Textual Cohesion in Journal Article Abstracts by Chinese and Native English Scholars in Applied Linguistics: A Comparative Study

He Tiantian

School of English Studies, Xi'an International Studies University, Xi'an, China
Tinahtt2062@gmail.com

Abstract: *As an indispensable part of journal article, English abstract can promote the sharing and exchange of international academic achievements. Cohesion and coherence are important criteria of a good abstract. Based on Halliday and Hasan's cohesion theory, this study compares 60 English abstracts written by Chinese and English native scholars. The results show that ellipsis and substitution are rarely used, while reference and conjunction are often employed, with no obvious difference; native English scholars apply lexical cohesion significantly more than Chinese scholars; the frequency of repetition is the highest in both corpora. The findings suggest that Chinese scholars have made considerable strides in writing English abstracts in recent years. Implications may be provided for Chinese researchers about how to write a coherent English abstract.*

Keywords: *English abstract; Grammatical cohesion; Lexical cohesion; A comparative study*

1. Introduction

As a paramount bridge and medium of international academic exchange among scholars worldwide, English abstracts are playing an increasing role. As Swales[1] argued, abstract is an indispensable part of a research article, and a separate text that summarizes the content of the whole paper. Many journal articles published in languages other than English are required to submit an English version of abstract[2]. International search organizations (e.g., SCI, EI, ISTP) also regard whether the writing of English abstracts meets the search requirements as an important index for the inclusion[3]. It is appropriate to highlight the fact that abstracts have independent textual structures and stylistic characteristics, playing a vital role in transmitting text information[4]. It can indicate and predict the structure and content of the following whole text[5]. To this end, we can see that abstracts do matter and it is well worth taking the writing of English abstracts seriously.

Scholars at home and abroad, therefore, have been paying attention to abstract. Prolific studies have been explored on it and many interesting and useful findings have been emerged[6][7][8]. For instance, studies proved that the level of coherence and cohesion of texts impacts the understanding of readers[9][10]. Throughout the course of studies on abstracts, cohesion and coherence have been thriving over the last few decades, but little has been carried out to explore it in English abstracts written by native English and Chinese scholars. Given the significance of English abstracts, as well as different language families of Chinese and English, it pays to contrast cohesive devices in English abstracts written by native-English and Chinese researchers with a view to providing useful and advisable implications on the writing of English abstracts for Chinese researchers.

2. Literature review

2.1. Reviews on abstracts

Found at the beginning of most journal articles, the abstract tends to be the first part of the article to be read and, to some extent, it 'sells' the article[2] and further pursues the 'inform-and-attract' function of the title[11]. Specifically, the abstract demands to summarize the research problem, justify why it is worth studying, provide some information about the methodology of the study and about the most important results and implications[11]. In other words, the abstract can be regarded as a tool to attract readers' attentions and provide them a guidance to grasp the article quickly. It is the epitome of the whole content

of the paper, showing the core and important content with clear and concise language in a systematic way. Moreover, with the rapid pace of globalization, English has become a lingua franca in many parts of the world. Particularly, it has as the language used in journal articles through which the work becomes accessible for the international scientific community[12]. Hence, it is necessary for non-native scholars, especially for Chinese graduates, to learn how to write a standard and well-organized English abstract so as to take part in the international academic communication better.

A range of topics have been addressed in previous studies on abstracts. Those studies at home and abroad have focused on macro- and micro-structural analyses. The former has centered on the genre analysis touching upon discourse patterns, move structure[13][14], and the multi-dimensional (MD) analysis[15][16], to find out how to develop a coherent text via textual variations and generic structure. While the latter has investigated diverse and specific aspects of abstracts such as thematic structure[17], hedging and boosting[18], tenses and voices[19], cohesion and coherence[20][21]. Although those studies add to our understanding of how abstracts operate, more is still needed, especially about how to write a coherent English abstract which is accessible for readers to cut their reading load and to understand the text better.

2.2. Reviews on cohesion

The discourse analysis has boosted 70 years since the structuralist Zellig Harris had put forward this term. Meanwhile, lots of scholars, such as Van Dijk and Halliday & Hasan, have made investigations about it, and then developed and formed several relevant theories like Halliday and Hasan's cohesion theory.

A text has texture that refers to the quality of "being a text"[22]. Texture mainly involves cohesion and coherence. To be specific, cohesion can distinguish a written text or a conversation from a disordered list of sentences, including structural and non-structural cohesion[22]. And the appropriate and correct use of it is conductive to construct a coherent text. In terms of cohesion, it refers to "the range of possibilities that exist for linking something with what has gone before" [22], which is expressed partly through the grammar and partly through the vocabulary, that is, grammatical cohesion and lexical cohesion.

Van Dijk argued that abstracts function as independent texts. The text is created by the textual or text-forming components of the linguistic system, of which cohesion is one, coherence is another[23]. Coherence contributes to understanding the meaning of a text. The more coherent a sequence of sentences, the better they are understood[10]. Much research has been emerged in terms of its value. Malah[24] examined lexical cohesion in abstracts and its findings revealed that repetition was the most preponderant and lexical cohesion conduced to the propositional development of all the move structures typical of abstracts, which had the similar results with Ahmad et al.'s study[20]. In addition, Kirana et al.[21] and Episiasi et al.[25] investigated the types of grammatical and lexical cohesion and the errors in thesis abstracts. They found both types contributed to writing a good abstract mainly showed by reference and repetition but the improper use of cohesive devices exists like omission of conjunction. But such research rarely compared English abstracts written by native English and Chinese scholars in light of cohesion. Thus, the present study takes Halliday and Hasan [22]'s cohesion as the theoretical framework to investigate similarities and differences between native and Chinese speakers' English abstracts. The specific research questions are proposed as follows:

1) Are there any similarities and differences in the utilization of cohesive devices in RA English abstracts between native English scholars and Chinese scholars? If any, what are they?

2) What are the underlying causes of the above-mentioned similarities and differences and what implications can Chinese writers draw from it?

3. Theoretical foundation

The present study contrasts native (English) and non-native (Chinese) scholars' English abstracts based on Halliday and Hasan[22]'s cohesive devices.

According to Halliday and Hasan[22], cohesion occurs when the interpretation of some elements in the discourse relies on that of another. It is realized primarily through two aspects, grammar and vocabulary, that is grammatical cohesion (reference, substitution, ellipsis and conjunction, see in Table 1) and lexical cohesion (reiteration and collocation, see in Table 2).

Table 1: Halliday and Hasan's framework of grammatical cohesion.

Type	Subtype	Specification	Example
Reference	Personal	Speaker (only) Speaker & other person Addressee Other person, male Other person, female Object Generalized person	I, me, mine, my we, us, ours, our, they, their, them you, yours, your he, him, his she, her, hers it, its one, ones
	Demonstrative	Proximity near Proximity far Proximity nature	this, these, here, now that, those, there, then the
	Comparative	Identity Similarity Difference Numerative Comparative form	same, equal, identical, identically such, similar, so, similarly, likewise other, different, else, differently, otherwise more, fewer, less, further, additional, so many better, worse, equally good
Substitution	Nominal		one, ones, the same
	Verbal		do, do so
	Clausal		so, not
Ellipsis	Nominal Verbal Clausal		
Conjunction	Additive		and, furthermore, moreover, besides, in addition, likewise, similarly, while, this is, for example, etc.
	Adversative		yet, though, despite this, but, however, instead, rather than, at least, on the contrary, etc.
	Temporal		then, next, subsequently, first, second, after, meanwhile, finally, in the end, eventually, etc.
	Clausal		so, then, hence, therefore, consequently, because of this, for this reason, for, because, etc.

Reference is the specific nature of the information to be retrieved from elsewhere[22]. Simply speaking, it uses word or words (e.g., proper nouns, noun phrases and pron.) to identify someone or something. Then substitution refers to the replacement of one item by another, which usually uses pro-forms to replace the words or phases in the surrounding text. Ellipsis (zero substitution) refers to the omission of elements normally required by the grammar which the speaker/writer assumes are obvious from the context and therefore need not be raised[26]. Finally, a conjunction does not trigger a search backward or forward for its referent, but it does assume a textual sequence and indicates a connection between different parts of the discourse[26].

Table 2: The general concept of lexical cohesion.

Type	Subtype	Referential relation	Example
Reiteration	Repetition Synonymy Superordinate General word	same referent inclusive exclusive unrelated	leave, leaving, left leave, depart animal---sheep, tiger, wolf, dog (co-hyponyms) thing, people, place, do, make
Collocation	Antonymy Complementary Word from the same series		hot-cold: warm, tepid, lukewarm, cool single-married, dead-alive, post office--letters, stamps

Lexical cohesion, as a major characteristic of coherent discourse, is defined as related vocabulary items occurring across clauses and sentence boundaries in written texts and across act, moving and turning boundaries in speech[26]. As the name implies, it usually achieves the cohesive effect by the selection of vocabulary[22]. There are two major categories—reiteration and collocation (Table 2). Reiteration relates that one lexical item refers back to another, with which it shares a common referent and is related in meaning. Collocation describes the association of lexical items that regularly co-occur,

projected in antonymy (degrees between polarities), complementary (no degree in between), word from the same series (related to field of discourse).

4. Method

4.1. Data collection

Two separate corpora were set up for this study. One (named EA) comprises 30 journal articles' abstracts written by native English scholars and the other (named CA) includes 30 by Chinese scholars (see Table 3). All English abstracts were selected from two authoritative journals in the field of applied linguistics—*System* and *Journal of Second Language Writing*, and published in years from 2016 to 2022. All abstracts were compiled with the forms of E1, E2…E30 and C1, C2…C30.

In order to achieve comparability of the data, the corpora should differ as few as possible, except for the characteristics under the investigation. Three principles are adapted in compiling the two corpora. Firstly, only published journal articles were selected because of their legitimacy and visibility. Published articles are public information that already gained status as accepted and admired by disciplinary peers, which have easy access. Secondly, this study tried to make sure that all articles in EA were written by British and American authors and all in CA by Chinese authors. Finally, to make genre consistent and data comparable, the two corpora are homogenous in terms of subject matter and the total number of words.

Table 3: Description of two corpora used in current study

Corpus	Journal	Number of Articles	Number of Words	Number of Sentences
Native (British and American) scholars	*System Journal of Second Language Writing*	30	5571	226
Non-native (Chinese) scholars		30	5531	201

4.2. Data analysis

As for grammatical cohesion, guided by Halliday and Hasan' frameworks, all English abstracts will be analyzed in the following steps:

1)Identify the boundaries of sentence of each English abstract and code each sentence with numbers.

2)Identify the four types of grammatical cohesion in each sentence in the two corpora.

3)Measure the frequency and the percentage of each type.

4)In light of the data gained from step 3), examine whether there exist significant similarities or differences between the two corpora.

For lexical cohesion, the researcher randomly selected three samples (E1, E13, E14, C1, C6, C26) from each of the corpus to analyze the selected samples' similarities or differences. The other steps are the same as the analysis of grammatical cohesion.

It must be highlighted that as Halliday and Hasan[22] argued, cohesion lies in inter-sentential relation embodied by non-structural elements. Thus, the study only identified and counted cohesive devices used between sentences of the sample abstracts. Moreover, to make sure the reliability of data analysis to the greatest extent, the researcher asked the teacher and postgraduate companions for help to try to confirm some uncertain cohesive devices occurring when identifying.

5. Results and discussion

5.1. The differences and similarities of grammatical cohesion in English abstracts (RQ1)

The types of grammatical cohesion used in the two corpora are presented respectively by the number and percentage in Table 4. On the whole, the frequency of grammatical cohesion in the two corpora is similar (318 in CA; 335 in EA), but there are still some subtle differences. Only three kinds of grammatical cohesion are employed by the Chinese scholars, namely, reference, ellipsis and conjunction while all four types are used in EA corpus. Among them, the most frequently used type in both corpora

is reference (62.58% in CA; 64.15% in EA); next is conjunction (35.23% in CA; 34.03% in EA). As for substitution, it is found only three times in EA. And for ellipsis, no obvious difference of its use is shown in the two corpora with only taking up a rather small percentage as a whole.

As argued by Zhang and Dong[27], serving as the function of conveying information or providing services, abstracts need to make language accurate and distinct, and to avoid ambiguity, ellipsis and substitution are rarely used. Therefore, due to the space limitations, the following will mainly analyze the two frequently used devices, that is, reference and conjunction.

Table 4: The number and percentage of the grammatical cohesion in CA and EA

Cohesive devices		Subtype	CA		EA	
			Number	Percentage	Number	Percentage
Grammatical cohesion	Reference	Personal	36	11.32%	52	15.52%
		Demonstrative	146	45.91%	145	43.28%
		Comparative	17	5.35%	15	4.48%
	Substitution	Nominal	0	0.00%	0	0.00%
		Verbal	0	0.00%	3	0.90%
		Clausal	0	0.00%	0	0.00%
	Ellipsis	Nominal	4	1.26%	4	1.19%
		Verbal	1	0.31%	1	0.30%
		Clausal	2	0.62%	1	0.30%
	Conjunction	Additive	46	14.47%	56	16.72%
		Adversative	33	10.38%	29	8.66%
		Temporal	24	7.55%	18	5.37%
		Clausal	9	2.83%	11	3.28%
Total			318	100%	335	100%

On the one hand, as shown in Table 4, reference, occupying the highest percentage in both corpora, is the mainly employed grammatical cohesion. Among the sub-types of reference, the use of demonstrative reference occurs the most (45.91% in CA; 43.28% in EA) with no significantly difference in selected data, while there are some differences in the use of personal reference, which is shown by the fact that its frequency in Chinese scholars' abstracts is clearly less than that of native scholars.

As shown in Table 5, Chinese scholars use the first person (we, our) significantly less than native-English ones. But compared with other types of persons, the used frequency of the first person is lower in the two corpora. In the ordinary way, to maintain the objectivity and scientificity of academic papers, the use of the first-person pronoun should be avoided as much as possible, however, the research on the personal use of academic texts in the last decades shows that the first person also has a hold on the writing of academic papers, which can make academic research more easily accepted by readers[28]. Although this study presents that there are differences in the use of first-person pronouns between Chinese and foreign scholars, it is easy to see that in recent years Chinese scholars' abstracts have gradually integrated with international academic writing, and first-person pronouns more or less come to be used, especially in applied linguistics journal articles.

Table 5: The use of reference in English abstracts of CA and EA

Sub-types	Words	CA	EA
Personal	first-person pronouns (we, our)	6	15
	other person pronouns (they, it, etc.)	30	37
Demonstrative	this, that, those, these, there	57	65
	the	89	80
Comparative	few, little, similar, such, etc.	17	15
Total		199	212

Secondly, the study finds that in light of demonstrative reference like in Example 1, *this* and *the* (study / research / paper) are often used to refer to the study itself, which has the same function as "we", but shows more objective than "we" that is a personal subject, indicating the author's subjective involvement in the writing process. While *this* and *the*, as impersonal subjects, can weaken the subjectivity of the author to some extent, thus making the academic discourse more objective and rigorous. Therefore, most scholars incline to use *this* / *the* to refer to the research itself. In addition, *the* also refers to persons and things that appear or are mentioned again. This usage is most common in the writing English abstracts of Chinese and native English scholars.

Example 1

*(6)*While recognizing code-meshing's appeal as a strategy of hybridity, *this paper* concludes that L2

writing educators should therefore avoid uncritically adopting translingual approaches. *(7)**The paper*** also makes a significant contribution by considering the differences between spoken and written forms of self-presentation, an overlooked distinction in the debate on language difference. (E22)

Finally, the two corpora have used comparative reference but no significant difference. The study finds that comparative reference is mostly used to introduce the background and describe the shortcomings of previous studies, so as to indicate the significance or value of the research, which is a good strategy for beginners to learn abstract writing. From Example 2, we can see that in C19, the first step is to give a topic, and then through comparative reference (***much*** *of this research* and *the* ***few*** *studies*) showing that most of the research in this area focuses on local cohesion and text cohesion, and the few studies are limited to study global cohesion in first language writing, which leads to the content or purpose of ***this study***.

Example 2:

*(1)*An important topic in writing research has been the use of cohesive features. *(2)**Much of this research*** has focused on local and text cohesion. *(3)**The few*** studies that have studied global cohesion have been restricted to first language writing. *(4)**This study*** investigates the development of local, global, and text cohesion in the writing of 57 s language (L2) university students and examines the effects of these cohesion types on judgments of L2 writing quality. (C19)

On the other hand, conjunctions play a cohesive role in a text. In the use of conjunctions, there are similarities and differences between Chinese and native-English authors. It can be seen from Table 4 that the frequency of additive conjunction in both corpora is the highest, and EA (16.72%) is slightly higher than CA (14.47%), but there is no significant difference between them. The occurrence of adversative conjunctions (33 places in CA; 29 places in EA) is also relatively high, with no significant difference. The above findings show that additive and adversative conjunctions play an important role in enhancing the textual cohesion of RA English abstracts by Chinese and foreign scholars. In terms of temporal conjunctions, CA (24 places) is slightly more than EA (18 places), but there is no obvious difference. This is because Chinese and foreign writers are basically consistent in this respect that the abstract reflects the structure of the full text to a certain extent, and the layout of the text is arranged according to a certain time sequence. The use of causal conjunctions is relatively small. The reason may be that the move features of the abstract are arranged according to the research purpose, methods, results and conclusions, while the causal description usually appears in the discussion of the research results and is rarely involved in the abstract.

5.2. Samples analysis on lexical cohesive devices in the two corpora (RQ1)

The author chose six selected samples (E1, E13, E14, C1, C6, C7) from the two corpora to analyze the types of lexical cohesion and presented them respectively by providing their numbers and percentage. Due to limited space, only E13 take as examples to show the analysis process of lexical cohesion. According to Table 6, the use of lexical cohesion in three samples of the CA corpus totally amounts to 146 and only four kinds of lexical cohesion are employed by the Chinese scholars, namely, repetition, synonymy, antonymy and word from the same series. Among the four kinds of lexical cohesion, repetition occupies the highest percentage, which accounts for 83.56% of the whole lexical cohesion; it is followed by synonymy and word from the same series, and the least used is antonymy. As can be also presented from Table 6, there are altogether 192 places of lexical cohesion used in the three samples from the EA corpus, and six subtypes of lexical cohesion are employed. On the one hand, like in CA, the most frequently used is also repetition occupying 62.50%; next is synonymy, whose percentage is 18.23%.

Table 6: The number and percentage of lexical cohesion in the selected samples of CA and EA

	Cohesive devices	Subtype	CA		EA	
			Number	Percentage	Number	Percentage
Lexical cohesion	reiteration	Repetition	122	83.56%	120	62.50%
		Synonymy	11	7.54%	35	18.23%
		Superordinate	0	0.00%	7	3.65%
		General word	0	0.00%	0	0.00%
	Collocation	Antonymy	4	2.74%	13	6.77%
		Complementary	0	0.00%	4	2.08%
		Word from the same series	9	6.16%	13	6.77%
Total			146	100%	192	100%

On the other hand, obviously, the utilization of lexical cohesion in English abstracts written by native

English scholars is more diverse than that by Chinese scholars. English abstracts of both CA and EA not employ general word, such as thing, people, etc. And among other subtypes, the abstracts in EA generally are written with more and various vocabularies than that in CA.

The research findings show that native English scholars use more lexical cohesive devices than Chinese ones, and the degree of textual cohesion is higher. Vocabulary is the most basic element of a text. By using a series of words with related meanings to create a "lexical chain", a meaningful connection can be formed between paragraphs or sentences, which can enhance the cohesive effect of the text, as well as maintain and control the flow of meaning in the text. Taking E13 as an example to present this kind of process:

E13: *(1)*The English article system presents a particular challenge to learners. *(2)*This paper explores the acquisition of articles by Chinese learners of English in two corpora: one of Asian college EFL students, and one of Chinese professionals living and working in the United States. *(3)*It seeks to describe patterns of L2 English articles across different proficiency levels. *(4)*Our results show a surprising level of conformity of accuracy rates across participant proficiency levels. *(5)*L2 speakers use articles in the most native-like manner in plural contexts. *(6)*Certain errors are common, such as overusing the zero article in inappropriate contexts. *(7)*Other errors are nonexistent, such as using more than one determiner in a noun phrase. *(8)*In the end, we emphasize the importance of educators examining their students' L2 article use with an eye towards the commonly made errors that we uncover. *(9)*In addition, we advise that L2 article patterns might appear grammatical, but still represent an oversimplified understanding of the English article system. *(10)*We also suggest further topics for research in L2 acquisition of the noun phrase.

This article uses lexical repetition, synonyms, hyponyms, antonyms, and word from the same series to reflect the cohesive relationship between sentences in the text through semantic connections (Words that contain two or more types are counted only once):

Repetition: *(1)(9)*the English article system; *(1)(2)*learners; *(2)(3)*articles; *(3)(4)*proficiency levels; *(3)(5)(10)*L2; *(5)(6)*contexts; *(6)(7)(8)*errors; *(6)(7)*such as; *(7)(10)*noun phrase; *(8)(9)*L2 article; *(3)(9)*patterns; *(5)(8)*use; *(8)*commonly—*(6)*; *(1)(10)*acquisition; *(2)(3)*English; *(8)*students—*(2)*.

Synonyms: *(1)*presents, *(4)*show, *(9)*represent; *(9)*advise, *(10)*suggest. Hyponyms: *(5)*articles, *(6)*zero article, *(7)*determiner.

Antonyms: *(1)*particular, *(6)*common, *(7)*nonexistent; *(6)*overusing, *(7)*using.

Word from the same series: *(2)*students, *(8)*educators, *(9)*grammatical, *(5)*plural.

5.3. The underlying causes of the above-mentioned similarities and differences (RQ2)

The results present that grammatical and lexical cohesive devices used in English abstracts of the two corpora are generally similar, which indicates that Chinese scholars have paid close attention to the exchange of international academic achievements in recent years, and have made great strides in the writing of papers by following the writing trend of academic journal, for instance, the use of reference and conjunction is closer to that of English native speakers. However, there are also differences between the two. For example, the use of first-person pronouns by native English speakers is obviously more than that by Chinese scholars. The reason may be that Chinese scholars are biased against the use of first-person pronouns.

For lexical cohesion, there are some differences between the two sample corpora. English native speakers have more abundant lexical cohesive forms and better cohesive effects. This phenomenon may be due to the different thinking modes (or cultural factors) between Chinese and native English speakers. In Chinese, the original words are often repeated, while in English writing, different forms are usually used to express the same meaning, so as to strengthen the meaning connection of sentences. In addition, repetition is the most frequently used cohesive device in both corpora, which may be to emphasize the theme of the thesis. Through analysis, we can find that most of the repeated words are highly related to the theme of the article.

6. Conclusions

This study makes a comparative analysis of the similarities and differences in the use of cohesive devices in English abstracts by Chinese and native English scholars, and the reasons also are discussed.

The study finds that the use of cohesive devices in English abstracts by Chinese scholars in recent years is close to that of English native speakers, but the gap between them should be clearly seen. To further improve the English abstract writing ability of Chinese scholars, the author puts forward the following suggestions: (1) follow the international writing trend and pay attention to the use of first-person pronouns; (2) use conjunctions properly to show the logical connection between sentences; (3) employ different forms of lexical repetition, such as synonyms, hyponyms, and so on. Through different forms of lexical cohesion, the connection between sentences can be strengthened, thus increasing the coherence of the text. In view of this, beginners can learn how to use the "lexical chain" to better present the cohesive relationship between sentences. In short, cohesion theory plays a guiding role in abstract writing. Beginners should learn and master the use of cohesive devices to improve their skills of writing papers.

Finally, these findings must be interpreted in the light of several limitations, such as the small sample size. Moreover, future research should continue to analyze textual cohesion of English abstracts from interdisciplinary perspective or compare different native scholars' English abstracts to provide more comprehensive outcomes.

References

[1] Salager-Meyer, F. (1992). A text-type and move analysis study of verb tense and modality distribution in medical English abstracts. English for specific purposes, 11(2), 93-113.

[2] Pho, P. D. (2008). Research article abstracts in applied linguistics and educational technology: A study of linguistic realizations of rhetorical structure and authorial stance. Discourse studies, 10(2), 231-250.

[3] Li Jianjun, Chen Yanhong & Yang Chuanming. (2013). The application of textual cohesion theory in English abstracts. Journal of Northeast Agricultural University (Social Science Edition), 11 (05), 57-62

[4] Liu Yonghou & Zhang Ying. (2016). A contrastive study of the abstracts in international journal articles by Chinese and English-speaking scholars. Foreign Language World, (05), 20-27.

[5] Graetz, N. (1982). Teaching EFL Students to Extract Structural Information from Abstracts. International Symposium on Language for Special Purposes, 8, 2-4.

[6] Behnam, B., & Golpour, F. (2014). A genre analysis of English and Iranian research articles abstracts in applied linguistics and mathematics. International Journal of Applied Linguistics and English Literature, 3(5), 173-179.

[7] Hyland, K. (1996). Talking to the academy: Forms of hedging in science research articles. Written Communication, 13(2), 251-281.

[8] Jiang, F. K., & Hyland, K. (2017). Metadiscursive nouns: Interaction and cohesion in abstract moves. English for Specific Purposes, 46, 1-14.

[9] McNamara, D. S., & Kintsch, W. (1996). Learning from texts: Effects of prior knowledge and text coherence. Discourse Processes, 22(3), 247-288.

[10] Todirascu, A., François, T., Gala, N., Fairon, C., Ligozat, A. L., & Bernhard, D. (2013). Coherence and cohesion for the assessment of text readability. In Proceedings of 10th International Workshop on Natural Language Processing and Cognitive Science (NLPCS), 11-19.

[11] Dornyei, Z. (2007) Research Methods in Applied Linguistics: Quantitative, Qualitative, and Mixed Methodologies. New York, NY: Oxford University Press.

[12] Pezzini, O. I. (2003). Genre analysis and translation-an investigation of abstracts of research articles in two languages. Cadernos de traduçao, 2(12), 75-108.

[13] Darabad, A. M. (2016). Move analysis of research article abstracts: A cross-disciplinary study. International Journal of Linguistics, 8(2), 125-140.

[14] Ebrahimi, S. F., & Chan, S. H. (2015). Research article abstracts in applied linguistics and economics: Functional analysis of the grammatical subject. Australian Journal of Linguistics, 35(4), 381-397.

[15] Wang Li. (2014). The textual analysis of the abstracts in English academic papers. Foreign Language Research, (03), 111-113.

[16] Zhang Yining, Sun Caihui & Li Ye. (2018). Multi-dimensional analysis of the English abstracts of the most-cited articles in linguistic journals. Technology Enhanced Foreign Language Education, (04), 64-71.

[17] Ghadessy, M. (1999). Thematic organization in academic article abstracts. Estudios Ingleses De La Universidad Complutense, 7, 141-161.

[18] Cusen, G. (2019). Forms and functions of vague language in academic journal article abstracts. Diacronia, (9), 1-8.

[19] Bondi, M. (2014). Changing voices: Authorial voice in abstracts. Abstracts in Academic Discourse:

Variation and Change, 243-270.

[20] Ahmad, M., Mahmood, M. A., & Siddique, A. R. (2019). Organisational skills in academic writing: A study on coherence and cohesion in Pakistani research abstracts. Languages, 4(4), 92.

[21] Kirana, R. P., Mukhrizal, M., & Jayanti, F. G. (2020). Types of lexical cohesion and grammatical cohesion in thesis abstracts. Jadila: Journal of Development and Innovation in Language and Literature Education, 1(1), 57-68.

[22] Halliday, M. A. K. & Hasan, R. (1976). Cohesion in English. London: Longman.

[23] Tamunobelema, I. (2018). The fact of cohesion and coherence in textual harmony. British Journal of English Linguistics, 6(4), 43-51.

[24] Malah, Z. (2015). Lexical cohesion in academic discourse: exploring applied linguistics research articles abstracts. Research Journal of English Language and Literature, 3(4), 291-299.

[25] Episiasi, E., Syaputri, W., Suramto, S., & Kasriyati, D. (2022). Lexical and grammatical cohesion in the undergraduate students' abstracts. Linguistic, English Education and Art (LEEA) Journal, 5(2), 143-152.

[26] McCarthy, M. (1991). Discourse Analysis for Language Teachers. Cambridge: CUP.

[27] Zhang Chunfang & Dong Naiting. (2009). A comparison of discourse cohesion in English and Chinese academic paper abstracts. Modern Chinese: Language Research Edition, (09), 110-113

[28] Zhang Man. (2008). A comparative study of first person pronouns in abstracts in China and English Speaking Countries. Shanghai Journal of Translators, (02), 31-36.