>more... than</i>	1	6	5	2
most	11	9	6	15
mostly	0	6	4	0
my/our belief	0	0	0	0
normally	0	2	1	0
not necessarily	1	0	2	0
occasionally	0	0	0	0
often	5	35	11	3
open to question	0	0	0	0
ostensibly	0	0	0	0
partial	0	0	0	0
partly/in part	0	25	3	4
partially	0	2	0	0
perceive	2	0	1	0

perhaps	1	0	0	3
plausible	0	0	0	0
possibility	0	1	3	2
possible(ly)	0	5	3	6
postulate	0	0	0	0
predict	0	1	0	0
prediction	0	0	0	0
predominantly	0	0	0	0
presumably	0	2	0	0
presume	0	0	2	0
presuppose/(be) presupposed	0	0	0	3
probability	0	0	0	0
probable(ly)	0	4	1	0
propose	0	0	1	6
provided that	0	0	0	0
questionable	0	0	0	0
quite	0	0	0	0
rare(ly)	0	0	2	0
rather	2	2	2	2
rather than	1	1	5	2
reason	0	0	0	0
relatively	0	0	0	0
seem	10	20	14	9
seemingly	4	1	3	6
seem to	4	6	7	8
seen (as)	0	0	7	2
seldom	1	5	0	1
(general) sense	0	0	0	0
should/shouldn't	6	9	7	12
similar (to)	0	0	1	0
somehow	0	6	2	2
sometimes	1	6	17	10
Somewhat	2	9	3	1
speculate	0	0	0	0
speculation	0	3	0	0
suggest	0	0	0	0
superficially	0	0	0	0

Metadiscourse in Academic Writing

suppose	0	0	0	4
<i>supposedly</i>	0	0	1	0
surmise	0	0	0	0
suspect	0	0	0	1
technically	0	0	0	0
tend (to)	0	25	16	2
tendency	0	0	3	0
theoretically	0	0	0	0
<i>to a certain degree</i>	0	0	2	0
to some extent/to a great extent	2	0	0	0
typically	0	0	0	0
uncertain(ly)	0	0	1	3
unclear	0	0	0	0
unlikely	0	1	0	0
<i>unpredictability</i>	0	0	1	0
<i>unpredictable</i>	0	0	1	0
unsure	0	0	0	0
usually/as usual	0	5	6	1
virtually	0	0	0	0
would	8	25	22	7

Emphatics (boosters)

	TU	NU	CCU	TSU
<i>accurately/exactly</i>	4	2	3	2
actually	0	14	10	8
always	25	17	0	17
apparent	0	0	0	0
<i>as a matter of fact</i>	0	4	3	0
assured(ly)	0	0	0	0
best	0	0	1	0
by no means	3	0	0	0
certain that	0	0	0	0
certainly	0	3	0	4
certainty	0	2	0	0
clear(ly)	1	21	2	4
conclude	0	1	0	4
conclusive(ly)	0	0	0	0
confirm	0	0	0	0

Chi-yee Lin

convince	1	2	0	0
convincingly	0	0	0	0
couldn't	0	0	0	0
decided(ly)	0	0	0	0
definite(ly)	0	1	1	1
demonstrate	0	3	0	0
determine	0	0	0	0
doubtless	1	0	0	0
essential	0	3	1	0
establish	0	0	0	0
evidence	0	0	0	0
evidently	0	0	0	0
exclusively	0	1	0	0
expect	0	2	0	4
(we) find that/(be) found that	0	19	2	13
given that	0	0	2	0
I believe	0	0	0	0
the fact that	0	0	0	0
impossible(ly)	1	1	2	1
impossibility	0	0	0	1
improbable(ly)	0	0	0	0
indeed	4	7	1	2
<hr/>				
in effect	4	0	0	1
inevitable(ly)	7	4	0	6
in fact	17	15	16	10
intriguing	0	0	0	1
It is clear	0	0	2	0
it is known that/ to	0	0	0	0
(we) know	1	6	1	9
(at) least	1	8	2	10
manifest(ly)	4	2	1	1
more than	8	4	0	5
must	0	17	12	3
necessarily	0	0	0	0
never	43	22	11	5
no/beyond doubt	4	6	1	0
not...at all	0	0	0	0

Metadiscourse in Academic Writing

<i>no wonder</i>	2	1	0	1
obvious(ly)	0	1	4	4
of course	0	0	1	1
particularly	0	3	1	0
patently	0	0	0	0
perceive	0	0	0	0
plain(ly)	0	0	0	0
precise(ly)	0	1	3	1
prove	3	4	3	1
(without) question	0	0	0	0
quite	0	1	0	1
reliable(ly)	0	0	0	0
show	0	0	0	0
sure(ly)	2	0	0	7
surmise	0	0	0	0
(we think)	0	0	1	16
true	0	0	0	0
unambiguous(ly)	0	0	0	0
unarguably	0	0	0	0
undeniab(ly)	8	0	0	0
undoubtedly	5	0	0	2
unequivocal(ly)	2	0	0	0
unmistakab(ly)	0	0	0	0
unquestionab(ly)	0	0	0	0
well-known	0	0	0	0
will	0	0	0	0
won't	0	0	0	0
wouldn't	0	3	0	0
wrong(ly)	0	0	0	0

Attitude markers

	TU	NU	CCU	TSU
!	0	0	0	0
admittedly	0	0	0	0
<i>amazing</i>	0	0	1	0
amazingly	0	1	0	0
<i>annoying</i>	0	0	0	2
Appropriately	0	0	0	0

Chi-yee Lin

bother	0	0	0	2
confusing	0	0	0	1
correctly	0	0	0	0
correct	0	0	0	1
curiously	0	0	0	0
disagree	0	0	0	1
disappointedly	0	0	1	0
<i>disappointing</i>	0	0	1	0
disturbingly	0	1	0	0
even x	0	1	2	1
fortunately	0	0	0	0
glad/pleased	0	0	0	0
have to	2	15	16	4
hopefully	0	0	0	0
I agree	2	2	0	3
<i>I am much indebted to</i>	0	0	0	2
<i>I don't intend/mean to</i>	0	0	3	1
imperative	2	0	0	0
important(ly)	0	1	5	2
interesting(ly)	0	2	1	6
<i>It is ironic that</i>	0	0	2	1
<i>It is proper to say</i>	0	0	1	1
<i>It is reasonable to</i>	0	0	0	2
like	0	1	1	5
<hr/>				
mandatory	0	0	0	0
must (obligation)	0	0	0	0
obliged	0	2	4	0
ought (obligation)	0	0	0	0
prefer	7	0	0	0
preferable/ preferably	0	2	0	0
preference	1	0	0	0
reluctant	0	0	0	1
remarkable	0	0	0	0
should (obligation)	0	0	0	0
surprisingly	1	0	0	1
understandably	0	1	0	0
unfortunate(ly)	0	0	0	0

Metadiscourse in Academic Writing

unusually	0	1	0	1
<i>worth considering</i>	0	0	0	1
<i>would rather</i>	0	0	0	2

Relational markers	TU	NU	CCU	TSU
()	0	0	0	0
?	0	0	0	0
assume	0	0	0	0
by the way	0	0	0	0
Consider	0	0	1	0
determine	0	0	0	0
find	0	0	0	0
imagine	0	0	0	0
incidentally	0	0	0	0
Let's/let us	0	0	0	0
Let x = y	0	0	0	0
note (that)	0	1	0	1
notice	0	0	0	0
one/one's	0	0	0	0
our (inclusive)	0	0	0	0
recall	0	0	0	0
think about	0	0	0	0
us (includes reader)	0	0	0	0
we (includes reader)	0	0	0	0
you/your	0	0	0	0

Person markers				
I/ we/me/my/our/mine	0	107	144	116

Appendix III: Metadiscourse in the Theses on Linguistics

Textual metadiscourse

Logical connectives	TU	NU	CCU	TSU
accordingly	0	2	0	2
additionally/ in addition (to)	3	17	11	4
also	30	36	26	26
although/ though/ even though	12	18	14	15
and	85	247	208	520
as a result/ the result is/ result in	8	6	11	3
because/ because of	2	19	8	22
besides	0	10	0	0
But	25	6	3	51
consequently/ as a consequence	0	0	2	1
<i>contradictory to</i>	0	2	0	0
equally	2	3	1	2
further	4	17	6	3
furthermore	0	0	0	1
hence	0	18	5	1
however	32	40	24	41
in contrast/ by contrast/ on the contrary	2	23	3	3
lead to	7	1	5	0
likewise	1	0	1	0
moreover	7	4	6	9
nevertheless/nonetheless	0	18	5	3
on one hand...on the other hand	1	4	6	26
one.....the other	5	3	0	0
similarly	2	0	0	1
Since	9	32	5	34
so/ so as to	8	1	6	29
so that/ so.....that	12	3	0	0
<i>the former...the latter</i>	0	1	0	0
thereby	0	5	0	0
therefore	29	18	15	47
thus	2	25	7	26
whereas	1	27	7	3
while	7	1	0	0

yet	1	0	0	0
<hr/>				
Frame marker	TU	NU	CCU	TSU
----- Sequencing	44	29	26	38
to start with/ to begin				
firs(ly)/ next/then/second(ly), etc.				
last(ly)/finally				
Subsequently/1,2,3, etc./a,b,c, etc.				
----- Label stages				
all in all	0	0	0	0
on the whole	0	0	0	0
overall	2	0	0	0
so far/ by far/ thus far	4	0	6	0
<i>to clarify</i>	0	0	1	0
to conclude/ in conclusion	0	0	1	3
to repeat	0	0	0	0
to sum up/ in sum/ to summarize	1	5	0	2
----- Announce goals				
<i>We will concentrate on</i>	1	0	0	0
<i>Chapter X is to</i>	6	10	6	5
here I do this/ I will	0	0	0	0
I argue	0	0	0	0
I discuss	0	0	0	0
I intend	0	0	0	0
I propose	0	0	0	0
I seek	0	0	0	0
I suggest	0	0	0	0
I/we will focus on / emphasize/ aim at	2	0	0	0
I wish	0	0	0	0
I would like to	0	0	0	0
in this section/ in this chapter	15	3	3	0
my goal is	0	0	0	0
my purpose/ the aim	2	0	0	6
<i>The following table summarizes</i>	0	0	2	0
<i>The present study aims to</i>	0	3	6	1

<i>The purpose of is</i>	1	1	1	2
----- Topic shifts				
<i>As for</i>	2	5	1	0
<i>As regards</i>	0	1	0	0
In (with) regard to	2	4	0	1
now	0	0	0	0
so	0	0	0	0
to come back to	0	0	0	0
to digress	0	0	0	0
to examine	4	0	0	0
to illustrate	5	0	0	1
to look more closely	0	0	0	0
to more on	0	0	0	0
well	0	0	0	0
<i>When it comes to</i>	2	0	0	0
<hr/>				
Endophoric markers	TU	NU	CCU	TSU
	65	28	56	51
Example X/page X				
Fig./Figure X/ Table X				
Section X/ Chapter X				
see/noted/discussed above				
see/noted/discussed earlier				
see/noted/discussed before				
see/noted/discussed below				
see/noted/discussed later				

Metadiscourse in Academic Writing

Evidentials	TU	NU	CCU	TSU
according to	8	29	7	54
cite	0	0	0	0
(date)	0	0	0	0
established	0	0	0	0
quote	0	0	0	0
said/says	0	0	0	0
studies/research/literature	0	0	0	0
X argues	17	5	1	0
X believes	0	0	0	0
X claims	6	1	2	8
<i>X considers that</i>	4	0	0	0
<i>X criticizes that</i>	1	0	0	0
X demonstrates	2	0	1	0
X found that	0	0	0	0
X indicates	0	0	0	0
<i>X mentions that</i>	0	0	3	0
<i>X notes that</i>	1	2	0	1
X points out/to	11	0	1	0
<i>X proposes that</i>	0	3	12	1
X proves	0	0	0	0
X shows	1	0	0	0
<i>X states that</i>	1	1	2	0
X suggests	24	1	5	0

Code glosses	TU	NU	CCU	TSU
<i>as a matter of fact</i>	0	1	1	0
call	4	0	0	0
<i>characterized as</i>	0	1	0	1
<i>classified as</i>	0	2	0	0
<i>conceptualized as</i>	3	0	10	0
<i>considered as</i>	0	12	0	1
<i>consider...to be/ considered to be</i>	1	2	8	0
<i>counted as</i>	0	0	1	1
defined as	1	9	6	4
<i>describe...as/described as</i>	1	2	2	0
e.g.	3	15	30	2
<i>encoded as</i>	0	0	1	0
for example	15	1	15	15
for instance	2	16	1	0
i.e.	8	54	6	4
in fact	0	0	1	0
in other words	4	6	3	14
<i>in short</i>	2	1	0	1
<i>interpreted as.../interpret...as</i>	3	4	0	0
known as	0	0	0	0
<i>labeled as</i>	0	3	0	0
<i>named as</i>	1	0	0	0
namely	2	3	0	1
or x	4	53	35	101
<i>perceived as</i>	0	14	0	0
put another way	3	0	0	0
<i>refer to as/referred to as</i>	2	3	7	6
<i>regarded as</i>	0	1	3	0
say	0	0	0	0
specifically	0	0	1	0
<i>stated as</i>	0	0	1	0
such as	22	4	6	18
that is/ that is to say	0	21	8	2
this means/ which means	0	1	3	7
<i>view....as/(be) viewed as</i>	8	4	1	3

viz.	0	0	0	0
------	---	---	---	---

Interpersonal Metadiscourse

Hedges	TU	NU	CCU	TSU
about	2	1	0	3
a certain X	0	0	0	0
admittedly	0	0	0	0
almost	1	3	0	10
(not) always	0	0	0	0
apparently	0	1	0	0
appear to be	1	0	1	1
approximately	5	1	1	0
argue	1	0	0	0
around	0	0	0	0
assume	7	1	4	0
assumption	0	0	1	0
basically	0	0	1	2
believed	0	0	4	1
<i>by no means</i>	0	0	1	0
certain extent/amount/level	0	0	0	0
<i>compatible</i>	2	0	0	0
conceivab(ly)	0	0	0	0
<i>conceived of as</i>	1	0	0	0
<i>conform</i>	10	14	6	0
conjecture	0	0	0	0
consistently	2	0	0	0
consistent with	4	1	0	0
contention	0	0	0	0
<i>correspond</i>	0	4	1	0
<i>correspondently</i>	1	0	0	0
could/couldn't	63	4	5	9
deduce	0	0	0	0
discern	0	0	0	0
doubt	0	0	0	1
essentially	0	1	0	1

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estimate	0	0	0	0
evidently	0	0	0	0
figure	1	0	0	0
formally	0	2	0	0
frequent	0	0	0	5
frequently	3	1	1	4
generally/ in general	2	2	4	6
guess	0	0	0	0
hypothesize	2	0	0	0
hypothetically	0	0	0	0
I believe	0	0	0	0
ideally	0	0	0	0
identical	0	2	0	0
(we) image	0	0	0	0
implication	0	0	0	0
imply	0	0	0	0
in agreement with	0	1	0	0
incompatible with	0	2	0	0
incongruous with	0	6	0	0
in part	2	0	0	0
interpret	0	0	0	0
in theory	0	0	0	0
intuitively	0	1	0	0
irrelevant	0	2	0	0
I/we claim	0	0	0	0
largely	0	0	0	0
less	0	6	0	29
likely	6	4	1	4
little/not understood	0	0	0	0
mainly	0	5	3	1
<hr/>				
may	3	25	6	0
maybe	0	0	0	11
might	19	1	1	48
more	2	3	4	28
more or less	0	1	0	0
more...than	0	11	3	27
most	1	5	2	53

Metadiscourse in Academic Writing

mostly	0	1	0	2
my/our belief	0	0	0	0
normally	0	2	2	1
not necessarily	4	4	1	1
occasionally	0	0	0	0
often	2	0	13	23
open to question	0	0	0	0
ostensibly	0	0	0	0
partial	0	0	0	6
partially	3	3	2	1
partly/in part	0	2	1	1
perceive	0	0	0	0
perhaps	1	1	0	1
plausible	1	1	0	0
possibility	7	0	3	0
possible(ly)	4	1	1	11
postulate	2	2	0	0
predict	2	0	1	1
<i>predictability</i>	0	0	1	0
<i>predictable</i>	0	3	0	1
prediction	0	0	0	0
predominantly	1	0	0	0
presumably	0	2	0	0
presume	0	0	0	0
<i>presuppose/(be) presupposed</i>	2	0	0	0
probability	0	0	0	11
probably (ly)	0	0	0	0
propose	2	0	6	5
provided that	1	0	0	0
questionable	0	0	0	0
quite	0	0	0	0
<hr/>				
rare(ly)	1	0	0	5
rather	1	0	0	0
rather than	0	0	1	1
<i>reason</i>	1	0	0	0
relatively	1	0	0	1
seem	1	12	1	2

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seemingly	1	0	0	0
seem to	2	12	6	7
seen (as)	1	2	1	0
seldom	0	0	0	0
(general) sense	0	0	0	0
should/ shouldn't	5	8	3	13
<i>significantly</i>	9	0	0	0
<i>similar</i>	0	2	0	0
<i>somehow</i>	0	1	0	0
sometimes	0	5	3	4
speculate	0	0	0	0
suggest	0	0	0	0
superficially	0	0	0	0
suppose	1	2	1	1
surmise	0	0	0	0
suspect	0	0	0	1
technically	0	0	0	0
tend (to)	4	12	3	6
tendency	0	6	1	3
theoretically	0	4	0	0
<i>thought of as</i>	0	0	1	0
to some extent/to a great extent	0	4	0	0
typically	1	0	0	0
uncertain	0	0	0	0
unclear	0	0	2	0
unlikely	1	15	2	0
<i>unpredictability</i>	0	0	1	0
<i>unpredictable</i>	0	6	1	0
unsure	0	0	0	0
usually	1	14	0	10
virtually	0	0	0	0
would	16	2	8	4
<hr/>				
Emphatics (boosters)	TU	NU	CCU	TSU
<i>accurately/exactly</i>	6	0	2	1
actually	0	0	1	1
always	1	0	1	4

Metadiscourse in Academic Writing

apparent	0	0	0	0
<i>as a matter of fact</i>	0	0	1	0
<i>ascertain</i>	2	0	0	0
assured(ly)	0	0	0	0
<i>best</i>	0	4	0	0
certain that	0	0	0	0
certainly	0	0	0	0
certainty	0	0	0	0
clear(ly)	3	3	1	2
conclude	3	1	0	2
conclusive(ly)	0	0	0	0
confirm	2	0	0	0
convince	0	0	0	0
convincingly	0	0	0	0
couldn't	0	0	0	0
decided(ly)	0	0	0	0
definite(ly)	0	0	0	0
demonstrate	0	0	0	0
determine	0	0	0	0
doubtless	0	0	0	1
essential	0	1	0	0
establish	0	0	0	0
evidence	0	0	0	0
evidently	0	0	0	0
<i>exclusively</i>	0	12	1	0
expect	1	4	0	0
(we) find that/(be) found that	14	6	10	4
given that	2	1	0	0
<i>hardly</i>	0	1	0	0
I believe	1	0	0	0
impossible(ly)	1	14	1	0
improbable(ly)	0	7	0	0
<i>inappropriately</i>	1	0	0	0
indeed	1	2	0	1
inevitable(ly)	0	0	0	0
in fact	1	1	4	4
It is clear	0	1	2	0

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it is known that/ to	0	0	0	0
(we) know	0	0	0	0
(at) least	0	7	1	11
manifest(ly)	0	0	0	0
markedly	0	18	0	0
more than	3	1	0	32
must	5	2	2	0
necessarily	1	1	0	1
never	0	0	3	2
no/beyond doubt	0	0	1	0
not...at all	0	5	0	0
obvious(ly)	0	1	3	3
of course	0	0	0	0
particularly	8	0	1	0
patently	0	0	0	0
perceive	0	0	0	0
plain(ly)	0	0	0	0
precise(ly)	0	0	0	0
prove	1	0	3	0
(without) question	0	0	0	0
quite	1	0	0	2
reliable(ly)	0	0	0	0
show	0	0	0	0
sure(ly)	0	1	0	0
surmise	0	0	0	0
(we) think	1	0	0	0
the fact that	0	0	0	0
true	0	0	0	0
unambiguous(ly)	0	0	0	0
unarguably	0	0	0	0
undeniab(ly)	0	0	0	0
undoubtedly	0	0	0	1
unequivocal(ly)	0	0	0	0
unmistakab(ly)	0	0	0	0
unquestionab(ly)	0	0	0	0
well-known	0	0	0	0
will	8	8	0	4

Metadiscourse in Academic Writing

won't	0	0	0	0
wouldn't	15	0	0	0
wrong(ly)	0	0	0	0

Attitude markers	TU	NU	CCU	TSU
!	0	0	0	0
admittedly	0	0	0	0
amazingly	0	0	0	0
appropriately	3	2	4	3
correctly	0	0	0	0
crucial	0	1	0	0
curiously	0	0	0	0
disagree	0	0	0	0
disappointing	0	0	0	0
even x	2	2	1	1
fortunately	0	0	0	0
glad/pleased	0	0	0	0
have to	10	3	8	13
hopefully	0	0	0	0
I agree	10	0	0	0
important(ly)	1	0	1	4
interesting(ly)	1	0	0	1
<i>It comes as not surprise that</i>	0	2	0	0
<i>It is logical and expected that</i>	0	2	0	0
<i>It is reasonable to</i>	0	0	3	0
like	0	1	0	2
mandatory	0	0	1	0
must (obligation)	1	2	0	1
ought (obligation)	0	0	0	0
prefer	8	0	1	23
preferable	0	0	0	0
preference	0	0	0	2
remarkable	0	0	0	0
should (obligation)	1	0	0	1
<i>stunning</i>	0	0	1	0
surprisingly	0	0	3	1
<i>To one's surprise</i>	0	0	1	0

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understandably	0	0	0	0
unfortunate(ly)	0	0	0	1
unusually	0	0	0	0
<i>What is interesting is</i>	0	0	1	0
<i>worth mentioning</i>	0	1	0	0

Relational markers	TU	NU	CCU	TSU
()	0	0	0	0
?	0	0	0	0
assume	0	0	0	0
by the way	0	0	0	0
consider	1	15	1	9
determine	0	0	0	0
find	0	0	0	0
imagine	0	0	0	0
incidentally	0	0	0	0
Let's/let us	0	0	0	0
Let x = y	0	0	0	0
note (that)	3	2	7	0
notice	0	0	0	0
one/one's	0	0	0	0
our (inclusive)	0	0	0	0
recall	0	0	0	0
think about	0	0	0	0
us (includes reader)	0	0	0	0
we (includes reader)	1	0	0	0
you/your	0	0	0	0

Person markers				
I/ we/me/my/our/mine	93	69	52	134

***The bold-faced, italic items in the appendices are those from student writers' theses.**