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Tartalom

Linguistic realizations of research article abstracts written by Ecuadorian and North American academic authors

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Abstract: The way in which article abstracts introduce their research has increasingly become the subject of great interest among researchers and scholars. The abstract, indeed, after the title, is the most read section freely available online. The study investigates the linguistic features, such as verb tenses, clauses, modals and stance markers that categorize abstracts and abstracts moves in North American and Ecuadorian journals. The genre analysis of English and Spanish texts is based on a corpus of 120 abstracts from the fields of humanities and sciences. Results show that present and past tense, and hedges are the most frequent categories. Present tense predominantly occurs in M1 and M2, and sometimes in M5. The usage difference concerning the linguistic realization of abstracts moves might be due to the nativeness or non-nativeness of authors however, such rhetorical and style choices remain quite unclear, in terms of conventional patterns or authors' preferences.

1 Introduction

The way in which abstracts present their research articles has led to extensive attention being paid to the rhetorical and writing style across disciplines and languages. Indeed, much research recognizes the importance of examining how research article abstracts (RAAs) written by native and non-native authors textually organize the language when communicating the gist of the whole paper (e.g. Çakir 2015, Can et al. 2016, Fallatah 2016; Fan and Song 2017, Kosasik 2018, Lee 2017). Although abstracts significantly vary in the organization of the texts namely, in the rhetorical and writing style as well as language use, they have to present faithful and accurate information. In fact, much credit and merit is given nowadays to those RAAs that provide readers with a clear picture of the information content. In other words, they function as "screening devices", helping readers decide whether to read the complete article or not (Huckin 2001:93). An abstract, therefore, is the brief description and the pure reflection of the entire article (Bhatia 1993). Abstracts, particularly RAAs, are quite important because they constitute the first mini-texts that academics will encounter freely available online.

However, writing publishable RAs that include accurate abstracts is not easy. It is because writing like any other advanced skill requires the pre-existing knowledge of the writing system, as formats, vocabulary and sentence structure of those second or foreign languages to be successfully acquired. In this process, the effective selection of the rhetorical and linguistic elements to persuade readers determines the readability of the written texts (Ren and Li 2011). In effect, according to the writing style, texts may be categorized as sources that contain good or vague information. In academic writing therefore abstracts play an essential role in disseminating the new knowledge, particularly the way of how writers show readers that the paper is worth reading and deserves their attention (Hyland 2000). What is more, scholarly journals, publishing articles written either in English or in other languages, require abstracts accompanying the original research studies (Martin 2003:27). From this point of view, abstracts create not only a road map of the full paper, but also are the key section of the article, which, according to Salager-Meyer (1992), are read more receptively by scholarly and non-scholarly readers, either national or international.

Abstracts then in the globalized world of scientific communication and information explosion are the gateways to knowledge production (Swales and Feak 2009). Thus, non-English medium journals, under pressure to disseminate the research findings and hook an international audience, include an English version of the original RAAs (Martin-Martin 2005). Despite the fact that the English version of the RAAs is a great chance for non-native authors to disseminate their articles internationally, the English translated version seems not to be of much interest for many writers, indeed, they perceive it as a mere requirement set by the journal editors (Lorés 2014:87). Accurate abstracts, in fact, draw readers' attention and increases opportunities of indexing and citation. Nevertheless, some writers are not aware of the potential impact that abstracts have when translating the scope of the paper into the foreign language vers-ion (Lorés 2014). Underlying the relevance of rhetorical and writing style in academic writing, a great number of the RAs summarize their works by emphasizing the purpose, methodology, results and conclusions (Hyland 2000).   The present contrastive study examines the linguistic realizations of 'moves' —discoursal or rhetorical units to determine the communicative purpose of the texts (cf. Swales 1990, 2004) in RAAs published in North American and Ecuadorian journals. It explores the linguistic features, namely verb tenses, clauses, modals, and stance markers, that characterize the RAAs written in the disciplines of education, sociology, electronics and agronomy in English and Spanish languages.

1.1 Theoretical background

In the genre analysis of written texts, research studies have increasingly attempted to show how academic writers intervene in their texts and build solidarity with their readers (Hyland and Tse 2005:124). The analysis of texts then, particularly research articles (RAs), has gone beyond the structural and linguistic examinations aiming to understand the context in which the genre is produced. Much research therefore has been carried out on how language is textually organized in different sections of RAs, such as the introduction (Swales, 1990, 2004), results (Yang & Allison, 2003), methodology (Lim, 2006) and abstracts (e.g. Pho, 2008; Işık-Taş, 2018). This research interest, in the last two decades, has led to the proliferation of considerable studies in the genre analysis of RAAs published in particular disciplines, for example

linguistics, applied linguistics, education, literature, law, experimental science, sociology, among others (e.g. Doró 2013, Kafes 2012, Lau 2004, Samraj 2002, Suntara and Usaha 2013, Ghasempour and Farnia 2017, Loutayf 2017, Ebrahimi and Motlagh 2015, Hyland 2015) and genres (Bordet 2014, Hyland 2000, Kosasik 2018, Sayfouri, 2010) across languages (e.g. Behnam and Golpour 2014, Divason and León 2006, Lorés, 2004, Martin-Matin 2003, van Bonn and Swales 2007).

As a result of the above studies, research outcomes show that abstracts may vary, in terms of rhetorical organization and how language is produced in the surrounding context of publication. For instance, Martin-Martin (2003), Lorés (2004) and Loutayf (2017) found that RAAs written in Spanish traditionally reflect the introduction, method, result and discussion (IMRD) conventional structure, but with variation in the frequent occurrence of result moves throughout the abstracts. Similarly, Behnam & Golpour (2014), notice that abstracts written in English and Persian follow the four-move structure, as purpose, method, result and conclusion (PMRC). This result is in line with those of Kafes (2012), Suntara and Usaha (2013), Samraj (2002) and Dos Santos (1996) where introduction, unlike conclusion, was optional. Nonetheless, Lau (2004) notices that abstracts written by expert authors showed a frequent occurrence of a five-move pattern compared to the abstracts written by PhD student authors.

Kafes (2015), in contrast, found that Turkish abstracts hold their local discursive practices, but follow the international English writing conventions to construct the rhetorical structures, reporting a three-move conventional pattern such as PMR. Çakır (2015), similarly reveals that the majority of Turkish and English RAAs adopt the three-move schema, however, Turkish abstracts describe the research purpose without referring to the place, whereas English ones define it when announcing the purpose of the study. These findings are in connection with those of Doró (2013), Hyland (2000), Kafes (2012), Pho (2008), Fallatah's (2016), Lorés (2014), Farzannia and Farnia (2017), Al-khaswneh (2017), Kosasih (2018) in which introduction and conclusion were optional, except in Farzannia and Farnia's study, and Fallatah's international RA abstracts, where conclusion had 90% of occurrence. This rhetorical divergence may be connected to writers' different local practices and international discourse conventions.

Taking the impact of the above descriptive framework, academics have turned their interest to analyzing the linguistic features that constitute those RAAs written in different disciplines and genres. Mur-Dueñas (2011) thus investigates the linguistic and cultural differences of research articles published in English and Spanish journals. Topicalizers and endophoric markers were more common in the Spanish articles than in the English ones. Nonetheless, English texts showed a strong use of interactional meta-discourse features to balance the writer–reader positioning as the agent or owner of knowledge. In the same way, Loutayf (2017) found that the majority of abstracts written by Argentinean authors in five disciplines adopt the impersonal style (70%) when communicating the content of the entire article. It seems that Argentinean writers hold a secondary role to avoid negative criticism within the academy. Similarly, Poveda (2007) notices that modal verbs occurred in English abstracts, and adverbial expression and subjectivity in Spanish ones, nonetheless, both types of texts used hedging strategies, such as depersonalization, modesty, solidarity, deference, tentativeness and justification to control the level of precision when presenting the information. Writers then show objectivity rather than authority or arrogance.

Tseng (2011), examining the linguistic realization of abstracts moves written in English discovered, that the present tense frequently occurred in M1, M2 and M5, and

past tense sometimes appeared in the moves: M3 and M4. Nonetheless, native texts used the present tense more than their nonnative counterparts did. The findings also revealed that the present perfect was used in almost over half percentage of the abstracts. Tseng's findings are in line with those of Salager-Meyer (1992), observing that verb tenses perform different functions in different sections of the texts and their moves, for instance, the present tense enhances and emphasizes the discussion in the conclusion, recommendation and synthesis of the data. In contrast, the past tense was commonly used in purpose, methods, results and case presentation moves. Ghasempour & Farnia (2017) and Kosasik (2018), meanwhile, found that present tense and past tense frequently occurred in the five moves identified. Likewise, Pho (2008) reports linguistic variation, in terms of verb tenses. Present tense and present prefect were the most frequent categories across the abstracts; however, their occurrence varied according to the context of publication. Pho also notices that writers have the tendency to open the scope of work by mentioning previous researchers or studies in the field, that is, the reference subject frequently occurred in the introduction move. Similarly, Ghasempour & Farnia (2017), Kosasik (2018) and Pho's studies, Lorés (2014) found dissimilar lexico-grammatical patterns in English and Spanish abstracts. Thus, active voice with textual nouns as subjects occurred in both languages; nevertheless, Spanish texts favor the use of the passive form 'se', which is used to refer to the process without mentioning the agent. These results show the linguistic differences between languages, in terms of the writing style.

Hu and Cao (2011), investigating the stance markers in RAAs published in English and Chinese-medium journals, found that hedges were most frequent in English texts and boosters in Chinese ones. This study is in line with the results of Divasson & Leon (2006), in which boosters were frequently used in non-native texts. Hu and Cao conclude that writers whose first language is not English sometimes show preference for using boosters when presenting their claims and arguments. On the other hand, Ebrahimi & Motlagh (2015), studying the textual devices and discourse functions in RAAs written by native and non-native writers of English, notice that the choice of textual devices, frequencies and discourse functions, to some extent respond to particular discursive practices and conventions across disciplines. This stylistic variation in Swales and Feak's (2012) view is affected by the genre, discipline and discourse community practices, which somehow are closely connected to the audience, purpose, organization, and style. For example, in Ebrahimi & Motlagh (2005), native authors tend to employ more contrastive textual devices than non-native ones to validate their research merits and to keep the readers' attention on their findings. Alonso (2014), on the other hand, revealed that evidential lexical items were common in law and medicine abstracts written in English and Spanish while epistemic modals were used in the English law and medicine texts.

The rhetorical and linguistic differences discussed above may be attributed to different linguistic and cultural conventions among writers (Connor 2004). Indeed, when authors position their claims about what others have said and what they actually say, they seem to have their own preferred rhetorical and textual strategies. Following Connor's view, Hyland and Tse (2005) highlight that written texts contain rhetorical patterns or moves, which are essential to analyze the rhetorical and textual organization of particular type of texts. In this vein, van Bonn and Swales (2007) argue that such rhetorical patterns are valuable sources to identify not only the socio-cultural influence, but also the discursive practices employed in different scientific communities across languages. Taking abstracts as the corpus for the analysis, the aim

of this study is to investigate the linguistic features —verb tenses, clauses, modals and stance markers— that categorize abstracts and abstract moves written in the fields of humanities —education, sociology— and natural science —electronics and agronomy— published in North-American and Ecuadorian journals.

1.2 Research Questions

In order to portray a clearer picture of the linguistic features used in English and Spanish RAAs, the present study addresses the following three research questions:

(i) What are the most frequent linguistic features in articles abstracts published in the two journal types?
(ii) What are the linguistic features that characterize each abstract move in the fields of humanities and science in both languages?
(iii) Are there any significant differences in the linguistic realizations of moves across the four disciplines?

2 Methodology

Sentences are the analytical unit for the linguistic realizations of moves. Nevertheless, given the fact that abstracts are condensed texts, and a move pattern may likely be within one or more sentences (e.g. Lau, 2004; Pho, 2008), linguistic signals, for instance, *in a recent work…, the present study examined…, the purpose of this investigation is…, the article analyzes data from…, the data for this research…, the findings reveal…, the results of the study suggest…, the article concludes…, within this context, differences …, in this project, we…* are used to identify the communicative goals of each move and its textual organization. With this in mind, the analysis focuses on (a) verb choice, namely present-past tense, perfect and passive structures, (b) clauses such as coordinated and subordinated, (c) modals, particularly auxiliary and non-auxiliary, and (d) stance markers, as hedges and boosters.

Following Tseng' (2011) procedure, the move analysis consisted of three steps: thus, if a move was realized in a sentence, then the main verb of that sentence determined the verb tense of such move, as in examples 1 and 2. Then, if a move was realized in a clause or a phrase, for instance, the main clause ruled the sentence structure from the analysis, such as in examples 3 and 4. Finally, if a move was embodied by several sentences, which had different linguistic realizations, then the features, namely, verb tense, voice and modals were counted as individually ones, see examples 5 and 6. The researcher, namely, human coder supports the reliability of the coding of this procedure, which consists of a double round of coding with an interval in between. Then the coding was compared to see to what extent this match, and to establish the final results.

[1] *The control of atmospheric emissions **is** relevant in fragile ecosystems as the Galapagos Islands* (M1). Present [Eng. electronics – NNS]

[2] *El propósito de esta investigación **ha sido** recoger datos sobre la aplicabilidad de la concepción simple de la lectura a la lectura del español.* (M2) Pretérito perfecto /perfect/ [Span. education – NSS]

[3]   *Even though the pesticide was tested in two different crops, it **needs** a further research to see its effects on the product.* (M5) Subordinate and present [Eng. agronomy – NS]

[4]   *Using canonical correlation analysis with 475 white Catholic and Protestant students, results **showed** religious beliefs and white privilege attitudes…* (M4). Subordinate and present [Eng. sociology – NS]

[5]   *La tecnología aplicada al desarrollo de prótesis **ha experimentado** grandes avances desde los diseños hasta la manufactura y sistemas de control. La tendencia **es** a crear diseños que permitan al amputado tener más grados de libertad de lo que una prótesis rígida normalmente ofrece* (M1). Pretérito perfecto /perfect/ and presente /present/ [Eng. electronics – NSS].

[6]   *The results **showed** that student teachers' learning from experiences is a process involving many interrelated personal and social aspects. This process **could include** past and present experiences gained in multiple situations and contexts over time. Four chains of activities and experiences **were distinguished** in their learning processes.* (M4) Past, non-auxiliary verb and passive [Span. education – NS]

Once each move was clearly set down and differentiated from one to another, the study quantifies the frequency of occurrence of the above-mentioned linguistic features in order to analyze to what extent native and non-native RAAs show writers' frequent preferences for these linguistic features when constructing the rhetorical moves of the abstracts. The data analysis includes the most and the least frequent features in both languages across the four disciplines.

2.1 Corpus

The study embraces the analysis of 120 RA abstracts published in North American and Ecuadorian peer-reviewed online/print journals in the fields of humanities and sciences. Eighty English abstracts written by native English and Spanish speakers of the language, and forty Spanish texts written by native Spanish speakers published in the periods of 2010–2016 constitute the sample of the research study. The native and non-native authorship, as authors' names and affiliation, were verified based on the bio-data section presented at the beginning of the article of each journal. Nonetheless, as many speakers from different countries speaking different languages may use the same names usually common in English-speaking countries (Sayfouri 2010), in the current study, the nativeness or non-nativeness of the context in which the related journal/article was published is the matter and not the nativeness or non-nativeness of the author. Thus, the genre analysis focuses on the publication content of the abstract rather than on the writers themselves.

Although the linguistic realizations of RAAs, for instance, in the disciplines of linguistics, applied linguistics and literature have been widely investigated, the aforementioned disciplines, as far as I know, are scarce in Ecuadorian journals compared to education, sociology, electronics and agronomy. Moreover, there are few contrastive studies carried out in Ecuador, particularly in the genre analysis of abstracts between Ecuadorian and North American journals. With this in mind, the

corpus of the Spanish RAAs is composed of 6,886 tokens, with 6,179 ones in the English translated version and 6,303 running words in the English L1 RAAs. The corpus was distributed across the four disciplines, for instance, 1,850 words in education, 1,331 in sociology, 1,533 in electronics and 2,172 ones in agronomy constitute the Spanish sub-corpora. Additionally, 1,688 tokens in education, 1,284 in sociology, 1,298 in electronics and 1909 ones in agronomy form the sub-corpora of the English version of RAAs published in Ecuadorian journals. On the other hand, 1,574 running words, 1,371 in sociology, 1,357 in electronics and 2001 ones in agronomy are the sub-corpora of English RAAs published in North American journals.

The data set includes 40 English article abstracts published in North American journals, such as the *American Journal of Education (AJE), Journal of Teacher Education (JTE), American Journal of Sociology (AJS), Sociological Perspectives, Journal of Electronic Materials (JEM), Journal of Electronic Packaging (JEP), Journal of Agricultural and Food Chemistry (JAFC) and Journal of Agricultural Science (JAS)*. Each discipline such as sociology, education, electronics and agronomy encompasses 10 abstracts. Similarly, the Ecuadorian corpus consists of 40 English article abstracts and their original Spanish versions (40) published in Ecuador in the following journals: *INNOVA Research Journal, Alteridad, Axioma, UTCiencia, Revista Tecnológica ESPOL, Amazonica, Analitika, Procesos, Perfiles, Avances, Ingenius and, La Granja*. All four disciplines, namely sociology, education, electronics and agronomy, comprise of 10 abstracts each.

The selection criteria used in choosing the journals were their indexation. Both Ecuadorian and North American journals are indexed either in a regional or international medium contexts. Ecuadorian journals, for instance, are indexed in latindex (regional cooperative online information system for scholarly journals from Latin America, the Caribbean, Spain and Portugal), as well as in *elsevier, dialnet, GoogleScholar, REDIB, and e-rivist@s*. These journals are hosted by Ecuadorian Universities. North American journals are indexed in *ERIC, EBSCOhost, elsevier, American statistical association, SciSearch, SCOPUS, Applied Science and Technology, and GoogleScholar*. Unlike North American journals, Ecuadorian ones are mixed journals, either online or print, which devote special sections and space to the aforementioned disciplines.

3 Results and Discussions

The contrastive study of the genre article abstracts has revealed that there are significant differences derived from the lexico-grammatical choices in the three linguistic and cultural practices, namely, L1-English, EFL-English, and L1- Spanish. The table 1 below shows the frequent use of each linguistic category in the abstracts accompanying the articles. It can be seen that present tense is one of the most frequent linguistic features used in English and Spanish abstract published in native and non-native-medium contexts. Hedges and past tense are reported to be the second and third highest features used in the majority of the RA abstracts, either in Spanish or in English. Unlike hedges and past tense, boosters and subordinate clauses are the fourth and fifth highest frequent linguistic category used among article abstracts written in both languages. Perfect tenses, coordinate clauses, non-auxiliary and passive

structures are the least frequent linguistic elements throughout the Spanish and English sub-corpora.

The research outcomes of the present study are in line with those obtained by Tseng (2011), and Hu and Cao (2011). Tseng, on the one hand, found that present and past tense were the most frequent linguistic categories in almost over the majority of 90 RA abstracts. Hu and Cao, on the other hand, report that hedges were more frequent in English texts than in their non-native English counterparts. Although in the current research the past tense is the third most frequent structure compared to Hu and Cao's, and Tseng's rhetoric and linguistic realization of verb tense, the findings further support its common use in RAAs. That is, in the construction of abstracts, native and non-native abstracts written in English and Spanish show the frequent use of such a linguistic feature. Thus, present and past tense, and hedges were the typical pattern used in both descriptive and informative article abstracts when introducing the scope of the research papers. In effect, the genre analysis reports that from 120 RAAs analyzed, 248 times (26%) the present tense was used in the texts, distributed across native and non-native English and Spanish written corpora. Additionally, past tense was used 124 times (13%), and hedges occurred 155 times (16%) in the RA abstracts. Moreover, boosters significantly appear 107 times (11%) in the whole corpora.

Ling. Features	English corpus.				Spanish corpus		
	NES	%	NNES	%	SPaS	%	*Occur*
Present tense	90	25	77	21	81	33	248
Past tense	37	10	38	10	49	20	124
Perfect tense	11	3	9	2	9	4	29
Passive voice	33	9	37	10	7	3	77
Coordinate	18	5	12	3	11	5	41
Subordinate	38	10	52	14	13	5	103
Auxiliary	29	8	20	5	1	-	50
Non-auxiliary	14	4	27	7	3	1	44
Hedges	53	15	53	14	49	20	155
Boosters	41	11	47	13	19	8	107
TOTAL	364		372		243		

Table 1. Linguistic features in English and Spanish abstracts

All the linguistic features mentioned above are more frequent in L1 English than in Spanish and in the English translated abstracts. Yet, the English translated version from Spanish outperformed the total use of the linguistic features in the sub-corpora. The parallel analysis of abstracts written in English by non-native users of the language (NNES) and Spanish ones written by native speakers of Spanish (SPaS) shows that Spanish texts significantly varied the occurrence of linguistic features when presenting the gist of the original RAAs in the foreign language translated version (see Table 1 above). For instance, whilst present tense in the Spanish sub-corpora occurs 81 times (33%), in the English one it does 77 times (21%). Similarly, Spanish abstracts outperformed English texts in the frequent used of the past tense with approximately 49 times (20%) of occurrence. Passive structures, subordinate clauses and boosters tend to be more common in English RA abstracts than in Spanish ones. Hedges tend to be more frequent in English (13%) than in Spanish (8%) texts. Auxiliary verbs were the least frequent linguistic feature in Spanish texts while

perfect tenses rarely occur in NNES and SPaS abstracts. This linguistic variability would seem to be due to the fact that Spanish authors have to adapt their texts to the English discourse conventions and writing system.

The data analysis of the frequency of the verb tense in each move shows that the present tense was the preferred tense in Move 1 (introductions), Move 2 (purposes), and M4 (results), and that the past tense was used more frequently in Move 3 (methods) in abstracts written in Spanish. Among the 80 abstracts analyzed (40 in English and 40 in Spanish), M2 sections show the highest occurrence of the present tense in Spanish and in the English translated version. Passive voice, in contrast, frequently occurs in M3 in the English texts translated from Spanish. The further analysis revealed that Spanish abstracts and their English translated versions seem to be less informative and less organized compared to their L1 English counterparts. However, despite the fact that English and Spanish languages, linguistically and culturally, in terms of linguistic base and language identity are quite different, these linguistic and cultural differences do not mean that Spanish speakers are not able to produce informative and well-structured information as natives do. The discrepancy arises when first language (L1) features are translated into foreign language writing to communicate the gist of the original paper. For example, the below excerpts, (7-9) discuss the lop-sided punctuation and mechanics, wordiness and lack of concreteness throughout the texts.

[7]   *'[...] impunemente, a través de los **micromachismos** (mM), que es el término con el que se conoce a las cotidianas agresiones **machistas** de baja intensidad...'* (SPaS)
      /…[…], impunity a Through the (mM) **micromachismos, which is the term that is known to everyday…that is known to everyday Low Intensity **macho** aggression…/' M1 (Sociology, English translated version).

[8]   'La **habilidad** empresarial fué establicida como una variable dependiente, y como variables **independientes**...' (SPaS).
      /…The entrepreneurship **hability was stablished as a dependent variable, and as **independants** variables…./ M3 (Sociology, English translated version).

[9]   *'Este artículo explora las razones por las cuales las manifestaciones de violencia simbólica **son** socialmente toleradas y reproducidas, en la mayoría de los casos...'* (SPaS)
      ***/*This article explores the reasons why the manifestations of symbolic violence **son** and reproduced socially tolerated in the majority of cases…/ M1(Sociology, English translated version)

The examples above alert writers, particularly those to whom English is not their first language, so that they pay more attention when constructing the information content of any type of text, mainly those of RAAs. In the sense that a text poorly written in any language remains poor in its recipient/target language after being translated unless the translator re-writes the whole text (Wallwork, 2016). In other words, writers are virtually 100% responsible for readers understand or not understanding the text. Then, in order to make reading a pleasant experience, writers should include clear and concrete information to introduce the gist of the complete article. Otherwise, it affects the comprehension and interpretation of the information content. As a result, the content may be judged in terms of concreteness and

wordiness, in the sense that such information is neither informative nor descriptive text (Tovar, 2016).

The non-parallel linguistic analysis between abstracts written in English by native and non-native academic authors reported that boosters (13%) and subordinates (14%) appear more often in the RAAs published in non-native-medium journals than in those of native ones (11% vs. 10%, respectively). Nonetheless, native English texts exceeded non-native ones in the frequent use of the present tense (see Figure 1 below). Past tense and hedges appear to have similar frequency of occurrence in both the native and non-native English sub-corpora. The results are consistent with Hu and Cao (2011), who noticed that hedges were frequently used in English texts. The genre-related difference in this study is that boosters markedly occurred in English abstracts written by Ecuadorian speakers, whereas in Hu and Cao (2011), boosters frequently appeared in Chinese texts. The lexico-grammatical choices between native and non-native English abstracts shed lights on to assume that non-native writers adapt their texts to the rhetorical and international English writing style. Despite the fact that non-native RAAs, particularly those of Ecuadorian authors, follow English writing conventions, a further analysis suggests that there are stylistic aspects such as word choice that needs to be polished when translating from one language into another (see the examples a, b, c above).
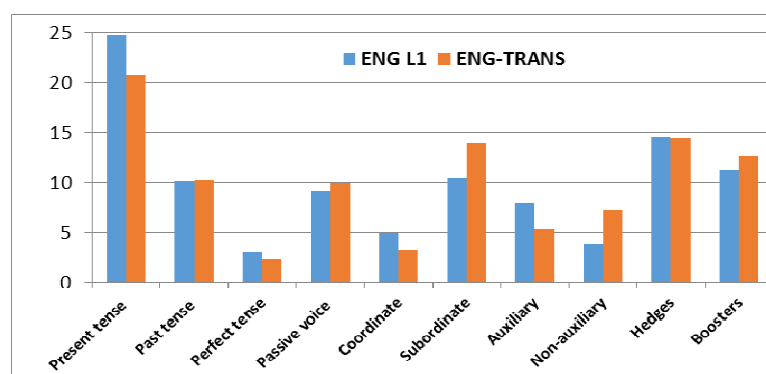

Figure 1.
Non-parallel linguistic analysis of native and non-native English corpora.

When comparing the results of the present study with those of Hu and Cao (2011), similarities and differences were discovered. In effect, the data in figure 1, clearly show that in the present study and that of Hu and Cao, writers whose first language is not English sometimes show preference for using boosters to present claims. That is, non-native English speakers tend to express a higher degree of certainty and confidence when interpreting the research findings, while native writers, in contrast, appeared to be more prudent at the moment of discussing and presenting arguments in M4 (results).

Results of the lexico-grammatical choices in each move across RAAs written in English by native and non-native speakers show differences in the linguistic realization of the abstract moves. The data suggest some linguistic variation in the realization of moves that constitute abstracts in the field of humanities. The statistical analysis reveals that non-native English texts more often use the present tense when

presenting the purpose, M2 (31%), introducing the topic, M1 (25%) and describing methodology, M3 (24%) than their native English counterparts. Moreover, present tense was the linguistic feature in which non-native English abstracts devoted much more space when constructing the purpose (M2). Unlike coordinates, auxiliaries occurred in almost all English abstract moves written in the field of humanities. Although passive voice indicated regular move occurrence in both NE and NNE English RA abstracts (8%), this feature did not occur in M1 (introductions) and M5 (conclusions) throughout native and non-native texts, respectively. Similarly, non-auxiliaries were rarely used in the moves M2, M3 and M5 written by native speakers of English. Moves 2 and 4 had the highest occurrence of using all the linguistic categories, in effect, M2 in NNE abstracts accounted for 48 times while M4 registered 53 times in those texts authored by NE speakers of the language.

On the other hand, the relevant research outcome derived from the contrastive analysis between English and Spanish RAAs written in the fields of humanities and science indicate the common occurrence of the present tense in both languages. Nonetheless, the Spanish abstracts published in Ecuadorian journals, in the two fields have the tendency to use the present tense to communicate their research studies, in essence, 33% corresponds to science and 30% to humanities. The genre analysis so far also revealed that in English abstracts authored by Ecuadorian writers, boosters were common in move M4 in the fields of science and humanities. Meanwhile, hedges in M2 and subordinate clauses in M1 frequently occurred in RAAS written in the field of humanities. Conclusion (M5) was the move reporting the least use of the linguistic categories, particularly in those of Spanish texts, which were used 13 and 11 times in both fields. Passive voice was rarely used in Spanish texts; however, few had the use of the passive form 'se' (see examples 10-13 below), which is used to refer the process without mentioning the agent. This result is in line with Lorés (2014, 2016), who found this linguistic category in sociology texts. The usage differences concerning verb tense, clauses and markers might be due to the nativeness or non-nativeness of authors when producing abstracts (Lau 2004). Moreover, non-native English texts with 183 occurrences in humanities and 189 in science exceeded Spanish abstracts (115 vs. 128, respectively) in the usage of the linguistic features within the five-move pattern. Yet, the frequent occurrence of hedges and present tense significantly varied from move to move. Subordinates and non-auxiliaries occur in conclusion move (M5) in English abstracts published in Ecuadorian journals; nonetheless, these categories were absent in Spanish texts. Although the linguistic variation of the linguistic features discussed earlier was clearly identified across RAAs, the causes for such linguistic choice in each abstracts' move remains quite unclear, in terms of conventional or authors' preferences.

[10] *En la actualidad casi toda la electricidad que se consume en Galápagos **se genera** en centrales equipadas con motores de combustión interna.* (Electronics M1)
'Currently, almost all the electricity consumed in the Galapagos **is generated** in plants   equipped with internal combustion engines.'

[11] ***Se presenta*** *una variedad de propuestas existentes en la bibliografía sobre modelación, optimización y pruebas para dispositivos solares tipo termosifón, considerando la posible aplicación en el diseño de dispositivos que se adecuen a la geofísica de la zona ecuatorial.* (Electronics M2)

'**The paper presents** existing proposals in the literature on modeling, optimization and Thermosiphon solar devices testing, considering the possible application in the design of devices that fit the equatorial geophysics.'

[12] *En la deshidratación **se aplicó** el método de secado en bandejas a tres temperaturas,…* (Agronomy M3)
'In the dehydration the drying trays method **was applied** in three temperatures,...'

[13] *Dentro de dicho contexto (…) en el presente artículo **se describe** la adaptación y descripción de los valores obtenidos en el experimento Go/No-Go dentro de una muestra de estudiantes.* (Sociology M2)
'In this context (…) t**he article describes** the adaptation and description of the values obtained in the Go / No-Go experiment in a sample of Ecuadorian students.'

The examples above show the occurrence of the passive form 'se' in Spanish abstracts, particularly when introducing the background, presenting the purpose, and describing the methodology of their research. When comparing the tendency of the linguistic realizations between English abstracts written in the field of humanities and science by North American and Ecuadorian authors, English texts in the field of science showed less frequency of use of the present tense (17%) compared to those of the humanities (29%). However, the frequent occurrence of past tense (15%), subordinates (13%) and passive voice (11%) was higher in the science texts rather than in the field of humanities, as 5%, 11% and 8%, respectively. Although the use of hedges and boosters appears to show a similar tendency of usage between the two fields (15% vs. 14%), they are different in terms of occurrence within the sub-corpora. For example, while boosters in texts written by native English authors in the field of humanities occur the 13% in the M1, this category is optional in the field of science. Moreover, whilst in the field of humanities hedges in M2 are used more often in non-native texts (29%) than native ones (18%), in science their usage is parallel (both at 12%). Additionally, result sections (M4) in both fields, humanities and science report to have the highest occurrence of using all the linguistic features throughout the English RAAs published in North American journals (53 vs. 68, respectively). Conclusion move (M5), meanwhile, issued in humanities and science indicate the least use of those linguistics categories written in non-native English texts, for instance, 13 and 21 tokens each. This outcome might be the result of several factors, for instance, different linguistic and cultural conventions, disciplinary practices and the context of publication, which may define authors' rhetorical preferences and writing style.

The data in the Figure 2 show that passive voice, clauses and modals report variability, in the sense that their frequency of occurrence in the fields of science and humanities across disciplines varies in both languages. Thus, the single most striking outcome to emerge from the data comparison was that auxiliaries and non-auxiliaries were omitted in the majority of abstracts moves across the Spanish sub-corpora in the field of science. Passive tense and subordinates, in contrast, occur similarly in English texts. Present and past tense, and hedges were the linguistics categories that commonly occur within the RA abstracts. However, interestingly, the present and past tense was observed to be used more frequently in Spanish texts than in English ones written in science, and, as well as compared to their counterparts in the field of

humanities. The analysis also showed that passive voice was more frequent in English than in Spanish RA abstracts. Closer inspection of the data indicates that boosters follow the general tendency to occur in English abstracts when authors discuss or present the results of the study. Nonetheless, the further analysis revealed that the set of article abstracts written in English had significantly more usage of the linguistic categories than the other set of abstracts written in Spanish.
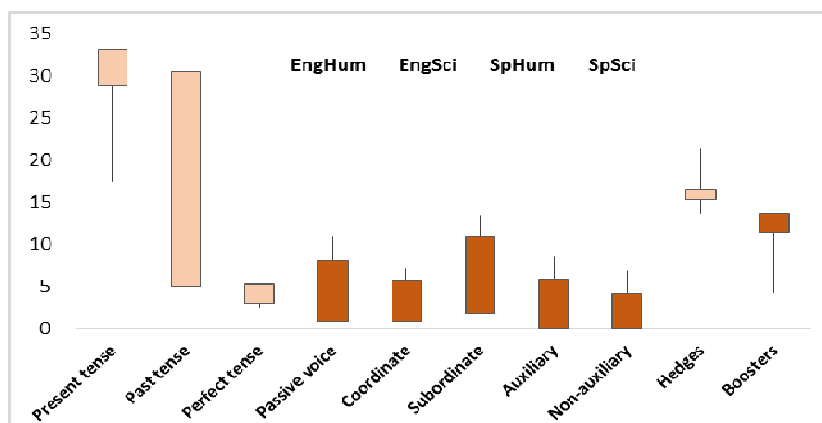

Figure 2.
Linguistic categories in English and Spanish sub-corpora in humanities and science.

The results in Table 2-4, below indicate variation in the textual organization of moves in English and Spanish RAAs in the four disciplines, namely, education, sociology, electronics and agronomy. Although English and Spanish abstracts in the disciplines above mentioned disciplines had fewer occurrences of the linguistic categories throughout the sub-corpora, present tense with the 25% of incidence was the feature that usually occurred in RA abstracts across disciplines. Nonetheless, this feature with 37% of commonness tends to be used more in English sociology abstracts authored by native academics when announcing the essence of the research, especially in moves M2, M4 and M5. Hedges and boosters were frequently used in education texts written in English by non-native speakers of the language, particularly when discussing the research findings. Indeed, they accounted for 16% and 17% of frequency each. The most interesting finding of this cross-disciplinary analysis is that perfect tense, passive voice, clauses, and modal verbs did not occur in agronomy RAAs written in Spanish; however, these features occurred in the majority of English texts written by native and non-native speakers of the language (see Table 2). Moreover, unlike in the sociology abstracts written in Spanish, boosters occurred in the rest of the disciplines such as in the education, electronics and agronomy texts in both English and Spanish sub-corpora. Moreover, a further analysis revealed that there was not any occurrence of the linguistic category in the move M5 throughout the Spanish sub-corpora. Auxiliaries in education, as well as passive voice and coordinate clauses in electronics were infrequently used in RAAs written in Spanish. Furthermore, education and agronomy abstracts written in English and issued by NNE writers had the most frequent use of the linguistics features throughout the corpora, that is, 110 and 113 times of occurrence. On the other hand, whilst in the education

and sociology texts, past tense was partially used to focus on the new findings, in science texts, this feature was deployed when describing the methods (M2) and discussing the results (M4). What is more, RA abstracts written in English by non-native academic authors used more modal verbs than their native counterparts.

The data analysis so far also showed that passive structures were sometimes used in native and non-native English abstracts to reference established knowledge, as well as to emphasize new knowledge. Subordinate clauses occurred in the agronomy text written in English to enhance that the writers' ideas depend on or are the result of a previous conceptual schema, which often indicated the authors' agreement or disagreement with previous findings as a way of justifying the investigation and setting the new knowledge. Perfect tense tends to be the least frequent linguistic element, either in English or Spanish texts. In contrast, hedges, after present tense, were the second most frequent feature used in both fields across the four disciplines. Within the Spanish sub-corpus, there is a clear statistical result revealing that auxiliaries, non-auxiliaries, passive tense and perfect tense were the least frequent micro-categories used throughout the texts written in the field of humanities and science as well.

| Features | English sub-corpora | | | | | | | |
| | Educa | | Slogy | | Electr | | Agron | |
	NES	NNES	NES	NNES	NES	NNES	NES	NNES
Present tense	20	23	32	23	19	16	19	15
Past tense	5	5	3	4	12	10	17	19
Perfect tense	1	6	3	-	2	3	5	-
Passive voice	8	10	4	5	13	8	8	14
Coordinate	5	5	3	6	4	1	6	-
Subordinate	5	9	11	12	10	15	12	16
Auxiliary	3	9	5	3	13	5	8	3
Non-auxiliary	1	6	1	6	-	7	12	8
Hedges	14	18	10	10	13	9	16	16
Boosters	9	19	14	4	8	11	10	13

Table 2. Linguistic features in English sub-corpora across disciplines

| | Spanish sub-corpora | | | |
	Educa SPaS	Slogy SPaS	Electr SPaS	Agron SPaS
Present tense	23	20	17	21
Past tense	8	6	9	26
Perfect tense	3	-	6	-
Passive voice	6	-	1	-
Coordinate	5	5	1	-
Subordinate	6	5	2	-
Auxiliary	1	-	-	-
Non-auxiliary	-	3	-	-
Hedges	19	11	8	11
Boosters	6	-	7	6

Table 3. Linguistic features in Spanish sub-corpora across disciplines

	Present tense	Past tense	Perfect tense	Passive voice	Coordi- nate	Subordi- nate	Auxi- liary	Non- aux.	Hedges	Boosters
Occr	248	124	29	77	41	103	50	44	155	107
%	25	13	3	8	4	11	5	4	16	11

Table 4. Linguistic features in English and Spanish sub-corpora across disciplines

4 Conclusions

The analysis of RA abstracts focuses on how the lexico-grammatical features, for instance, verb tenses, clauses, modals and stance markers are distributed in the texts, particularly in the fields of humanities and social science. In this analysis, similarities and differences were discovered, which mainly derive from or depend on the social context in which the RA abstracts are constructed, used and published. Moreover, different discourse conventions practised within academic communities influence the style of academic writing within disciplines, either in national or international academic settings. The adoption of the international generic formats and forms, particularly in scholarly writing is inevitable. This is because experts or novice writers, in order to get international recognition for publishing in well-structured journals, necessarily have to follow or adapt their writing style and rhetorical strategies to the discourse conventions in which they wish to publish their research.

In general, therefore, it seems that RAAs in the three contexts communicate the gist of the entire paper by adapting their own practices and displaying the writing style of those linguistic and cultural conventions practised in each discourse community. As a result of that lingua-cultural divergence, native and non-native abstracts significantly vary in the textual organization of the abstract moves. Nonetheless, English articles use more hedges than Spanish ones to communicate the new knowledge in such a way that readers and the scientific discourse communities, on the one hand, have space for refutation, and, on the other hand, find the focus of the argument to debate. The research outcomes strengthen the idea that the written discourse is socially produced within academic communities, in effect, the meaning and interpretation of the texts greatly depend on the social practices and conventions. This, in fact, is because in accordance with Hyland and Salager-Meyer (2008:300), "knowledge is not a privileged representation of reality but a conversation between members of academic communities who have some agreement on the ground rules for negotiating what counts as plausible". That is to say, the ways academics write allow readers to know how the information of those texts is or was constructed.

Although the differences between reader–writer relationship, in terms of content and rhetorical structures could be attributed to the variety of conventions and practices within the scientific discourse communities, based on the literature reviewed above, there is no evidence that proves whether such textual organization merely respond to those discourse conventions. Nonetheless, Mur-Dueñas (2011) argues that when addressing papers to an international readership, particularly in English, academic writers have the necessity to adjust their writing to meeting the prevalent conventions and readers' expectations in the new broader cultural context. Yet, this requisite does not mean they put aside their own rhetorical and writing preference in their native language (2011:3076). In effect, authors adjust their research articles to the prevailing disciplinary convention in which they wish to publish, but their article

abstracts, in some cases infrequently follow a conventional style. Consequently, more broadly, research is also needed to determine if the textual variation responds to the authors' preference or discourse conventions.

From the results, it is quite unclear to what extent native or non-native RAAs written in English adopt particular discourse conventions to communicate the scope of the complete article. However, it seems that non-native article abstracts follow an English conventional style to transmit the information towards an international or national audience; nevertheless, when presenting the RAAs written in Spanish, they tend to maintain their own local discourse community practices. This difference could be the reason why the textual organization of the English translated version, in some cases, significantly varied from their original RAAs. Thus, according to Hyland (2000), the discourse practices and conventions define what disciplines are somehow academically recognized and codified across scientific discourse communities. The textual organization then is influenced by particular discourse practices, which follow disciplinary conventions. That is, the ways in which writers present their arguments, seems to signal their discourse-preferred practices, but also show their professional competence in those disciplinary-approved conventions (Hyland and Salager-Meyer, 2008). In order to promote the essence of the research study writers must convince readers of the effective selection of rhetorical and linguistic elements; otherwise, the information content will remain vague and unclear, and, as a result, the entire paper loses opportunities of indexing and citation.

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