Cohesion Analysis of Iranian Advanced EFL Learners' Writing

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Abstract—**This study seeks to examine the most common cohesive devices used by Iranian advance EFL learners in writing a composition. This study also tries to determine the most common cohesive errors committed by the learners and find probable sources of errors. To this end, 30 advance EFL learners were selected. A proficiency test was conducted to ensure if they were at the same level. Then, participants were asked to write a composition of 200-220 words. The data were analyzed. It had been revealed that the most frequent cohesive devices were reference cohesion followed by conjunction, lexical cohesion, ellipsis, and substitution. The most frequent cohesion errors committed by learners were also related to reference cohesion, conjunction, lexical cohesion, ellipsis, and substitution respectively. Furthermore, in this study some pedagogical implications had been suggested for language teachers regarding cohesion.**

Index Terms—**cohesion analysis, cohesive devices, cohesive errors, the sources of cohesive errors**

I. INTRODUCTION

Productive skills, especially writing, are the most problematic areas for foreign language learners. Nowadays, the skill of writing a coherent text is of great importance particularly in academic setting. The ability to convey meaning coherently in written texts is a critical skill for academic success. Cohesion and coherence are two concepts which are used to show connectedness of a text. Halliday & Hassan take the view that "a text has a texture and this is what distinguishes it from something that it is not a text" (1967). According to Halliday and Hassan (1976) cohesive relation is what provides texture. Cohesive relationships refer to when the interpretation of discourse elements is dependent on that of another. They are achieved by explicit using of cohesive devices. In fact, cohesion is regarded as explicit realization of semantic relation within and between the sentences.

Writing a coherent text as mentioned is highly important for language learners; therefore, studying cohesion in writing deserves much attention. There is also a considerable value in cohesion errors committed by learners. Analysis of those errors to some extent makes it possible to find the sources of learners' errors. Subsequently, it makes teachers able to find an appropriate teaching method in order to teach cohesion and therefore, to avoid cohesion errors, at least those predictable errors, committed by the learners.

II. REVIEW OF THE RELATED LITERATURE

A considerable amount of literature has been published on error analysis of cohesion and cohesive devices. Learners' errors were always of great importance. According to Corder (1967), errors represent discrepancy between the transitional competence of the learner and the target language. Errors are inevitable and a necessary part of learner language. Error analysis may supply clues to find the sources of errors. Although it is uncontroversial that using cohesive devices alone does not guarantee 'textness' they are necessary features of a coherent academic writing. As mentioned before, Halliday and Hassan pointed out that cohesion distinguishes 'text' from 'non-text'. In the words of Halliday and Hassan (1976), explicit manifestation of meaning relations through cohesive devices is necessary for a text. Halliday and Hassan (1976) identified five types of cohesive relationships including reference, substitution, ellipsis, conjunctive, and lexical cohesion have been explained very briefly.

1. Reference

According to Halliday and Hassan (1976), reference is a relation between different elements of the text in which one element is being interpreted by reference to other elements. They distinguished between three kinds of reference which are explained below:

1.1 *Personal reference* is a reference through the category of person such as personal pronoun (e.g. I, me, you, we, us, he, him, etc.); possessive pronoun (e.g. mine, yours, ours, his, hers, etc.); possessive identifiers (e.g. my, your, his, her, our, their, etc.).

1.2 *Demonstrative reference* is a reference by means of location (e.g. this, that, there, here, there, then, etc.).

1.3 *Comparative reference* is a reference by means of identity or similarity. In this case, the words such as same, identical, equal, similarly, likewise, differently, otherwise, etc. are used.

2. Substitution

It refers to the replacement of a word or sentence segment by a dummy word. There are three kinds of substitution as following:

2.1 *Nominal substitution:* three words occur in nominal substitution, one, ones, and same. For example: Can you give me a glass? -There is *one* on the table.

2.2 *Verbal substitution:* lexical verbs are replaced by *do* and its morphological scatter such as *does, did, doing, done.* For example: Jane goes to the party. I think Mary *does* too.

2.3 *Clausal substitution:* an entire clause is replaced by *so* and *not.* For example: Is there going to be rainy? -It says *so.*

3. Ellipsis

It refers to the omission of a word or part of a sentence. Depending on structural unit within which ellipsis occur there are three types of ellipsis:

3.1 *Nominal ellipsis:* This is my bag. I used to have four.

3.2 *Verbal ellipsis:* Have you done your assignment? -Yes, I have.

3.3 *Clausal ellipsis:* Are you going to write your composition? – Yes.

4. Conjunction

It indicates how sentences or clauses should be linked to the preceding or the following sentences. Conjunctions are categorized as followed;

4.1 *Additive conjunction* simply adds more information to what is already stated; for example, I like tea *and* coffee.

4.2 *Adversative conjunction* adds information in some sense opposed to what has come before; for example: this ring is beautiful *but* it is very expensive.

4.3 *Temporal conjunction* indicates a relation of sequence in time; for example: revise your assignment *before* submission date.

4.4 *Causal conjunction* indicates the cause or reason of what is being stated; for example: stay at home *because* it is raining.

5. Lexical cohesion

It refers to the links between the content words used in subsequent segments of discourse.

5.1 *Repetition: John* gave his book to Mary. *John* bough the book yesterday.

5.2 *Synonymy:* I *bought* the car from Peter. He had *purchased* it from his friend.

5.3 *Antonymy:* Your ruler is *long* and mine is *short*.

5.4 *Hyponymy:* Jenny is climbing *the palm. The tree* is very long.

5.5 *Meronymy: The house* seems to be very old. *The roof* is completely destroyed.

5.6 *Collocation: The teacher* left *the class*.

Some language researchers have conducted empirical studies regarding cohesion. Sadighi and Heydari (2012) investigated the most frequent cohesive errors committed by Iranian EFL learners at different proficiency levels. They found that in low level the most frequent errors were involved in lexical cohesion and conjunctive cohesion respectively. In mid level the most frequent cohesion errors were found in lexical cohesion and conjunctive cohesion. Finally, in the high level, errors in lexical, references and conjunction cohesion were the most frequent one respectively. This study also seeks the origin of cohesive errors. It was found that errors relevant to personal pronouns, possessive pronouns, and collocations were rooted in learners' L1, which is Persian.

In 2015, Gholemi and Abedini conducted a study to investigate language related problematic areas in Iranian medical specialists' research papers. It aims to seek the most common discoursal, lexical, grammatical and mechanical problems. The result showed that 576 (around 44.6%) errors out of 1291 were related to discoursal features. This statistic revealed the significant of discoursal features, particularly cohesive devices. It has been said that the higher proportion of discoursal errors is the result of foreign language educational system in Iran.

In 2007, similar study was conducted by Nasrin Shokrpour and Mohammad Hossein Fallahzadeh to determine areas of difficulties which medical students of Shiraz university face with when writing the their medical reports. To this end, 120 medical students were selected. They participated in three writing unit courses, three hours weekly. During this period they were required to visit patients and write reports. 101 notes written by fifth year medical students were examined to identify the major problems. The study found that the most problematic areas were grammar, punctuation, cohesive devices and coherence. Cohesive devices were the most problematic area. At the end, some recommendations were given regarding effective teaching of writing. It had been suggested that "process genre approach" would be appropriate in university writing classes as the language teaching approaches have moved toward discoursal aspects of language.

Cohesive errors in writing have been studied by Kwan and Yunus (2014) among ESL pre-service teachers. In this study, 30 Malaysian final year ESL pre-service teachers of medium and high levels were asked to write 200-word narrative essays. Then, according to Halliday and Hassan's (1976) Cohesion Taxonomy cohesive errors made by the teachers were tabulated and categorised. The results showed that the most cohesive errors by medium level pre-service teachers were lexical errors followed by reference and conjunction. The most frequent cohesive errors by high level pre-service teachers were lexical errors followed by reference and ellipsis. It had been concluded that regardless of the proficiency level of the teachers, lexical cohesion, collocation on particular, was the most difficult to master. However,

it has been suggested that the absence of cohesive errors in some categories and subcategories of cohesive devices may not necessarily mean that the teachers have completely mastered those cohesive devices.

In an investigation into academic writing difficulties, Hassan Al-Babi (2015), found that one of the most common difficulties was related to cohesion and coherence. Most of the students in the sample were found to have difficulty employing the cohesive devices accurately and properly. In the same vein, Akpinar (2012) found that Turkish learners were familiar with cohesive devices and they were good at grammatical structures; however, they did not know how to use their knowledge appropriately. Turkish EFL learners were asked to read an argumentative text and identify cohesive devices. Substitution and ellipsis were the most difficult cohesive devices to identify. An implication suggested in this study was that teaching cohesive devices could be helpful for comprehension of the text; thus, it seems necessary to teach them explicitly.

Overall, the combination of findings provides further support for the significance of cohesion and cohesive devices. Lack of cohesion in writing and high proportion of cohesion errors reflect the fact that cohesion as a problem cannot be ignored. It seems necessary to take teaching cohesive devices more seriously while the ability to convey meaning proficiently in written texts is a critical skill for academic and professional success. Cohesive errors by intermediate- and high-level proficiency English learners have received much more attention than those by advance learners. The current study intends to investigate cohesive errors by advance learners.

The purpose of the study

The aim of this research project has been to examine the following questions:

1. What are the most frequent cohesive devices used by Iranian advance learners?
2. What are the most frequent cohesive errors committed by the learners?
3. What are the probable sources for cohesion errors?

III. Methodology

A. Participants

Thirty advance students studying English language teaching were recruited non-randomly for this study. Participants were from Rasht University. They were learners of two intact classes. Participants were both male and female aged between 25 to 35 years old. Regarding linguistic background of the participants, all participants were monolingual in Persian.

B. Instruments

In order to be sure that all of the participants were from the same proficiency level and there were no significant differences between them, Oxford full Placement Test was administered. This test included 76 multiple items, each of them were worth one point, and 3 writing items, 8 points for each of them. Essay items were scored by two raters. To determine the frequency of cohesive devices used and the frequency of cohesion errors committed by the learners the participants were asked to write a composition of 200-220 words about the following topic (TEOFL essay topic);

'Do you agree or disagree: you can get a better education from experience than you can in a classroom? Use specific details and examples to support your opinion'.

C. Procedures

First, to ensure that the participants are of near homogeneity regarding their proficiency level Oxford Full Placement Test was administered. According to the Oxford Full Placement Test conversion table, the participants' scores fell between 86 and 100 (mean score: 88); therefore, they were assigned to advance level. After determining the level of participants, they were given a topic on which they were asked to write a composition of 200-220 words. To determine the frequently used cohesive devices and cohesive errors made by the learners, the cohesion taxonomy developed by Halliday and Hassan was used.

D. Data Analysis

In the case of the first two research questions investigating the most commonly used cohesive devices and the most frequent cohesive errors committed by the participants, the data were analyzed quantitatively using descriptive statistics with frequency and percentages. Referring to Halliday and Hassan's (1976) Cohesion Taxonomy, cohesive devices and cohesive errors made by learners were identified and categorized. In the case of the last research question investigating the origin of errors, the data were analyzed using qualitative method.

IV. Results

A. The First Research Question

The frequency and percentages of the cohesive devises used by the learners were calculated according to Halliday and Hassan's (1976) Cohesion Taxonomy. Table 1 presents the frequency of cohesive devices used by the learners. The results indicate that reference cohesion was the most frequently used one (42.91%), followed by conjunction (33%), lexical (17.51%), ellipsis (3.82%), and substitution (2.76%).

TABLE I.
FREQUENCIES AND PERCENTAGES OF COHESIVE DEVICES USED BY THE LEARNERS

Cohesion categories	Number of occurrence	Percentages	Cohesion subcategories	Number of occurrence	Percentages
Reference	730	42.91	Personal	430	58.90
			Demonstrative	190	26.02
			comparative	110	15.06
Substitution	48	2.76	Nominal	20	42.55
			Verbal	25	53.19
			Clausal	3	6.38
Ellipsis	65	3.82	Nominal	30	46.15
			Verbal	20	30.76
			Clausal	15	23.07
Conjunction	560	33			
Lexical	298	17.51	Repetition	83	27.85
			Synonymy	20	6.71
			Antonymy	30	10.06
			Hyponymy	20	6.71
			Collocation	145	48.65
Total	1701	100		1701	

B. The Second Research Question

The frequency and percentages of the cohesive errors made by the learners were also calculated according to Halliday and Hassan's (1976) Cohesion Taxonomy. Table 2 shows the frequency of commonly errors committed by the learners. It is apparent from the table that errors in references were the most common (43%), followed by conjunction (35%), lexical (18%), ellipsis (2.5%), and substitution (1.5%). In the case of reference cohesion, major portions of errors were related to personal pronoun and demonstrative pronoun. In the case of lexical cohesion, the major portions of errors were related to collocation and repetition.

TABLE II.
FREQUENCIES AND PERCENTAGES OF COHESIVE ERRORS COMMITTED BY THE LEARNERS

Cohesion categories	Number of errors	percentages	Cohesion subcategories	Number of errors	percentages
Reference	86	43	Personal	38	29.23
			Demonstrative	37	28.46
			Comparative	11	8.46
Substitution	3	1.5	Nominal	1	0.76
			Verbal	2	1.53
			Clausal	0	0
Ellipsis	5	2.5	Nominal	5	3.84
			Verbal	0	0
			Clausal	0	0
Conjunction	70	35			
Lexical	36	18	Repetition	16	12.30
			Synonymy	0	0
			Antonymy	1	0.76
			Hyponymy	0	0
			Collocation	19	14.61
Total	200	100		200	

Cohesion errors committed by the learners were exemplified in the following table.

TABLE III.
EXAMPLES OF LEARNERS' COHESION ERRORS

Cohesion categories	Cohesion subcategories	Learners' cohesion errors
Reference	Personal	Consider a student… he might be a top student. <u>She</u> will certainly learn a lot. The teacher encourage <u>their</u> students. His family can help <u>s/he</u> learn speaking. You involved yourself in the classroom but <u>it</u> classroom you…
	Demonstrative	You can get a better education <u>in classroom</u>. There are several <u>argument</u>. … we are exposed to the experience of <u>the another</u>.
	Comparative	For learning mathematics, I think that classroom is more important <u>that</u> experience.
Substitution	Verbal	Whatever you learn theoretically and whatever your teachers had done in the classroom, you can <u>did</u> too.
Ellipsis	Nominal	… for instance, the teacher uses a specific method and you can use <u>a specific</u>. (no need).
Conjunction		<u>The child</u> who wants to learn writing it is necessary that… (for the child) The similar situation cannot be identical <u>because of</u> individuals have… (because) Although both kinds of learning are useful <u>but</u> in my opinion… (no need)
Lexical	Repetition	Being involved in the classroom may be <u>it</u> has a theoretical reason. (no need) When I think of myself as a teacher, I hope to start my language teaching <u>to teach</u> based on experience rather than... (no need)
	Antonymy	Extreme view of both ways not only cannot make you more proficient but also make you <u>low proficient</u>. (less proficient)
	Collocation	He will probably need to <u>take part at</u> practical courses. (take part in) When I try to do a research, I can <u>get in touch with</u> it. (be in touch with) … learn to work in groups and <u>cooperate by</u> one another. (cooperate with) Although I <u>agree with</u> learning by experience… (agree on) For instance, when I teach practically not only I <u>enjoy from it</u> … (enjoy sth) I think teachers should <u>denote their experiences for</u> their students or in other words make their experiences available. (denote sth to)

C. The Third Research Question

Regarding the sources of learners' cohesive errors, intralingual and interlingual causes were considered. Interlingual errors refer to those which are related to the target language, in this case English language. Inerlingual errors refer to those which are originated from the source or the first language.

Intralingual errors: In this study, the majority of cohesive errors especially most of the errors in the use of conjunction and repetition, can be attributed to L2 proficiency. For example:

1. Being involved in the classroom may be <u>it</u> has a theoretical reason. (no need)
2. The similar situation cannot be identical <u>because of</u> individuals have… (because)

Interligual errors: It is uncontroversial that L1 (Persian language) influences L2 (English language) learning. This is called interference of L1. The results of this investigation show that the most frequently errors committed by the learners was related to the reference cohesion. A possible explanation for this is that Persian does not make distinction between pronouns (personal pronouns and possessive pronouns).

3. His family can help s/he learn speaking.

/xanevade-?æsh mitævanænd dær yadgiriy-e sohbæt kærdan be ?u komæk konænd /

In this example /æsh/ represent possessive pronoun.

4. … he might be a top student. She will certainly learn a lot.

/?u momken ?æst daneshamuz-e xubi bashæd. ?u qæt?æn chizhay-e ziyadi yad xahæd gereft/

Here, /?u/ in Persian is equivalent to both 'he' and 'she' in English.

There are some other interlingual errors which are the result of the fact that in Persian, there is also no agreement between the determiner and its referent. For instance:

5. There are several argument.

/chændin dælil vojud daræd/

Regarding lexical errors, most of the problems deal with the use of wrong preposition. It seems that the learners overlook co-occurrence restrictions and under the influence of Persian add, omit, and replace prepositions wrongly. For instance|:

6. Although I agree with learning by experience… (agree on)

/?ægarche mæn ba yadgiri ?æz tæriqe tæjrobe movafeqæm/

7. When I teach practically not only I enjoy from it … (enjoy sth)

/zæmani ke ?æmæli tædris mikonæm næ tænha ?æz ?an lezzæt mibæræm/

8. Although both kinds of learning are useful but in my opinion… (no need)

/?ægarche hær do noe yadgiri mofid ?æst ?æma be næzær-e mæn/

V. DISCUSSION AND CONCLUSION

This study set out with the aim of investigating cohesion in the learners' writing. The first question in this study sought to determine the most commonly used cohesive devices in writing. The results indicate that reference cohesion

was the most frequently used one (42.91%), followed by conjunction (33%), lexical (17.51%), ellipsis (3.82%), and substitution (2.76%). The second question in this study sought to determine the most frequent cohesive errors committed be the learners. The results show that errors in references were the most common (43%), followed by conjunction (35%), lexical (18%), ellipsis (2.5%), and substitution (1.5%).

However, the absence of errors in some cohesion subcategories including clausal substitution, verbal ellipsis, clausal ellipsis, synonymy, and hyponymy may not necessarily mean that learners have mastered them. The learners may avoid using these cohesive devises because they are difficult for them (Brown, 2007). The third question in this study investigated the origins of the errors. It was found that the majority of cohesive errors can be attributed to L2 proficiency (intrallingual causes) and some others were the results of L1 interference (interlingual causes). The findings were consistent with those of Sadighi & Heydari (2012), and Ahmadvand (2008). They reported that most of the errors were independent of the learner's native language. The results of this study indicate that more than half of the errors were the results of lack of L2 proficiency; most of the errors in the use of conjunction and repetitions have intralingual causes. On the other hand, some of the errors in the use of personal references, demonstratives, and collocations were the result of interference of native language, Persian. In conclusion, the study found that even advance EFL learners have difficulty in the area of cohesion. Therefore, in order to improve writing skill it is necessary to teach cohesion and guide learners to use cohesive devices appropriately.

VI. LIMITATION

The present study has some limitations. Firstly, the sample, consisting of 30 advance EFL learners, is an insufficient representation of the population so the results cannot be generalized. Secondly, it did not distinguish between errors and mistakes. It seems that some of the errors were not really errors. They were mistakes and their occurrence were not the results of neither lack of L2 knowledge nor L1 interference. They were occurred due to memory lapses, physical states or psychological conditions. Another limitation of the study is that avoidance strategies used by the learners are not taken into account. Learners may avoid using some specific cohesive devices because they find them difficult.

VII. PEDAGOGICAL IMPLICATIONS

The findings of this study have a number of implications for language teachers. First of all, since writing a coherent text is highly important for language learners and there is a positive relationship between appropriately use of cohesive devices and the quality of writing, studying cohesion in writing deserves much attention. The results of this study show that major weak points in the advance EFL learners' writing are personal reference, demonstrative reference, lexical repetition and collocation. So, there is a need for more rigorous attention to these cohesive devices. Second, ellipsis and substitution were the least frequently used cohesive devices thus, it is important to make the learners more familiar with them and ask the learners to practice them. The next one is that in the case of interlingual errors, it is suggested that the teachers inform the learners about differences between L1 and L2. Pointing to the differences may help the learners to avoid interlingual errors.

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