INTERNATIONAL JOURNAL OF EDUCATION, PSYCHOLOGY AND COUNSELLING (IJEPC)

www.ijepc.com

GLOBAL ACADEMIC EXCELLENCE

THE EFFECTS OF LEXICAL COHESION IN MAINTAINING COHERENCE IN THE EFL JORDANIAN STUDENTS' WRITING

Alsariera, Anas Hashem [1]*, Yunus, Kamariah[2]

[1] Department of Languages and Communication, Universiti Sultan Zainal Abidin (UniSZA), Malaysia
Email: alsarieraa@fulbrightmail.org
[2] Department of Languages and Communication, Universiti Sultan Zainal Abidin (UniSZA), Malaysia
Email: kamariah@unisza.edu.my
* Corresponding Author

Article Info:

Abstract:

Lexical cohesion is one of the key issues that has received much attention from linguists due to its importance in maintaining coherence in discourse. However, many researchers claim that EFL Jordanian students could not write coherent pieces of writing because of their limited awareness of lexical cohesion. Therefore, this article investigates lexical cohesion's role in creating coherence in the EFL Jordanian students' writing. To achieve this goal, 20 written pieces have been analyzed based on Hoey's (1991, 2005) model of lexical cohesion. Importantly, the article highlights how lexical bonds emerge and hold relations between the sentences in writing. It, more specifically, underlines the significant sentences and how the reader can apprehend them. As for coherence in the Jordanian students' writing, the article indicates that the students can still not write fully coherent texts due to their poor knowledge of lexical items and training.

Keywords:

Introduction

Coherence, a text-centered notion, constitutes one of the seven standards of textuality. Thus, without coherence, text interpretation remains difficult. This conveys the centrality of coherence in communication. Many researchers have indicated that EFL learners' performance is characterized by numerous coherence problems, particularly to unity, transition of ideas, and

repetition. This study, which is devoted to examining coherence in the writing of Jordanian EFL learners, is expected to highlight the students' ability to write coherently. More importantly, this research sheds light on the role of lexical connections and bonding in creating coherence. Therefore, the significance of the current study stems from its attempt to highlight the impact of lexical cohesion as a configurational means of constructing coherence in written compositions. Hence, the current paper aims to answer the following question: "How does lexical cohesion affect the coherence of Jordanian EFL students' writing?"

Literature Review

Writing is the secondary form of language. Yet, it is the primary means of knowledge in spite of bringing the most difficult language skills to be acquired by native speakers and learners. As a term, writing has been defined by many scholars. It is an integrative skill and an important constructive, at the same time its complex learning process. Connelly (2013) reports that writing entails innovation and deliberation. As far second language acquisition is concerned, writing is considered as an important skill in foreign language (FL) learning that aims to provide language learners with the chance to advance the proficiency they require to produce different forms of written productions including letters, emails, essays, and papers for their researches and reports. Also, it improves the cognitive and meta-linguistic awareness of the students (Oscarson & Apelgren, 2011).

Since writing constitutes a serious challenge in the EFL / ESL context, a need for systematic and comprehensive writing instruction is increased. The teaching and study of the second language (L2) writing involves various factors: the writing process, peer and teacher responses, writing activities, and writing instructions (Wolf et al., 2014). Also, students are required to address content, organization, structure, and mechanics appropriately to convey meaning through writing simultaneously (S. Lee & Lee, 2013). They often encounter a number of linguistic difficulties with vocabulary and sentence construction (Dörnyei, 2009), Reporting verbs (Bloch, 2009), and cohesive devices (Owens & Van Ittersum, 2013).

Texture is a fundamental in writing because it leads to text unity. It distinguishes unified texts from disconnected ones. Therefore, to capture a better understanding of texture, it is highly required to highlight coherence and cohesion for being central textual qualities to maintain good writing (Liu & Braine, 2005). Cohesion is a textual organization method that occurs within the text that brings various elements together, including lexical and grammatical links (Conner, 1996; Halliday & Hasan, 1976). It is further used to refer to relations among these surface elements (De Beaugrande & Dressler, 1981; Hoey, 1991, 2005, 2012). Additionally, it is a property that holds the text together and makes it linguistically organized and readable.

Many linguists indicated that cohesion has a critical function in creating effective writing, such as Halliday and Hasan (1976), De Beaugrande and Dressler (1981), Johns (1986), Hoey (1991), and Lee (2002). They maintained that cohesion creates connected sentences via the use of particular cohesive ties that build cohesive relations within the text. Based on Connor's (1996) descriptions, these ties involve grammatical and lexical devices on the surface of a text that connects parts of the text.
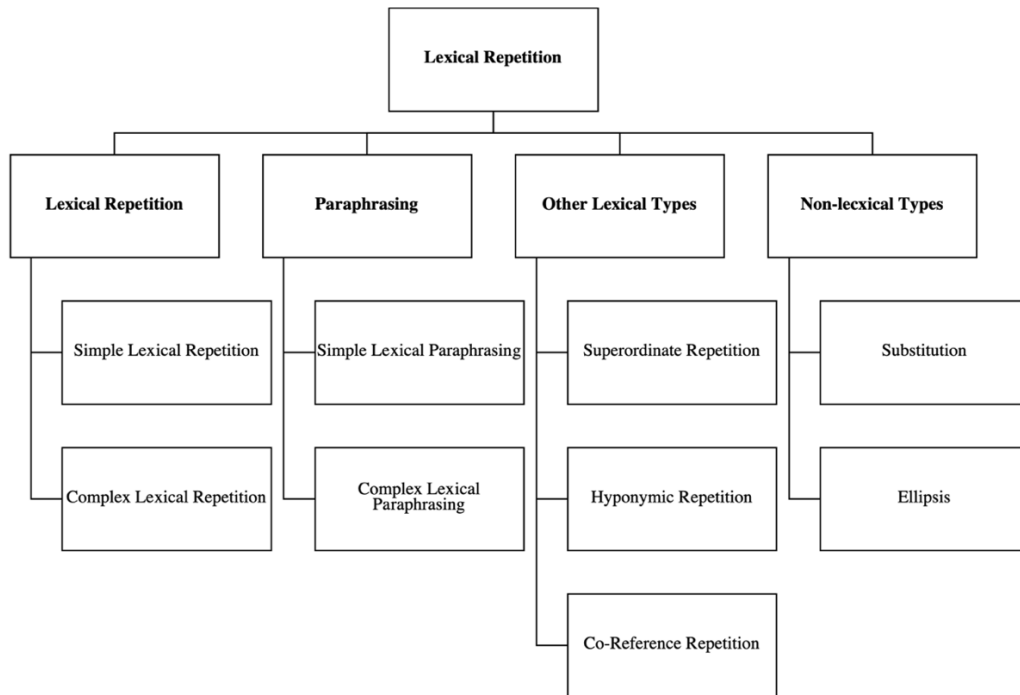
Coherence is the quality of writing created by the configurational means and interrelated relationships established in a text logically and consistently. It also refers to the reader's interpretation of the text by various linkage of the content-based relations between the cohesive

links within the text (Kaplan,1966; De Beaugrande & Dressler, 1981; Brown & Yule, 1983; Halliday & Hasan,1989). It is also the facet of the writer and the reader's appropriate comprehension of the context, so the reader can effectively make sense of the text (Hoey, 1991; Campus, 2017). Mey (2001) manifests that coherence retrieves the content-based links between lexis that make them have sense. Coherence is , thus, attained by the interaction between writer and receiver of the discourse to make sense based of their linguistic knowledge. Thus, it is apparent that cohesion and coherence are interrelated in the sense that cohesion maintains relations between the different parts of the text in a very syntactic way, while coherence points to the existing meaning in the same discourse (Campus, 2017).

However, there are number of theories in this field including Halliday and Hasan (1976, 1985, 1989), and Hoey (1991, 2005). Generally, Halliday and Hasan's (1976) theory is one of the dominant theories since it shares a big credit in this field for the analysis of discourse. According to them, "cohesion does not concern what a text means; it concerns how the text is constructed as a semantic edifice" (Halliday & Hassan, 1976, p.26). Therefore, they provided various types of cohesive devices to investigate discourse. These types are simply grammatical and lexical cohesion. Halliday and Hassan's (1976) grammatical cohesion suggests that the surface structure of the text is connected by certain grammatical devices to create unity. These devices include reference, substitution, ellipsis, and conjunction. On the other hand, lexical cohesion has a key role in establishing textuality in discourse because it refers to the semantic relations between lexis. Additionally, it points to "relationships in meaning between lexical items in a text and, in particular, content words and the relationship between them" (Paltridge, 2006, p. 133). However, there are two categories of lexical cohesion, namely, reiteration and collocation.

Apart form Halliday and Hasan's (1976) theory of cohesion, Hoey (1991) was the first to characterize a detailed theory that reveals the organizing role of lexical cohesion. In his theory, grammatical cohesion's role is less significant than that of lexical cohesion; therefore, he focused on items with lexical meaning. He maintains that lexical cohesion is manifested by a systematic recurrence of those lexical items within a text.

He additionally proposes that the repetition of the cohesive devices is critical in creating connected relations which lead to the overall coherence of the written text. He devised a new taxonomy of lexical repetition types and observed their patterns in text formation (Adorján, 2013). This theoretical model divides repetition into three lexical repetitions, paraphrase and non-lexical repetition, as shown in Figure 1 below.

Hoey's (1991) Types of Lexical Repetition

One of the central issues in Hoey's notion of lexical cohesion is bonding. Simply, Hoey (1991,2005) maintains that the systematic repetition of items creates connections and organizations within text. When the sentences are linked by an average quantity of those lexical connections, then "a 'bond' between two sentences is created whenever the threshold of repetition is met" (Hoey, 2017, p. 13). In other words, if these relations create at least 3 connected links between the sentences, then they are qualified to establish bonds of lexical relations. If not, the linkage between the sentences is disputed and disconnected, and that they are not qualified to build coherence. More interestingly, bonded sentences are usually projected to be meaningful coherent. Correspondingly, the notion of bondage takes a crucial role in interpreting texts and achieving overall coherence (Hoey 1991; Benbrahim & Ahmad, 1995).

As for the criteria for judging the coherence level created by the bonded sentences, Hoey (1991, 2005, 2017) proposes four measures to observe coherence in written texts. They include (1) sentences that are fully coherent, (2) sentences that need some adjustments to be fully coherent, (3) sentences that need major adjustments, and finally (4) sentences that are totally incoherent. Besides that, Hoey's (1991) notion of lexical patterns is seen essential in recognizing the different chunk of sentence groups in the texts. These patterns include: (1) central sentences, (2) topical sentences (topic opener and topic closer sentences), and (3) marginal sentences.

Methodology
In order to account for the research question, this study employed a descriptive analytical method in order to find out the effectiveness of the students' writing in terms of cohesion and coherence. It is also fundamental to trace the impact of Hoey's (1991, 2005) analytical method of lexical cohesion.

Participants

The participants of the study were selected using a purposive sampling method where all of the students were Jordanian EFL students majoring in English language and literature at Mu'tah University. They were all in an elective course called "Research Writing." Therefore, the total number of the participants involved in this study was twenty third year students.

Data Collection

The data were obtained from the writing assignment given to the students where they were asked to write a well coherent piece of writing about "the impact of recent technological advances on our life." The given topic was determined on the basis of its familiarity and ability to be tackled by the students. However, the assignment was administered by an EFL instructor.

Data Analysis

To analyze the obtained data, Hoey's (1991, 2005) model of lexical cohesion was employed to answer questions of the study. Accordingly, the researcher considered the following steps to determine the cohesiveness of the students' writing: (1) the percentages of the different cohesive devices engaged in the written compositions, (2) the density of lexical devices, and (3) the strength of bonds created in the texts. Then, the researcher depended on Hoey's description of coherence to find the effect of lexical cohesion to create coherence.

Findings and Discussion

In order to identify the effect of lexical cohesion on the overall coherence, a non-narrative written text has been chosen for a detailed analysis. The text consists of 15 sentences. The text is analyzed in accordance with Hoey's (1991, 2005) theory of lexical cohesion. The example is driven from SWT20.

Example (SWT20):

1) "Social media now adays becomes one of the important things in our life."
(2) "It is especially in the field of communications like sending messages."
(3) "Using social media for long time daily can cause phisical effects and social effects."
(4) "People are spending too much time using their phones on social media appliacations."
(5) "Using too much time on social media can casue many physical issues like eayes problems from spending houres staring at their phones' screens."
(6) "And back bone pains from sitting for a long time in an proper way while we are using their phones."
(7) "Using social media has also a social effects."
(8) "People are spending most of their time using phones."
(9) "They don't spend that time with their families and friends."
(10) "They become isolated from friends and families."
(11) "They prefer to stay alone with their phones than to communitate."
(12) "We should reduce the time we spend using social media."
(13) "We also should take care about health."
(14) "And to communicate with people more to feel that we are not living alone."
(15) "We have families and friends who started to think that we don't care about them anymore."

First of all, the researcher traced and identified the types of cohesive devices found in the text. Therefore, the analysis indicated that the total number of repetitions found was 179 distributed as follows: 92 simple repetition links, 9 complex repetition links, 10 simple paraphrasing links, 19 complex paraphrasing links, and 49 substitution links. Also, the analysis indicated that there is a complete absence of the other categories including superordinate, hyponymy, and ellipsis. The following figure shows the repetition matrix for SWT20.

	1	2	3	4	5	6	7	8	9	10	11	12	13	14
2	1													
3	3	1												
4	1	1	4											
5	1	1	5	5										
6	Ø	Ø	3	4	4									
7	2	Ø	5	3	4	1								
8	Ø	Ø	2	7	4	4	1							
9	Ø	Ø	1	6	2	3	Ø	5						
10	Ø	1	Ø	3	Ø	2	Ø	3	4					
11	Ø	1	Ø	3	2	1	Ø	2	Ø	2				
12	1	Ø	3	4	4	2	3	3	3	Ø	Ø			
13	Ø	Ø	Ø	Ø	Ø	Ø	Ø	Ø	Ø	Ø	Ø	Ø		
14	Ø	1	Ø	3	4	Ø	Ø	2	4	4	3	Ø	Ø	
15	Ø	Ø	Ø	1	Ø	2	Ø	4	4	4	4	Ø	1	3

Figure 1: The Repetition Matrix for SWT20

As shown in Figure 1, the matrix can be employed to identify the connections between the sentences including the neighboring or remote ones in SWT20. It can be demonstrated that number of connections created among the sentences by the repetition of the different types of cohesive devices in this text vary considerably from one sentence into another. Sentence 1, for instance, has a total number of 9 connections: 1 with sentence 2, 3 with sentence 3, 1 link with 4, 1 with sentence 5, 2 with sentence 7, and 1 link with sentence 12. It also shows no links with other sentences, such as 6, 8, 9, 10, 11, 13, 14, and 15. On other words, the repetition links between sentence 1-3, for example, are 1 simple repetition link, 1 complex repetition link, and 1 substitution link. Also, links identified between sentence 1-7 are 2 simple repetition links (i.e., the repetition of noun phrase 'social media'). Likewise, sentence 8 has 19 links: 5 links with sentence 9, 3 with sentence 10, 11 with different succeeding sentences. It has, for instance, 5 links with sentence 9: 1 simple repetition, 1 complex repetition, 1 substitution, and 2 complex paraphrasing.

On the other hand, the matrix can reveal that many of sentential pairs are isolated, such as sentences 1-4, 1-5, 1-6, 1-7, 1-8, 2-3, 2-4, 2-5, 2-6, 2-15, 3-8, 3-9, 3-10, 3-11, 3-13, 3-14, 3-15, 4-8, 4-15, 5-9, 5-13, 5-15, 6-7, 6-15, 12-13, 12-14, 12-15, 13-14, and 14-15. However, the frequency of the lexical connections in this text can be observed in Figure 2 (see below). The figure shows that the percentage of pairs that has no cohesive connections was (41%), pairs with 1 connection were (15%), pairs with 2 connections were (10%), pairs with 3 connections were (13%), pairs with 4 connections were (15%), and finally those with 5 connections were

(6%). Accordingly, we can observe that (65%) of the cohesive links are insignificant, and that only (35%) of the total links are significant if we determine to pick 3 cohesive connections as the threshold cut-off criterion for creating a lexical bond between the sentences.
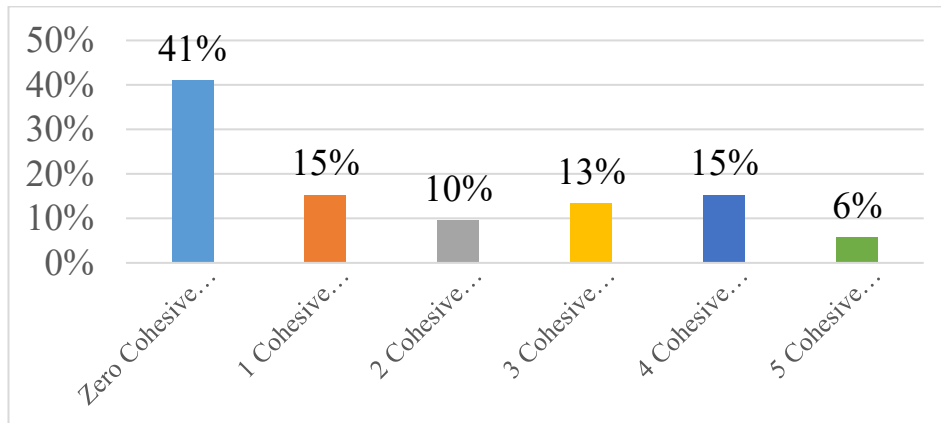

Figure 2: The percentages of Lexical Links in SWT20

Lexical Bonding

The analysis of the bonding positions and directions can be demonstrated in Table 1. The table shows inconsistency between the sentences in SWT20. Out of 15 sentences, 12 sentences have 3 or more bonds with the other sentences. It also shows that 1 sentence (i.e., sentence 1) has only one bond. Additionally, it reveals that 2 sentences have no bonds (i.e., sentences 2 and 13) as they lack the ability to create lexical relations because of the absence of links between these sentences and the others in the same text. However, it is worth mentioning that this type of analysis is necessary to trace the efficient connections between the sentences in that text as seen in sentence 1 which shares 3 connections with sentence 3, and as a result it has 1 lexical bond which means that it is a significant sentence. Similarly, sentence 5 has 2 bonds with sentences 3 and 5, and that it has 5 consecutive bonds with sentences 6, 7, 8, 12, and 14. Thus, it the total number of bonds pointing backward and forward is 7.

Table 1: Bonded Sentences in SWT20

Sentence	Number of bonds pointing backward and forward
1	0,1
2	0,0
3	1,5
4	1,9
5	2,5
6	3,2
7	3,1

8	3,4
9	3,5
10	3,2
11	1,2
12	6,0
13	0,0
14	5,1
15	5, -

In accordance with the previous analysis, Figure 3 presents the strength of lexical relations among the sentences of this text. Specifically, it shows that the strongest lexical relations are between sentences 4-8 with 7 links. It also represents that the average number of bondages is 3 to 4 bonds like those observed in sentences 1-3 (3 bonds), 3-4 (4 bonds), 4-14 (3 bonds), and 14-15 with 3 bonds.
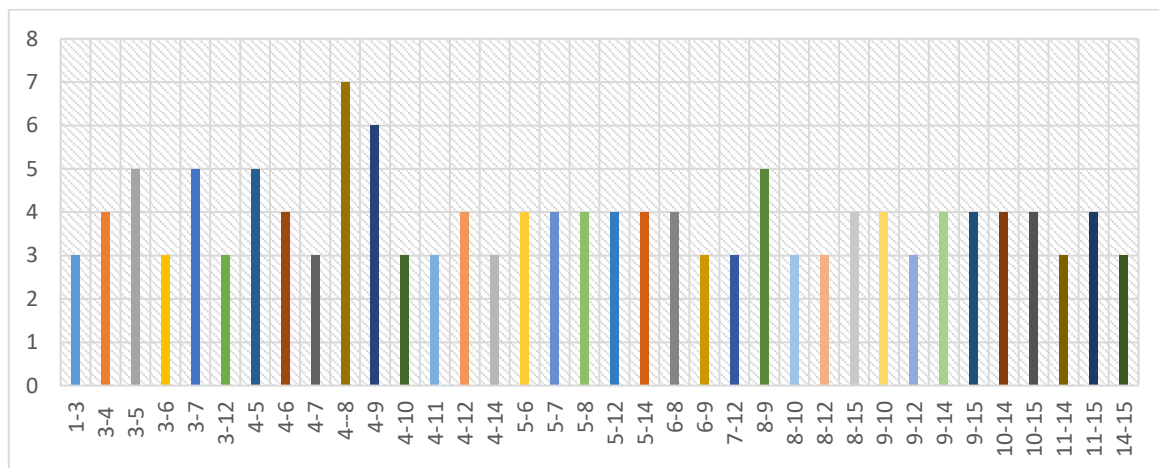

Figure 3: The strength of connections between bonded sentences in SWT20

Following Hoey's descriptions about patterns of coherence, the current text is made of 15 sentences. It is made of 2 marginal sentences, 1 central sentence, and 12 topical sentences. Specifically, sentences 2 and 13 are regarded as marginal sentences because the reader identifies that these sentences have no shared connections with the other sentences within the text. Therefore, these two sentences are not significant. Still, these sentences can be enhanced by reforming them and making significant adjustment in order to make them coherent.

On the other hand, sentence 4 is redeemed as a central sentence since it holds the highest number of bonds emerged in the text. More specifically, sentence 4 has 10 lexical bonds with sentences 3, 5, 6, 7, 8, 9, 10, 11, 12, and 14. This can be clearly demonstrated from Figure 4 below.
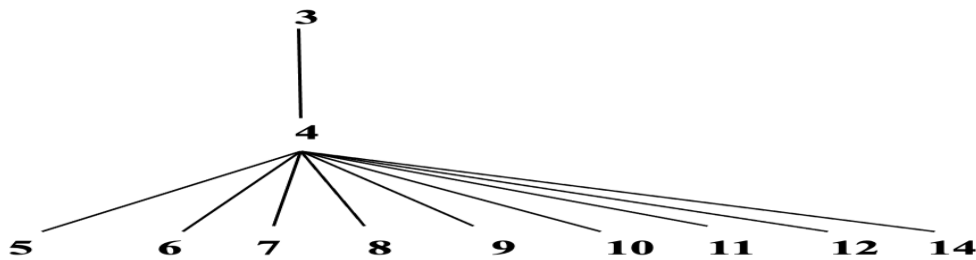
Figure 4: Net of Bonds Pointing Backward and Forward of Sentence 4

Regarding the rest of the sentences, the analysis reveals that sentences 1, 3, 5, 6, 7, 8, 9, 10, 11, 12, 14, and 15 are seen as topical ones. Besides that, the percentage of these sentences is (80%). These sentences are considered topical because they may not be fully coherent despite their shared connections with the other ones in the text. Still, if they are edited and enhanced so they can create more coherent and meaningful discourse. However, Hoey (1991) proposes that if the central sentence (i.e., sentence 4) and the topical sentences grouped together, they can create a coherent summary about the text. Therefore, the reader of the summary can recognize the overall coherence emerged. Remarkably, it is worth to mention here that since coherence is mostly subjective, the receiver of the text is encouraged to apprehend the emerged summary of the text and determine if it is readable or meaningful.

Based on the analysis of the students' texts, Figure 5 indicates that the overall assessment of the 20 texts is weak due to the large percentage of the insignificant sentences in the students' texts. Specifically, the percentage of the central sentences is (44.35%) while the percentages of the marginal sentences and topical sentences are (15.65%) and (40%), respectively. As per of Hoey's descriptions, the percentage of the insignificant sentences in the students' writing is (55.65%) which means that students' ability to write coherently is not adequate due to their lack of knowledge of producing coherent writing as well as their limited deposit of vocabulary as claimed by many researchers like Chanyoo (2018), Elkhayma (2020), and He (2020).
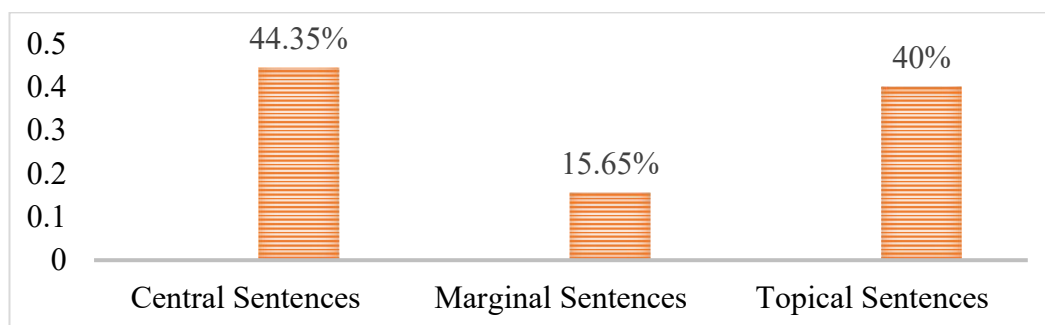

Figure 5: The Percentages of the Lexical Patterns in the Students' Texts

Conclusion

This study has attempted to investigate the role of lexical cohesion due to the importance of creating coherence in the Jordanian EFL students' writing based on Hoey's (1991, 2005) theory of lexical cohesion. To achieve this purpose, it has been essential to identify the repetition links employed by the students, the cohesive links and the lexical bonds emerged between the different parts of the texts. These lexical links and lexical bonds have been the main mechanics in the textual organizations established by the repetition of items in the students' writing.

The analysis has been able to identify the bonded and unbonded sentences. Furthermore, it has identified the significant "central" and non-significant "marginal" sentences. It also has shown an optimal means to create a coherent brief about the text that can be perceived by the reader and make sense of it. Accordingly, the study concludes that the appropriate and accurate employment of the various cohesive ties is fundamental for textual mechanics to emerge and collaborate to efficiently produce more coherent and effective writing.

Last but not the least, the study has revealed that students are not able to write meaningfully and coherently because of their lack of lexical knowledge and limited training. Therefore, the findings of the study have some theoretical and pedagogical implications including the importance of vocabulary learning and reading comprehension. Certainly, the ability to understand the different roles of lexical cohesion mechanics can lead to a better understanding of textual organization.

References

Adorján, M. (2013). Explorations in lexical repetition analysis: The outcomes of manual vs. computer automated research methods. *Working Papers in Lanugage Pedagogy*, *7*, 1–28.

Benbrahim, M., & Ahmad, K. (1995). Text Summarisation: the Role of Lexical Cohesion Analysis. *The New Review of Document & Text Management*, *January 1995*, 321–335.

Bloch, J. (2009). The design of an online concordancing program for teaching about reporting verbs. *Language Learning and Technology*, *13*(1), 59–78. https://doi.org/10.1093/applin/aml021

Brown, G. & Yule, G. (1983). *Discourse Analysis*. Cambridge: Cambridge University Press.

Campus, V. T. (2017). *CORPUS-BASED ANALYSIS OF COHESION IN WRITTEN ENGLISH ESSAYS OF NIGERIAN TERTIARY LEARNERS Remilekun Iyabo ADEYEMI Supervisor : Prof . AJ van Rooy April 2017*. *April*.

Chanyoo, N. (2018). Cohesive Devices and Academic Writing Quality of Thai Undergraduate Students. *Journal of Language Teaching and Research*, *9*(5), 994. https://doi.org/10.17507/jltr.0905.13

Connelly, M. (2013). *A Rhetoric, Reade, and Research Guide*.

Conner. (1996). *Contrastive Rhetoric Cross-Cultural Aspects of Second-Language Writing*. Cambridge: Cambridge University Press.

De Beaugrande, R. Dressler, W. (1981). *Introduction to Text Linguistics*. London & New York: Longman.

Dörnyei, Z. (2009). Individual differences: Interplay of learner characteristics and learning environment. *Language Learning*, *59*(SUPPL. 1), 230–248. https://doi.org/10.1111/j.1467-9922.2009.00542.x

Elkhayma, R. (2020). Moroccan Students ' Writing Difficulties : Problems of Cohesion and Coherence Kenitra as a Case Study. *International Journal for Innovation Education and Research*, *8*(01), 8–24.

Halliday, M. A. K., & Hasan, R. (1976). *Cohesion in English*. English Language Series, London: Longman.

He, Z. (2020). Cohesion in Academic Writing: A Comparison of Essays in English Written by L1 and L2 University Students. *Theory and Practice in Language Studies*, *10*(7), 761. https://doi.org/10.17507/tpls.1007.06

Hoey, M. (1991). *Patterns of Lexis in Text*. Oxford: Oxford University Press.

Hoey, M. (2005). *Lexical Priming: A New Theory of Words and Language*. London: Routledge.

Hoey, Michael. (2012). Lexical priming: A new theory of words and language. In *Lexical Priming: A New Theory of Words and Language*. https://doi.org/10.4324/9780203327630

Hoey, Michael. (2017). Cohesion and coherence in a content-specific corpus. In M. Pace-Sigge & K. J. Patterson (Eds.), *Lexical Priming. Applications and advances* (Vol. 3, Issue February 2004, pp. 53–60). John Benjamins Publishing Company. https://benjamins.com

Johns, A. M. (1986). Coherence and Academic Writing: Some Definitions and Suggestions for Teaching. *TESOL Quarterly*, *20*(2), 247–265.

Kaplan, R. B. (1966). Cultral thought patterns in intercultural communication. *Journal of Language Learning*.

Lee, I. (2002). Teaching Coherence to ESL Students: A Classroom Inquiry. *Journal of Second Language Writing*, *11*, 135–159.

Lee, S., & Lee, C. H. (2013). A Case Study on the Effects of an L2 Writing Instructional Model for Blended Learning in Higher Education. *Turkish Online Journal of Educational Technology*, *12*(4), 1–10. http://search.ebscohost.com/login.aspx?direct=true&db=eue&AN=91261469&lang=es&site=ehost-live%5Cnhttp://content.ebscohost.com/ContentServer.asp?T=P&P=AN&K=91261469&S=R&D=eue&EbscoContent=dGJyMNLe80Sep7Y4v%2BvlOLCmr06ep7FSsKq4SbSWxWXS&ContentCustomer=dGJyM

Liu, M., & Braine, G. (2005). Cohesive features in argumentative writing produced by Chinese undergraduates. *System*, *33*(4), 623–636.

Mey. (2001). *Pragmatics: An Introduction*.

Oscarson, M., & Apelgren, B. M. (2011). Mapping language teachers' conceptions of student assessment procedures in relation to grading: A two-stage empirical inquiry. *System: An International Journal of Educational Technology and Applied Linguistics*, *39*(1), 2–16. https://doi.org/10.1016/J.SYSTEM.2011.01.014

Owens, K. H., & Van Ittersum, D. (2013). Writing With(out) Pain: Computing Injuries and the Role of the Body in Writing Activity. *Computers and Composition*, *30*(2), 87–100.

Paltridge, B. (2006). *Discourse Analysis*. London: Continuum.

Wolf, M. K., Everson, P., Lopez, A., Hauck, M., Pooler, E., & Wang, J. (2014). Building a Framework for a Next-Generation English Language Proficiency Assessment System. *ETS Research Report Series*, *2014*(2), 1–48. https://doi.org/10.1002/ets2.12034