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Communicative Moves in English Conceptual Review Article Abstracts: A Genre-based Corpus-driven Discourse Analytic Approach

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Abstract

This study investigated rhetorical functions and their associated linguistic realizations in English review article abstracts. The analysis was based on a corpus of 100 English review article abstracts from linguistics and applied linguistics disciplines and followed a corpus-driven discourse analytic top-down approach. MAXQDA and WordSmith were used to code the moves and analyze their associated sub-corpora, respectively. The results of calculating range and frequency distributions showed that English conceptual review article abstracts use a rhetorical structure, different from that of research paper abstracts. This rhetorical organization is realized through a different set of moves, namely 1) establishing the territory or area of study, 2) identifying the problem, 3) introducing the present research, 4) organizing the paper, and 5) concluding or reflecting. Moreover, each move was realized through a distinct set of sub-moves. In terms of range, the moves dealing with purpose and structure were the most widely present moves; in terms of frequency distribution, the move dealing with structure was the most frequent. Furthermore, the highly frequent use of plural self-mentions indicates that in review article abstracts, the emphasis is on research as a group activity inclusive of the researcher(s) and objects of study. In addition, the presence of 'establishing the territory', together with 'identifying the problem' can be seen as an attempt to sell the research. Finally, the prevalent use of the five moves showed that most review article abstracts are indicative-informative in function.

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1. Introduction

With the "information overload" (Lancaster, 2003, p. 104) that the world of research has been facing over the past few decades, the need for condensed but accurate and thorough document representations has grown (Tibbo, 1993). To satisfy this need, the abstract, as it captures the essence of the entire paper, has been introduced and has increasingly become indispensable to the research paper in academic prose (Hartley, 2003; Salager-Meyer, 1990). Nowadays, almost every journal, published in English or any other language, requires an abstract (Lorés, 2004; Martín-Martín, 2003; Ventola, 1994). Abstracts have thus become the gateway that article readers use to take up an article, and journals and conference organizers use to accept or reject papers (Lorés, 2004). Yet, it is important to note that selection or rejection of a paper is not based on its abstract alone, but as it is the first part of an article editors and reviewers see based on which they decide whether to continue reading the paper or not (Hyland, 2000), whether the paper will get an external review or not will greatly depend on the construction of its abstract (Swales & Feak, 2010, 2012).

Developing a well-structured abstract is a very demanding job (Hyland & Tse, 2005; Lorés, 2004; Swales & Feak, 2009). This difficulty is partly due to the varying norms set by different publishing houses for writing abstracts in terms of word count and structuring, and partly related to their distinctive features. As Cross and Oppenheim (2006) point out, reading and writing abstracts is difficult because they should be short yet contain the main ideas of the original text. Therefore, they are lexically and propositionally dense (Hartley, 1994; Kaplan et al., 1994). Whether as an accompanying subsection of research articles or as an independent part-genre in its own right (Lorés, 2004; Nwogu & Bloor, 1991), the abstract differs in some aspects from the research article. According to Lorés (2004), abstracts differ from RAs[1] in their function, rhetorical structure, and linguistic realizations. The function of an abstract determines its rhetorical structure and linguistic realizations.

As Hyland and Tse (2005) note, abstracts are highly rhetorical and thus follow certain rhetorical organizations (Bhatia, 1993). This is mainly because they are used to perform different rhetorical functions, i.e., as "stand-alone mini-texts, giving readers a quick summary of a study's topic, methodology, and findings; "screening devices, enabling the reader to decide whether to read the article as a

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1. research articles

whole; "previews, creating an interpretive frame that can guide reading"; and "aids to indexing by professional indexers for large database services" (Huckin, 2001, p. 93).

Many research studies have investigated the rhetorical organization of abstracts (e.g., Can et al., 2016; Cross & Oppenheim, 2006; Doró, 2013; Hwang et al., 2017; Lorés, 2004; Melander et al., 1997; Pho, 2008; Ren & Li, 2011; Samraj, 2005; Santos, 1996; Sidek et al., 2016; Suntara & Usaha, 2013; Van Bonn & Swales, 2007; Yang, 2009). Yet, the abstract of review articles has been left partially unexplored. The purpose of this study was to investigate the rhetorical structure of English conceptual review article abstracts in linguistics and applied linguistics fields.

2. Review of the Related Literature

2.1 Theoretical Framework

Generally, there are three genre theories: a) Australian genre theory, b) North American New Rhetoric, and c) English for specific purposes (ESP) (Hyon, 1996). The Australian genre theory draws on systemic functional linguistics, which deals with the relation between language and its associated functions in different situations. North American New Rhetoric focuses on the situational features of genres and the communicative purposes they accomplish in these contexts. On the other hand, ESP sees "genre as a tool for analyzing and teaching the spoken and written language required of nonnative speakers in academic and professional settings linguistics" (Hyon, 1996, p. 695). ESP researchers define oral and written types of texts based on their context-specific formal features and communicative purposes. Swales (1990, p. 58), who is a key figure in ESP genre theory, defines genres as "a class of communicative events, the members of which share some set of communicative purposes". Therefore, genres are more than texts. They are social or communicative events. According to this theory, there is a relationship between the communicative purposes of a genre and its structure. That is, communicative purposes of the genre influence and shape its rhetorical structure. Many research studies have investigated the rhetorical structure of different genres based on this view of genre theory (e.g., Lorés, 2004; Pho, 2008; Swales, 1990). The present study is part of this tradition.

2.2 Research on Abstracts

Hyland (2000) synthesizes the various classifications found in abstracts into five rhetorical moves, namely Introduction, Purpose, Method, Product and Conclusion. Several studies have investigated Hyland's (2000) rhetorical moves in abstracts (e.g., Can et al., 2016; Lorés, 2004; Pho, 2008; Ren & Li, 2011; Samraj, 2005; Sidek et al., 2016; Suntara & Usaha, 2013; Yang, 2009).

Lorés (2004), for example, based on the analysis of rhetorical structure in research article abstracts from linguistic journals, distinguishes between indicative, informative, and indicative-informative abstracts. Indicative abstracts indicate the general essence and scope of the article; they also contain the main findings of the paper (Lorés, 2004). On the other hand, informative abstracts are articles in miniature. Furthermore, indicative-informative abstracts act as both and "contain general information as found in indicative abstracts together with brief conclusion-like statements" as in informative abstracts (Cremmins, 1996, as cited in Cross & Oppenheim, 2006, p. 432).

Lorés (2004) shows that most linguistics abstracts display the commonly accepted rhetorical structure Hyland (2000) found. Such abstracts are referred to as informative abstracts. Yet, the rhetorical organization of about one-third of the abstracts matches that of the Introductory section of research articles, namely the Creating a Research Space (CARS) structure (Swales, 1990). These abstracts are indicative abstracts. Lorés also finds another minor rhetorical organization that mixes both types, referred to as combinatory type (Lorés, 2004; Suntara & Usaha, 2013).

Can et al. (2016) and Sidek et al. (2016) show that only some of their studied abstracts contain the rhetorical moves, suggested by Hyland (2000), with a variety of move sequences. Analyzing rhetorical moves sequential structure, Sidek et al. (2016) also argue "the most prominent moves structure sequence is Purpose-Method-Product-Conclusion (42.1%). The missing moves pattern seems to vary, ranging from a minimum one to maximum three missing moves" (p. 30). The other finding of Can et al. (2016) is that more than 80% of abstracts include information about purpose, methodology, and results. All of the three most frequent moves (presenting the research purpose, describing the methodology, and summarizing the findings) are categorized as 'conventional' for applied linguistics (AL) abstracts. Exploring the rhetorical moves of abstracts in the fields of linguistics and applied linguistics, Suntara and Usaha (2013) also conclude that "the Product move were

conventional moves in abstracts in both fields. The Introduction move was optional in both fields, but the frequency of occurrence of this move was nearly 50%" (p. 97). Studying the move structure of the literature RA abstracts, Tankó (2017) shows that "LRA[1] abstracts have a non-hierarchical eight-move structure with four stable moves, whose functions are to present the background, purpose, methodology and outcomes of the research" (p. 42). By comparing the rhetorical moves in the abstracts of Chinese Master's English theses and published RAs in applied linguistics, Ren and Li (2011) argue that experts are more selective in their use of the moves in comparison with student writers. Also, they note that when students have so many repetitions in their abstracts, this shows that they are not aware of the value of space in academic writing.

Investigating the characteristics and problems associated with review articles in the sciences, Virgo (1971) identifies three major classes of review articles: the annual review, the critical review, and data compilations. Noguchi (2006) and Dochy (2006) also categorize review articles. Dochy (2006) divides them into the systematic review, best-evidence synthesis and narrative review, and Noguchi (2006) groups them into status quo review, history review, and issue review.

Review articles that cover a specific topic comprehensively are crucial for successful research and academic projects (Gasparyan et al., 2011), due to their versatile functions, i.e., to organize, synthesize, and evaluate literature, to identify patterns, trends, and gaps in the literature, and to recommend new research areas (Mayer, 2009). Furthermore, review articles attract more citations than other articles and contribute greatly to the impact factor of journals (Gasparyan, 2010). Yet, they are not commonplace, and very few of them are published in scientific periodicals, at least in linguistics and applied linguistics fields. One reason for their limited circulation is that they are complex to write, and this complexity is mainly because the overall structure or format of such papers is not clear (Webster & Watson, 2002). According to Hagger (2012), "features that make a good review article are originality, advances knowledge and original thinking, theory-based, evidence-based, accurate, comprehensive and rigorous, recommendations for future inquiry, and stimulates debate" (p. 141).

As mentioned earlier, the extensive research on abstracts has mainly focused

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1. linguistics research articles

on the abstract of research papers. However, the abstract of conceptual review articles, to the knowledge of the researchers, has been left unexplored or very partially investigated (e.g., Gasparyan et al., 2011; Guimarães, 2006; Mulrow et al., 1988). Besides, most of the studies that have investigated the abstract of conceptual review articles provide commentaries on how to structure abstracts without basing them on corpus-based studies of such kind. For example, Gasparyan et al. (2011) suggest that abstracts contain few words and notable messages; they provide the background, aim, and literature search method in 2–3 short sentences, followed by points derived from literature analysis and conclusion; the conclusion specifically conveys messages for future research and clinical practice. Moreover, Gülpınar and Güçlü (2013) point out that what is important and valuable for a review abstract is the findings and the way these findings have been presented. Mulrow et al. (1988) also present six guidelines for preparing informative abstracts of review articles. These guidelines are:

1. The abstract should begin with a precise statement of the primary objective of the review.

2. The data sources for the review should be succinctly summarized.

3. The criteria used to select studies from the data sources and the method by which these criteria were applied should be specified.

4. The guidelines used for abstracting data and assessing data quality should be described.

5. The main results of the review and the methods used to obtain these results should be stated.

6. Conclusions and potential applications of the review's results should be clearly and succinctly stated. (Mulrow et al., 1988, p. 613)

Altogether, a clear image of the overall rhetorical structure of conceptual review articles is missing and this requires that more studies investigate the features of this highly neglected written academic genre. To this end, this study was aimed to provide answer to the following question: What rhetorical structure, move and sub-move, and linguistic realizations do English conceptual review article abstracts in linguistics and applied linguistics fields consist of?

3. Methodology

3.1. Corpus

A dataset of more than 17,000 words comprising 100 English conceptual review article abstracts from linguistics and applied linguistics disciplines, published between 2000 and 2018 was developed for this study. Linguistics and applied linguistics were chosen as the fields of focus because these two disciplines are closely related, and there is overlap in their thematic topics. Also, as abstracts vary in length and format according to publishing norms, in order to offer a representative image of the language of review article abstracts, we selected papers from different journals and publishers with varying publishing conventions. Furthermore, attempts were made to include articles from major publishers and journals of the field in the dataset. However, the number of articles compiled in the dataset from each journal or publisher was different as journals differed in the number of review articles they had published. Because of the low number of review articles published by each journal, accessibility was the sole criterion for choosing articles. A distinction here needs to be made between systematic review articles and conceptual review articles. Systematic reviews contain methodology sections and involve synthesizing data from already published articles into a single statistical measure (Petticrew & Roberts, 2006). Instead, conceptual review articles lack methodology sections and include only those parts of the literature that support a certain perspective (Callahan, 2010). In the present study, the abstracts of only conceptual review articles were compiled in the dataset. The dataset included both papers with a single author and papers with many contributors. Moreover, as writers of articles within specific disciplines are supposed to stick to the norms and conventions of their own discipline in order to get their papers published and promoted, we did not consider intercultural rhetoric. Therefore, we did not check to see if English was the first, second, or foreign language of the authors of articles in our dataset. We considered all of them English as a lingua franca (ELF) writers. Furthermore, we considered that as long as the articles are published in scientific journals, the writers of these articles certainly have an acceptable knowledge of English writing, whether they are native or non-native. In terms of word count in abstracts, none of the journals constituting the dataset of this research required extended abstracts. Therefore, this was considered as a limit in word count (normally from 100-250) for the

journals. Table 1 presents the description of the data, including publishers, their associated journals, and the number of papers selected from each.

Table 1
Description of the Corpus

Disipline	Publisher	Journal	Article count	Min. words in abstract	Max. words in abstract	Word count
Applied linguistics	Oxford	Applied Linguistics	5	100	250	840
		ELT Journal	5	100	250	695
	Cambridge	Language Teaching	8	100	250	1,632
		Annual Review of Applied Linguistics	5	100	250	1,055
		ReCALL	1	100	250	170
	Elsevier	System	5	100	250	790
		Journal of English for Academic Purposes	4	100	250	788
		Journal of Second Language Writing	2	100	250	396
	Wiley	TESOL Quarterly	4	100	250	748
		Language Learning	5	100	250	615
	Sage	Language Testing	2	100	250	278
	Routledge - Taylor & Francis	Computer Assisted Language Learning	4	100	250	524
Linguistics	Cambridge	Journal of Linguistics	4	100	250	696
	Elsevier	Lingua	6	100	250	1,014
	De Gruyter Mouton	Theoretical Linguistics	5	100	250	870
		Linguistics	3	100	250	528
		The Linguistic Review	7	100	250	1,575
	Routledge – Taylor & Francis	Australian Journal of Linguistics	4	100	250	748
	John Benjamins	Annual Review of Cognitive Linguistics	6	100	250	1,068
		International Journal of Corpus Linguistics	1	100	250	139
	Linguistic Society of America	Language	1	100	250	102
	Annual	Annual Review of	6	100	250	720

Disipline	Publisher	Journal	Article count	Min. words in abstract	Max. words in abstract	Word count
	Reviews	Linguistics				
	Brill	International Review of Pragmatics	6	100	250	1,014
		Journal of Greek Linguistics	1	100	250	173
Total			100			17,178

3.1. Analytical Procedure

To investigate the rhetorical structure of English conceptual review article abstracts, we explored the move structure of this written academic genre. A move is defined as a stretch of text used to realize a specific function (Bhatia, 1993; Swales & Feak, 2009). Moves are realized by smaller discourse units known as steps (Hyland, 2004) or sub-moves (Santos, 1996). Here, we use the term sub-move. Move analysis studies follow either a top-down or bottom-up approach for the identification of moves. In the top-down approach, moves are identified based on the content of text, whereas in the bottom-up approach, moves are distinguished based on their lexical and structural signals (Pho, 2008). Here, rather a corpus-driven discourse analytic top-down approach was followed to identify moves and their associated sub-moves. That is, moves and sub-moves were identified based on the content or perceived communicative functions of the text (discourse analytic top-down approach). What distinguishes the approach adopted here from the ones followed in previous studies (e.g., Cross & Oppenheim, 2006; Jiang & Hyland, 2017; Pho, 2008) is that the identification of moves and sub-moves was based on a corpus-driven analysis. That is, with no preconception about the moves of abstracts, the researchers approached the dataset of this study with an open mind to see what rhetorical moves emerge (Tognini-Bonelli, 2001). To make sure that we maintained a corpus-driven approach in investigating moves and sub-moves, we built a sub-corpus of 30 abstracts--15 from linguistics and 15 from applied linguistics. Next, we read these abstracts carefully to derive moves and their associated sub-moves. This was done independently by each coder. This resulted in a taxonomy of five moves for the abstract section of English conceptual review articles in linguistics and applied linguistics which include: "territory", "problem", "purpose", "structure", and

"conclusion". Afterwards, we analyzed all the 100 abstracts in the dataset functionally to determine their moves and sub-moves.

Coding of the moves and sub-moves was done using a qualitative data analysis tool, namely MAXQDA 2018. Because of the corpus-driven nature of the study, the unit of coding for moves and sub-moves was not selected beforehand; moves and sub-moves were identified on the basis of their communicative purposes. Moreover, because "a special emphasis was made to treat moves as truly 'functional' rather than 'formal' units" (Moreno & Swales, 2018, p. 48), following Moreno and Swales (2018), we did not establish a formal criterion for determining moves. Therefore, in different cases, a different unit, i.e., the phrase, the clause, or the full sentence, was deemed as the unit for analysis (1, 2, 3, 4).

(1) *Originally introduced by Jernudd and Neustupný´ in 1987, as a … (AL[1]-28)[2]*

(2) *with so little attention devoted to teachers in comparison (AL-7)*

(3) *which are three tools commonly used to automate syntactic complexity … (AL-8)*

(4) *Social class is a curious construct. (AL-24)*

(5) *Following this overview, …. The article concludes by highlighting …. (AL-13)*

In examples (1) and (2), the phrase, in example (3), the clause, and in example (4), the sentence were units for analysis.

In order to moderate the subjectivity inevitable in functional analysis of texts and increase coding reliability, the researchers coded the abstracts independently. Here, a Cohen's kappa of 0.81 was reached, using IBM SPSS Statistics 24. After coding the abstracts, the researchers came together to check the results of their investigation. In case, any disagreement ensued in the functional analysis of moves, a third coder was consulted (6).

(6) The theoretical underpinnings of each will be briefly described according to a matrix of curriculum factors. (AL-4)

For example, the above sentence was coded as containing different functional moves by the two coders. To ensure precision, the researchers also invited the third coder to check a random sample of 20 coded abstracts. Here, the reliability index (Cohen's kappa) was estimated at 0.85, using IBM SPSS Statistics 24.

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1. In our notation system, AL stands for applied linguistics abstracts.
2. The parentheses show the code of the article in our dataset from which the example was derived.

Range and frequency distribution of the moves were also calculated. Range or essentiality refers to the percentage of abstracts that have each move. Following other studies (Lim, 2010; Yang & Allison, 2003), we set cut-off range at 50% to remove optional moves. That is, if fewer than 50% of the abstracts contained the move, it was considered optional for the rhetorical organization of English conceptual review article abstracts. For sub-moves, however, we did not set any cut-off range. Frequency distribution, calculated for both moves and sub-moves, refers to the frequency and percentage that each specific move or sub-move holds in the entire corpus of moves. What distinguishes range from frequency distribution is that range was calculated based on the presence or absence of each move in every abstract, whereas frequency distribution was the sum of the frequency of each move or sub-move for each abstract in the entire dataset. Example (5), for instance, contains a move two times, thus a frequency of two.

Next, in order to further analyze the linguistic features of each move and to see if the linguistic and functional features of each move are compatible with each other, we developed sub-corpora from the associated stretches of text for each move. Accordingly, for each move, one sub-corpus was constructed. The sub-corpora were then investigated with a corpus-based approach, using WordSmith (Scott, 2015). Finally, word frequency lists were created for each move-specific sub-corpus, and the most frequent content words were extracted and further analyzed using the Concordance module of the software.

4. Results and Discussion

Analysis of the rhetorical functions led to the emergence of five moves in English linguistics and applied linguistics conceptual review article abstracts: 1) "establishing the territory" (territory), 2) "identifying the problem" (problem), 3) "introducing the present research" (purpose), 4) "organizing the paper" (structure), and 5) "concluding or reflecting" (conclusion). In order to investigate the essentiality of these moves, their range was calculated. Table 2 presents the results of calculating the range and frequency of all the five moves.

Table 2
Range and Frequency Distribution of Moves

Moves	Range		Frequency distribution	
	Frequency	Percent	Frequency	Percent
Territory	78	78	189	22.97
Problem	56	56	117	14.22
Purpose	80	80	131	15.92
Structure	73	73	212	25.75
Conclusion	73	73	174	21.14
Total			823	100

As Table 2 shows, all the moves had a range beyond 50%. That is, each move was present in at least 50% of the abstracts. Therefore, all the five moves were considered essential in English conceptual review article abstracts. Yet, Can et al. (2016) found only "purpose", "methodology", "results", and "implications of results" as conventional moves in most applied linguistics research article abstracts. The difference here which is mainly in the obligatory use of "territory" and "problem" moves in abstracts is attributed to the nature of articles in our dataset. Our dataset only included conceptual review article abstracts and because of their argumentative nature, it is important to situate the research within a well-established area of study and discuss what earlier research has to offer and what is missing in it.

As Table (2) shows, in terms of range, "purpose" was the most widely used move, followed by "territory", "structure", "conclusion", and "problem". On the other hand, Can et al. (2016) found 'methodology', followed by "purpose" as the most widely used moves in applied linguistics research article abstracts based on their range. Additionally, Tankó (2017) found "outcome", as the most widely used move, followed by "purpose", "background", and "method" in literary research article abstracts. As can be seen, in line with Can et al. (2016) and Tankó (2017), the moves dealing with purpose and methodology (the structure move in this study) were among the most widely present moves in English conceptual review article abstracts. In terms of frequency distribution, as Table 2 shows, "structure" was the most frequently used move, followed by "territory", "conclusion", "purpose", and "problem". On the other hand, Can et al. (2016) found "methodology", followed by "results", "purpose", "introduction", and "discussion" as the most frequent moves in applied linguistics research article abstracts. Also, Tankó (2017) found "purpose", followed by "outcome",

"method", and "background" as the most frequently used moves in literary research article abstracts. Therefore, in line with Can et al. (2016) and Tankó (2017), the move dealing with methodology which in our set of moves was "structure" was the most frequent. These findings are attributed to brevity, exhaustivity, and density features of abstracts (Cross & Oppenheim, 2006). That is, as writers have to use the limited space given to abstracts economically, they prefer to disregard the parts, such as literature review, which they do not consider important and instead focus more on the parts, i.e. purpose and methodology, which promote their research (Can et al., 2016).

Table 3 presents the results of calculating the range and frequency distribution of the sub-moves, associated with each move.

Table 3
Range and Frequency Distribution of Sub-moves

Moves	Sub-move	Range		Frequency distribution	
		Frequency	Percent	Frequency	Percent
Territory	Sub-move 1	74	74	154	18.71
	Sub-move 2	22	22	35	4.25
Problem	Sub-move 1	39	39	31	3.77
	Sub-move 2	45	45	86	10.45
Purpose	Sub-move 1	80	80	108	13.12
	Sub-move 2	20	20	23	2.80
Structure	Sub-move 1	35	35	48	5.83
	Sub-move 2	60	60	164	19.93
Conclusion	Sub-move 1	70	70	146	17.74
	Sub-move 2	20	20	28	3.40
Total				823	100

As Table 3 shows, each move in English conceptual review article abstracts was realized through a distinct set of sub-moves, referred to in Table 3 as (1) and (2).

i) Territory
(1) making statements about the topic
(2) summarizing what previous research offers.
ii) Problem
(1) indicating the abundance of research in an area
(2) showing the gap or problem in that area

iii) Purpose

(1) stating the aim(s) of the article

(2) narrowing down the scope of the article or focusing

iv) Structure

(1) methodology of review

(2) structuring

v) Conclusion

(1) presenting the author's own reflection, argument, or proposed model

(2) stating what it means or what contributions it makes to the literature

The presence of a hierarchical rhetorical structure in English conceptual review article abstracts is contrary to what Tankó (2017) observed for literary research article abstracts. Tankó found a non-hierarchical structure for such articles and attributed it to the fact "that literary scholars do not consider it necessary to use alternative rhetorical strategies for the realization of the same rhetorical goal" (2017, p. 48).

Moreover, the five moves our investigation led to, along with their associated sub-moves, are partially different from the ones previous research shows for research paper abstracts, i.e. (1) "background", (2) "present research/purpose", (3) "methods", (4) "results", and (5) "discussion/conclusion/implications" (Swales & Feak, 2010). Abstracts of articles are considered articles in miniature. Hence, they are supposed to reflect the main themes of the main five sections in research papers, though exceptions exist where not all the five moves are present (Swales & Feak, 2010). Conceptual review articles, however, are different from research papers and follow their own structure. Therefore, abstracts of conceptual review articles realize a partially different set of moves. Also, given the fact the different article types have their own intended audience, difference in their rhetorical organization is inevitable.

Additionally, as Tables 2 and 3 show, the prevalent presence of these five moves, along with their associated sub-moves, in English conceptual review article abstracts may indicate that such abstracts are a combination of both indicative and informative abstract types. Lorés (2004) relates the function of abstracts, i.e. indicative and informative, to their structure. Through comparing the structure of abstracts to that of the whole article, Lorés associates the IMRD structure (Introduction–Methods–Results–Discussion) to the definition of informative abstracts, as they contain discussion and conclusion-like statements,

and the CARS structure to indicative abstracts, as they lack such statements. Therefore, as the moves and their associated sub-moves in English conceptual review article abstracts follow the structure of both IMRD and CARS models, as shown in Table 3, it can be said that most such abstracts are indicative-informative in function. A detailed discussion of the five moves and their associated sub-moves follows in sections 3.1 to 3.5.

Using WordSmith, a word list was also produced to investigate the language of abstracts in general. It included "this" (152 tokens), "research" (130 tokens), "we" (102 tokens), and "I" (67 tokens). Therefore, unlike Van Bonn and Swales (2007) who found the use of first-person pronouns dependent on the number of authors, here, the plural first-person pronoun *we* outnumbered the singular first-person pronoun "I" even in cases where a single academic authored the article. Van Bonn and Swales (2007) explain this by the comments of an anonymous reviewer who notes the plural pronoun is used exclusively in places

where the emphasis is now on research as 'inclusive' of researchers and 'participants' (not 'subjects') and where the plural pronoun is preferred as a symbol of the research being a group endeavor, not the result of detached analysis by a trained researcher as separate from the objects of analysis. (Van Bonn & Swales, 2007, p. 98)

4.1 Establishing the Territory

"Establishing the territory", as one of the recurring rhetorical moves in English conceptual review article abstracts, deals with introducing the area of study the paper lies in. Rhetorical analysis of the abstracts showed that establishing the territory is done mainly through one or more of the following two sub-moves: 1) "making statements about the topic" (7) and 2) "summarizing what previous research offers" (8). The first sub-move introduces the area and the second one reviews its related literature.

(7) *Speakers* monitor their own speech for errors. (AL-1)
(8) *A* decade ago, Hornberger & Johnson proposed that the ethnography of (AL-6)

Whereas some abstracts contained both sub-moves (9), others included only one of them (7). Additionally, the sequence of the two sub-moves was found to be

different in different abstracts (9).

(9) *The* Study Abroad (SA) domain has echoed …. *SA* researchers have sought (AL-15)

(10) *Originally* introduced …, *language management* along these lines has …. (AL-28)

(11) *The* system of communication—has been hailed as ….   *By* enabling symbolic culture, language …. *A* common … (AL-10)

As can be seen, example (9) begins with a statement about the topic and continues with summarizing previous research. Example (10), however, goes the opposite. Santos (1996) sees the writers' embedding and reversal of moves in their realizations as an attempt to "compete for the attention of a busy readership" (p. 492). What is important about the first sub-move in this move is that it happens in more than one sentence in some cases (11). Generally, in such cases, the first sentence introduces the topic with a statement and the next sentence(s) present(s) more specific information about it.

The second sub-move in this move is similar to Tankó's (2017) "background" move the purpose of which is to provide general information about the topic to situate it in the wider context of literary studies. In terms of both range and frequency distribution, as Table 3 shows, this sub-move was considerably less frequent than the first one. This may be attributed to the fact that such statements do not promote the research and as publishers allocate a very short space to the abstract of papers, they are neglected.

Like Pho (2008), here we found the move "establishing the territory" to contain present simple and present perfect tense most frequently which is in keeping with the fact that such statements introduce established knowledge and established knowledge is respected through the use of present tense (Day, 1998). The results of the words list WordSmith produced only included "this" (20 tokens), "it" (16 tokens), and "research" (15 tokens), acting mostly as subjects, and did not show self-references ("I", "we") as frequent words. This is consistent with Pho's observation that authorial stance is not expressed explicitly in this move by self-mentions.

This move is similar to Pho's (2008) "situating the research" move wherein previous studies are mentioned first as a way to lead into the current study. The move is also comparable to the move "establishing a research territory" proposed

by Swales (1990) in his CARS model for the introductions of research papers. Yet, it is important to note that Swales' version of the move contained three sub-moves, including 1) "claiming centrality", 2) "making topic generalizations", and 3) "reviewing previous items of research". "Claiming centrality" concerns telling the reader that the research is part of a well-established area of study and is thus important for investigation (Jalilifar, 2011). Thus, its presence in introductions goes well with the fact that one of the purposes of writing introductions is to state the significance of study. Yet, the absence of this sub-move in English conceptual review article abstracts may be due to the fact that the significance of the paper is already taken for granted for such papers, as most such articles are solicited by editors, though the existence of such items may promote the paper after being published. Additionally, this may be related to the fact that there are strict word and character count restrictions imposed by most publishers and journals on abstracts (Swales & Feak, 2010).

The widespread presence of this move in 78% of abstracts, as Table 2 shows, is contrary to the findings of Pho (2008) and consistent with Hyland's (2004) observation that the presence of "situating the research" move is increasing in abstracts.

4.2 Identifying the Problem

As the name suggests, the purpose of this move is to identify or state the problem. This is mainly done through one or more of two sub-moves: 1) "indicating the abundance of research in an area", and 2) "showing the gap or problem in that area" (12).

(12) *the* field of language learning psychology has focused so predominantly on the psychology of learners *with* so little attention devoted to teachers (AL-7)

(13)*there* are detailed accounts of monitoring in first language (L1) processing (AL-1)

The sub-move "indicating the abundance of research in an area" involves showing the existence of a wide body of research in a specific area of study (12, 13). The purpose of the sub-move "indicating the abundance of research in an area" is to indicate insufficiency or inconclusiveness of the findings of previous research.

(14)*Narratives* of … remain relatively uncommon within language education (AL-16)

(15)*motivated* by recent work on socio-indexical knowledge in first language (AL-2)

The second sub-move, however, concerns indicating how a specific topic has received little or no attention in previous research (14), or is an extension of previous research (15). Here, the purpose is to justify the need for or usefulness of further research in the area. There were several abstracts that featured only the second sub-move (14, 15). Interestingly, as Table 3 shows, in terms of both range and frequency distribution, the second sub-move was more frequent and thus important.

WordSmith produced "research" (23 tokens), "has" (20 tokens), "been" (17 tokens), "however" (12 tokens), and "but" (10 tokens) as the most frequent words. The abundance of "research", "has", and "been" is in keeping with the first sub-move. On the other hand, the frequent use of however and but reflects the second sub-move which is to indicate gap.

As Table 2 shows, in terms of both range and frequency distribution, this move was the least frequently used move in abstracts. This is similar to what Tankó (2017) observed in literary research article abstracts. Yet, "identifying the problem" seems a preliminary sub-move for outlining the purpose(s) of the research, as it indicates the need for the study and thus its significance. Absence of the sub-move "identifying the problem" in some abstracts may be related to the brevity of abstracts and to the fact that well-known journals do not publish unsolicited review articles. Writers of review articles do not need to indicate the significance of their article by showing the gap through this move, as their article's place is already secured in the journal that asked for the article.

Altogether, the presence of the former move, namely "establishing the territory", together with "identifying the problem", in English conceptual review article abstracts can be seen as an attempt to show that the paper is part of a well-established area of inquiry.

This move is comparable to the move "establishing a niche" Swales (1990) introduced for introductions of research papers. Swales' version of the move contained (1) "counter-claiming", (2) "indicating a gap", (3) "question-raising", and (4) "continuing a tradition". Swales' first, second, and fourth sub-moves are

somehow the same as our second sub-move, given the fact the purpose of all of them is to indicate the niche. The move is also similar to Tankó's (2017) "niche" move, defined as creating a place for the research paper.

4.3 Introducing the Present Research

The purpose of "introducing present research" in English conceptual review article abstracts is to determine the scope of the study. The scope of conceptual review articles was found to be determined through one or two of the following sub-moves in their abstracts: 1) "stating the aim(s) of the article" (16, 17) and 2) "narrowing down the scope of the article or focusing" (18, 19).

(16)*The* present paper presents an account of one view of DMs … (L[1]-13)

(17)*In* this paper, we analyze the surface patterns of suffix harmony in … (L-2)

(18)*I* specifically review evidence for impairment in one universal linguistic … (L-39)

(19)*and* in this article, I provide a review of that research, *focusing* primarily on the period 2000–2014. (AL-24)

(20)*This* article reviews the developments in significant pedagogical and research domains in TESOL …. *It* situates these developments in the shift from a modernist to postmodern orientation (AL-17)

As can be seen in (16) and (17), in the first sub-move, the aim of the study is introduced. Later, in the second sub-move, the boundaries of the topical themes of the article are marked more specifically. Whereas some abstracts featured both sub-moves (19, 20), many abstracts lacked the second sub-move (16, 17). This is confirmed by the results of range and frequency distribution analyses, shown in Table 3.

The move "introducing the present research" is comparable to "occupying the niche" move that Swales (1990) introduced in his CARS model for the introduction section of research papers. For this move, Swales listed "outlining purposes", "listing research questions", "announcing principal findings", and "indicating the structure" as the sub-moves, among which only "outlining purposes" is present in our move. Though the two sub-moves, i.e. "stating the

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1. In our notation system, L stands for linguistics abstracts.

aim(s) of the article" and "outlining purposes", are the same, the moves are different overall, as they are used for performing different rhetorical functions. The purpose of Swales' move is to fill the gap which was indicated earlier in the abstract, as the name suggests. The purpose of our move, on the other hand, is to introduce the paper in most cases, though in some abstracts it is also aimed to fill a gap which was indicated earlier in the abstract by "identifying the problem" move.

Additionally, this move is similar to Pho's (2008) "presenting the research" move and Tankó's (2017) "topic" and "purpose" moves, found in literary research article abstracts, which due to their nature are similar to conceptual review article abstracts. Tankó lists "introducing the topic" and "providing bibliographic information" as the components of "topic" move and "outlining purposes" in "purpose" move. The words list WordSmith produced for this move showed that "article" (39 tokens), "paper" (25 tokens), "we" (16 tokens), and "I" (14 tokens) are frequently used as syntactic subjects in the stretches of text that are associated with this move. Likewise, Tankó found "essay", "article" and occasional ("I", "we", "my", "the author") as most frequently used syntactic subjects in "topic" and "purpose" moves. Pho (2008) also found that most cases of presenting the research move are realized through a grammatical subject that refers to the study itself. As the examples (16, 17, 18, 19, and 20) show, this move features present simple and active voice most frequently which is in line with the observations of Tankó and Pho. Overall, the words list, voice, and tense usage show that this move features a balance of personal and impersonal style.

The widespread use of this move in English conceptual review article abstracts, as Table 2 shows, is in line with the findings of Pho (2008) and Santos (1996). This in keeping with the fact that one of the functions of abstracts is to filter the overflow of available information (Jiang & Hyland, 2017). To reinforce this purpose, in some abstracts, this move comes right at the beginning (16, 19). Yet, certain abstracts positioned this move after the territory and problem moves (17, 18).

4.4 Organizing the Paper

Here, an overview of the conceptual organization of the paper is given. "Organizing the paper" happens in one or two of the following sub-moves: 1) "methodology of review" (21, 22), and 2) "structuring" (23, 24).

(21) *After* searching major databases … findings of 35 studies were analyzed. (AL-14)

(22) *This* exploratory review … (AL-34)

(23) *Three* challenging areas in longitudinal L2 research are first discussed. *Next*, various traditional and recent quantitative approaches … (AL-27)

(24)*The* article ends with a call for action. (AL-48)

As examples (21) and (22) show, "methodology of review" concerns giving information about the design of review and procedures. On the other hand, "structuring" concerns organizing the abstract in terms of its conceptual themes, as shown in (23) and (24).

"Methodology of review" is similar to Tankó's (2017) "method" move, signaled by a fronted participle clause, present tense, and occasional self-mentions ("I", "my").

(25) *Drawing* on bibliometric methods (citation analysis and content analysis) and literature review (AL-43)

(26) *We … showing* (*based on a corpus study* we carried out to (L-2)

Similarly, many examples of our methodology sub-moves include present and past participles (25, 26) which is not consistent with Pho's (2008) observation that in very few cases moves are realized by a word or a phrase. Yet, this is consistent with Can et al.'s (2016) conclusion that applied linguistics writers combine the "methodology" move with the "purpose" or "results", as example (25, 26) shows. Similarly, Pho found most "describing the methodology" move embedded in either "presenting the research" or "summarizing the findings" move. Pho explains the embedding of such moves in the form of a word or a phrase in other moves by their relative flexibility of realization. This can also be explained by the brevity, exhaustivity, and density of abstracts as an accompanying or independent part-genre. Furthermore, the "structuring" sub-move in English conceptual review article abstracts was mostly signaled by present simple tense (23, 24) which is contrary to the predominant past tense that Pho (2008) found. This reflects the nature of this sub-move which is to present the thematic organization of the paper in question. Pho's "describing the methodology" move reports the research methodology, employed in the empirical study, which should undoubtedly be expressed in past tense. The words list WordSmith produced for this move include

"we" (42 tokens), "studies" (35 tokens), "this" (25 tokens), "I" (23 tokens), and "review" (22 tokens), all acting as subjects. Therefore, this move is associated with both personal and impersonal styles, whereas Pho found self-mentions ("I", "we") rarely in the move. The more personal style that writers of conceptual review articles adopt through the use of self-mentions in this move follows the fact that review or "theoretical research articles tend to be more argumentative and thus the writer may need to be more assertive" (Pho, 2008, p. 243).

As Table 2 shows, the "structure" move was the most frequently used move in abstracts in terms of both range and frequency distribution. The widespread presence and highly frequent use of this move, especially the second sub-move which was much higher than the first one, as Table 3 shows, in English conceptual review article abstracts may be explained by the fact that such articles do not follow a uniform structure in presenting information, and thus need to tell the reader in advance about their specific content structure. As Endres-Niggemeyer (1998) notes, the effectiveness of an abstract depends on the extent to which it mirrors the macrostructure of the parent paper. Additionally, the prevalent use of this move may also confirm the general purpose of abstracts to filter the flood of information (Lorés, 2004). The highly infrequent use of the first sub-move, namely "methodology of review", as Table 3 shows, is in contrast to the findings of Santos (1996) and Pho (2008). This difference is attributed to the fact that our dataset contained only conceptual review articles. As mentioned earlier, conceptual review articles lack methodology sections.

4.5 Concluding or Reflecting

"Concluding or reflecting" was found to be performed through two specific sub-moves: 1) "presenting the author's own reflection, argument, or proposed model" (27, 28) and 2) "stating what it means or what contributions it makes to the literature" (29, 30, 31).

(27)*We* argue that Subject serves experiential, interpersonal and textual … (L-37)

(28)*We* propose an alternative account of manipulation …. (L-48)

(29)*This* proposal unifies L1 processing and L2/Ln acquisition as …. (AL-2)

(30)*The* framework raises awareness of the role of the learning situation …. (AL-14)

(31)*Researchers* are invited to be more explicit as regards their position ….

(AL-27)

The sub-move "presenting the author's own reflection, argument, or proposed model" here resembles "outcome" and "conclusion" moves in literary research article abstracts (Tankó, 2017), "informative discussion" move in applied linguistics abstracts (Can et al., 2016), and "discussing the research" move in applied linguistics and educational technology abstracts (Pho, 2008). Tankó's "outcome" move presents the outcome(s) of research in the form of descriptive summative statements and his "conclusion" move "rounds up the abstract with a final summative comment directly related to the research problem raised" (Tankó, 2017, p. 51).

Our "concluding" move is closer to Tankó's "conclusion" move than the "outcome" move. This is evident in the tense usage and words frequently used in our "concluding" move. Like Tankó's and Pho's moves, our "concluding or reflecting" move featured present simple tense which reflects the nature of generalized statements presented in such moves. Additionally, the most frequent words WordSmith produced for this move include "we" (39 tokens), "this" (26 tokens), "research" (22 tokens), "I" (17 tokens), and "argue" (27 tokens) which show the writer's preference to have self-mentions in this move, similar to "discussing the research move" in Pho (2008). As most such moves occur at the end of abstracts, the writer's self-mentions can be seen as an attempt for the purpose of self-promotion (Hyland, 2003, as cited in Pho, 2008, p. 244). The frequent use of the word "argue" in this move is attributable to the argumentative nature of conceptual review article abstracts. Furthermore, as in most cases of "summarizing the findings" move of Pho and consistent with Hyland and Tse's (2005, as cited in Pho, 2008, p. 243) observation, "that"-complement clauses were dominant in "presenting the author's own reflection, argument, or proposed model" sub-move (26).

The second sub-move in "concluding or reflecting" move is similar to the "implications" move of Tankó (2017) which highlights the practical significance of the outcome of research and the "pseudo-discussion" move in Can et al. (2016). Consistent with Tankó's observation and contrary to the findings of Can et al. as Table 3 shows, this sub-move was one of the least frequent sub-moves in English conceptual review article abstracts in terms of both range and frequency distribution. Tankó (2017) relates this to the fact that the purpose of humanities

disciplines, unlike natural and social sciences, is not to generate universal laws. Rather, the study of literary topics is done "to understand them better and to engage in scholarly conversation about them by means of critical reflection and cogent argumentation" (Germano, 2008, as cited in Tankó, 2017; Turabian et al., 2010, as cited in Tankó, 2017). Nevertheless, the fact that this sub-move indicates worthiness of the paper in terms of practical significance and can thus be used to promote the paper after being published may call for writers of conceptual review articles to include this sub-move in their abstracts if abstract length limitations allow.

Only some abstracts contained both sub-moves (28, 30); many abstracts featured only the first sub-move (27, 28). This may be attributable to the word count restrictions that many journals place on the abstract of articles (Swales & Feak, 2010).

Altogether, the presence of "concluding or reflecting" move, along with other moves and features such as frequent self-references, dominant present tense use, etc. in English conceptual review article abstracts indicates that most such abstracts are indicative-informative. Tankó's (2017) investigation of literary research article abstracts also showed that such abstracts seem "to be a mix of the descriptive and informative abstracts, with markedly more of the descriptive abstract features" (p. 51). Tankó based this conclusion on the fact that such abstracts contained present tense dominantly, gave the general nature and scope of the research, didn't substitute the paper, included passive voice, active voice, and self-mentions.

5. Conclusion

This study was an attempt to investigate rhetorical functions and their associated linguistic realizations in English conceptual review article abstracts based on their move structure. Overall, the study shows that English conceptual review article abstracts in linguistics and applied linguistics fields use a rhetorical structure, different from that of research paper abstracts. This rhetorical organization is realized through a different set of moves, found in English linguistics and linguistics conceptual review article abstracts, namely 1) "establishing the territory", 2) "identifying the problem", 3) "introducing the present research", 4) "organizing the paper", and 5) "concluding or reflecting". Moreover, each move in English conceptual review article abstracts is realized through a distinct set of

sub-moves which indicates the hierarchical structure of such abstracts. Additionally, the highly frequent use of plural self-mentions, i.e. inclusive "we", indicates that in English conceptual review article abstracts the emphasis is on research as a group activity inclusive of the researcher(s) and objects of study. Furthermore, the presence of "establishing the territory", together with "identifying the problem" can be seen as an attempt to indicate that the paper is part of a well-established area of study. Also, the occurrence of "introducing the present research" move right at the beginning of some English conceptual review article abstracts may be an attempt to reinforce filtering of information overflow. Moreover, depending on the move, writers of abstracts make use of different levels of impersonal and personal style. In addition, the highly frequent use of the "structure" move indicates that conceptual review article abstracts need to reflect their content structure, due to the fact that such articles do not follow the same structure in presenting information. Finally, the prevalent use of the five moves and their associated sub-moves, together with other features such as frequent self-mentions and dominant present tense use indicates that most English conceptual review article abstracts are indicative-informative in function.

Writing English conceptual review article abstracts is an important but complex task, given the gateway function they play (Lorés, 2004). However, most previous studies have not based their guidelines concerning how to structure review article abstracts on corpus-based studies. Therefore, the results of the present study, though by no means conclusive, are useful. On the one hand, our findings can be used as the basis for contrastive EAP research on how our rhetorical functions occur in other genres. On the other hand, our results can be used to inform EAP material developers and pedagogy. Hence, EAP material developers can incorporate our findings in their materials for writing effective English conceptual review article abstracts; and EAP teachers can include our findings in their teaching sequences when focusing on writing English conceptual review article abstracts.

The study was limited in a number of ways. First, conceptual review articles are not commonplace and very few of them can be found published in periodicals. Browsing all the volumes of a periodical over a period of ten years, for example, might lead to the identification of only one or two such articles. Because of this, our dataset contained a small number of these abstracts from specific journals in

linguistics and applied linguistics. Second, the subjective nature of coding of moves makes the results of such studies rather inconclusive, though we did our best to ensure coding precision through calculating inter-coder reliability measures. Nevertheless, the study led to some observations worth noting. Hence, further research is necessary to investigate much larger corpora, to see if such abstracts truly represent their associated articles in terms of moves, and to investigate the rhetorical organization of such abstracts from a disciplinary and cultural perspective.

Acknowledgments

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