Modern English Education, Vol. 17, No. 4, Winter 2016
http://dx.doi.org/10.18095/meeso.2016.17.4.02

Comparative Study of Abstract Writings of Novice and Expert Researchers: Move and Metadiscourse Analysis*

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Byun, Jung-Hee. (2016). Comparative study of abstract writings of novice and expert researchers: Move and metadiscourse analysis. *Modern English Education*, *17*(4), 25-49.

This study focuses on the of rhetorical move structures and metadiscourse among Korean novice academic writers, who are graduate students (n = 91) in writing research article abstracts (RAAs) compared with experienced academic writers (n = 91) who publish in leading linguistics and applied linguistics journals. The analysis adopts two models of rhetorical structure of RAAs – the IMRD model (Hyland, 2004) and CARS model (Swales, 2004) – and two types of metadiscoursal resources (Hyland, 2005) – textual and interpersonal. The study found significantly higher use of the CARS model and the preference for some metadiscourse markers (boosters, engagement, and evidentials) in Korean novice RAAs. Also, the two writer groups showed the relationship between the overall move structure and the distribution of metadiscourse markers across moves, but the cross-disciplinary variation in this relationship was only marked in the novice group; these findings may be interpreted as the intended strategies of novice academic writers to engage their academic communities and infer the functional link between the rhetorical move structure and the distribution of metadiscourse markers which calls for further work.

[abstract writing/metadiscourse/novice writers/rhetorical structure/
논문초록쓰기/메타담화/초심자 글쓰기/수사적 구조]

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* This work is the revised version of the paper presentation entitled as "The rhetorical structure and metadiscourse of student-produced research article abstracts" by the author in the international conference of the Korea Association of Teachers of English (KATE) in Seoul, Korea in July 4 ~ 5, 2014.

I. INTRODUCTION

The research article abstract (RAA) is an integral section of a research article (RA) as the readers' first encounter. The primary aim of an RAA is not only to introduce an article but also to present the gist of the article to help potential readers quickly decide whether to read on or ignore it. In addition to this promotional and time-saving function (Geloebiowski 2009; Hyland & Tse, 2005), RAAs have a gate-keeping function in the preliminary inspection of editorial boards of journals that handle a wealth of incoming research papers (Dahl, 2004). The importance of RAAs in relation to research articles (RAs) is also echoed in Arsyad's (2014) study, which quotes Belcher's (2009) claim as follows: RA writers must argue convincingly for the significance of their research project in order to win the competition for an international journal publication, and the argument must have been presented from very early in the article; i.e., in the abstract of the article.

These important roles of an RAA in addition to its constraint in length cause a writer to make a series of critical decisions on how to summarize one's study and what to include or exclude in the abstract in order to best convince others, especially members in their discipline, of the importance of their work. The significances that RAAs gain in the literature above are sufficient for us to seriously consider the quality of abstracts. This is particularly the case among novice researchers such as graduate students who wish to enter the discourse community of their disciplines.

However, the trend of English as a *lingua franca* in academic communication worldwide, whether domestic or international, and the highly constrained form of abstracts have often posed a challenge to novice researchers with non-English L1 backgrounds. These researchers struggle with not only developing their theoretical arguments but also writing an effective summary of their research in L2 English (Ahmadi, Ghonsooly, & Fatemi, 2013; Ventola, 1994). The major challenge is presumably derived from the conventional textual organization and other rhetorical practices that are established by the English-speaking academic community (Connor, 2011; Martín-Martín, 2003 as cited in E. Shim, 2013). Therefore, as Pho (2008) argues, writing an abstract might as well be looked upon as 'a skill' for novice researchers to acquire to successfully address the challenge.

To improve abstract-writing skills of novice academic writers, the first thing to do is to closely examine how the rhetorical structure (e.g., move pattern in abstracts) and its linguistic realizations (e.g., metadiscourse markers) are actually deployed in their RAAs. It seems not long ago, however, that we began to turn our eyes to the RAAs of novice researchers (B. Jeon & H. Eun, 2007; S. Kim & Y. H. Na, 2012; Ren & Li, 2011). Thus, more empirical evidence needs to be collected, unlike a large volume of research about expert RAAs for making pedagogical implications (Gillaerts & de Velde, 2010; S. Ko, 2010; Lorés, 2004; H. Park, 2013; K. Y. Park, 2012; S. B. Park, 2007a, 2007b; Pho, 2008;

Shamsabadi, Riahipour, & Rasekh, 2014; E. Shim, 2013).

In fact, writers' selective representation of their articles in abstracts usually comes through various patterns of rhetorical moves (Hyland, 2000), and the general patterns of writers' choices often vary across disciplines (e.g., Samraj, 2008). And, metadiscourse, although known as a nonpropositional material unlike discourse carrying topical content, is intended to help readers understand the information given in a text, performing interpersonal and textual functions of language (Kopple, 1985). Khedri, Heng, and Ebrahimi (2013) also found the self-reflective and social functions of metadiscourse highly conducive to the effective dissemination of knowledge in a discipline. To be brief, metadiscourse can be a useful device for novice academic writers to fulfill their purpose, which is to effectively convince prospective readers of their work being worthy of further reading. What are mentioned here crucially indicate that investigating the use of metadiscourse and the rhetorical move structure in RAAs of novice writers in parallel with expert writers will give a relevant and direct support for the former group, EFL novice academic writers, to devise strategies against the major challenge aforementioned in their abstract writing.

Investigating the relationship between rhetorical structure (as a feature of discoursal dimension) and metadiscourse is another concern in this study. Many previous studies had an exclusive focus (Gillaerts & de Velde, 2010; Khedri, Heng, & Ebrahimi, 2013; J. W. Kim, 1999; Ren & Li, 2011; Samraj, 2008), and few study (Stotesbury, 2003) dealt with both, using expert abstracts only. Although the two dimensions are conceptually independent, it seems plausible that skillful writers effectively relate these two as they make utmost effort to fulfill communicative purposes of academic discourse of disciplines in which they engage in.

With such significance in mind, the present study aims to compare the nature of rhetorical move structure and metadiscourse used by expert and novice academic researchers in writing RAAs. Then it will look into cross-disciplinary variations in two writer groups and the relationship between the two rhetorical features. In consequence, it will make pedagogical implications for novice academic writers. For these, the present study will seek for answers to the following questions :

1) What are the characteristics of the move structure and metadiscourse of RAAs produced by Korean novice academic writers as compared with those of RAAs among experienced academic writers?
2) Do the RAAs of Korean novice academic writers show cross-disciplinary differences between linguistics and applied linguistics in their use of move structure and metadiscourse?
3) Is there a distributional pattern of metadiscourse subcategories across moves ? If so,

does it demonstrate a cross-disciplinary difference?

II. LITERATURE REVIEW

1. Move Structure of RAA

Move analyses of the RAA genre have been numerous (Bhatia, 1993; Dos Santos, 1996; Hyland, 2000; Jordan, 1991; Lorés, 2004; Nwogu, 1990, as cited in Zhang, Bui, & Pramoolsook, 2012; among many others). A 'move', defined as a text segment that can be identified by its particular linguistic clues, allows for a specific function within a text to be met, signals the content of a particular discourse within a genre and leads to the overall coherent understanding of the text (Swales, 1981, as cited in Crossley, 2007). Hyland (2004) mentions that move analysis offers information and activities that can raise learners' awareness of a certain genre so as to give them support for better writing, so the teaching of these moves allows students to be more aware of the various propositions expected within genres and helps them avoid mistakes that might come when the expectations of a genre are not fulfilled.

TABLE 1

Two Models of the Rhetorical Structures of RAAs

IMRD model	Create A Research Space (CARS) model
Swales (1990), Hyland (2000)	Swales (2004)
MOVE 1 introduction: context and motive	MOVE 1 establish territory: claim centrality MOVE 2 establish niche: indicate gap, justify research
MOVE 2 purpose, thesis MOVE 3 method MOVE 4 findings MOVE 5 conclusion	MOVE 3 occupy niche: announce purpose, methods, findings in option
• canonical structure of abstract • faithful-map purposes, summarize article	• optional and flexible • initially used for Introduction analysis • promotional purposes

As summarized in Table 1, Day and Gastel (2006) categorize models of move structures of RAAs into the IMRD model, which is 'informative' or 'an encapsulation of the full paper,' and the CARS model, which is 'indicative,' or 'an attention getter indicating important parts'. As Lorés (2004) states, though deviations from the norm do occur, the predominant rhetorical structure is traditionally viewed to be a structure encompassing Introduction, Method, Results and Discussion (IMRD) that mirrors the global structure of the RA itself, and still a significant number of abstracts draw upon the Create a Research

Space (CARS; Swales, 1990, 2004) structure model, originally intended to describe RA introductions. This model includes three moves: Move 1 (establishing a territory), Move 2 (establishing a niche), and Move 3 (occupying the niche). Each move has a number of steps. Samraj (2005) argues that these two models are not separate, but opposite ends of a continuum, as the choice of pattern varies in the disciplines. For the present study, these two frameworks will be used to examine which best describes the abstracts produced by Korean novice academic writers in comparison with those by expert writers who have published in internationally reputable journals.

One issue of interest is whether the distribution of individual moves in the structure is conventional or optional. Suntara and Usaha (2013) cited Kanoksilapatham's (2005) recommendation that the conventional move is generally 60%. This means that, if the frequency falls below 60%, the move can be considered to be optional. Similarly, the comparative study of Linguistics and Applied Linguistic conducted by Suntara and Usaha (2013) found that, in abstracts of Linguistics, there are three conventional moves (Purpose, Method, and Product) and four moves in abstracts of Applied Linguistics (Purpose, Method, Product, and Conclusion). E. Shim's (2013) study similarly showed the outcome that forty RAAs published in two reputable journals of Applied Linguistics, *TESOL Quarterly* and *Applied Linguistics*, contained the four obligatory moves. Earlier, Hyland (2004) caught a trend of the Introduction move in abstracts in the humanities and social sciences (the soft sciences) in which writers must acquaint readers with the background of their research. Suntara and Usaha (2013) reported that the introduction is an optional move in both disciplines, as opposed to Hyland's prediction.

Another issue related to the move structure of RAAs is the comparison of the move structure of RAAs and its linguistic realizations across disciplines. Stotesbury (2003) examined the use of evaluative language and the differences across disciplines, analyzing 300 samples with 100 each from the humanities, social sciences, and natural sciences from 51 journals. The findings revealed that explicit forms of evaluative language were more common in the humanities and social sciences and more often occurred in the Introduction move. Analysis of 'modality,' a sign of implicit evaluation (e.g., *will*, *may*, *would*, *might*, *could*), disclosed that the humanities and the natural sciences most frequently use evaluative expressions in the Background move, whereas they are located in the Result and Conclusion moves in the social sciences. In addition, Suntara and Usaha (2013) discovered more use of first-person pronouns (*I/we*) in linguistics. The *that*-complement clause, a place for the promotional aspects of abstract genre (Hyland & Tse, 2005), is a dominant structure in moves 4 and 5 of both disciplines.

The next issue is concerned with differences in the writing of RAAs between novice academic writers from non-English backgrounds and expert writers from native English backgrounds. S. Kim and Y. H. Na (2012) compared four linguistic features (subjects, verb

tense and voice, and modal verbs) of fifty master's thesis abstracts of Korean graduate students with those of expert native English-speaking researchers published in leading journals in Applied Linguistics: a distinct difference between the two groups was observed in the use of modal verbs: native speaking authors exploited the modal verbs to convey possibility (80%), whereas more than half of the Korean graduate students' modal verbs signaled obligation (59%), thus revealing the novice writers' failure to control their tone when summarizing their research. One question arising from S. Kim and Y. H. Na's study (2012) is whether these two kinds of abstract are comparable – thesis abstracts vs. journal abstracts – since the two types of abstracts differ in contribution to researchers' interest in winning a wider readership; the former's readership is limited to faculty members involved in a researcher's degree program. H. Park (2013) similarly compared English RAAs by Korean scholars who are engaged in teaching Korean L2 and native-English-speaking scholars; she analyzed fifty abstracts in each group containing L1 English abstracts published after 2000 in the discipline of Applied Linguistics and journals related to teaching Korean as an L2. The study found that the nonnative writers' abstracts include more modals of certainty and strong commitments than the native-speaking writers' abstracts.

2. Metadiscourse (MD) of RAA

Meanwhile, studies of metadiscourse, referring to how writers conceive their texts in relation to their intended audience (Hyland, 2005), classify RAA into two dimensions of interactions: interactive and interactional. The former concerns the way a writer organizes or constructs a text to accommodate readers' needs. The latter concerns what Hyland (2005) called 'a community-recognized personality'; it includes how the writer interacts with readers to invite involvement and evaluation. The details of Hyland's classification of metadiscourse are presented in Table 2. In this study, the Hyland's two dimensions of interaction will be referred to as 'textual' and 'interpersonal' respectively for facilitating conceptual distinction between the original terms.

According to Gillaerts and de Velde (2010), RAAs include more boosters and fewer hedges than RAs, as the abstracts are intended to convince the reader that the article is worth reading and that the author presents interesting research findings. Therefore, claims are likely to be emphasized by means of boosters rather than downplayed by hedges. The decline of interpersonal metadiscourse overall 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 Hyland's (2000) findings has to do with increasing factual material in the abstracts, which implies that longer RAAs in recent years do not display a higher density of interpersonal

metadiscourse, and there is no significant increase in textual metadiscourse.

TABLE 2

Hyland's Categorization of Metadiscourse (2005, p. 49)

Category	Function	Examples
Interactive	Help to guide readers 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*
Interactional	Involve the reader in the text	Resources
Hedges	Withhold writer's full commitment to statements	*may, might, could, would, perhaps, some, possibly*
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*

The density of metadiscourse was also examined in another popular genre in academic settings – argumentative essay writing. J. W. Kim (1999) conducted a comparative study of differences in the density and range of metadiscourse used in 45 native English speaking and Korean college students' persuasive essays. He highlighted the differential use of metadiscourse of Korean EFL writers in different proficiency levels and captured the differential use of the metadiscourse of NNS writers in different English proficiency levels in relation to the quality of writing (e.g., writing score). According to his study, the advanced nonnative writers use more metadiscourse categories in general, specifically logical connectives, and hedges, while the native writers use 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 illuminates two major significances: variation in the range and density of metadiscourse occurs not only across disciplines but also genres.

III. METHOD

The RAA samples are obtained from 91 research articles abstracts in the journal, 'The SNU Working Papers in English Language and Linguistics,' published annually 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 (advanced English learners in Korean EFL context). The paper abstracts for a decade from 2002 to 2013, except the year 2011 when there was no publication. To examine discernable variations of the two closely related disciplines – Linguistics and Applied Linguistics, the data is divided by the two disciplines, including 59 abstracts of Linguistics and 32 abstracts of Applied Linguistics. For comparison with experienced academic writers who have had their papers published in representative and accredited international journals of the two disciplines regardless of gender, national, and linguistic backgrounds, the same number of RAAs was collected through a simple random sampling in the following sources – *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 covers mainly (1) identification of move structure model, (2) move frequency including identifying conventional and optional moves, (3) variety (or range), and (4) density of metadiscourse markers. Regarding the density of metadiscourse, this study complies with J. W. Kim's (1999) clause-level method: the number of metadiscourse markers is divided by the number of clauses in a single abstract.

Data coding to identify move structures and metadiscourse subcategories was first performed manually by two human coders, who major in applied linguistics and one of whom specializes in discourse analysis. They separately coded a third of abstracts in each group and met to negotiate the differences from individual coding and reached agreements. Relying on the agreements resulting from their discussion, one coder finished coding the rest of the data. To compute the intercoder reliability for the first individual coding, Cohen's kappa was chosen, generally known as inter-rater agreement statistic that controls for the agreement based on chance. The value that exceeds .70 is taken as a good indicator of inter-rater agreement. Starting from the agreement in move structure, the Cohen's kappa was .71 (p = .00) for the novice group (n = 30) and .78 (p = .00) for the expert group (n = 30). As to metadiscourse, the Cohen's kappa values of textual and interpersonal subcategories were averaged: for textual and interpersonal categories of the novice group, the Cohen's kappa was .74 (p = .00) and .76 (p = .00) respectively and on the counterpart, the average Cohen's kappa of textual and interpersonal subcategories was .72 (p = .00) and .78 (p = .00) respectively. Then, the *Antconc* 3.3.5 version (Anthony, 2012), a popular computer software for corpus study was employed to find metadiscourse markers missed

by human coders. For analysis, a chi-square (χ^2) test was conducted to investigate whether the difference in occurrence of the two move structure models in each writer group is statistically significant, complying with Crossley (2007) and S. B. Park's (2007a) studies, and *t*-test was adopted to compare the mean density of metadiscourse of the two groups.

IV. RESULTS AND DISCUSSION

1. Move Structure and Metadiscourse of Novice and Expert RAAs

The two writer groups gave preference to different rhetorical models. Table 3 shows IMRD model is more used by the expert group and CARS model by the novice group: such difference nearly approaches statistical significance. This result may suggest that expert writers tend to use their RAAs for summarizing their research, whereas Korean novice writers under study are more concerned about promoting reader's interest by highlighting and emphasizing gaps of the previous literature (so-called 'niche' in CARS model) and mentioning significant contributions of their research to the relevant field of study.

TABLE 3

Identification of Rhetorical Move Structure in Two Writer Groups

	Word number	Clause number	MODEL		Total number	χ^2	*Sig.*
			IMRD	CARS			
Expert	16223(3386)*	1190(13)**	57 (63%)	34 (37%)	91	3.76	.05
Novice	12218(2392)	899(10)	44 (48%)	47 (52%)	91	5.26	.02*

Note 1. Word number indicates the number of word types and clause number here indicates the average number of clauses per abstract.
Note 2. *p < .05, **p < .01

Following is a sample student abstract that used CARS model. In Move 1, a writer gives background of the research topic; in Move 2, the writer clearly indicates the gap in the area of the research topic; then, in Move 3, the writer states the study's purpose and approach to bridge the gap. Obviously, this abstract is not a summary as it does not include, but gives clues to, the entire content.

> **(MOVE 1: Establishing a territory)** This paper focuses on non-universality in standard OT, which 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 constraints. 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 to control rankings of different morphemic items. **(MOVE 3: Occupying the niche)** This paper expands Russell's idea and proposes a special component: Supervisor (SUP). Since operation of SUP is activated based on the information contained in input, information-contained input becomes critical in my study, which proffers a solution for non-universality issue of standard OT. (H. S. Cho, 2003)

Figures 1 and 2 indicate move frequency pertinent to whether a move is optional or conventional: Moves 1 to 4 are conventional in both groups when applied to 60% criteria suggested by Kanoksilapatham (2005). The finding corresponds to Hyland's (2004) prediction of the trend of the introduction (Move 1) in soft disciplines such as linguistics and social sciences. And the mean length of clause in each move shown in Table 4 indicates that the novice group 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 make active use of optional moves of CARS model.

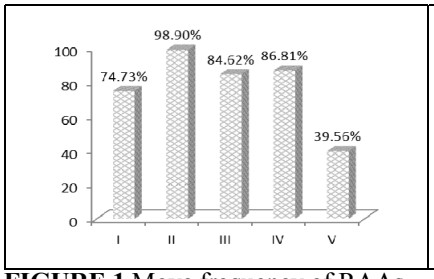

FIGURE 1 Move frequency of RAAs in Expert group

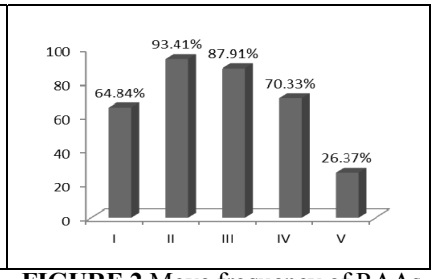

FIGURE 2 Move frequency of RAAs in Novice group

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

Next, when it comes to the use of metadiscourse (MD) subcategories as illustrated in Figures 3 and 4, the expert group used more metadiscourse overall with particularly higher rates in connectives, hedges, and self-mentions, whereas novice Korean writers used more evidentials, boosters, and engagement markers. Starting from textual metadiscourse, both groups generally make much use of (A) connectives, (C) endophoric markers and (B) frame markers, whereas a stark contrast between the two groups emerges in (D) evidentials. Regarding interpersonal metadiscourse subcategories, the novice group shows more use of (D) boosters and (B) engagement but less use of (A) self-mentions, (C) hedges and (E) attitude markers.

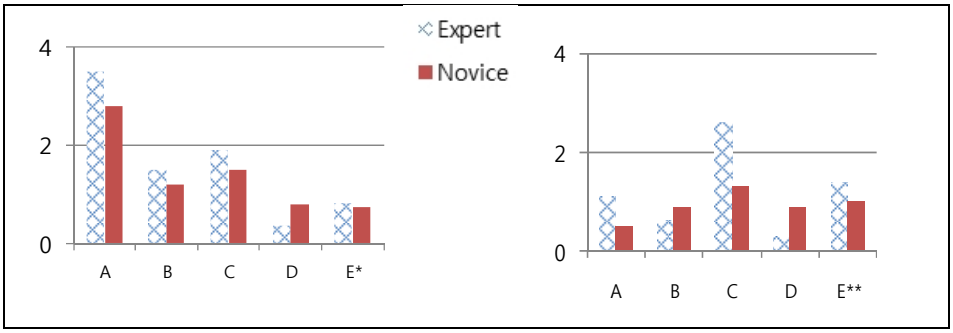

FIGURE 3 Use of Textual MD

FIGURE 4 Use of Interpersonal MD

Note. *A~E in Figure 3 indicates (A) connective, (B) frame marker, (C) endophoric marker, (D) evidential and (E) code gloss. **A~E in Figure 4 indicates (A) self-mention, (B) engagement marker, (C) hedge, (D) booster and (E) attitude marker.

It can be said that novice RAAs demonstrate typical characteristics as novice: keeping a low profile of their identity, which is also supported by Flowerdew (2001) identifying authorial voice as particularly problematic for novice writers, relying more on authoritative voices in active use of citations, sometimes bringing emphatic words into their study to amplify the degree of their certainty and other times using expressions such as second-person pronouns to invite readers to the discourse of their study. Ultimately, it also can be considered as a strategic use of metadiscourse to emphasize justification of their study and to promote reader engagement in academic communication.

Meanwhile, the distinct patterning of the use of hedges and boosters between the expert and Korean novice groups can be explained by lack of facility in English as a foreign language and the trend in epistemological belief about science that leads to a notable drop in the occurrence of boosters and a steady rise in the use of hedges in abstracts published in the accredited Journal of Pragmatics for three decades (see Gillaerts & de Velde, 2010). The current study also measured the density of metadiscourse to calculate the average use of metadiscourse markers per clause as shown in Table 5, Figures 5 and 6. The result

went opposite to what was found in frequency where the expert group excelled the novice group; the novices have higher density in overall and textual metadiscourse subcategory than the counterpart, both leading to statistical difference (p = .02, and p = .00 respectively); the density of (D) evidential markers, as indicated in dotted circle in Figure 5, is what makes the two groups significantly different.

TABLE 5

Density of Metadiscourse (MD) in Two Writer Groups

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

Note. *p < .05, **p < .01

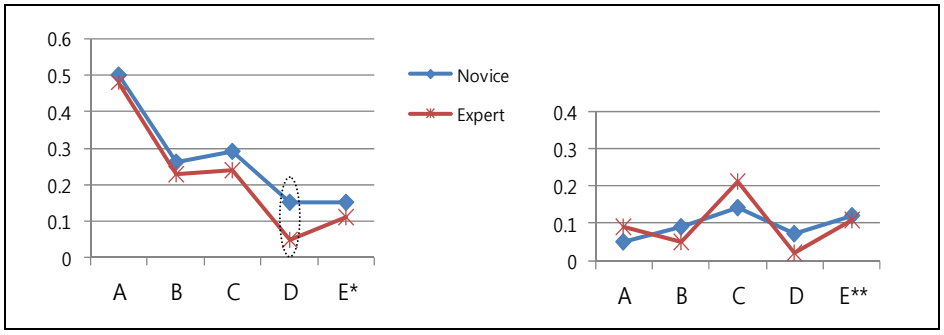

FIGURE 5 Density of Textual MD **FIGURE 6** Density of Interpersonal MD

Note. *A~E in Figure 5 indicates (A) connectives, (B) frame markers, (C) endophoric markers, (D) evidentials and (E) code glosses. **A~E in Figure 6 indicates (A) self-mentions, (B) engagement markers, (C) hedges, (D) boosters and (E) attitude markers.

To be clear, the novice group more intentionally harnessed citations of previous studies in writing their RAAs, which reflects the distinctive use of metadiscourse by novice academic writers. Given that as J. W. Kim (1999) stated, evidential and endophoric markers are the features of academic articles in hard-pure disciplines (e.g., natural sciences), the rhetorical style of novice RAAs under analysis resembles the rhetorical style in such discipline domains to some extent, which forms another unique characteristic of the novice academic writers in the current study. The following examples demonstrate the density of evidentials 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 following Sag and Wasow (1999), the analysis founded on no lexical rules following Warner

> (1999), and the analysis grounded on no default specifications following Green and Morgan (1995). Particularly this paper will partially revise a multiple inheritance sort hierarchy which was originally suggested by Green and Morgan (1995). It will also make a comparison between "Will not they...?" and "Will they not...?" (J. Jo, 2003)

> Lass (1994) 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' (Hogg, 1992; Lass, 1994) or as 'one of the least controversial sound changes' (Colman, 2003). This paper tries to analyze i-umlaut in Old English within the framework of… . (M. Piao, 2012)

Like the frequency of interpersonal metadiscourse, high density of some interpersonal categories such as (B) engagement and (D) boosters, and lower density of (A) self-mentions and (C) hedges form distinctive features of novice RAAs in comparison with those of expert RAAs despite no statistical significance. To sum up, RAAs of novice researchers are characterized to have introduction as a conventional move, higher frequency and density of evidentials in textual MD subcategory, boosters and engagement markers in interpersonal MD subcategory, but lower in self-mention, hedges and attitude markers. What metadiscourse analysis showed about novice academic writers suggests their seeking justification of their argument by keeping a low profile and acknowledging the references of the related literature.

2. Cross-Disciplinary Variations in Linguistics and Applied Linguistics

Cross-disciplinary variation is conceivable in mean clause length in move where Move 1 is longer in RAAs of linguistics than in applied linguistics (see Table 4). This implies that starting RAAs of linguistics with sufficient background knowledge and contexts is a rather conventional act that is inconspicuous in those of applied linguistics. On the other hand, Move 3 shows the opposite result; Move 3 is longer in abstracts of applied linguistics as illustrated in Table 4 as well. Move 3 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 between the two closely-related disciplines in the expert RAAs. Chi-square test followed to see whether such cross-disciplinary difference in distribution of the two rhetorical models – IMRD and CARS – has statistical significance in each writer group. Table 6 shows that only novice writers had statistical significance ($\chi^2 = 21.34$, $p = .00$) in their preference of rhetorical structure model:

CARS for linguistics and IMRD for applied linguistics.

Regarding move frequency, the two writer groups had four conventional moves from Move 1 to Move 4, which does not concur with a recent cross-disciplinary study (Suntara & Usaha, 2013) where RAAs of both disciplines had introduction as optional. This result rather confirms the turn to increase of introduction in humanities RAAs as Hyland (2004) predicted.

TABLE 6

Cross-Disciplinary Difference in Model Distribution

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

Note . *p < .05, **p < .01

As for frequency of metadiscourse, RAAs of Linguistics were analyzed as follows. The first bars in Figures 7 and 8 show the overall frequency of metadiscourse, which is higher in the expert group. In particular, discrepancy of the interpersonal subcategories (Figure 8) between the two writer groups is greater than in the textual counterparts (Figure 7). Following the pattern observed before dividing by discipline, novice writers use more engagement markers (B in Figure 8) and boosters (D in Figure 8), which reflects stronger motivation for entering their academic communities. In respect to the textual categories, frequency of evidentials (D in Figure 7) is exceptionally high, the same as observed in Research question 1.

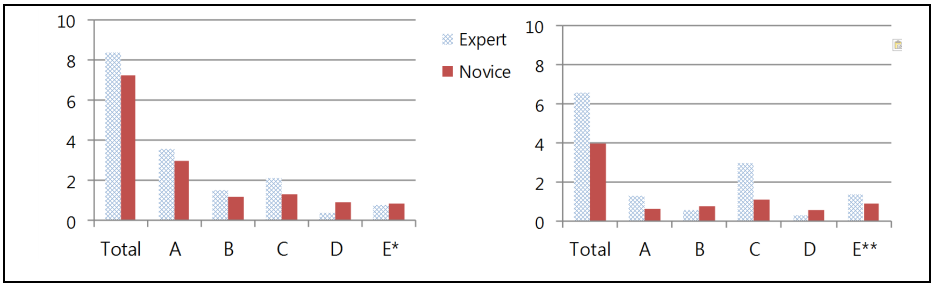

FIGURE 7 Frequency of Textual MD in Linguistics RAAs

FIGURE 8 Frequency of Interpersonal MD in Linguistics RAAs

Note. *A~E in Figure 7 indicates (A) connectives, (B) frame markers, (C) endophoric markers, (D) evidentials and (E) code glosses. **A~E in Figure 8 indicates (A) self-mentions, (B) engagement markers, (C) hedges, (D) boosters and (E) attitude markers

In RAAs of applied linguistics, discrepancy in overall frequency of metadiscourse between novice and expert academic writers gets narrower than those of linguistics; novice writers hardly mentioned themselves (A in Figure 10), whereas they prefer engagement markers (B in Figure 10) and boosters (D in Figure 10). These findings point to the indirect approach to hide their identity in their RAA, in contrast with a higher proportion of self-mentions by the expert group. Hiding their presence, however, is complemented by the increasing use of boosters to amplify or emphasize what they found with certainty instead of confirming their presence. The following excerpts demonstrate the use of engagements and boosters by the novice group.

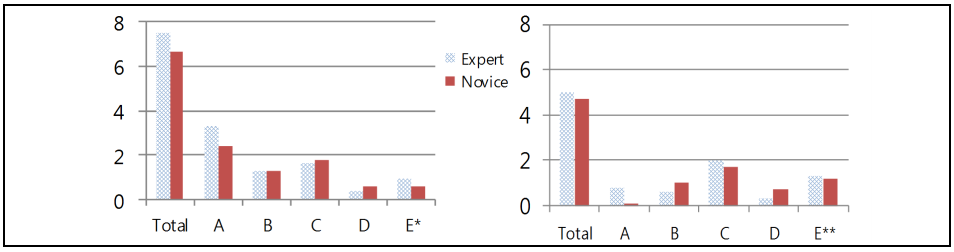

FIGURE 9 Frequency of Textual MD in Applied Linguistics RAAs

FIGURE 10 Frequency of Interpersonal MD in Applied Linguistics RAAs

Note. *A~E in Figure 9 indicates (A) connectives, (B) frame markers, (C) endophoric markers, (D) evidentials and (E) code glosses. **A~E in Figure 10 indicates (A) self-mentions, (B) engagement markers, (C) hedges, (D) boosters and (E) attitude markers.

> … 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* … . (E. Park, 2006)

> … Among the clauses, reason clauses most frequently occur in the sentence-final position. Among condition clauses, the positive *if* … . Data also show 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… . (T. S. Park, 2002)

As Table 7 summarizes, the overall density of textual metadiscourse between the two linguistics writer groups was statistically significant (t = 2.35, p = .02) due to higher density of evidentials (D in Figure 11) in RAAs of the novice group. Hedges (C in Figure 12), one kind of interpersonal categories that marks a characteristic of expert writers,

however, did not go to the level of statistical significance. On the other hand, RAAs of applied linguistics bear more similarities between the two writer groups than those of linguistics in terms of density of metadiscourse as illustrated in Figures 13 and 14, and in Table 8 where the two writer groups showed no statistical difference, whether it is textual, interpersonal, or overall (p = .90, .94, and .90 respectively).

TABLE 7

Mean Density of Metadiscourse in the Two Linguistics Groups

Category	Expert	Novice	*t*	*Sig.*	Group difference
Textual	.63	.85	2.35	.02*	Expert < Novice
Interpersonal	.51	.47	.51	.61	Expert = Novice
Total	.57	.66	1.47	.14	Expert = Novice

Note . *p < .05, **p < .01

TABLE 8

Mean Density of Metadiscourse in Two Applied Linguistics Groups

Category	Expert	Novice	*t*	*Sig.*	Group difference
Textual	.68	.69	.12	.90	Expert = Novice
Interpersonal	.44	.44	.07	.94	Expert = Novice
Total	.56	.56	.13	.90	Expert = Novice

Note . *p < .05, **p < .01

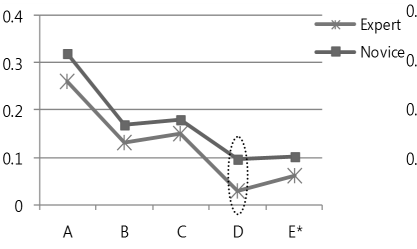

FIGURE 11 Density of Textual MD in Linguistics RAAs

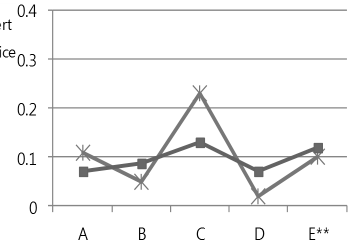

FIGURE 12 Density of Interpersonal MD in Linguistics RAAs

Note.*A~E in Figure 11 indicates (A) connectives, (B) frame markers, (C) endophoric markers, (D) evidentials and (E) code glosses. **A~E in Figure 12 indicates (A) self-mentions, (B) engagement markers, (C) hedges, (D) boosters and (E) attitude markers.

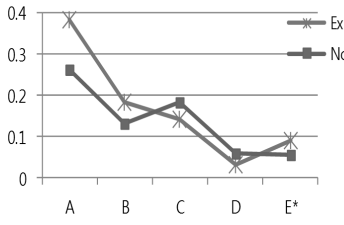

FIGURE 13 Density of Textual MD in Applied Linguistics RAAs

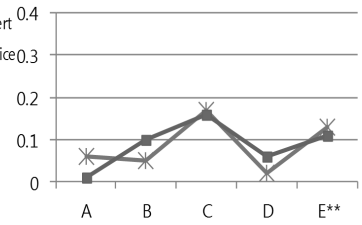

FIGURE 14 Density of Interpersonal MD in Applied Linguistics RAAs

*Note.**A~E in Figure 13 indicates (A) connective, (B) frame marker, (C) endophoric marker, (D) evidential and (E) code gloss. **A~E in Figure 14 indicates (A) self-mention, (B) engagement marker, (C) hedge, (D) booster and (E) attitude marker.

In sum, cross-disciplinary variations were more discernable in the Korean novice writer group than in the expert group in terms of rhetorical structure, frequency and density of metadiscourse. More importantly, in the RAAs of linguistics, there are greater differences between the two writer groups than in those of applied linguistics.

3. Distributional Pattern of Metadiscourse Subcategories Across Moves

Distributional pattern of metadiscourse subcategories was identified across moves and it made group difference: uneven distribution of metadiscourse across moves in the novice group. Overall, expert abstracts with IMRD structure include a slightly larger quantity of metadiscourse than those with CARS structure do. Out of need to signal a transition to the next step in the IMRD 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 draw attention for further reading, which the IMRD structure inherently lacks. Thus, it can be argued that the use of metadiscourse depends on the rhetorical structure in choice and the former complements the latter.

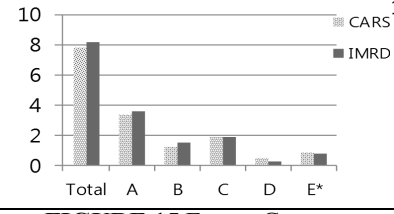

FIGURE 15 Expert Group Move structure↔Textual MD

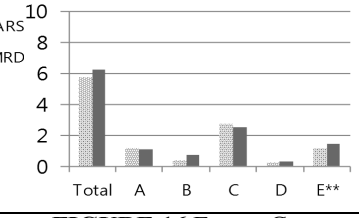

FIGURE 16 Expert Group Move structure↔Interpersonal MD

Note. *A~E in Figure 15 indicates (A) connective, (B) frame marker, (C) endophoric marker, (D) evidential and (E) code gloss. **A~E in Figure 16 indicates (A) self-mention, (B) engagement marker, (C) hedge, (D) booster and (E) attitude marker.

In the meantime, the novice abstracts with CARS structure include a larger quantity of metadiscourse than those with IMRD structure. As Figure 17 shows, two textual subcategories – (A) connective and (D) evidential –were greatly used in abstracts with CARS structure. Particularly, evidentials were 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 justify the significance of their study. Thus, it can be mentioned that evidentials serve to reinforce the rhetorical function of Move 2.

Moreover, relatively more use of attitude markers in novice abstracts with CARS structure demonstrates the intended rhetorical effect that can occur when writers evaluate the scope or the significance of a relevant topic in Move 1, or offer a critical view to the literature in Move 2. However, the same marker is seen in a different place and in a different way by expert abstracts with IMRD structure to evaluate the findings or the implication of their own study in Move 4 or 5. This finding is consistent with Stotesbury's (2003) report that different disciplines would use evaluation in different ways.

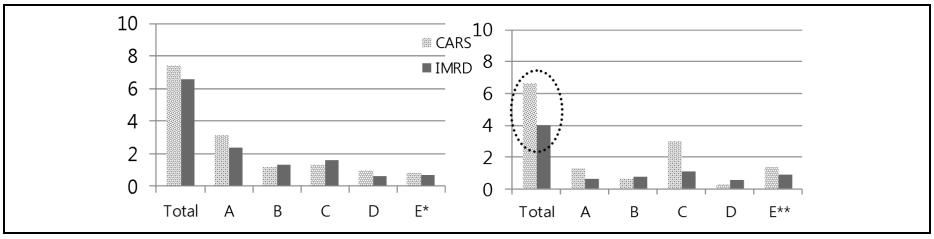

FIGURE 17 Novice Group Move structure↔Textual MD

FIGURE 18 Novice Group Move structure↔Interpersonal MD

Note. *A~E in Figure 17 indicates (A) connective, (B) frame marker, (C) endophoric marker, (D) evidential and (E) code gloss. **A~E in Figure 18 indicates (A) self-mention, (B) engagement marker, (C) hedge, (D) booster and (E) attitude marker.

To wrap up, statistical difference in distribution of interpersonal metadiscourse between the two move structure models ($\chi^2 = 0.01$, $p < .05$) was identified in novice abstracts as illustrated in dotted circles in Figure 18. It means that the use of interpersonal metadiscourse of novice writers under study differs in their choice of move structure. Also, it can be inferred that novice academic writers of linguistics major showed more intention to join readers into the discussion of their research.

Next, what Table 9 illustrates is a clear distributional pattern in metadiscourse to move structure. First, seven metadiscourse markers with highest frequency were concentrated in Move 4 of the expert group, while nine metadiscourse markers were in Move 2 of the novice group. It demonstrates that the two groups make most use of metadiscourse for different purposes: it is highly useful for experienced writers to elaborate the result, but for

novice writers to intend to solidify the significance of their study. The analysis confirms that the distribution of metadiscourse in use is affected by the writer's rhetorical structure of choice.

Comparing the distributions of metadiscourse in linguistics abstracts between the two writer groups as seen in Table 10 was similar to the overall distributional tendency in Table 9 where concentrations of metadiscourse clearly differed across moves: Move 4 for expert abstracts and Move 2 for novice abstracts, but applied linguistics abstracts in Table 11 did not show any discrepancy in distribution of metadiscourse between the two writer groups. In other words, only in the novice group did the distribution pattern of metadiscourse show cross-disciplinary variations.

TABLE 9

General Distribution of Metadiscourse Across Moves

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

Note. NA indicates no metadiscourse category of highest frequency in the move. Number in parenthesis counts the metadiscourse subcategories with highest frequency in the move.

TABLE 10

Distribution of Metadiscourse Across Moves in Linguistics RAAs

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

Note. NA indicates no metadiscourse category of highest frequency in the move. Number in parenthesis counts the metadiscourse categories with highest frequency in the move.

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 marker, self-mention, engagement marker, hedge, booster, attitude marker (8)	connective, endophoric marker, engagement marker, booster, attitude marker, frame marker, hedge (7)
V	NA	hedges (1)

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

V. CONCLUSION AND IMPLICATION

The purpose of this study is to identify the characteristic use of rhetorical move structure and metadiscourse in RAAs written by Korean graduate students with linguistics and applied linguistics majors representing academic novice writers, in comparison with experienced academic researchers, who are established authors in the domain of their discipline. The study made some interesting discoveries in novice RAAs and offers a new look at the rhetorical functions of move structure and metadiscourse of their choice.

In Research Question 1, novices write abstracts in a unique way that makes optimal choices of rhetorical structure; their preferred use of CARS structure and some metadiscourse subcategories such as evidentials, boosters, and engagement markers reflect their strenuous efforts to highlight the significance of their study and draw readers' attention for further reading.

Research Question 2 regarding cross-disciplinary variation suggests that RAAs of the novice group can find rhetorical distinctions in the two-closely related disciplines – linguistics and applied linguistics: CARS model for linguistics abstracts and IMRD model for applied linguistics, using evidential metadiscourse markers with statistical signficance against the expert group for linguistics and no particular metadiscourse marker with statistical significance against the expert group for applied linguistics. This distinction may be due to their different approach to language research: theory-oriented or experiment-oriented.

Next, Research Question 3 addresses the relationship between the distributional pattern of metadiscourse and the move structure. It was found that the distribution of metadiscourse across moves differs at the two writer groups, and the effect of the selected move structure is reinforced (i.e., much use of evidential and attitude markers in Move 2 of CARS structure for the novice group and attitude markers in Move 4 of IMRD structure

for the expert group) or complemented by metadiscourse markers used (i.e., experts' more use of engagement markers in Move 4 of IMRD structure). To put it briefly, novice writers made a significantly different use of interpersonal metadiscourse subcategories (i.e., self-mention, hedges, and attitude markers) depending on the move structure model of their choice – more use of them in abstracts with CARS structure.

With all characteristic choices of move structure and metadiscourse in novice abstracts, however, the findings still suggest novice researchers' learning from the writing practice of expert researchers: to make more frequent and diverse use of metadiscourse subcategories overall, as seen in the expert group - for instance, code-glosses, frame markers, hedges, and attitude markers. It is noteworthy that high frequency of code glosses (e.g., in other words, it means that…, such as, for example….), one category of textual metadiscourse among expert writers can make a pedagogical implication that Korean novice researchers should more use paraphrases or examples to enhance specificity in writing their RAA. The cross-disciplinary differences found in this study also suggest that novice academic writers be more conscious of the features of audience expectations including writing conventions, constraints, and practices that are specific and acceptable to the academic communities they desire to engage, instead of merely studying the generic guidance of writing article abstracts.

The current study makes some implications as follows. It brings into attention that the comparative study of RAAs of EFL novice vs. expert academic writers does reach the understanding of how EFL (advanced) learners actually perform their communicative skills in terms of rhetorical and pragmatic aspects of a specific genre – the extent to meet the needs in a highly specialized context to fulfil language learners' communicative purposes, to put it differently, to perform a communicative act of persuading academic readers to read on the following whole text. Another implication is that investigating the relationship between rhetorical structure in discourse level and metadiscourse that is beyond the discourse level deserves a consideration for future studies. The positive - reinforcing and complementary - interaction of move structure with metadiscourse demonstrated here may offer a new perspective that will guide us to deeper understanding of how the features of discourse (i.e., rhetorical organization, grammar or lexis) and metadiscourse (i.e., textual or interpersonal subcategories) interact in a text of a specific genre (i.e., research article abstracts) in specific disciplines (i.e., humanities, social sciences or natural sciences).

Lastly, the current study bears some limitations. It is not guaranteed whether the sampled data used in this study fully represents the population of novice academic writers in Korea although the study attempted to make statistical inference about the whole population. And, such limited methodology might have been completed by qualitative methods including interview. These issues will be left for follow-up study that is more validly designed with combined methods both quantitative and qualitative, and with an increased sample size that

represents diverse majors and English proficiency levels.

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예시언어(Examples in): English
적용가능 언어(Applicable Languages): English
적용가능 수준(Applicable Levels): Tertiary

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Received 10 September 2016
Revised 23 October 2016
Accepted 11 November 2016