



A Corpus-Based Study of Reformulation Markers: The Case of Native versus Non-Native Research Articles

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Abstract

This study presents a corpus-based study of reformulation markers as a common metadiscourse device in research articles of applied linguistics by native and Iranian non-native writers. Toward this end, qualitative and quantitative analyses of reformulation devices were conducted. The corpora were compiled by downloading articles from academic journals which were selected via convenience sampling. Each corpus included approximately one million words. All the analyses were conducted through employing Murillo's (2004, 2007) classification which consists of three broad categories: explicit meaning functions (identification, specification, and explanation), conceptual meaning functions (definition and denomination), and implicit meaning functions (conclusion and mathematical operation). After analyzing the data, Chi-square tests were performed to determine whether the results found in the analysis were statistically significant. The results revealed that there were differences between the functions of reformulation markers (RMs) across research articles written by native and non-native writers. In particular, they differ in terms of their types and functions, where non-native writers of applied linguistics research articles (RAs) use RMs much more frequently than native writers of applied linguistics. In light of the findings, recommendations are made for EAP classes as well.

Keywords: reformulation markers, frequency, function, native, non-native, applied linguistics, research articles

Introduction

Academic discourse communities are related to discussion, criticism and academic competition with regard to knowledge creation, without being free of power constellations. We can consider academic research communities as 'specific interest groups' whose main purpose is to produce knowledge in a specific subject area. They have certain mechanisms and media by which they can exchange data and shared by their members, they have specific terminologies and genres, which both include official texts (e.g. articles, conference papers, working papers) and unofficial texts (e.g. submission letters) (Swales, 1998). In the official discourse, the focus is often on argumentative texts which are based on well-documented proof.

Writers accompany social practices of problem-solving for writing in academic discourse communities, which is often an integral part of it. Besides the shared language and discourse, academic discourse communities, therefore, also share practices of thinking, research, and learning. Those are in line with processes of changing, producing, disseminating and sharing knowledge in departments, institutes, universities, research associations, scientific disciplines, and on conferences. Not all "social practices" (Fairclough, 1992, pp. 86-96) of research, information management, knowledge sharing, and learning are discursive, but these "discursive practices" (Fairclough, 1992, pp. 73-86) are the starting point for the concept of the discourse community. Nowadays many of these discursive practices take place in electronic newspapers, on electronic conferences, in electronic discussion lists, or weblogs.

Researchers belonging to all academic discourse communities are portrayed by the wish to impart new information to alternate parts of the academic community, and the principle method for transmitting scientific examination is by means of publication. Consequently, it is vital for these scholastics to have a good command of the discourse conventions which portray scientific composing. In this respect, Widdowson (1979) has propounded the thought of an all-inclusive scientific discourse which is procured through instruction. Then again, following Kaplan's (1966) starting deal with contrastive rhetoric, a few different studies in this field have uncovered that textual organization of academic discourse is legislated by socio-social components which represent rhetorical variety. Contrastive rhetoricians keep up that different discourse communities' desires are the essential reason for cross-cultural differences in composing styles, and that authors of second languages may exchange their L1 textual and rhetorical methodologies to the new circumstance of the second language before they have completely consumed the desires of their second language audience (Connor, 1996).

Academic discourse is the normal object of examination for different subfields of English studies. In a large portion of the conventional studies academic discourse has been seen as indifferent and goal. An incredible large number of these studies are educationally arranged, focusing on student needs and competences. But this perspective has gradually been supplanted by a view of academic writing as social engagement, involving interactions between writers and readers (Hyland, 2004).

One of the most significant and revealing instances of institutional discourse features including academic writing discourse is the speakers' utilization of metadiscourse, a term used to demonstrate a movement in discourse levels, by method for which the speaker's messages are continuously passed on simultaneously with the continuous discourse. A considerable measure of language specialists has characterized the term metadiscourse; among them Vande Copple (2002), Halliday (1973), and Hylland (1998) are the most critical ones. According to Vande Copple (2002), metadiscourse refers to components in messages that convey meanings other than those that are essential referential.

The word metadiscourse was coined by Harris in 1959 to refer to text segments "that hold data of only secondary importance" (Beauvais, 1989, p. 11). Vande Kopple (1985) characterizes metadiscourse as "discourse about discourse or communication about communication" (p. 83). By this, he implies that metadiscourse helps readers in their endeavors to organize, classify, interpret, evaluate, and respond to the propositional substance of the content. Essentially, Crismore and Farnsworth (1990) describe metadiscourse as the "writer's overt and non-overt presence in the discourse in order to direct rather than to inform readers" (p. 119). Based on a perspective of writing as a social and open engagement, metadiscourse centers our consideration on the way writers project themselves into their work to indicate their informative plans (Hyland, 1998). The term metadiscourse can serve what Halliday (1978) calls the text-based and interpersonal capacities of language. It can, thus, be considered as a significant characteristic of a text which helps its textuality by serving as the glue which bonds the propositions together and develops both cohesion and coherence (Jalilifar & Alipour, 2007)

Given the significance of metadiscourse in academic disciplines, from among eleven academic discipline classifications provided by Braxton and Hargens (1975), five have the most empirical attention: the Hagstrom Model (1964) on the basis of the idea of disciplinary agreements, the Lodahl and Gordon Model (1972) based on levels of paradigm development, and the Biglan Model (1973) based on the hard/soft, pure/applied, and life/non-life distinction, the Hargens Model (1975) based on normative and functional integration, the Zuckerman and Merton Model (1986) based on disciplinary codification, (Braxton & Hargens, 1996). Each of these classification schemes is rooted in the idea that every field of study has

Alipour:

A Corpus-Based Study of Reformulation Markers

different levels of paradigmatic development according to their level of agreement. Fields with high paradigmatic development enjoy high levels of agreement with regard to issues such as appropriate research topics and methods (Braxton & Hargens, 1996). Fields with low paradigmatic development, however, have less agreement with regard to the appropriate research questions for their field and even less agreement on the appropriate methodology for addressing these questions (Alise, 2007; Kuhn, 1970).

Considering the salience of academic language, linguists and discourse analysts have paid increasing attention to academic disciplines. Rhetorical structure (Swales, 1993, 2004) and metadiscursive features (Alipour & Matouri, 2017; Hyland, 2005; Hyland & Tse, 2004; Jalilifar & Alipour, 2007; Kahkesh & Alipour, 2017) have been studied in order to examine disciplinary and generic differences (Hyland 1999, 2000, 2004, 2005) in academic texts written in English, mainly in research articles, book reviews, and textbooks. To work in a discipline, linguists need to be able to engage in these practices and, in particular in its discourses. Hence, disciplines structure the work within wider frameworks of beliefs and provide the conventions and expectations that make texts meaningful. For example, it is believed that applied linguistics as a discipline in humanities, is explicitly interpretive, has a more varied readership and a more fluid discourse, and guides the readers to make their own meaning (Creswell, 2009). Physics and computer engineering research articles, as quantitative research articles, have their own ways to provide conventions and put forth their claims, and they aim to create explicit, coherent, systematically principled organization of knowledge (Bernstein, 1996, 1999).

Essentially, we can see disciplines as language using communities and the term helps us join writers, texts, and readers together. Communities provide the context within which we learn to communicate and to interpret each other's talk; therefore, we can see different disciplines as particular ways of doing things, particularly of using language to engage with others in certain familiar ways. Wells (1992) believes that:

Each subject discipline constitutes [different] ways of making sense of human experience that has evolved over generations and each is dependent on its own particular practices: its instrumental procedures, its criteria for judging relevance and validity, and its conventions of acceptable forms of argument. In a word each has developed its own modes of discourse (p. 290).

Nonetheless, this deterministic view has been challenged by Carter (2003). He believes that a text does not exist in a vacuum but naturally refers to other texts that are essential for its understanding, thus, to increase language awareness within the parameters of form and function, learners should be encouraged to view language as a system and to examine what language does in the given context. This was a shift from a schemata-view to a

language-awareness-view defined as “the of an enhanced consciousness of and sensitivity to the forms and functions of language” (Carter, 2003, p.64).

As a subcategory of metadiscourse markers, one of the most important examples of institutional discourse features is the speakers' use of reformulation markers which are a significant discourse phenomenon in academic discourse (Thoiron & Bejoint, 1991). Reformulation is a discourse function that the speakers use to re-elaborate an idea in order to be more specific and "facilitate the hearer's understanding of the original or to develop the previous information" (Blakemore, 1993, p. 125). Reformulation is based on an equivalence act that two expressions are used to express a single idea in which the second utterance is an interpretation of the first one. Some researchers consider reformulation as an equivalence act at the metatextual level (Bach, 1996; Cabre, 1995; Fuentes, 1993).

Reformulation becomes possibly the most important factor when somebody says something that has been paraphrased beforehand or said in an alternative way (e.g. in other words) and accepts that the two formulations could be likened either from the semantic or the pragmatic point of view. Reformulation, however, is not a simple discourse function. It ought to be viewed as a complex semantic classification that ranges from paraphrase to other values such as specification, explanation, summary, or denomination, and even to non-paraphrastic meanings such as implication, conclusion, and contrast (Cuenca, 2003).

Reformulation is a discourse phenomenon in academic discourse (Thoiron & Bejoint, 1991). Reformulation techniques go hand in hand with communication: writers regularly feel the need to go back to what they have composed formerly, keeping in mind the end goal to expand, specify, clarify, or define it, and they may utilize reformulation markers for that reason (Gulich & Kotschi, 1983). In English, some of these markers can include that is, that is to say, in other words, i.e., and namely, together with different less grammaticalized markers such as to put it another way, to put it simply, to put it differently, in plain words, etc.

Reformulation markers are a sort of discourse markers which function to upgrade integration in discourse (Schourup, 1999). Murillo (2004) calls them "markers of the explicit" as these discourse markers "aid, to shifting degrees, in the inferential process by making explicit reference assignment, disambiguation, further improvement and elliptic material regarding the recuperation of the propositional structure" (p. 2066). Murillo (2004) sees, from the perspective of Relevance Theory that reformulation markers not only function to recover the propositional form of an expression, but they also operate in connection to its explicatures and implicatures "by explicating implicated premises and conclusions" (p. 2066).

The glossing and explicating functions of reformulation markers render them especially relevant to the explicitation theory in translation universal research.

Alipour:

A Corpus-Based Study of Reformulation Markers

For example, Baker (2004) finds that reformulation markers, for example, that is, that is to say, and in other words, are more frequent in fiction and biography components of the Translational English Corpus than in the fiction sub-corpus of the British National Corpus. Mutesayire (2005) views the higher frequency of reformulation markers in translated English as confirmation of explicitation.

Blakemore (1993) examined all instances of reformulation in a range of both literary and non-literary samples and demonstrated that reformulation serves a variety of aims, such as making relevance. In a technical content, a reformulation may oblige the understanding of the original with the end goal of guaranteeing a more correct understanding of a specific idea, and thus a greater understanding of the surrounding text.

In another study, Cuenca (2003) dissected the reformulation markers in English, Spanish, and Catalan. The study was focused around a corpus of expository composition, mainly academic writing. The examination demonstrated the frequency of the markers and differences in the variety of forms expressing reformulation and also in their recurrence of utilization. It was shown that those markers prompting the making of connectives have their roots in discourse, parallel differences are required to be found in content development. He contended that the divergences identified in the linguistic use of English versus those of Spanish and Catalan could be connected with two different styles for building academic texts.

Bach and Cuenca (2007) investigated the structure and utilization of reformulation markers in examination papers composed in English, Spanish, and Catalan. Considering the form and frequency of the markers, English papers had a tendency to incline toward basic altered markers and included less reformulators than Spanish and Catalan. Unexpectedly, formal Catalan and Spanish papers included more markers, some of which were intricate and considered some structural variability. Concerning utilization, reformulation markers secured element connections between shares of discourse which could be recognized in our corpus with expansion, reduction and permutation. The examination of the corpus demonstrated that English authors normally reformulated to add more data to the idea (expansion), while Catalan and Spanish authors reduced the substance or the implicatures of the previous formulation more frequently than English.

Xiao (2011) conducted a contrastive investigation of word clusters and reformulation markers in Chinese and English and discussed the implications of discoveries for interpretation of Universal theories. The study was focused around three adjusted practically identical corpora which Represented British English, native Chinese and translational Chinese. There was also an English-Chinese parallel corpus which gave a premise to contrasting native and translated English and researching explicitation in translation. The results

illustrated that word clusters were more regular in translated Chinese. Chinese and English tended to use reformulation markers of diverse styles, while reformulation markers were by and large more basic in both translated English and translated Chinese than in their native counterparts.

Murillo (2012) explored the utilization of reformulation markers as a typical metadiscourse device in L1 English and Spanish and in L2 English research articles of a specific discipline, namely, Business Management. These markers are viewed as procedural items, i.e. they encode data on how to process lexical meaning (Murillo, 2012). The general recurrence of utilization of the markers, the types of markers utilized, the functions most commonly performed, and their (non-)parenthetical utilization were compared in order to detect the degree of transference in their use by the L1 Spanish academics writing L2 English articles. The results were contrasted with comparable studies on reformulation markers in general English and Spanish in addition to studies in other disciplines. The results uncovered that some general rhetorical L1 features are more likely to be adjusted in the L2 texts written by L1 Spanish academics than other more specific grammatical features.

Moreover, the review of the literature in reformulation markers shows that there is a need for disciplinary RMs research in native and non-native corpora. While cross-cultural RMs research has been conducted in a few languages, with the comparative language often being English, Spanish and Catalan (Murillo, 2012, Cuenca, 2003 & Bach & Cuenca, 2007), it appears that to date no study has been conducted on disciplinary research that examines the use of RMs and their functions in different academic disciplines between native and non-native RAs written by English natives and Iranian non-native researchers. The current investigation can be of significance in that it can shed light on how reformulation is employed in academic language to specify, elucidate, and summarize propositions. It can also demonstrate the variation in the types and functions of RMs in RAs written by native and non-native writers. The current study, thus, aims to conduct an analysis of the frequency, types, and functions of RMs to find out the differences which might exist in research articles of applied linguistics written by both native and non-native writers. In order to conduct a comprehensive analysis, this study attempts to explore two research questions,

- (1) Do the frequency and types of reformulation markers differ significantly in the English RAs of applied linguistics written by native and non-native writers?;
- (2) Do the functions of reformulation markers differ significantly in the English RAs of applied linguistics written by native and non-native writers?

Method

Corpora

The data for this study comprised of a total of more than two million words from both native and non-native RAs of applied linguistics each comprising approximately one million words. The compilation of all corpora included the main text, general title, titles of sections and subsections, and footnotes/endnotes. The RAs were selected from well-established journals of applied linguistics written by native and non-native writers. Their selection was informed by their inclusion in Web of Science and was based on convenience sampling and the accessibility of their articles to the researchers. That is why there were five journals for native applied linguistics and four journals for the non-native ones. The period of their publication ranged from 2004 to 2017. It should be pointed out that Writers' names, affiliations, and biographies were checked in each article and some emails were sent to writers in order to make sure all the articles were authored by British natives.

The native and non-native applied linguistics articles were selected from these journals: Applied Linguistics (AP), System, Journal of Pragmatics (JP), English for Specific Purposes (ESP), and Discourse and Society (DS), Asian ESP Journal (AESPJ), Asian EFL Journal (AEFLJ), Journal of Teaching Language Skills (JTLS), and Iranian Journal of Applied Linguistics (IJAL). The following table shows the number of articles included in the corpus from each group.

Table 1. Number of Articles in Each Group

| <i>Disciplines</i> | <i>Number of Articles</i> |
|--------------------------------|---------------------------|
| Native Applied Linguistics | 180 |
| Non-Native Applied Linguistics | 121 |

As can be seen, the numbers are different on the ground that the length of articles was different for each group to make a corpus of nearly one million words. For example, while nonnative applied linguistics articles comprise approximately 5000 words on average, the average length for native articles is roughly 3000 words.

Instrumentation

Two instruments were employed in the present study. The first one was AntConc freeware available at <https://laurenceanthony.net>, and the second one was the classification of functions of reformulation markers proposed by Murillo (2004, 2007).

AntConc is a freeware, multiplatform tool for carrying out corpus linguistics research and data-driven learning. It contains seven tools: Concordance,

Concordance Plot, File, View, Clusters, Collocates, Word List, and Keyword List. We used the Word List tool for counting the total number of words in all the articles and used Concordance tool for counting the number of RMs in all the articles.

The analysis was carried out according to the classification proposed in Murillo (2004, 2007) which integrates the typologies proposed by Fluttum (1994), Gulich and Kotschi (1995), and Quirk, Greenbaum, Leech and Svartvik (1985). This classification takes as a basis the process of utterance interpretation as explained by Relevance Theory (Blakemore 1987; Wilson & Sperber 2004) and considers reformulation discourse markers as procedural items that contribute to the different stages in this process, by guiding the inferences that the hearers/readers make when they interpret utterances.

Given the nature of reformulation markers, the typology of functions in this framework is closely associated with the contextual and co-textual presentation of information and content, and consists of three broad categories or macro-functions: first, functions related to the interpretation of explicit content, including coreference/identification and specification, i.e. where the markers assist in reference assignment, introducing the referents, and explanation where the whole explicit import of an utterance is restated or clarified; second, functions related to conceptual or encyclopedic knowledge, with definition and denomination markers, to generate the necessary background for interpretation; and third, functions in which the markers introduce implicated conclusions, thus helping in the recovery of implicit content: conclusion and quantification/mathematical operation. The following table summarizes the functions of RMs.

Table 2. *Functions of RMs*

| Function | |
|-------------------------------|--|
| Explicit meaning functions | Identification Specification Explanation |
| Conceptual Knowledge Function | Definition Denomination |
| Implicit Meaning Function | Math. Conclusion |

On the basis of the above framework, the functions of reformulation markers were analyzed and classified by two raters separately in a pilot study. Toward this aim, the two researchers, who were the raters, first studied and discussed the framework closely and attempted to reach agreement over the best definition for each category of functions and tried to find examples for them. After this step, each of the raters separately analyzed 20 percent of the corpus based on the agreed-upon framework. Finally, to ensure the inter-rater reliability of the analysis,

Phi correlation was run. The obtained coefficient was 0.87 which manifested that the method adopted to analyze the functions of RMs across the research articles of each discipline was reliable.

Procedure

Before conducting the main analysis of the corpora, a pilot study, elaborated on above, was carried out in which two raters crosschecked the reliability of RMs classification which was employed. The reliability index was 0.86 calculated by Cohen's Kappa. A bottom-up text analysis method was employed. After reading all the RAs carefully, the articles were searched for RMs, the words which function as these devices were marked and put in their proper categories regarding their function in the context they were embedded. It is worth mentioning that, apart from the reformulation markers scrutinized in the present study, there were some others such as to put it differently, to say the same thing differently, in plain words, to put it simply, and to put it bluntly which were excluded from the analysis simply on the ground that they occurred very infrequently in the data so much so that they could not lend themselves to the analysis. In our corpora, only one of them, to put it simply, occurred twice so that they were excluded from the analysis. The type of each marker was detected and then the frequencies of all of them were counted in all the RAs.

Results

In this section, the frequencies and percentages of the types of all the RMs in the corpora are presented and compared through Chi-square.

Table 3. *Types of RMs*

| Types | Applied Linguistics Discipline | |
|----------------|-----------------------------------|-----------------|
| | Native | Non-native |
| That is | 160 (29.73%) | 206 (24.46%) |
| That is to say | 20 (3.71%) | 10 (1.18%) |
| Namely | 82 (15.24%) | 110 (13.06%) |
| In other words | 58 (10.78%) | 146 (17.33%) |
| i.e. | 218 (40.52%) | 370 (43.94%) |
| Total | 538 (100%) | 842 (100%) |
| Chi-Square | 0.0 | 0.0 |

Table 3 illustrates that in native applied linguistics RAs the most repeated RM was i.e. (40.52%), while the least repeated one was that is to say (3.71%). As for non- native applied linguistics RAs, i.e. with 43.93% and that is to say with 10% were the most and the least recurrent markers respectively.

According to table 3, Chi-square (0.0) indicates significant differences in the frequency rates of RMs and their functions between native and non-native RAs. It means that the non-native writers used reformulation markers in their RAs differently from the native writers.

In table 3, figures strongly manifest that non-native writers on English overused the RMs in their RAs. It also shows that the marker i.e. was the most frequent one in both native (218 times) and non-native (370 times) applied linguistic RAs, while that is to say was the least frequent one in both of them which is (20 times) in native and (10 times) in non-native RAs.

According to the above table, Chi-square value (0.0), which is substantially below 0.05, indicates significant differences in the frequency rates of RMs in native and non-native applied linguistics research articles. It means that native and non-native writers of different academic disciplines apply reformulation markers in their research articles in different ways.

In table 3, figures strongly manifest that non-native writers on English overused the RMs in their RAs. It also shows that the marker i.e. was the most frequent one in both native (218 times) and non-native (370 times) applied linguistic RAs, while that is to say was the least frequent one in both of them which is (20 times) in native and (10 times) in non-native RAs.

Some examples of RMs in native and non-native applied linguistics discipline are given below:

Native

1. "His may be due to the fact that the first article is extracted from the newspaper supporting the winner team, i.e., Persepolis, who has been the superior team and attacking its rival most of the match time." (Discourse and Society, 2005, Introduction).
2. "Following Van Ek's (1976) dichotomy of -distance/+distance, the social distance perceived between the interlocutors in our study was also a binary valued variable. That is to say, the interlocutors either had a close relationship (-distance) or hardly knew each other (+distance)." (Applied Linguistics, 2007, Results).
3. "combine with second level instructions (Luscher, 1994), namely, denomination, designation, exemplification, correction, conclusion, argumentation, level change and degree of specialization Finally, these specific meanings or moves." (Journal of Pragmatics, 2007, Methodology).

Non-Native

4. "Characterizing a complaint as expectable from the complainant, i.e. as dispositional, can be a way of undermining its factual basis or seriousness." (Journal of Teaching Language Skills, 2008, Result).
5. "Ultimately, despite Ellie's claim, the 'whole story' is an amalgamation of Ellie's and Meg's tales. That is to say, there may be a hierarchy of narrators, but both narrators are entitled tellers." (Asian ESP Journal, 2010, Methodology).
6. "According to Van Dijk (1993), words such as accuse or charge are discrediting devices. In other words, it appears as though the newspapers perceive what Iran says as just accusation and claim." (Asian EFL Journal, 2011, Introduction).

Regarding the functions of the RMs, the frequencies and percentages of all the RMs in native and non-native applied linguistics research articles are presented and compared through Chi-square in the following table.

Table 4. *Functions of RMs*

| Functions | Applied Linguistics Discipline | |
|----------------|--------------------------------|-----------------|
| | Native | Non-native |
| Identification | 32 (5.94%) | 178 (21.14%) |
| Specification | 190 (35.31%) | 194 (23.04%) |
| Explanation | 260 (48.32%) | 335 (39.78%) |
| Definition | 36 (6.69%) | 60 (7.12%) |
| Denomination | 4 (0.74%) | 22 (2.61%) |
| Conclusion | 16 (2.97%) | 27 (3.20%) |
| Math | 0 | 26 (3.08%) |
| Total | 538 (100%) | 842 (100%) |
| Chi-Square | 0.0 | 0.0 |

According to this table among all the functions in native applied linguistics RAs, the most frequent function is explanation (48.32%) and the least frequent one is denomination (4%). The overall results of analyzing broad category of RMs, which are explicit meaning functions, conceptual knowledge functions, and implicit meaning functions, are as follows: explicit meaning functions were the most frequently used type of RMs as 89.57 percent, followed by conceptual meaning functions (7.43%) and implicit meaning functions (2.97%).

As for non- native applied linguistics RAs 39.78% of all functions were explanation, whereas merely 2.61% was denomination, rendering them the most and the least persistent functions in non-native applied linguistics RAs. Analyzing

the broad categories of functions indicated that explicit meaning functions, conceptual meaning functions, and implicit meaning function were used as 83.96%, 9.73% and 6.28% respectively of functions which explicit meaning functions were the most repeated function than the others.

According to table 4, Chi-square (0.0) indicates significant differences in the functions of RMs between native and non-native RAs. It means that the non-native writers used reformulation markers in their RAs differently from the native writers.

As can be observed, there are some differences between the frequency and percentage of different functions of RMs in native and non-native applied linguistics RAs. The most recurrent function in both native and non-native applied linguistics RAs was explanation which accounted for 39.7% of RMs in non-native and 48% in native RAs. The least frequent function in both corpora was math which is 0% in native and 3% in non-native RAs.

According to the table 4 the functions related to the interpretation of explicit meaning including identification, specification, and explanation are more common than the other functions and the functions that are related to implicit meaning consisting math and conclusion, which help in the recovery of implicit content, are the least frequent functions. Some examples of this function in the native and non-native RAs of applied linguistics are provided below.

Explanation Function/ Native

7. "What influences the trajectory of the parent-child interaction, however, i.e. whether there will be choice offers by parents or whether there will be protracted negotiations between parents and children, is whether the participants, themselves, interpret the event as moral, social or personal." (English for Specific Purposes, 2008, Abstract).

Explanation Function/ Non-Native

8. "Prepositional GM is so pervasive that it governs other types of GM in this genre, forcing them to merge. That is, not only does it give rise to a fundamental structure for adverbials in MPF in its own right, but it also merges and creeps into other types of GM, particularly with double barreled GM and S/T Presentation when they are Prepositional GM at the same time." (Journal of Teaching Language Skills, 2009, Conclusion).

Following explicit meaning functions, conceptual meaning functions, including definition and denomination, were the most frequent functions in both native and non-native RAs of applied linguistics. However, it is worth mentioning that they were more frequent in non-native RAs than in native ones. This can be due to the fact that writers use these functions to define the specific terms well to the readers, and this may be caused by a few cultural factors; perhaps making a good understanding of readers is necessary for non-native writers, and they may feel their duty is not just to convey their knowledge. This suggests that in native applied linguistics RAs, conveying knowledge is more important than improving

the understanding of the readers. As a consequence, it seems that native writers are not as reader-involved and reader responsible as Iranian non-native writers. The followings are some of these functions in the native and non-native RAs:

Definition/ Native

9. "This article will consider one of these factors in particular – the increasing demands placed on candidates in British job interviews for specific kinds of 'discursive skill' (Iedema, 2003), namely the synthesizing of personal and institutional discourses to produce an acceptable identity." (Discourse and Society, 2007, Introduction)

Denomination/ Native

10. "In studies of ESP, i.e. English for Special Purposes, the term ethnographic research is sometimes used to refer to the observation and description of naturally occurring language" (System, 2009, Discussion)

Definition/ Non-Native

11. "In this dimension, Wilkinson, et al. (ibid) views the moral development as cumulative, that is, the earlier sub-scales are - not necessarily preceded by mature judgments." (Asian EFL Journal, 2012, Result)

Denomination/ Non-Native

12. "In keeping with Henning's definition, there could be a variety of gender pairings in an OPI namely Oral Proficiency Interview, between interviewers and candidates the gender effects of each of which could potentially be a major source of difference between interviews." (Asian ESP Journal, 2007, Introduction)

Functions of implicit meaning functions including conclusion and mathematical operations were the least frequent functions in the native and non-native RAs of applied linguistics. Some examples of these functions in the native and non-native RAs are provided here:

Conclusion/ Native

13. "Probability with which that term is chosen' (Halliday, 2005: 65) and that is why lexical and grammatical choices may mean different things in different genres, where probabilistic profiles may be found to vary." (Journal of Pragmatics, 2009, Introduction)

Mathematical Operation/ Native

14. "The most frequent marker in English is the abbreviation i.e. (25 instances out of 54, 46.3%)." (Applied Linguistics, 2010, Result)

Conclusion / Non-Native

15. "The intention to produce related pictures during a reading task seems to have the effect of keeping readers on task and pushing them toward deeper processing in comparison with when there is not a picture production task. In other words, because readers have to produce pictures on paper, they cannot "just memorize" or ignore essential information." (Iranian Journal of Applied Linguistics, 2013, Introduction)

Mathematical Operation/ Non-Native

16. "As for the internal intensifier's sub-formulas, the adverbial and the emotional intensifiers in the participants' apology utterances made up the highest frequency of the internal intensifiers, namely, 38.12% and 22.7% respectively." (Asian ESP Journal, 2009, Result)

Discussion

In the view of first question, which asked for any differences in the types of RMs in RAs of applied linguistics in both native and non-native corpora data analysis confirmed that there were statistically significant differences between these two corpora. Regarding the examination between the native and non-native applied linguistics corpora and frequencies of RMs, results demonstrated that non-native writers utilized RMs more than native writers. This means that the total number of RM was more in the non-native corpus, and the two corpora were different in terms of frequencies of RM. This result is in line with the study by Alipour and Zare (2013), in which they analyzed the use of lexical bundles in native and non-native RAs, and it was found that non-native writers made a greater use of lexical bundles. Here, it is worth mentioning that the non-native writers' more frequent use of RMs could be due to the fact that they have already been exposed to them several times in their previous readings of various kinds of English literature (Biber & Barbieri, 2007). In other words, non-native writers have a desire to produce something which is like the works of native writers they were previously exposed to. Subsequently, they attempted to make use of the RMs which were used by the native writers, but sometimes they may overuse them to demonstrate that they are capable enough to be considered as writers in that discipline. However, it is possible that they may also have a lower range of such markers at their works.

Another reason for the non-native authors' greater use of the RMs may refer to the fact that when they use them frequently, they can help them to achieve naturalness in language use, and markers that are different from native speaker norms need more time and consideration when reading. The more writers use RMs, the more they may be considered as apprentice writers, who tend to use RMs in a misguided attempt to imitate experienced writers' use of a wide range of explanation, hoping this will help them to achieve naturalness in their language use. Thus, non-native authors attempt to use the RMs excessively, and this might cause them to over-use them in their papers.

Regarding the second question, there was a difference between native and non-native RAs concerns the use of different functions of RMs. The analysis showed that native and non-native writers of applied linguistics use explicit meaning functions very frequently, and it is noticeable that these functions are more frequent in non-native RAs than native ones. As we know, writers try to help readers' understanding the content by using explicit meaning functions; they

include functions as identification, specification, and explanation. Explanation function was the most recurrent one in both the native and non-native applied linguistics RAs, and it is due to the nature of RAs of applied linguistics as qualitative RAs that aim to produce “qualitative/subjective description, empathetic understanding, and exploration” of human thoughts, behaviors, and experiences as “situational, social, contextual, personal, and unpredictable” (Johnson & Christensen, 2012, p.34) and the writers need to explain everything very clearly to arrive at this goal.

Regarding other functions, implicit meaning functions including conclusion and mathematical operations were the least frequent functions in the native and non-native RAs of applied linguistics, which might be due to the fact that these functions tend to be used less in humanities or social sciences such as applied linguistics. Notwithstanding this similarity, both conclusion and mathematical operation functions were used more frequently by non-native writers. This was possibly caused by cultural factors; non-native writers perhaps try more to show the conclusion and results, and they insist to ensure that everything is clear to the reader. It is necessary for these writers to mention the results with a high degree of certainty. It seems that it is a good characteristic for writers to express their self-assurance and certainty about the subject matter they discuss in their articles. This might be a “stylistic feature” (Khodabandeh, 2007, p.71) of non-native writers who show more certainty.

It can be concluded that these differences stem from a number of cultural, political, and psychological factors which are effective in the writing style of native and non-native writers. The discrepancies may also root in the existing differences to the background and personal characteristics of these two groups of writers.

The results of this study are consistent with Xiao (2011) who compared native and translated corpora, and showed that native speakers used significantly fewer RMs than non-native speakers in their translations. A number of cultural, social, and psychological factors might help justify such differences. These differences may show the specific nature and writing style of native and non-native English writers. Aijmer (2007) argues that reformulation markers have the metalinguistic function of clarifying, specifying, expanding or elaborating without changing the semantic content. One possible reason for non-native writer's tendency toward the heavier use of comparing to native writers could be that they might opt for more precision in their writings at the cost of appropriateness. In other words, they use more RMs in order to protect themselves against being criticized. Using the RMs, they can clarify, specify, expand, or elaborate and convey their meaning completely clear, and they can be sure that the readers get their meaning correctly, and then they ensure that no one can criticize that there is vagueness in their writing. Hyland (2002) believes that writers support their study and express

their ideas based on a variety of social and psychological factors. However, “rhetorical identity” is influenced by the writer’s background (p.1111).

As Liantade (2008) mentions applied linguistics is more interested in theoretical studies and is more concerned with theories, so the discipline of applied linguistics exercises more caution. It means that the writers should be more objective in their writing because in the applied linguistics, they are dealing with theories and the writers must be sure that the readers can get the concept of theories correctly because theories have an interpretative, abstracting, and generalizing nature and they provides an explanatory framework for some observation and possible hypotheses that can be tested in order to provide support for the theory. As a result, the theory should be understood correctly.

Conclusion

This study compared the reformulation markers in English research articles of applied linguistics written by native and Iranian non-native writers. Results of this study indicated native and also non-native writers of applied linguistics RAs applied RMs in considerably different ways.

It was found that functions related to the interpretation of explicit meaning are the most frequent functions; in contrast, implicit meaning functions are the least frequent ones in this discipline. Another conclusion that was reached is that there are significant differences between the frequency of RMs in native and non-native RAs of applied linguistics since Iranian non-native writers employ RMs much more than native writers. It can be concluded that these differences stem from a number of cultural, political, and psychological factors which are effective in the writing style of native and non-native writers. The discrepancies may also root in the existing differences to the background and personal characteristics of these two groups of writers.

Results of the current study can have implications for non-native writers; if these writers, who write in English as their foreign language, become aware of the differences and similarities of the use of reformulation markers in the target language, they will be able to apply them more effectively and appropriately.

Having a better understanding of RMs and their similarities and differences, English for Academic/Special Purposes (EA/SP) students and researcher can develop a good command of RMs in English and write more authentic texts. As Martin (2003) suggests, contrastive studies of this type can be especially helpful to novice academics who wish to publish their works in international and national journals and, therefore, need to know the conventions which are favored by the English-speaking discourse community. To achieve their goals, they are required to be aware of disciplinary and cultural conventions of their discourse community. If Iranian researchers have a good understanding of RMs, they can communicate

more efficiently in the target language and be more successful members of their discourse community.

One of the limitations of this study was the low number of studies, disciplinary ones in particular, which directly consider reformulation markers. This made our work difficult so that we could not compare the findings of the current study with them to gain more insight and depict a better picture of reformulation and its use across different disciplines. Another limitation that we faced is related to the fact that there were not any studies on the application of RMs in Persian in the Iranian context. The majority of the previous studies compared RMs in English, Spanish, and, Catalan.

In this study, the researchers did not make a distinction between single-authored and two- or more-authored RAs. Therefore, a comparison of the use of RMs in just single-authored or two- or more-authored RAs with different topics can be the subject of future research. Future researchers may also consider studying reformulation across different genres, for instance, introduction and discussion sections of articles, or across more formal and informal or written and spoken registers. It seems that reformulation in ESP students' writings has sunken in oblivion by researchers. This line of research can cast light on some of the learners' writing problems. It can also inform ESP classes and materials.

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