Rhetorical Structure of L1 and L2 Research Article Introductions*

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Lee, Seung Hee & Uhm, Chul Joo. (2014). Rhetorical Structure of L1 and L2 Research Article Introductions. *The Linguistic Association of Korea Journal, 22*(2), 155-181. This study analyzed the rhetorical structure of sixty research article introductions written by Korean and native English-speaking authors using a revised Create a Research Space (CARS) model. The results show that the Korean authors employed the same rhetorical style as the native speakers of the language did, with the former actually following the model more closely than the latter. The two groups' strategies were, in fact, identical in so far as their use of each move; after establishing a research territory through generalization and background exposition, both sets of authors identified weaknesses in previous research or opportunities for further study and offered their present research to fill the gap. This study may assist novice writers in producing English-medium research articles more acceptable to international journals. The potential also exists for this study to contribute toward the creation of a new guideline for genre conventions in academic writing.

Key Words: CARS model, move analysis, research article introduction, rhetorical structure

1. Introduction

In the last twenty years the research article (hereafter, RA) as a genre has attracted a great deal of interest from researchers, particularly those in the field of English for Specific Purposes (ESP). Researchers have explored RAs' rhetorical

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structure (Najjar, 1990) and linguistic features such as citation (Park, 2011), tense (Salager-Meyer, 1992), voice (Matsuda & Tardy, 2007), pronoun (Eun, 2008), and metadiscourse (Hyland, 2005). The researchers have suggested pedagogical implications in their work and attempted to develop better teaching materials for teachers and students.

As English is the language through which the world now communicates on matters of science and technology, researchers have found it necessary to write their articles in it—and not just those papers meant for international journals, but ones bound for national publication as well. The dual requirements of proficiency in English and knowledge of RA conventions served as additional barriers for non-native speakers of English who desire to full participate in modern communities of academic discourse. The need for a guide to RA development for non-native or novice writers was acute by the time Swales (1990) introduced his Create A Research Space (CARS) model.

Despite interest in all sections of the RA, it is the introductory section that has drawn the most attention from researchers, since it is in their introductions that writers are most sensitive to the expectations and attention span of their readers. Even natives of English-speaking countries consider an effective introduction to be a challenge to write. To provide both teachers and students with helpful insights into writing the introduction sections of their RAs, researchers have investigated rhetorical structure in different languages (Ahmed, 1997; Hirano, 2009) and in different fields (Anthony, 1999; Milagros, 2011). Their studies have contributed to identifying the characteristics of the genre.

To date, studies on RAs' rhetorical structure have primarily focused on the discovery of variations between corpora and the identification of likely causes for them. Early contrastive rhetoricians fingered cultural differences, disciplinary cultures, and genre characteristics as likely factors, but language is always in flux, morphing in accordance with social, political, and economic changes within the society employing it, and altering the generic structure of texts along with it (Halliday, 1978). Bazerman (1988) suggested that as the sciences continue to evolve, so too must the rhetorical means by which they are communicated, and Swales (1990) himself declared that "like all living genres, the RA is continually evolving" (p. 110). Recently, Li and Ge (2009) seemingly proved both Bazerman and Swales right when they reported that medical RAs have undergone

significant structural and linguistic changes in the last two decades. The reformulation of cross-cultural writing is now a hot topic (Connor & Moreno, 2005; Jeong & Choe, 2012).

Further investigation as to whether the writing style of Korean authors has changed is therefore of interest, as is the question of whether national journals share the same communicative purposes as international journals. Though some researchers (Lee, 2001; Shim, 2005) have conducted comparative studies on the overall structure of RAIs written by Korean authors, very little research has compared national journals with international journals, as well as they have mostly reported the variations between the data.

The present study contrasts the rhetorical structures of research article introductions (hereafter, RAIs) written by Korean authors with those written by native speakers of English. The research questions for the present study are as follows:

1. Do Korean authors use a different rhetorical structure than native English-speaking authors do in research article introductions?
2. Do national journals prefer a different rhetorical style than international journals do in research article introductions, in terms of move structure?

2. Literature Review

Swales' ground-breaking work has facilitated valuable insight into the rhetorical structure of different RA sections including introductions (Jalilifar, 2010), abstracts (Brett, 1994), results (Williams, 1999), discussions (Holmes, 1997), discussions and conclusions (Yang & Allison, 2003), as well as whole sections (Li & Ge, 2009). However, researchers' attention has mainly dwelled on the introductions in different languages and fields.

The introduction of the RA has long been the most commonly studied academic genre, as it is considered the most problematic for both native English writers and L2 writers (Flowerdew, 1999). Swales (1990) credits the attention to the daunting variety of options writers must consider when choosing what kind of background knowledge and how much of it they wish to utilize. Detailed analyses of RAIs identify a series of communicative actions, or moves. Swales

argues that texts are conventionally constructed with a series of moves that serve certain functions for both the writer and the community. The focus of move analysis is on an overall rhetorical structure and the linguistic components signaling transitions between moves.

In Swales' (1981) first study, he analyzed forty-eight RAIs from a variety of disciplines. In those RAIs he found a consistent rhetorical movement he identified as the '4-moves' model: Move 1 (establishing the field), Move 2 (summarizing previous research), Move 3 (preparing for present research), and Move 4 (introducing present research). Other researchers (Crookes, 1986; Lopez, 1982) criticized the model because of perceived difficulties in differentiating Move 1 and Move 2.

Accepting his peers' critiques, Swales (1990) returned with a modified version of his original model that he named the Create a Research Space (CARS) model. The model consists of Move 1 (establishing a research territory), Move 2 (establishing a niche), and Move 3 (occupying the niche), with each move serving the communicative purpose of the RA instruction. The model is as follows (Swales, 1990, p. 141):

Move 1   Establishing a research territory
    Step 1   Claiming centrality
    Step 2   Making topic generalization
    Step 3   Reviewing items of previous research
Move 2   Establishing a niche
    Step 1A   Counter-Claiming
    Step 1B   Indicating a gap
    Step 1C   Question-raising
    Step 1D   Continuing a tradition
Move 3   Occupying the niche
    Step 1A   Outlining purposes
    Step 1B   Announcing present research
    Step 2   Announcing principal findings
    Step 3   Indicating RA structure

In the last 20 years, researchers have analyzed countless RAs using the CARS model as an analytical framework. The model has been employed across

different languages (Árvay & Tankó, 2004; Duszak, 1994) and different disciplines (Kanoksilapatham, 2005; Ozturk, 2007).

However, some researchers have been skeptical of it. Paltridge (1994) charged that since move boundaries are semantically determined, a lack of explicit rules for decisions on move boundaries makes their judgment subjective. Additionally, small numbers of texts usually comprise the corpora of move-based studies (Peng, 1987), limiting the generalizability of the results, and quite a few studies (Swales & Najjar, 1987) have limited their focuses to a few sections of RAs, leaving the texts' rhetorical descriptions incomplete.

Although Swales (1990) suggested that the CARS model can account for the overall structure of RAIs regardless, subsequent studies (Anthony, 1999; Crookes, 1986) have indicated that the structure of RAIs vary in significant ways across disciplines. Samraj (2002) recognized deviations from the CARS model as well, so she claimed to need 'embedding.' After investigating RAIs in theoretical research articles, Árvay and Tankó (2004) added two additional steps to the CARS model: offering examples in Move 1 and analytical details of the writer's research in Move 3.

To compensate, Swales altered his model again in 2004. In his latest revision, he reduced the number of steps in Move 1 to one: topic generalization of increasing specificity. He freed the review of literature from its restrictive place in Move 1 Step 3; previous research could be reviewed throughout the RA instruction or even outside of it. He reduced his 1990 model's four options for Move 2 down to only two – the indication of a gap and adding to what is known – and introduced a new, optional Step 2 in case a writer might want to present a positive justification. Lastly, Move 3 was relabeled 'presenting the present work' and was assigned seven steps, one of them obligatory, three of them optional, and the final three PISF (probable in some fields).

3. Methodology

3.1. Data Selection

In this study, the only genre under consideration was the introduction

section of the RAs. Due to possible discipline-specific writing variations across disciplines (Crookes, 1986; Swales, 1990), one discipline was investigated: applied linguistics.

When selecting the RAs to be included in the corpus, the following criteria were imposed: 1) that the articles be experimental; 2) that the nationality of the authors be either Korean or that of an English-speaking, Western country; 3) that the articles have an 'Introduction' heading. Articles' eligibility for the study according to the second criterion was insured by obtaining the identities of the Korean authors through the National Research Foundation of Korea and by confirming the home countries of native speakers published in the international journals. In the latter case, through a two-step verification process (first, authors' surnames and affiliations with institutions, second, e-mails (see Appendix B for the identification letter) only the RAIs of native English speakers from the U.S.A., the Great Britain, Canada, Australia, or New Zealand were considered.

As a result, sixty RAIs issued in recent five-year periods (2008-2012) were compiled. Thirty RAIs were extracted from issues of leading national journals *English Teaching*, *Foreign Languages Education*, and *Korean Journal of Applied Linguistics*. Thirty RAIs were extracted from issues of *System*, *Foreign Language Annals*, and *Second Language Research*.

3.2. Data Analysis

Agreeing with Taylor and Chen (1991) that a reader's knowledge of content plays a crucial part in discourse comprehension, the researchers assembled a team of three raters[1] familiar with the field of applied linguistics in order to insure the objectivity of the analysis. After each of the three team members individually coded the sixty RAIs, they searched the texts for coding disagreements and reconciled them through further discussion of the coding criteria.

The team used a revised model based on Swales' CARS model (1990, 2004), other researchers' modified versions (Bunton, 2002; Soler-Monreal et al., 2011), and the raters' own opinions. The developed model involved three moves, as

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1) They were two Koreans (a professor of applied linguistics and a high school English teacher with an M.A.) and one American (an EPIK teacher with a B.A. in English).

Swales' (1990, 2004), but the model added the categories of step and sub-step.

    Move 1 Establishing a territory
      Step 1 Claiming centrality
      Step 2 Making topic generalizations and giving background information
          2A Stating general knowledge / practice / phenomena
          2B Giving background information
          2C Indicating a problem / limitations / need
          2D Giving or explaining examples
          2E Defining terms / Classifying and commenting on terminology
          2F Giving or anticipating solutions
          2G Explaining the institutional / research group context
      Step 3 Reviewing previous research
    Move 2 Establishing a niche
      Step 1 Indicating a gap
      Step 2 Indicating a problem
      Step 3 Indicating need
      Step 4 Raising question(s)
      Step 5 Reviewing previous research
    Move 3 Occupying the niche
      Step 1 Announcing present research
      Step 2 Presenting RQs or hypotheses
      Step 3 Summarizing methods
      Step 4 Explaining subjects / materials / procedure
      Step 5 Announcing principal findings
      Step 6 Giving justification
      Step 7 Stating the value of the present research
      Step 8 Outlining the structure of the paper
          8A Overall thesis structure
          8B Chapter contents
      Step 9 Reviewing previous research

    The division of Move 1 into three steps corresponded to Swales' 1990 model. Unlike that model, however, the team subdivided the second step into seven

sub-steps. When Swales (1990) originally published the CARS model, Move 1 consisted of only three steps without any sub-steps, but researchers (Sheldon, 2011; Soler-Monreal et al., 2011) later posited a need for greater distinction and proposed their own model. In comparison to other steps, Step 2 covered many more sentences representing a variety of content, so the step proved too inclusive to keep in it its singular form.

With regard to 'reviewing previous research', the possibility that citations spread throughout the introduction was raised by some researchers (Crookes, 1986; Jacoby, 1986), including Swales (2004) himself. As a result of an analysis of the corpus, previous research was found to belong to different moves, according to the point of the previous content. That is why the raters included the category in all three moves.

In the analysis, the raters concentrated on identifying the sentence's function in context, based on the author's purpose and intention. A sentence comprised the main unit of coding, but if there were two clauses in a sentence and each clause belonged under a different move or step, each one was separately classified.

4. Results and Discussion

4.1. Move Structure

The following Tables 1 and 2 show the move structure, the number of words, and the number of sentences in both groups of RAIs. Korean Authors' RAIs consisted of sixteen sentences on average, with a range of eight to twenty-five sentences. The shortest introduction had 245 words in thirteen sentences, while the longest one had 843 words in nineteen sentences (see Table 1).

Table 1. Rhetorical Structure in Korean Authors' RAIs

Data	Move structure	No. of words	Number of sentences			
			Move 1	Move 2	Move 3	Total
ET 1	1-2-3	364	12	2	1	15
ET 2	1-3	843	15	0	4	19
ET 3	1-2-3	625	11	1	8	20
ET 4	1-2-3	495	14	2	1	17
ET 5	1-2-3-2-3	510	3	5	12	20
ET 6	1-2-3	553	19	2	1	22
ET 7	1-2-3	606	13	3	3	19
ET 8	1-2-1-2-3	431	6	4	7	17
ET 9	1-2-3	417	9	2	7	18
ET 10	1-2-1-3	622	9	6	6	21
Sub total		5466	111 (59%)	27 (14.4%)	50 (26.6%)	188
FLE 1	1-2-1-2-3	368	8	2	4	14
FLE 2	1-2-3	613	15	6	4	25
FLE 3	1-2-3	373	8	6	3	17
FLE 4	1-2-3	434	13	2	3	18
FLE 5	1-3	358	11	0	4	15
FLE 6	3-1-2-3	352	5	2	5	12
FLE 7	1-2-3	603	11	5	2	18
FLE 8	1-2-3	427	4	2	11	17
FLE 9	1-3	376	12	0	5	17
FLE 10	1-2-1-2-3	330	6	4	1	11
Sub total		4234	93 (56.7%)	29 (17.7%)	42 (25.6%)	164
KJAL 1	1-3	421	3	0	8	11
KJAL 2	1-3	500	12	0	6	18
KJAL 3	1-2-3	352	4	3	3	10
KJAL 4	2-1-3	316	4	9	3	16
KJAL 5	1-2-3	281	6	1	2	9
KJAL 6	1-2-3	631	15	3	3	21
KJAL 7	1-3	324	12	0	4	16
KJAL 8	1-2-3	328	4	2	2	8
KJAL 9	1-2-3	245	8	2	3	13
KJAL 10	1-2-3	514	9	4	6	19
Sub total		3912	77 (54.6%)	24 (17%)	40 (28.4%)	141
Total		13612	281 (57%)	80 (16.2%)	132 (26.8%)	493
Average		453.7				16.4

In the number of sentences per move, a similar distribution was found in the three journals, Move 1 accounting for the highest percentage with fifty-seven percent on average, followed by Move 3 and Move 2. This discovery may be due to Korean authors not feeling a need to establish a niche in their local community. They allotted a relatively small proportion to Move 2, focusing more on the significance of the research topic, the introduction of the research area, or their own research.

In the meantime, the average length of native English authors' RAIs was about 620 words, much longer than that of RAIs written by the Korean authors. The gaps in length between the thirty RAIs were very large, from 191 words (eight sentences) to 1,416 words (fifty-eight sentences). The number of move units ranged from one to seven (see Table 2).

Table 2. Rhetorical Structure in Native English Authors' RAIs

Data	Move structure	No. of words	Number of sentences			
			Move 1	Move 2	Move 3	Total
System 1	1-2-3	387	5	2	6	13
System 2	1-2-3	281	5	2	1	8
System 3	2-3	431	0	14	1	15
System 4	1-2-3	663	11	13	1	25
System 5	1-3	1070	4	0	35	39
System 6	1-2-3	354	9	1	3	13
System 7	1-2-3	352	8	3	3	14
System 8	1	304	11	0	0	11
System 9	1-3-1-2	885	17	9	2	28
System 10	1-3	191	1	0	7	8
Sub total		4918	71 (40.8%)	44 (25.3%)	59 (33.9%)	174
FLA 1	1-2-3-2-3	491	3	8	5	16
FLA 2	1-2-3	260	5	2	2	9
FLA 3	1-2-3	767	11	3	3	17
FLA 4	3-1	415	7	0	5	12
FLA 5	1-2-3	450	10	2	1	13
FLA 6	3-1-2	669	14	5	6	25
FLA 7	1	707	21	0	0	21
FLA 8	1-2-3	387	9	2	3	14
FLA 9	1-2-3	578	3	13	3	19
FLA 10	1-2-3	622	11	1	6	18
Sub total		5346	94 (57.3%)	36 (22%)	34 (20.7%)	164

SLR 1	1-2-3	285	4	1	7	12
SLR 2	1-2-3	1061	12	8	13	33
SLR 3	1-3	1218	35	0	6	41
SLR 4	1-2-1	545	11	1	0	12
SLR 5	1-2-3-2-3-1-3	669	4	8	8	20
SLR 6	1-2-3	654	8	10	7	25
SLR 7	1-2-3	695	15	2	2	19
SLR 8	1-3-2-3	798	10	1	18	29
SLR 9	1-3-2-3	992	6	1	14	21
SLR 10	1-3-1-3-1	1416	35	0	23	58
Sub total		8333	140 (51.9%)	32 (11.9%)	98 (36.3%)	270
Total		18597	305 (50.2%)	112 (18.4%)	191 (31.4%)	608
Average		619.9				20.3

The distribution of total sentence number per move was similar to that of Korean authors' data. Move 1 was quite common with an average of 50.2 percent, a rating more than two and a half times higher than Move 2, which comprised the lowest percentage of the move structure. However, this result did not apply to all three journals; in FLA, Move 2 accounted for a slightly higher percentage than Move 3. That suggests that the journal considers it relatively important to establish a niche.

As regards the move structure, Table 3 demonstrates that the Korean authors' RAIs tended to follow Swales' model more closely than their native English counterparts; about forty-three percent of the native English RAIs showed patterns which deviated from the CARS model. More than half of the RAIs in both groups conformed to the archetypal CARS model - the Move 1-2-3 order structure - but the number of RAIs written by the Korean authors slightly exceeded that of the native English authors. In the case of RAIs with a cyclical structure as well, the Korean authors employed them more frequently than the native English authors. Both archetypal and cyclical structures amounted to approximately seventy-three percent. This represents a substantial difference when compared to 56.7 percent of the native English RAIs. Both groups of authors used four types of recurrent structures. The first two types (Move 1-2-1-3, Move 1-2-1-2-3) are regarded as an effort to establish a research territory

and a niche as a base for creating a research space for their own research. The other two types (Move 1-2-3-2-3, Move 1-2-3-2-3-1-3) are regarded as the authors' attempts to attract interest to their research by placing emphasis on the need for additional attention. These appear to reflect author-dependent features.

Meanwhile, a distinct difference was found regarding the distribution of RAIs with deviating structures. The fact that the two groups deployed different structures, Move 1-3 excepted, is noteworthy (see Table 3). The Korean authors employed three different structures, out of which they preferred the Move 1-3 structure, using it in six RAIs out of eight. Previous studies (Ahmad, 1997; Jogthong, 2001) have shown that without the requirement to establishing a niche in the discourse community, Move 2 may be omitted. Considering this, Korean authors can be said to have employed the CARS model in all of the RAIs but two, suggesting they consciously tried to do so.

On the other hand, the native English authors used no fewer than nine structures. Among them, the Move 1-3 structure was adopted most often (three RAIs); the rest of the structures were only employed in one or two RAIs each. This diversity implies that current RA writing does not require a specific organizational structure; so long as a RA achieves the communicative purpose of the academic discourse community, any structure is acceptable. It would be inspiring that varied organizational patterns were welcomed in the international journals to non-native authors who have to master both English skills and RA writing conventions.

Furthermore, differences between the two groups were found as to the absence of specific moves. While in the Korean RAIs only Move 2 was found absent, in the native English RAIs all three moves occasionally disappeared; Move 1 once, Move 2 seven times, and Move 3 three times. In the case of the three RAIs lacking Move 3, it turned out that all of them included it in another section such as 'The current study' or 'Method' of the articles. Of the sixty RAIs, thirteen (about 22%) lacked Move 2, from which we can conclude that in spite of Swales' argument that Move 2 is an obligatory move in an RA introduction (Swales, 1990), it is not essential to appealing to the members of a discourse community.

Table 3. Distribution of Move Structure in Both Groups of RAIs

	Korean	Native English
introductions following Swales' CARS model	17 (56.7%)	15 (50%)
M 1-2-3	17	15
introductions showing recurrent structure	5 (16.7%)	2 (6.7%)
M 1-2-1-3	1	
M 1-2-1-2-3	3	
M 1-2-3-2-3	1	1
M 1-2-3-2-3-1-3		1
introductions deviating from Swales' CARS model	8 (26.7%)	13 (43.3%)
M 1		2
M 1-3	6	3
M 2-3		1
M 3-1		1
M 1-2-1		1
M 2-1-3	1	
M 3-1-2		1
M 1-3-1-2		1
M 1-3-2-3		2
M 3-1-2-3	1	
M 1-3-1-3-1		1
Total number of introductions	30	30

4.2. Steps and Sub-Steps

4.2.1 Steps and Sub-Steps in Move 1

As can be seen in Table 4, all three steps were used in each set of RAIs, but Step 2 occurred much more frequently than the others, with 49.4 percent and 60.5 percent, respectively. The data demonstrated a marked difference in preference for each step; the Korean authors preferred Step 1 more than the native English authors, but in regards to Step 2 the case was reversed. The two groups employed Step 3 to roughly the same degree.

Table 4. Distribution of Steps and Sub−Steps in Move 1

Steps (S) and Sub-Steps (SS)	No. of instances			No. of introductions[*]	
	Korean	Native	Korean -Native	Korean	Native
S1: Claiming centrality	25 (28.1%)	13 (17.1%)	11%	23 (76.7%)	10 (33.3%)
S2: Making topic generalizations and giving background information	44 (49.4%)	46 (60.5%)	-11.1%	20 (66.7%)	27 (90%)
SS2A: Stating general knowledge / practice / phenomena	14 (15.7%)	23 (30.3%)		11 (36.7%)	19 (63.3%)
SS2B: Giving background information	4 (4.5%)	3 (4%)		4 (13.3%)	3 (10%)
SS2C: Indicating a problem / limitations / need	9 (10.1%)	4 (5.3%)		9 (30%)	4 (13.3%)
SS2D: Giving or explaining examples	2 (2.3%)	4 (5.3%)		2 (6.7%)	4 (13.3%)
SS2E: Defining terms / Classifying and commenting on terminology	9 (10.1%)	4 (5.3%)		6 (20%)	4 (13.3%)
SS2F: Giving or anticipating solutions	3 (3.4%)	3 (4%)		3 (10%)	3 (10%)
SS2G: Explaining the institutional / research group context	3 (3.4%)	5 (6.6%)		3 (10%)	4 (13.3%)
S3: Reviewing previous research	20 (22.5%)	17 (22.4%)	0.1%	19 (63.3%)	14 (46.7%)
Total	89	76			

* In the number of introductions, the introduction stands for that of the corpus.

Among the journals, no particular preference for steps was found. In terms of Step 1 and Step 2, the three national journals showed a similar distribution of frequency in proportion to the total number of instances, despite a difference in sentence length in Move 1. Of the three international journals, *SLR* recorded twice as many instances as the others, reflecting a difference in sentence length. In Step 3, however, these proportions were inverted (see Table 1 in Appendix A).

To specifically examine each step, the analysis of the corpus for Step 1 demonstrated that in thirty instances, the significance of the research topic was claimed or the currently active and vibrant research field was represented with one or two sentences. The other eight instances also did so, preceded by some negative situations or cognitive difficulties in learning English. Both cases were followed by previous research to support the claims, mostly using the present

perfect tense (twenty-nine instances) and linguistic signals like 'interest' (nine instances), 'importance' (eight), or 'attention' (five). The following illustrate the two kinds of cases above, respectively.

(1a) <u>Many researchers have stressed the importance</u> of conscious understanding and the study for success in L2 learning (Schmidt, 1990, 1993, 1995). It has been claimed that conscious awareness of the form of input at the level of "noticing" was a necessary condition for L2 development to occur (Schmidt, 1995). A number of SLA researchers have supported that drawing attention to target forms in the input by making them salient can be beneficial to L2 learning (Doughty, 1991; Ellis, 1994, 1995; Sharwood Smith, 1991, 1993). (FLE 7)

(1b) Particularly in input-poor EFL contexts (Kouraogo, 1993) such as Korea, the lack of opportunities to be exposed to interactions with native English speakers causes learners to <u>suffer a higher level of difficulty</u> with listening (Kim, 2004). In order to address the problem, <u>not a little attention has recently been directed</u> toward how Korean EFL learners I listening ability can be improved (e.g., Choi, 2007; Chung & Ahn, 2005; Maeng, 2006). (KJAL 3)

4.2.2 Steps in Move 2

Like other studies using the CARS model (Bunton, 2002; Eun, 2008; Milagros, 2011), Step 1 took the first place in both RAIs, especially in the Korean RAIs. In fact it appeared in about fifty-four percent of the RAIs, which is comparable to the percentages of Step 1 (the first) and Step 5 (the second) combined in the native English RAIs. The more frequent next steps were Step 3 and Step 5 in both sets of RAIs (see Table 5).

Table 5. Distribution of Steps and Sub—Steps in Move 2

Steps (S) and Sub-Steps (SS)	Number of instances			Number of introductions	
	Korean	Native	Korean -Native	Korean	Native
S1: Indicating a gap in research	22 (53.7%)	15 (34.1%)	19.6%	18 (51.4%)	15 (34.9%)
S2: Indicating a problem	4 (9.8%)	5 (11.4%)	-1.6%	4 (11.4%)	5 (11.6%)
S3: Indicating need for research	8 (19.5%)	8 (18.2%)	1.3%	7 (20%)	8 (18.6%)
S4: Raising question(s)	2 (4.9%)	7 (15.9%)	-11%	2 (5.7%)	7 (16.3%)
S5: Reviewing previous research	5 (12.2%)	9 (20.5%)	-8.3%	4 (11.4%)	8 (18.6%)
Total	41	44		35	43

A journal-dependent characteristic was also identified: in the international journals, all of the steps were evenly distributed, whereas the distribution in the national journals proved uneven. (see Table 2 in Appendix A) Concerning the use of connectives in Step 1, the difference was found in a way that *FLE* and *SLR* used 'however' alone, while the other journals used a variety of connectives.

The corpus showed that both the Korean and native English authors favored the strategy of indicating a gap to establish a niche, but realized that gap in three different ways; out of the thirty-seven instances, thirty-three indicated the insufficiency of earlier research, three its limitations, and one the limitations in a certain situation. In the corpus, about two-thirds of the total frequency started with an adversative conjunction such as 'however', 'nonetheless', 'yet', or 'but', which was particularly common in the Korean RAIs (seventeen vs. seven instances). Additionally, negative linguistic components like 'few', 'little', 'no', 'seldom', 'rarely', 'scarce', 'rare', 'sparse', or 'insufficient' and the present perfect tense－twenty instances in total (thirteen in the Korean RAIs and seven in the native English RAIs)－were used. The three types of realization are shown below:

(2a) *However*, the object of the research has been mainly limited to
      advanced level university students; further, the scope seems to have

been limited to a particular linguistic feature such as connectors, amplifiers, and adjectives, etc. (Kim & Kim, 2006; S. Lee, 2006; Lee, 2007; Ryoo, 2007). (FLE 8)

(2b) <u>Surprisingly, most of this research has not systematically varied</u> teacher feedback to understand whether the form of feedback affects how quickly and accurately written feedback is perceived. (System 6)

(2c) <u>*Nonetheless*, appropriate use of the source text in summarization seems challenging</u> for second language (L2) writers due to a lack of L2 proficiency and insufficient practice (Currie, 1998; Pennycook, 1996; Shi, 2004). (ET 10)

4.2.3 Steps and Sub-Steps in Move 3

As shown in Table 6, Step 1 - 'Announcing present research' - occurred most frequently among all the steps in three moves; it was employed in all of the RAIs except four, so it proved an indispensable strategy for occupying the niche.

Table 6. Distribution of Steps and Sub-Steps in Move 3

Steps (S) and Sub-Steps (SS)	No. of instances			No. of introductions	
	Korean	Native	Korean -Native	Korean	Native
S1: Announcing present research	30 (48.4%)	30 (46.2%)	2.2%	29 (96.7%)	27 (90%)
S2: Presenting RQs or hypotheses	14 (22.6%)	3 (4.6%)	18%	14 (46.7%)	2 (6.7%)
S3: Summarizing methods	4 (6.5%)	2 (3.1%)	3.4%	4 (13.3%)	2 (6.7%)
S4: Explaining subjects / materials / procedure	2 (3.3%)	10 (15.4%)	-12.2%	2 (6.7%)	5 (16.7%)
S5: Announcing principal findings	1 (1.6%)	5 (7.7%)	-6.1%	1 (3.3%)	5 (16.7%)
S6: Giving justification	0	2 (3.1%)	-3.1%	0	2 (6.7%)
S7: Stating the value of the present research	7 (11.3%)	4 (6.2%)	5.1%	6 (20%)	4 (13.3%)
S8: Outlining the structure of the paper	3 (4.8%)	7 (10.8%)	-6%	3 (10%)	7 (23.3%)
SS8A: Overall thesis structure	3 (4.8%)	6 (9.2%)		3 (10%)	6 (20%)

SS8B: Chapter contents	0	1 (1.5%)		0	1 (3.3%)
S9: Reviewing previous research	1 (1.6%)	2 (3.1%)	-1.5%	1 (3.3%)	2 (6.7%)
Total	62	65		30	30

The data showed two features with respect to this step. The first characteristic was the employment of the connectives of causality such as 'thus', 'therefore', or 'hence.' Between the two RAIs emerged the difference of frequency; the Korean authors used eleven instances ('therefore' and 'thus', eight and three instances, respectively), while the native English authors used just one instance ('hence'). This possibly reflects an author-dependent feature to be reader-friendly rather than a language-specific one, in that both languages have and employ a number of connectives.

The second characteristic was the employment of a particular term like 'study', 'paper', or 'article.' Among them, the use of 'study' was overwhelming, occurring in forty-five instances, and the word was used with an adjective 'present/current' or a determiner 'this.' This suggests that authors feel psychological proximity to their research to be reported, in contrast to previous research. In the frequency of use, a slight difference was found between the two RAIs; the Korean authors preferred 'present' or 'current' (fifteen vs. twelve instances), whereas the native English authors did 'this' (eighteen vs. ten instances). Among the journals, a distinct preference was identified; *System* used only 'this' in nine instances but did not 'current/present' at all.

- (3a) *Therefore*, the purpose of this study is to reinvestigate the effects of shadowing on L2 listening ability by replicating the previous study (Chung, 2010) with a little bit modified research design and to identify what the general attitude of learners toward shadowing practice. (KJAL 7)
- (3b) The goal of this article is, broadly speaking, to add to an understanding of the potential linguistic benefits of study abroad (SA). Specifically, it investigates what factors, or combination of factors, can contribute to the acquisition of second language (L2) sounds by considering the roles of immersion and instruction in the second language acquisition (SLA) process. (FLA 6)

(3c) <u>In the current study, we attempt to answer</u> this and related
    questions, setting forth the possibility of negative syntactic transfer
    based on the 'L2 status factor' advanced by Bardel and Falk (2007).
    The focus is null-subject properties in two groups of L3 learners
    where the L1 and L2 remain constant (L1 English/L2 Spanish/L3
    French and L1 English/L2 Spanish/L3 Italian).   (SLR 2)

Table 6 demonstrated a marked contrast between the two RAIs regarding the
other steps. In the Korean RAIs, Step 2 and Step 7 were second- and third-most
prevalent, with percentages of 22.6 and 11.3, respectively. The top three steps
made up no less than 82.3 percent. In the native English RAIs, Step 4 accounted
for 15.4 percent, taking second-place, and was followed by Step 8. The
proportion of use for the top three steps was 72.4 percent in all. The rest was
divided among the remaining six steps in each corpus. One striking discovery
was ten instances of Step 4 in five native English introductions, in part due to
the excessive use of four instances in a certain introduction (*System* 5) (see
Tables 3 and 4 in Appendix A).

In the three moves, there existed a common step: 'Reviewing previous
research.' It appeared in twenty-four Korean introductions (twenty-six instances)
and in twenty-four native English introductions (twenty-eight instances). Most of
them were found in Move 1 and made up about seventy-seven percent in the
Korean RAIs, about sixty-one percent in the native English RAIs. It next
appeared in Move 2 in each corpus. In Move 3, few instances of it occurred
(only one case in the Korean RAIs and two cases in the native English RAIs).
This is likely because when authors establish a research territory in Move 1,
they refer to much earlier research in order to show their research topics have
been studied actively in the academic world.

5. Conclusion

The present study compared the rhetorical structure in terms of moves and
steps of thirty RAIs written by Korean authors with those of thirty RAIs written
by native English-speaking authors. This study suggests that the Korean authors

understood the modern style of academic writing and properly applied it in their RAIs. When the move structure of the two corpora was classified as examples of a CARS model, a recurrent structure, or a deviating structure, more than half of both corpora each conformed to the archetypal CARS model. The sum of that structure and the cyclical structures amounted to 73.4 percent and 56.7 percent of the Korean RAIs and the native English RAIs, respectively. However, eleven deviating structures, including nine structures in the native English data, were included in the corpus, so a diversity in structural pattern was also identified, indicating RA writers don't have to follow a typical structure.

Korean and native English speaker preferences for strategy per move proved to be nearly identical. Both groups positioned their research in their field of study through exposition and generalization, after which they established their own niches via indication of gaps in previous research and occupied them by announcing their present studies. Just so, the Koreans and native speakers also reviewed previous research to roughly the same degree in each move: prominently in Move 1, less so in Move 2, and rarely in Move 3. In comparison of the journals, the data only argued for each journal-specific aspect and a proportional relationship between the number of instances and the number of introductions in each step.

The results of the present study suggest the Korean authors are experts in their field and are therefore likely to utilize the same strategies as the native English authors. However, students who study in Korea, as shown in other research (Lee, 2001; Shim, 2005), most likely practice the rhetorical style of a research paper via multiple readings and imitation of other researchers' papers, and they need explicit instruction.

Teachers need to raise their students' awareness of the genre-based approach to academic writing, explaining that each genre possesses its own unique structure, content, and style, and that these features must be learned in order to fully participate in their chosen communities of academic discourse. Teachers might use Swales' CARS model as a representative model of an RA introduction to help students understand RA structure.

Activities involving actual research papers are also a good idea. Students might be asked to either individually or collaboratively analyze them using

Swales' model, and compare their work with others.' Their analyses could expand into other disciplines or genres to broaden their knowledge of genre rules and conventions. At the same time, teachers would inform students that no genre's rhetorical patterns are fixed, and encourage them to develop their own style by applying the structures and strategies of genres in original, creative ways.

Because the present study was restricted to a single discipline and utilized only a small sample for its data, generalizing the results is problematic. Additional studies with larger samples would be of value. The present study's objectivity also may have been undermined in the negotiation process which led to agreement among the study's analysts; the inclusion of interviews with informants would help in this regard.

Opportunities for future research certainly still exist in the investigation of RAIs' rhetorical styles, to say nothing of other sections in RAs, or the many other genres prevalent in EAP and ESP – grant proposals, newspaper editorials, job applications, conference papers, etc. More genre-specific research is clearly necessary if effective materials for teaching academic writing are to be produced.

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Appendix A

Rhetorical Structure

Table 1. Number of Instances of Each Journal in Move

Steps (S) and Sub-Steps (SS)	Number of instances					
	ET	FLE	KJ AL	Sys tem	FLA	SLR
S1: Claiming centrality	8	8	9	3	2	8
S2: Making topic generalizations and giving background information	16	13	15	11	12	23
SS2A: Stating general knowledge / practice / phenomena	4	3	7	8	5	10
SS2B: Giving background information	1	2	1	0	1	2
SS2C: Indicating a problem / limitations / need	4	3	2	0	1	3
SS2D: Giving or explaining examples	0	1	1	0	1	3
SS2E: Defining terms / Classifying and commenting on terminology	4	3	2	1	2	1
SS2F: Giving or anticipating solutions	2	1	0	0	0	3
SS2G: Explaining the institutional / research group context	1	0	2	2	2	1
S3: Reviewing previous research	5	9	6	7	6	4
Total	29	30	30	21	20	35

Table 2. Number of Instances of Each Journal in Move 2

Steps (S) and Sub-Steps (SS)	Number of instances					
	ET	FLE	KJ AL	Sys tem	FLA	SLR
S1: Indicating a gap in research	9	8	5	5	5	5
S2: Indicating a problem	1	2	1	1	2	2
S3: Indicating need for research	2	4	2	3	3	2
S4: Raising question(s)	0	0	2	3	2	2
S5: Reviewing previous research	1	2	2	4	2	3
Total	13	16	12	16	14	14

Table 3. Number of Instances of Each Journal in Move

Steps (S) and Sub-Steps (SS)	Number of instances					
	ET	FLE	KJ AL	Sys tem	FL A	SLR
S1: Announcing present research	10	10	10	10	9	11
S2: Presenting RQs or hypotheses	5	3	6	0	1	2
S3: Summarizing methods	1	2	1	1	1	0
S4: Explaining subjects / materials / procedure	0	2	0	4	2	4

Steps (S) and Sub-Steps (SS)						
S5: Announcing principal findings	0	0	1	0	1	4
S6: Giving justification	0	0	0	0	0	2
S7: Stating the value of the present research	3	3	1	0	3	1
S8: Outlining the structure of the paper	1	0	2	2	0	5
SS8A: Overall thesis structure	1	0	2	2	0	4
SS8B: Chapter contents	0	0	0	0	0	1
SS9: Reviewing previous research	0	1	0	1	1	0
Total	20	21	21	18	18	29

Table 4. Number of Introductions of Each Journal in Move 3

Steps (S) and Sub-Steps (SS)	Number of introductions					
	ET	FLE	KJAL	System	FLA	SLR
S1: Announcing present research	10	9	10	9	9	9
S2: Presenting RQs or hypotheses	5	3	6	0	1	1
S3: Summarizing methods	1	2	1	1	1	0
S4: Explaining subjects / materials / procedure	0	2	0	1	2	2
S5: Announcing principal findings	0	0	1	0	1	4
S6: Giving justification	0	0	0	0	0	2
S7: Stating the value of the present research	3	2	1	0	3	1
S8: Outlining the structure of the paper	1	0	2	2	0	5
SS8A: Overall thesis structure	1	0	2	2	0	4
SS8B: Chapter contents	0	0	0	0	0	1
SS9: Reviewing previous research	0	1	0	1	1	0

Appendix B

The Identification Letter

Dear Professor _____,

How do you do?

My name is 000. I am a graduate student in South Korea, currently writing my doctoral dissertation. At present I'm collecting data on the introductions of research articles in journals of applied linguistics. I intend to compare the Korean authors' writing style with that of researchers who are natives of

English-speaking countries, utilizing Swales' CARS model.

I'd like to include your own writing in my data. For the purposes of my study, however, it's important for me to confirm that each non-Korean author I analyze is indeed a native of his or her country. So if I may be so bold, would you confirm that you are a native of your country?

I will be very grateful for your response.

Sincerely,

————

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