A New Look to Research Article Abstracts (RAAs) of Novice Academic Writers:
Their Communicative Strategic Use of Rhetorical Structure and Metadiscourse*

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I. Introduction

The research article abstract (RAA) is an integral section of a research article (RA) as the readers' first encounter. The primary aims of the RAA are not only to introduce to potential readers a summary of the full article but to present the gist of the article to help them quickly decide whether to read on or ignore it, what we call a promotional function. The RAAs also have a gate-keeping function in the preliminary inspection of the editorial boards of journals that have to handle a flood of incoming research papers efficiently (Dahl, 2004 as cited in Park, 2008). Acquiring the skills of writing an abstract is thus important for novice researchers to enter the discourse community of their discipline. The trend of English as the lingua franca in academic communication worldwide and the highly constrained form of the abstract, however, have posed a grave challenge on non-native novice researchers that have to struggle not only with developing their theoretical arguments but with producing abstracts in L2 English. It is, however, quite recent to turn our eyes to the RAAs of non-native novice researchers, quite contrary to a huge number of studies on the RAAs written by native and non-native experienced researchers. To address such gap, the present study

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intends to identify the features of the RAAs produced by EFL graduate students and to add empirical evidence to the literature of the RAA study. A large number of studies on the RAAs have been conducted, broadly encompassing the rhetorical structure, cross-linguistic, cross-disciplinary variations, and some linguistic features.

II. Literature Review

1. Models of the rhetorical structures of the RAAs

Day and Gastel (2006) categorize the IMRD model as 'informative', or 'an encapsulation of the full paper' and the CARS model as 'indicative', in other words, an attention getter indicating important parts. The two models are, however, not separate but the opposite ends in the continuum of the two RAAs structures as the choice of pattern varies in the disciplines (Samraj, 2005). The predominant rhetorical structure is traditionally viewed as IMRD though deviations from the norm always occur. Regarding the distribution of individual moves in the structure, the issue of interest is whether they are conventional or optional. Suntara and Usaha (2013) cite Kanoksilapatham' (2005) recommendation that the conventional move generally occurs in 60%. It means that if the frequency falls below 60%, the move can be considered as optional move. Similarly, in the comparative study of Linguistics and

Table 1. Two models of the rhetorical structures of the RAAs

IMRD model	CARS (Create A Research Space) model
Swales (1990), Hyland (2000)	Swales (2004)
MOVE 1: context and motive	MOVE 1: establishing a territory: claiming centrality MOVE 2: establishing a niche: gap indicating, justify the research
MOVE 2: purpose, thesis MOVE 3: method MOVE 4: findings MOVE 5 :conclusion	MOVE 3: occupying the niche: announcing the purpose with methods and findings in option
• the canonical structure of the abstract • faithful-map purposes, summarizing the whole article	• optional and flexible • initially used for Introduction analysis of RAs • promotional purposes

Applied Linguistic by Suntara and Usaha (2013), it is found that in abstracts of Linguistics, there are three conventional moves – Purpose, Method, and Product- while four moves in abstracts of Applied Linguistics – Purpose, Method, Product and Conclusion. Meanwhile, earlier than these reports, Hyland (2004) had caught an increasing trend of the appearance of Introduction move in abstracts in the soft disciplines (e.g. humanities and social science) where writers have to acquaint readers with the background to their research. Back to the Suntara and Usaha's study (2013), they report that Introduction is an optional move in both disciplines, as opposed to Hyland's prediction.

2. Studies on the features of the RAAs across disciplines

Stotesbury's (2003) study examining the use of evaluative language and the difference in the rhetorical structure across disciplines with 300 samples out of 51 journals with 100 from the humanities, social sciences and natural sciences. Findings were that explicit forms of evaluative language were more common in the humanities and social sciences and more often found in the Introduction move. The analysis of 'modality', a sign of implicit evaluation, disclosed that the humanities and the natural science most frequently use epistemic modality (will, may, would, might, could) in the background move, whereas in the social science, evaluative expressions are located in the result and conclusion moves. Abstracts of experimental research more complied with the ANSI (American National Standards Institute) form, which is similar to IMRD, than narrative research abstracts that allowed for more deviations from it.

Suntara & Usaha (2013) conducted the analysis of disciplinary variations of the rhetorical structures of the two closely-related fields, Linguistics and Applied Linguistic. They analyzed two hundred samples of RAAs published during four years, 2009~2012 by means of the Hyland's (2000) five rhetorical moves. Findings revealed move distribution in the two disciplines; there are three conventional moves (MOVE 2, 3, 4) in the RAAs of linguistics and four conventional moves (MOVE 2, 3, 4, 5) in Applied Linguistics. They further discovered the more use of first person pronouns (I/We) in linguistics. That-

complement clauses, a place for the promotional aspects of abstract genre (Hyland & Tse, 2005), is a dominant structure in MOVE 4 and 5 of both disciplines.

3. Comparative Studies of the NS – NNS / Novice - Expert RAAs

Kim & Na's (2012) compared four linguistic features of fifty mater's theses abstracts of Korean graduate students (novice NNS researchers) with those of NS (experts)' RAAs published in leading journals in applied linguistics. The targeted features include grammatical subjects, verb tense, voice of verbs, and modal verbs. It is found that they are common in the tense distribution that the past tense is most frequent especially in the method and results moves. They frequently use active voice across moves except the more use of passive in the method move of the Korean RAAs. A distinct difference was observed in the use of modal verbs. NS authors exploited the modal verbs to convey possibility (80%), whereas more than half of the Korean graduate students' modal verbs were used to signal obligation (59%), revealing the novice writers' failure to control their tone in reporting the summary of their research. The first question that comes to mind after reading is whether these two kinds of abstract can be comparable- thesis abstracts .vs. journal abstracts. They might have faced a difficulty in the availability of the RAAs written by Korean novice writers. And regarding their approach, it might have been better to give reasons for choosing the four specific targeted features mentioned above and would have to account for their relations. While reading, I felt this concerning as their findings about the four linguistic features seemed to have remained factual, not further evolving into generalizable dimension. Nevertheless, this study is highly significant to address the RAAs produced by novice non-native English writers for the pedagogical implications.

Park (2013) compares English RAAs by Korean scholars who are engaging in the field of the teaching of Korean as L2 and native English speaking scholars. She analyzes fifty abstracts in each group that contains L1 English abstracts, published after 2000 in the discipline of applied linguistics and the journals related to the teaching Korean as L2. The study intends to iden-

tify differences and similarities in the rhetorical structure and in the distribution of linguistic features such as tense, voice and modal verbs between the NS and NNS abstracts. Findings are that a large number of Method and Result moves might be related to the types of the RAs, whether empirical or theoretical. The NNS abstracts included a higher number of modals of certainty and strong commitments than the NS abstracts. The active voice is commonly used.

4. Studies on the metadiscourse

Metadiscourse is a key term that refers to the way that writers conceive their texts in relation to their intended audience. It is classified into the two dimensions of interactions: textual and interpersonal categories. The former concerns the way a writer organizes a text to accommodate the readers' needs. The latter concerns a writer's textual 'voice', in other words, what

Table 2. A taxonomy of metadiscourse (Hyland, 2005)

Category	Function	Examples
Textual	Help to guide reader through the text	Resources
Logical connectives (Transitions)	Express relations between main clauses	and, but, in addition, however, thus
Frame markers	Refer to discourse acts, sequences or stages	My purpose is⋯, first, second, the findings are..., In conclusion
Endophoric markers	Refer to information in other parts of the text	mentioned above, as follows
Evidentials	Refer to information from other texts	according to⋯, X states that⋯
Code glosses	Elaborate propositional meanings	in other words, it means that⋯, such as⋯. , e.g., for example
Interpersonal	Involve the reader in the text	Resources
Hedges	Withhold writer's full commitment to statements	may, might, could, would, perhaps, some, possible,
Boosters	Emphasize force or writer's certainty	in fact, definitely
Attitude markers	Express writer's attitude including significance, obligation to proposition	should, have to, agree, surprisingly
Self-mentions	Refer to author(s) explicitly	I, my, exclusive we, our
Engagement markers	Build relationship with reader explicitly	imperatives (e.g., Please note that⋯) You can see that⋯, inclusive We

Hyland put as 'a community-recognized personality' (Hyland, 2005). It includes the way the writer conducts interaction with readers so as to invite their involvement and evaluation.

According to Gillaerts and Velde (2010), RAAs made more use of boosters and less use of hedges than RAs (research articles) as the abstracts are intended to convince the reader that the article is worth reading, and that the author presents interesting research findings. As a result, claims are likely to be emphasized by means of boosters, rather than downplayed by hedges. In the same study, they investigated interpersonal meta-discourse in 72 RAAs of Applied Linguistics over the three decades, focusing on the three interpersonal elements, Hedges, Boosters and Attitude markers out of the Hyland's (2005) classification. Regarding RAs and RAAs' differential use of various subcategories of interpersonal metadiscourse, they claimed that whereas RA exhibit a rather high number of hedges in comparison to boosters and attitude markers, abstracts show more affinity with boosting, rather than with hedging. The drop of interpersonal metadiscourse due to the underuse of boosters and attitude markers can be explained by a converging move of (applied) linguistics towards the hard sciences (Hyland, 2005). The increase in the length of the abstracts supported by Hylands' (2000) findings is to do with increasing factual material in the abstracts, which implies that the longer RAA in recent years do not display a higher density of interpersonal metadiscourse; nor is there a significant increase in textual metadiscourse.

Earlier than the study above, Kim (1999) conducted a comparative study of differences in the density and range of meatdiscourse used in 45 NS and NNS college students' persuasive essays. What made his study different from others addressing the same topic are first to divide NNSs into two groups by their English proficiency levels - basic and advanced writers and second to explore the relationship of the use of metadiscourse to the quality of writing. Results show that the advanced NNS writers use more metadiscourse categories in general, and specifically logical connectives and hedges. The NSs used code glosses more frequently. In addition, EFL advanced writers heavily depend on Frame Markers, Self-mention and Engagement

markers. The three categories – Hedges, Code glosses, and Logical connectives- highly correlate with their writing scores. This study casts two major significances; the range and density of metadiscourse show variation not only across different disciplines but also different genres, and from my understanding, he made a first attempt in the relevant domestic field that highlighted the differential use of metadiscourse of Korean EFL writers in different proficiency levels and successfully captured the differential use of the metadiscourse of NNS writers in different English proficiency levels.

5. Gaps of the previous studies

The most-studied RRA analysis is the comparison of experienced NS-NNS academic writers. Unfortunately, there are still few empirical studies on the RAAs produced by the NNS particularly. Second, in many previous studies that address the linguistic features of the RAAs, the criteria to their choice of the linguistic features are unreported or if any, somewhat arbitrary, which might have kept them from being generalized. In addition, the studies of a few features have been over-emphasized such as modalities, personal pronouns (e.g. I and We), tense and voices. Thus, taking a comprehensive approach or a framework-based study needs to be considered. What makes the metadiscourse framework (Hyland, 2005) appealing is that it can include many of the linguistic features that the previous studies have dealt with in part. And concerning the analysis of rhetorical structures in academic writings, the IMRD model is the dominantly used. Little attention has been paid to the other move structure - CARS model that gives more options than the IMRD so that it can better accommodate the promotional function of the RAAs. This might be due to the view that IMRD and CARS models are not separate ones as the moves of IMRD are in fact the optional moves in CARS.

In addition, although many studies have addressed the relation of some linguistic features to the rhetorical move structures, little has been attempted to investigate the relation of the use of metadiscourse to the rhetorical move structures. From my pilot study, it was conceivable that some metadiscourse markers, particularly interpersonal markers – evidential markers, hedges, boosters, self-mention, engagement markers- show a distributional

tendency that they occur in some rhetorical moves more than in other moves. Lastly, depending on the fields of study, English proficiency level of academic writers is of great diversity especially in EFL context. But, all the previous domestic studies mentioned above except Kim (1999) have not considered different proficiency levels as a key variable for their studies. Thus, it might be interesting to see what it would be like in a different genre- the RAA.

Furthermore, this study leads me to the expansion of idea that the density and distribution of metadiscourse might possibly be related to the move structure as well. From the pilot study, it is found that specific metadiscourse markers have a tendency to appear in specific rhetorical moves. This can be viewed as a gap of his study as he primarily addressed the two primary goals: the density ranking of the metadiscourse categories and the relation of metadiscouse categories to writing quality.

III. Research Questions

The questions to be addressed in this study are

1. **What are the characteristic use of the rhetorical structure and the metadiscourse of the RAAs produced by Korean novice academic writers as compared with those of the RAAs of native experienced academic writers?**

2. **Do the RAAs of the Korean novice academic writers show cross-disciplinary differences between linguistics and applied linguistics in use of rhetorical move structure and metadiscourse?**

3. **Is there any distributional tendency of metadiscourse categories across moves and does it reflect cross-disciplinary difference in Research question 2?**

To get the whole picture of the characteristics of the NNS abstracts, more

research needs to be done about the student-produced RAAs. In this sense, this study sets out to explore the features of the rhetorical structures and the metadiscourse that can be identified in the RAAs by EFL Korean graduate students. This study makes significance that these features are closely related to the communicative purposes that non-native English writers in academia need to achieve in their RAAs in order to gain readership and be actively engaged in the international as well as domestic academic discourse. The findings may contribute to the pedagogical implications for 'English as Academic Purpose (EAP)'.

IV. Method

The RAA samples are obtained from 91 research articles abstracts in the periodical, 'The SNU Working Papers in English Language and Linguistics', being annually published by the department of English Language and Literature of Seoul National University. It is a collection of research papers written by graduate students of English language major, which means they are advanced English learner in Korean EFL context. The paper abstracts for a decade from 2002 to 2013, excluding 2011 when there was no publication. To examine the discernable variations of the two closely-related disciplines – Linguistics and Applied Linguistics, I will divide the data into two groups: 59 abstracts of Linguistics and 32 abstracts of Applied Linguistics. For comparison with native academic writers, I sampled the same number of the RAAs of the two disciplines as the nonnative novice academic writers. Sources are four journals from linguistics – *Journal of Pragmatics*, *Journal of Phonetics*, *Language Science* and *English Language and Linguistics* - and three journals from applied linguistics – *English for Specific Purposes*, *System* and *Studies in Second Language Acquisition.*

Data analysis mainly covers (1) the identification of move structure model (2) move frequency including identifying conventional and optional moves (3) the variety (or range) and (4) density of metadiscourse markers. In particular, regarding the density of metadiscourse, I comply with Kim's (1999) clause-level method that the total number of metadiscourse marker are di-

vided by the total number of clauses in a single abstract.

Both qualitative and quantitative analysis will be made. I have made the learner's corpus of the 91 RAA samples by means of one of the popular corpus tools worldwide, called 'Antconc' (Anthony, 2012). To obtain quantitative evidences on the similarities and differences in the frequency of rhetorical moves and metadiscourse markers between the two writer groups, chi-square test and t-test are employed.

V. Results and Discussion

Question 1: What are the characteristics of the rhetorical structure and the metadiscourse of the RAAs produced by Korean novice academic writers as compared with those of the RAAs of native experienced academic writers?

The two writer groups gave preference to different rhetorical models. In Table 1, IMRD model is more used by the the expert group and CARS model is by the novice group. And such difference goes near to statistical significance. The result generally suggests that writers in the expert group tend to use their RAAs for summarizing their research whereas the RAAs of the Korean novice writer group serve to promote readers' interest in further reading of their research by highlighting some parts of their study - emphasizing gaps of the previous literature, so-called 'niche' in CARS model and further mentioning significant contribution of their research instead of summarizing all parts of their study.

Here is a sample of student abstract that used CARS model. In the first

Table 3. Identification of rhetorical move structure

	Word number	Clause number	MODEL		Total number	$\chi 2$
			IMRD	CARS		
Expert	16223(3386)[1]	1190(13)[2]	57 (63%)	34 (37%)	91	3.76
Novice	12218(2392)	899(10)	44 (48%)	47 (52%)	91	(p= .05)

( )[1] : the number of word types

( )[2] : the average number of clauses per abstract

(**MOVE 1: Establishing a territory**) This paper focuses on non-universality in standard OT. Non-universality in OT can be considered in two aspects: language-specific constraints and item-specific constraint ranking. (**MOVE 2: Establishing a niche**) Contrary to the basic assumption of OT, universality of constraints, there are language-specific non-universal constraint. In addition, applicability of the trisyllabic laxing rule implicates that different morphemes require different constraint ranking. Russell's morpheme-constraint model proposes abstract signature of morphemes and gatekeeper which controls different rankings for different morphemic items. (**MOVE 3: Occupying the niche**) This paper expands his idea and proposes a special component, termed Supervisor (SUP). Since operation of SUP is activated based on the information contained in input, information-contained input becomes critical in my proposal. My proposal thus proffers a solution for non-universality issue of standard OT.   - Cho (2003)
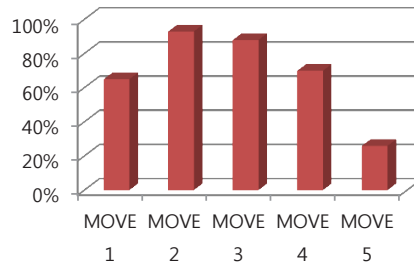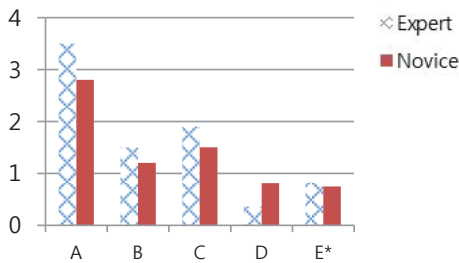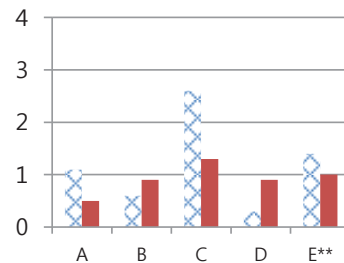

Figure 1. Move frequency of Expert RAAs

Figure 2. Move frequency of Novice RAAs

move, a writer gives background of the research topic. Then, in move 2, the writer clearly indicates the gap in the area of the research topic. Then, in move 3, the writer states one's purpose of study and one's approach to make up for the gap. So, obviously this abstract is not designed for summary as it does not include but give clues to what are found in their study.

In Figure 1 and 2 indicating move frequency pertinent to whether a move is optional or conventional, Move 1 to 4 are conventional in both groups when applied to 60% criterion suggested by Kanoksilapatham (2005). This finding corresponds to what Hyland (2004) predicted about the increasing trend of introduction move in the soft disciplines such as linguistics and social science. And it is seems more likely that novice writers skip moves 1, 4 or 5 more often than experienced writers, but the mean length of clause in each move shown in Table 4 below indicates that the novice group interestingly wrote longer move 1 (introduction) and move 4 (results) as opposed to their relatively lesser use of those moves. What can be inferred from this finding is that Korean novice academic writers in the current study put

Table 4. Mean length of clause in MOVE

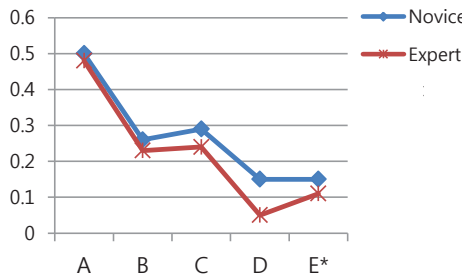| Move	Expert			Novice		
	Overall	Linguistics	Applied ling.	Overall	Linguistics	Applied ling.
M1	**2.6**	2.6	2.5	**2.8**	3.4	1.6
M2	**1.9**	2.2	1.5	**1.9**	1.8	2.0
M3	**2.1**	2.0	2.3	**1.4**	1.0	2.1
M4	**4.5**	5.0	3.9	**5.8**	6.1	5.2
M5	**2.7**	2.8	2.4	**1.2**	1.0	1.3

Figure 3. Use of Textual metadiscourse

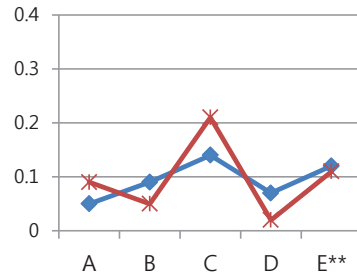**Figure 4.** Use of Interpersonal metadiscourse

*A~E in Figure 3 indicates connective (A) frame marker (B) endophoric (C) evidential (D) and code gloss (E).

**A~E in Figure 4 indicates self-mention (A) engagement (B) hedge (C) booster (D) and attitude (E).

much weight on optional moves of CARS model.

Next, when it comes to use of metadiscourse as illustrated in Figure 3 and 4, the expert group used more metadiscourse in overall with particularly higher rates in connectives, hedges and self-mention whereas novice Korean writers used evidential, boosters and engagement markers than experts.

Starting from textual metadiscourse, both groups make generally much use of connective, endophoric and frame markers, whereas a stark contrast between the two groups emerges in evidential markers. Regarding inter-personal metadiscourse, the novice group shows more use of boosters and engagements but less use of self-mention, hedges and attitude. Ultimately, novice RAAs demonstrate the typical characteristics as novice writer; keeping a low profile of their identity, relying more on authorial voices with ac-

Table 5. Density of Metadiscourse in the two writer groups]

Category	Expert	Novice	t-test	Group difference
Textual	.61	.71	t= 3.38 p= .00**	Expert < Novice
Interpersonal	.46	.42	t= .40 p= .69	Expert = Novice
Total	.52	.63	t= 2.27 p=.02*	Expert < Novice

* p>.05   ** p>.01

Figure 5. Density of Textual Metadiscourse

Figure 6. Density of Interpersonal Metadiscourse

*A~E in Figure 5 indicates in connective (A) frame marker (B) endophoric (C) evidential (D) and code gloss (E).
**A~E in Figure 6 indicates self-mention (A) engagement (B) hedge (C) booster (D) and attitude (E).

tive use of citations, sometimes bringing emphatic words into their study to amplify the degree of their certainty and using expressions including second-person pronouns to draw readers into the discourse of their study. This all can be interpreted as the strategic use of metadiscourse to emphasize justification of their study and reach out to readers for the sake of academic communication.

Measuring density of metadiscourse as well as frequency of metadiscourse was conducted to calculate the average use of metadiscourse markers per clause. Please refer to Table 5. The surprise is in density of metadiscourse. Unlike its frequency where the expert group excels the novice group, this time the latter group has higher density in overall and in one type of metadiscourse – interactive markers, both of which lead to statistical difference as displayed in Table 5.

Figure 5 illustrates that although the graph seemingly features a similar pattern between the two groups, evidential markers (M4) of all the meta-discourse categories most contributes to this subtle inversion as the only category which makes significant difference between the two groups in the t-test (t = 3.60, *p*=.00).

In short, it is the novice group in the current study that is more voluntarily harnessing citations of the previous studies, which reflects the distinctive use of metadiscourse as novice academic writers. Another thing unique about the novice academic writers in the current study is that as Kim (1999) claim evidential and endophoric markers are features of academic articles in hard-pure disciplines (e.g., natural science), it can be speculated that the rhetorical style of novice RAAs in the current study to some degree resemble the rhetorical style in the discipline domain mentioned above. The following examples demonstrate density of evidential and endophoric markers in some novice RAAs.

> … . I will present three well-recognized analyses of subject-auxiliary inversions: the analysis based on inversion lexical rules <u>following Sag and Wasow (1999),</u> the analysis founded on no lexical rules <u>following Warner (2000),</u> and the analysis grounded on no default specifications <u>following Green and Morgan (1995).</u> Particularly this paper will partially revise a multiple inheritance sort hierarchy which was originally <u>suggested by Green and Morgan (1995).</u> It will also make a comparison between "Will not they...?" and "Will they not...?", and… .
>
> - Jo (2003)
>
> <u>Lass (1994)</u> calls the period from Proto-Germanic to historical Old English as 'The Age of Harmony'. Among the harmony processes in this period, i-umlaut has been considered as 'one of the most far-reaching and important sound changes' <u>(Hogg 1992, Lass 1994)</u> or as 'one of the least controversial sound changes' <u>(Colman 2005).</u> This paper tries to analyze i-umlaut in Old English within the framework of…
>
> - Piao (2012)

Corresponding with its frequency pattern of interpersonal metadiscourse, high density of some interpersonal categories such as engagement markers (M2) and boosters (M4), and lower density of self-mention (M1) and hedge

(M3) make distinctive features of novice RAAs in comparison with those of expert RAAs although none of interpersonal categories results into statistical significance. Meanwhile, attributing low frequency and low density of self-mention in novice RAAs to modesty, one of oriental virtues needs to be cautious, based on Kim's (1999) study where advanced EFL writers who are usually well aware of genre-specific rhetoric expose themselves with highest frequency and density of self-mention in their persuasive essays. If we assume that the proficiency level of advanced Korean college students in Kim's (1999) study is largely comparable to that of novice academic writers of Korean graduate students in the current study, we possibly come to a conclusion that advanced EFL learners have command of different functions of rhetorical devices in different genres so that they can meet the intended purpose of each genre writing : that is to say, in writing RAAs they are more willing to appeal justification of their study by keeping themselves under the surface and instead bringing references of related studies to the surface, but in persuasive writings they choose opposite strategies to actively expose themselves to the discourse and making their presence more prominent.

Question 2: Do the RAAs of the Korean novice academic writers show cross-disciplinary differences between linguistics and applied linguistics in use of the rhetorical move structure and the metadiscourse?

1. Identification of rhetorical move structure and move frequency

To begin with, cross-disciplinary variation is conceivable in move frequency where introduction (Move 1) is more popular and longer in RAAs of linguistics than in those of applied linguistics as indicated in Table 4. It implies starting RAAs of linguistics by offering sufficient backgrounds and contexts is sort of conventional act that is not yet established in applied linguistics. On the other hand, method (Move 3) produces the opposite result that Move 3 is more popular and longer in RAAs of applied linguistics as illustrated in Table 4 as well. Method is necessary in RAAs of applied linguistics to meet the explicit need of stating it due to experiment-centered discourse prevalent in that field. What makes this more intriguing is no discernable contrast be-

Table 6. Cross-Disciplinary Difference in Model Distribution of Linguistics and Applied Linguistics RAAs

Group	Model type	Linguistics (%)	Applied Linguistics (%)	$\chi 2$
Expert	IMRD	35 (59)	22 (69)	.79
	CARS	24 (41)	10 (31)	(p=.38)
Novice	IMRD	18 (31)	26 (81)	21.34
	CARS	41 (69)	6 (19)	(p=.00**)

tween the two closely-related disciplines in the expert RAAs. Chi-square test is followed to see whether such cross-disciplinary difference in distribution of the two rhetorical models- IMRD and CARS- makes statistical significance in each writer group. The result is summarized in Table 6 showing that only novice writers of linguistics make statistical significance (χ^2 = 21.34, p = .00) in their different inclination of rhetorical structure model use across disciplines; CARS for linguistics and IMRD for linguistics.

Concerning move frequency, the two writer groups have four conventional moves from Introduction (Move 1) to Result (Move 4) altogether whether they are not totally statistically significant. It does not, however, agree to the recent cross-disciplinary study (Suntara & Usaha, 2013) where RAAs of both disciplines have introduction as optional. Notwithstanding, our result confirms the increasing trend of introduction move in humanities RAAs as Hyland predicted earlier in 2004.

2. Frequency of Metadiscourse

(1) RAAs of linguistics

The first bars in Figure 7 and 8 show the overall frequencies of metadiscourse that are higher in the expert group. In particular, discrepancy of the interpersonal categories between the two writer groups goes greater than in the textual counterpart. Following the pattern observed prior to being divided by discipline, novice writers use more engagement (B in Figure 8) and boosters (D in Figure 8) than the others, which reflects stronger motivation of entering their academic communities. In regard to textual categories, frequency of evidential markers (D in Figure 7) is exceptionally high, the same
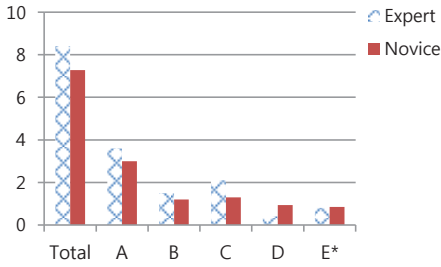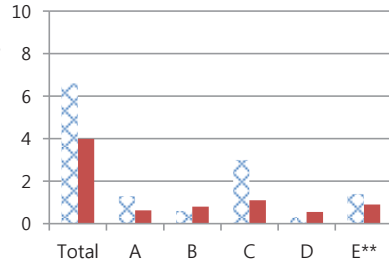
Figure 7. Frequency of Textual Metadiscourse

Figure 8. Frequency of Interpersonal Metadiscourse

*A~E in Figure 7 indicates in connective (A) frame marker (B) endophoric (C) evidential (D) and code gloss (E).
**A~E in Figure 8 indicates self-mention (A) engagement (B) hedge (C) booster (D) and attitude (E).
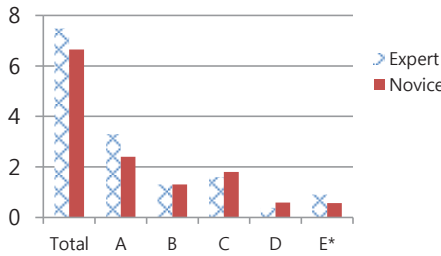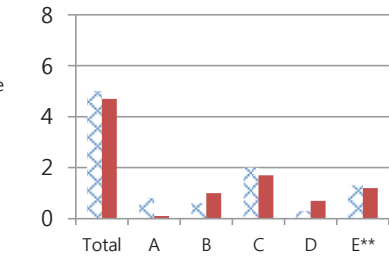
Figure 9. Frequency of Textual Metadiscourse

Figure 10. Frequency of Interpersonal Metadiscourse

*A~E in Figure 9 indicates in connective (A) frame marker (B) endophoric (C) evidential (D) and code gloss (E).
**A~E in Figure 10 indicates self-mention (A) engagement (B) hedge (C) booster (D) and attitude (E).

as observed in Research question 1.

(2) RAAs of applied linguistics

Now, turning to the RAAs of applied linguistics, discrepancy in overall frequency of metadiscourse goes narrower than those of linguistics. Corresponding with cross-disciplinary comparisons in linguistics, there is little self-mention (A in Figure 10) whereas engagement (B in Figure 10) and

boosters (D in Figure 10) are much used by novice writers.

These findings all point to the indirect approach to leave their presence hidden in their RAA, which contrasts with a higher proportion of self-mention used by the expert group. Withdrawing their presence, however, is complemented by the increasing use of boosters to amplify or emphasize writer's certainty. The high frequency of code glosses (e.g., in other words, it means that…, such as, for example….), one category of textual metadiscourse (E in Figure 9) of expert academic writers makes a pedagogical implication that Korean novice researchers need to write more specifically in their RAAs by often using paraphrasing or giving examples briefly with the expressions mentioned above. The following excerpts demonstrate the use of engagement and boosters by the novice group.

> … form-focused, content-based, and integrated feedback. More specifically, the study pursues the following issues: Why certain types of feedback are put forth, how they are performed in students' writing and what the main issues are in this field. Through the extensive review on the issues suggested, this study attempts to ….
>
> Park (2006)
>
> … Among the clauses, reason clauses most frequently occur in the sentence-final position. Among condition clauses, the positive if … . Data also shows that spoken English reflects this tendency more clearly than written English. We suggest that the clause ordering may be analyzed in terms of the semantic principle of end-focus… .
>
> - Park (2002)

3. Density of metadiscourse

(1) RAAs of linguistics

As summarized in Table 7, overall density of textual metadiscourse between the two writer groups is statistically significant (t = 2.35, p= .02*) particularly because the RAAs of the novice group contain significantly higher density of evidential markers (D in Figure 11) relative to the expert group (t = 3.60, p = .00**). On the other hand, overall density of interpersonal metadiscourse obtains the opposite result, yet its group difference is not statistically significant (t = .51, p = .61). Hedge, one kind of interpersonal categories

Table 7. Mean Density of Metadiscourse in the two writer groups]

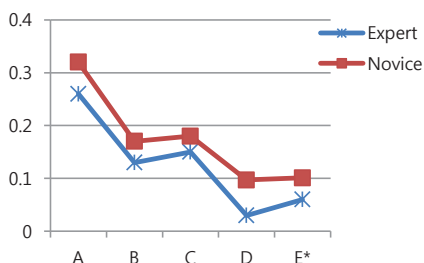| Category	Expert (E)	Novice (N)	t-test	Group difference
Textual	.63	.85	t= 2.35 p= .02*	Expert < Novice
Interpersonal	.51	.47	t= .51 p= .61	Expert = Novice
Total	.57	.66	t= 1.47 p= .14	Expert = Novice

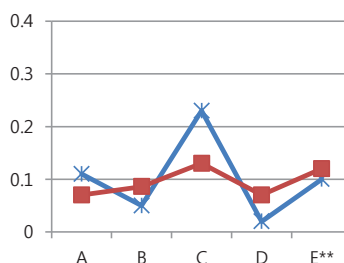**Figure 11.** Textual density of the two groups

Figure 12. Interpersonal density of the two groups

*A~E in Figure 11 indicates in connective (A) frame marker (B) endophoric (C) evidential (D) and code gloss (E).
**A~E in Figure 12 indicates self-mention (A) engagement (B) hedge (C) booster (D) and attitude (E).
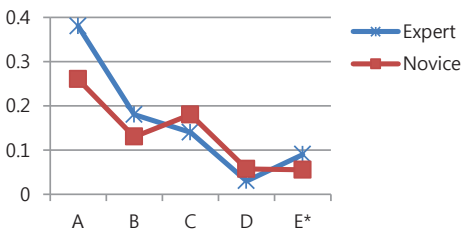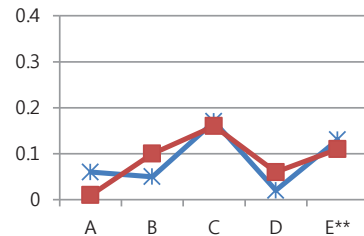
which marks a characteristic of expert writers being illustrated as C in Figure 12, does not go to the level of statistical significance, either.

(2) RAAs of applied linguistics

RAAs of applied linguistics bear more similarities between the two writer groups than those of linguistics. Table 8 describes no statistical difference in mean density of metadiscourse between them from the t-test, whether it is textual, interpersonal or overall. To wrap up, there are more cross-disciplinary variations in the Korean novice writer group than in the expert group in terms of rhetorical structure, frequency and density of metadiscourse. Moreover, in the RAAs of linguistics, there are greater differences between the two writer groups than in those of applied linguistics; in particular more widely used interpersonal metadiscourse by the expert group makes another pedagogical implication that novice academic writers of linguistics need to

Table 8. Mean Density of Metadiscourse in the two writer groups]

Category	Expert	Novice	t-test	Group difference
Interactive	.68	.69	t = .12 p = .90	Expert = Novice
Interpersonal	.44	.44	t = .07 p = .94	Expert = Novice
Total	.56	.56	t = .13 p = .90	Expert = Novice

Figure 13. Textual medtadiscourse density   **Figure 14.** Interactive metadiscourse density

*A~E in Figure 13 indicates in connective (A) frame marker (B) endophoric (C) evidential (D) and code gloss (E).

**A~E in Figure 14 indicates self-mention (A) engagement (B) hedge (C) booster (D) and attitude (E).

more actively involve readers into their text.

Question 3: Is there any distributional pattern of metadiscourse categories across moves and does it reflect cross-disciplinary difference in Research question 2?

As a response to question 3, distributional pattern of metadiscourses is identified across moves and it makes group difference. Uneven distribution of metadiscourse across moves is identified and particularly in the novice group. More details are described as follows.

1. Distribution of metadiscourse to rhetorical move structure

(1) Expert group

In total, expert abstracts with IMRD move structure include the slightly larger quantity of metadiscourse than those with CARS move structure do. Out of need to signal a transition to jump to the next step in the IMRD
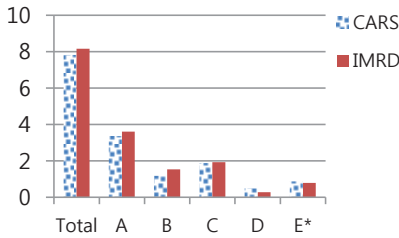
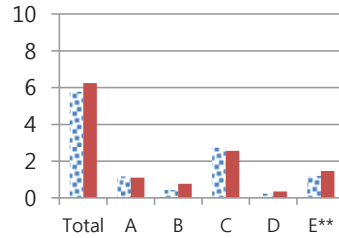**Figure 15.** Move structure - Textual metadiscourse

Figure 16. Move structure - Interpersonal metadiscourse

*A~E in Figure 15 indicates in connective (A) frame marker (B) endophoric (C) evidential (D) and code gloss (E).

**A~E in Figure 16 indicates self-mention (A) engagement (B) hedge (C) booster (D) and attitude (E).

structure, frequent use of frame markers (B in Figure 15) seems reasonable. Noticeable use of engagement markers (B in Figure 16) in the expert RAAs can be considered as a strategy to draws readers' attention for further reading, which the IMRD structure is inherently in lack of. To put it short, characteristic use of metadiscourse depends on rhetorical structure in choice and the former is in support of the latter.

(2) Novice group

Total use of metadiscourse of Korean novice writers is lower than that of experienced academic writers, yet unlike the expert group, novice abstracts with CARS move structure include the larger quantity of metadiscourse. As shown in Figure 17, two categories of textual metadiscourse, connectives (A) and evidential markers (D) are distinctively used in abstracts with CARS move structure. Particularly, evidential markers are found most in Move 2 of CARS structure where writers usually establish a niche, in other words, indicating gaps surrounded in their research topic so as to ultimately justify their study (see Table 1.) Thus, it can be said that evidential markers serve to reinforce the rhetorical function of

Move 2. Meanwhile, using three categories of interpersonal metadiscourse described in Figure 18 - self-mention (A), hedge (C) and attitude (E) – are characteristic of the novice RAAs with CARS move structure in comparison
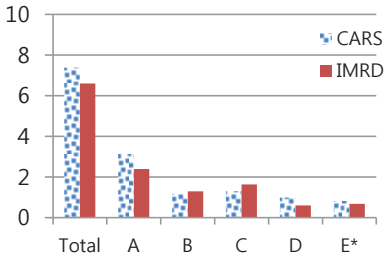
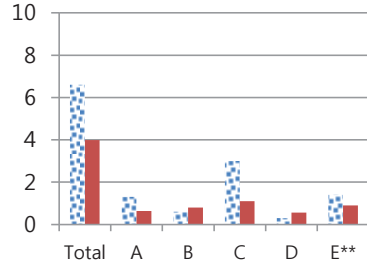**Figure 17.** Move structure - Textual metadiscourse

Figure 18. Move structure - Interpersonal metadiscourse

*A~E in Figure 17 indicates in connective (A) frame marker (B) endophoric (C) evidential (D) and code gloss (E).

**A~E in Figure 18 indicates self-mention (A) engagement (B) hedge (C) booster (D) and attitude (E).

Table 9. General distribution of metadiscourse across moves

Move	Expert	Novice
I	evidential (1)	attitude (1)
II	code gloss, self-mention (2)	connective, frame marker, endophoric, evidential, code gloss, self-mention, engagement, hedge, booster (9)
III	NA	NA
IV	connective, frame marker, endophoric, engagement, hedge, booster, attitude (7)	NA
V	NA	NA

Note: NA indicates that no metadiscourse category of highest frequency is in moves colored in gray.
Number in parenthesis counts the total number of metadiscourse categories of highest frequency in each move.

with RAAs with IMRD move structure. They are better to reveal their presence than writers of abstracts with IMRD structure and to discuss the literature with rather clear and evaluative diction. These markers are the ones that make contribution in one way or another to maximizing the rhetorical effect of CARS model. Plus, novice writers who choose CARS model are inclined to use more hedges similar to expert writers. Statistical significance of interpersonal metadiscourse ($x^2 = 0.01$, $p < .05$) is identified between the two different rhetorical models used in novice writers' abstracts. It means that

Table 10. Distribution of metadiscourse across moves in linguistics RAAs

Move	Expert	Novice
I	NA	attitude , evidential, endophoric (3)
II	frame marker, code gloss, self-mention (3)	code gloss, self-mention, connective, frame marker, endophoric, evidential, engagement, hedge, booster (9)
III	evidential (1)	NA
IV	connective, endophoric, engagement, hedge, booster, attitude (6)	NA
V	NA	NA

Table 11. Distribution of metadiscourse across moves in applied linguistics RAAs

Move	Expert	Novice
I	evidential, booster (2)	NA
II	code gloss (1)	frame marker, evidential, self-mention, hedge (4)
III	code gloss (1)	code gloss (1)
IV	connective, frame marker, endophoric, self-mention, engagement, hedge, booster, attitude (8)	connective, endophoric, engagement, booster, attitude, frame marker, hedge (7)
V	NA	hedge (1)

Note: NA indicates that no metadiscourse category of highest frequency is in moves colored in gray.
　　　Number in parenthesis counts the total number of metadiscourse categories of highest frequency in each move.

use of interpersonal metadiscourse differs at rhetorical structure model that novice writers choose.

Distributional pattern of metadiscourse across moves indicated in Table 9 is identified in both groups and the pattern is more conceivable in the Korean novice group. Generally speaking, in case of the expert group, 7 metadiscourse markers of highest frequency were concentrated in move 4, while 9 metadiscourse markers of the same kind are in Move 2 of novice abstracts. It is proven that the two groups make most use of metadiscourse for different purposes; it is highly useful for experienced writers to elaborate the result, that is, what their study finds, but for novice writers to solidify significance of their study, that is, how their study is justified. This analysis is also sup-

ported by difference in the preferred rhetorical structure of the two groups: IMRD model for expert writers and CARS model for novice writers.

Linguistics abstracts in Table 10 show agreement with overall distributional tendency in Table 9, where there is different concentration of metadiscourse between the two writer groups: Move 4 for expert abstracts and Move 2 for novice abstracts, but applied linguistics abstracts in Table 11 have an identical pattern of distribution between the writer groups; they have a high concentration of metadiscourse in the same move (Move 4). To put it in another way, distributional pattern of metadiscourse that differs at discipline appears only in the novice group. This finding taps into what have been discussed in Research question 2 that first discovers a supportive function of metadiscourse to facilitate the rhetorical effect of move structure and second, cross-disciplinary variations are evident only in the novice group.

VI. Conclusion and Implications

The initial purpose of this study is to identify characteristic use of rhetorical structure and metadiscourse in RAAs of Korean novice academic researchers in comparison with experienced academic writers many of whom are native speakers and have already been established in the domain of their discipline or familiarized with the discourse of academic communications to say the least. In time, however, the study has led to some interesting discoveries on the RAAs of novice writers that offer a new look to how novice academic researchers write abstracts.

To be sure, they write abstracts in a rather unique way, which is no less sophisticated than experienced academic writers do; their preference of rhetorical structure of CARS model and metadiscourse of evidentials, boosters and engagement markers contributes to the intended writing purpose and effect that first promote readers' attention to further reading, emphasize significance and justification of their study and finally appeal to the targeted readership, thereby effectively engage in communications of their academic domain.

It is also found that RAAs of the novice group reflect their awareness on

the distinguishable rhetorical subtleties of the two-closely related disciplines – linguistics and applied linguistics – and perform accordingly: CARS model for linguistics abstracts and IMRD model for applied linguistics. This distinction may derive from a different approach whether language study is theoretically-oriented or experiment-oriented and writing style in the two disciplines.

What this study first suggests is connecting distributional pattern of metadiscourse to move structure model which has rarely been studied. Distributional pattern of metadiscourse in a high concentration differ across moves of the two groups and the effect of the selected move structure is reinforced or complemented by metadiscourse markers used as explained in Research question 3. In particular, novice writers make a significantly different use of metadiscourse depending on the move structure model they choose. This clearly implies the relation between metadiscourse and move structure sometimes in a complimentary and other times a mutually reinforcing way.

Another critical insight that the current study suggests is that comparative study of RAAs of EFL novice .vs. expert academic writers does not restrict itself to making pedagogical implications focusing on what EFL learners need to do and expand to a broader dimension that sheds light on how EFL (advanced) learners' communicative competence is represented in writing RAAs, including knowledge about the discoursal and rhetorical characteristics of the genre and how they perform a range of communicative acts to meet a variety of needs and conditions embedded in such a highly specialized context as writing research article abstracts.

Lastly, it might be questionable whether the sampled data for the current study truly and fully represents the population of EFL novice academic writers in Korea. This issue is left for follow-up study with increased sample size that contains diverse majors and different English proficiency levels.

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ABSTRACT

A New Look to Research Article Abstracts (RAAs) of Novice Academic Writers:
Their Communicative Strategic Use of Rhetorical Structure and Metadiscourse

Junghee Byun

This study intends to highlight a unique approach that the research article abstracts (RAAs) of Korean graduate students (N= 91) make communicative and strategic use of rhetorical structures and metadiscourse in comparison with those of the experienced academic writers (N= 91) published in leading linguistics and applied linguistics journals. For analysis, two models of rhetorical structure—IMRD model (Hyland, 2004) and CARS model (Swales, 2004) — and two types of metadiscourse (Hyland, 2005)—textual and interpersonal — are employed in conjunction with statistical methods of chi-square test and t-test. Much use of CARS model in the novice RAAs suggests the intention to promote readers' interest in further reading by giving a gist of an article rather than a whole summary. Clear preference to some metadiscourse categories including 'boosters' (e.g., definitely), 'engagement' (e.g., you can see that…) and 'evidential markers' (e.g., according to X) with less 'self-mention' (e.g., I, exclusive we) can be interpreted as strategies to successfully enter their academic communities and engage in communications. Significantly higher density of the overall and the textual categories of metadiscourse may also help to bolster their choice of CARS structure that is flexible and optional. Furthermore, the current study has discovered a close relationship between preferred move structure and distributional pattern of metadiscourse across moves in the novice group. Cross-disciplinary variations, known as a feature of advanced academic writing, also make statistical significance only in the novice group. In sum, the findings mentioned

above suggest a new look to novice writers who are keenly aware of the rhetorical functions of move structure and metadiscourse and make strategic use of them for the sake of effective communication in the discourse of their academic discipline.

Key Words   student-produced academic writing, research article abstract study, metadiscourse analysis, CARS model, IMRD model, rhetorical structure study