The Use of Cohesion in Students’ Argumentative Writings

Nanta Hananta
Didi Sukyadi
Indonesia University of Education
nantahananta@gmail.com, didisukyadi@live.com

Abstract
This research study aims at discovering the use of cohesion in students’ argumentative writings in terms of its frequency and function. Moreover, it also investigates whether or not there is a correlation between students’ knowledge on cohesion and their writing performances. The participants of the study are seventeen students of English Language and Literature study program at Universitas Pendidikan Indonesia (UPI) who have learned how to compose argumentative writing as well as cohesion. To answer all research questions, this study employs a mixed method research design embracing the characteristics of a case study approach. The data are obtained from students’ argumentative writings, their writing score, and a cohesion test. This research study is grounded by the framework of Cohesion Taxonomy proposed by Halliday and Hasan (1976), which is also a tool for analyzing students’ texts.

Results reveal that grammatical cohesive devices—by the use of reference and conjunction as the dominant devices—are slightly more preferable to be used as cohesive resources than the lexical ones. Moreover, it is also found that cohesive devices generally have two major functions which are to remind the readers of the points under discussion and to clarify and affirm semantic relationship between clauses so that the position of the author is clear. In addition, based on the analysis, it is also found that there is no significant correlation between students’ knowledge on cohesion and their writing performances. However, it does not conclusively justify that cohesion is unimportant in writing. Instead, it suggests that writing is a process and cohesion per se is not the determining factor, yet it is one of them. Furthermore, this study recommends that students should expand their repertoire both in vocabulary and sentence structure since the analyzed writings point to their heavy reliance on repetition device.

Keywords: Cohesion, Writing Performances, Cohesive Devices

1. Rationale and Background of the Study
This study entitled the Use of Cohesion in Students’ Argumentative Writing focuses on two important points in this paper: cohesion and writing.

According to Defazio, J. et al (2010), writing has become a valuable tool in academic setting for engaging students in thinking, showing understanding, creating things, communicating, and learning. They added that the ability to write determines students’ success both during their study and after they graduate. Writing, moreover, is one of the inevitable tasks from a university student to do, including writing essays, articles, reports, and research papers. In order that the writings can function, the language used in it should be comprehensible; in this case, the writer should take note on the main functions of language usage in writing for academic purposes. However, when it comes to writing, especially
writing in the language which is not the students’ first language, in this case English; writing may become a difficult task to do (El-Gazzar, 1994: 1; Gao, 2012:2; Kwan & Yunus, 2014: 1-2; Tanawong 2014: 1). According to Richards and Renandya (2002, cited in Ghasemi, 2013) most of the ESL or EFL students find it difficult to both formulate and organize their ideas, and translate their ideas into a comprehensible text.

In Indonesia, the position of English as a foreign language nowadays is getting more and more important. This is indicated by the fact that English is as a compulsory subject not only in Junior High School and Senior High School, but also in Elementary School. Even though English belongs to one of the National Examination subjects, yet based on Mardjiono’s (2003) error analysis research; Indonesian students’ competence in English—especially in writing skill—is still considered insufficient. Although writing skills are regarded important in academic setting, writing has been an unresolved problem because it is less desirable than speaking (Yusuf, 2010: 1). For this reason, it is relatively hard to identify good writers with respect to academic writing (Azis and Alwasilah, 1996; cited in Yusuf, 2010: 1).

One of many ways to deal with the problem regarding the writing quality, as it is stated by Halliday (1994: 23), is by attaining cohesion and coherence in arranging text; as a result, the text will be easier to be understood by the readers. This argument is supported by Gerot and Wignel (1994) who mention the importance of cohesion in a text which is to provide continuity in a text and to help a text hang together (see also Halliday & Hasan, 1976: 7). In fact, there are many research studies conducted into the correlation between cohesion and writing quality; it has been found that writing quality positively correlates with the use of cohesive devices (McCulley, 1985; Guizu, 2005; Ebrahimpourtaher & Eissaei, 2008; Scott & Danielle, 2010, Janjua, 2012, Angeles, n.d.; Nakao, n.d). Because of the positive correlation between cohesion and the writing quality, it is apparent that the research on cohesion is important point in literacy studies, more specifically in writing.

Research on cohesion can be categorized and based on the concern, some of which are the ones investigating the correlation of the number of cohesive devices with the writing quality as aforementioned above. Besides, there are also the ones seeking the pattern of differences and similarities of the cohesive devices use by the EFL or ESL students and the native English students, one of which is conducted by Kargozari and Ghaemi (2012) who compare the use of cohesive devices by Iranian EFL students with the ones used by the native English students. The results show that the use of cohesive devices affect the mode of composition; however, certain problems such as misuse, overuse, and restriction are identified in the EFL students’ compositions in the use of reference, conjunction, and lexical devices. Likewise, relatively high numbers of contrastive studies come at the conclusion that the use of cohesive devices by EFL or ESL students are problematic in a way that they either misuse, underuse, or overuse the cohesive devices (Granger & Tyson, 1996; Xu, 2000; Prommas & Sinwongsuwat, 2001; Bikeliene, 2008; Na, 2011; Ong, 2011).
Another category in cohesion studies identifies the cohesive devices used in texts from particular genres, such as in narrative text (Horton, 2009; and Mawardi, 2014); in argumentative text (Tsareva, 2010; and Sanczyk, 2010; Alarcon & Morales, 2011; Angeles, n.d.); in expository text (Meisuo, 2000; Xu, 2000); in descriptive text (Rahman, 2013); in recount text (Swastami, 2014); or even in argumentative, descriptive, and expository text altogether (Kargozari & Ghaemi, 2012). Also there are research studies concerning the spoken discourse (Al-Kahtany, 2007) and the ones that are combined with theme-rheme progression analysis (Abu, 2013).

2. Research Objectives

This present research study attempts to carefully investigate the use of cohesion, more specifically, the use of cohesive devices—both grammatical and lexical ones—in argumentative writing by using taxonomy of cohesion proposed by Halliday and Hasan (1976). The reason for choosing cohesion in argumentative writing is because in arguing, reasoning, and establishing position in argumentative writing; cohesive devices are assumed to be significant in contributing to the connectedness of the arguments as well as in establishing position in the writing.

This present study is different from the previous four cohesion studies on argumentative writing. Angeles (n.d.) as well as Alarcon and Morales (2011) studied writing quality; Tsareva (2010) examined comparing and contrasting, and Sanczyk (2010) investigated the use of cohesive devices by students from different proficiency level. The study is to identify the type of cohesive devices used in argumentative texts composed by Indonesian students, how these cohesive devices function in the argumentative writings, and whether or not the students’ knowledge on cohesion correlates with their writing performance.

3. Research Methodology

This study employed a combination of a descriptive-qualitative and quantitative method. The use of quantitative method, however, is as a subsidiary. As stated by Farquar, Ewing, and Booth (2011: 1), it is possible to use a combination of qualitative and quantitative method to “provide comprehensiveness and greater knowledge yield.” This type of combination is commonly called a 'mixed method' (Bryman, 2006). Pearson Correlation was used as the tool to count the correlation matrix of cohesion devices and writing quality before qualitative findings being described. Quantitative data on the frequency of occurrences of the cohesive devices were reported in the form of percentage.

The application of qualitative method to this case study was chosen because its suitable characteristics (Hancock, 1998: 1-2; Creswell, 2007: 36-38; Patton & Cochran, 2007). The characteristics were: firstly, this study was conducted in natural setting which was English class in which the students learn to write; secondly, writing was a social phenomena; thirdly, this study analyzed how cohesive devices were used and utilized; lastly, this study investigated, analyzed, described, categorized, and interpreted the data that were writing
products—argumentative writings—composed by students. After conducting the text analysis of argumentative writings, the researchers presented and interpreted qualitative data as general findings and conclusions.

4. Data Collection

The data were obtained from one out of two Writing-in-Professional-context classes in English Language and Literature study program year 2014/2015, which meant the sample was 50 percent of the total population. The class size was 17 students.

There were two instruments for data collection in this study. The first instrument was documentation—the argumentative texts composed by 17 students. In collecting the data, the researcher took a procedure thus: (1) asked permission from the third-semester-writing lecturer in English Language and Literature study program to use the students’ argumentative writings as well as the scores as the data in this study; (2) asked permission from all the students to use their argumentative writings as the data in this study; and (3) collected the text from the students.

The second instrument was a test conducted to the seventeen students in agreed time (March 19th 2015). The test consisted of forty written questions about all types of cohesive devices to measure students’ knowledge about the devices. The results were utilized as a variable to be correlated with students’ writing performance —retrieved from their writing score. As for its content validity, the instrument was validated by an expert in the field under study (Sugiyono (2010, cited in Kusuma, n.d.). The instrument was piloted for its final revision with some English students with variables similar to those of the real subjects in the study.

5. Data Analysis

5.1 Identification of Cohesive Devices

In analyzing students' argumentative writing documents, the researchers used taxonomy of cohesion: (1) reference, (2) substitution, (3) ellipsis, (4) conjunction, (5) repetition, and (6) collocation as well as their subclasses. The researchers read the entire text to understand the context; then, based on taxonomy of cohesion, the researcher marked every cohesive device in every text that belonged to reference, substitution, ellipsis, conjunction, repetition, and collocation as well as their subclasses. The purpose of this procedure was to identify the types of cohesion devices used most frequently in each argumentative writing as well as the distribution of all cohesive devices. Furthermore, the types of cohesion devices were counted in frequency and percentage.

5.2 Examination of Functions of Cohesive Devices

After finishing the process of analysis and identification; the next step in this study was to examine the function of each cohesive device used in the argumentative writing. In the analysis, the researchers reread the entire text to examine the relationship between the tied
elements. The researchers, then, examined the pattern or structure in argumentative writing to find the general tendency for certain cohesive devices being used as well as their effect on intended meanings.

5.3 Investigation on the Correlation
The researchers used the results of the cohesion test performed by seventeen students to measure their knowledge of cohesive devices. The students’ overall writing score was used as an indicator of their writing performance. Then, the researchers used Pearson Correlation to examine the relationship between students’ knowledge of cohesion and their writing performance.

6. Findings and Discussion
6.1 Identification of Cohesive Devices
The types and numbers of cohesive devices used in each argumentative text were analyzed with the use of a cohesive framework by Halliday and Hasan (1976) cohesive framework. Based on data analysis, the occurrence of grammatical cohesive devices (54.73%) is slightly more frequent than the use of the lexical ones (45.26%). Table 1 illustrates overall frequency, averaged score per text, as well as the percentage of grammatical and lexical cohesive devices in students’ argumentative writings.

Table 1: Overall Cohesive Devices in Argumentative Writings

<table>
<thead>
<tr>
<th>Cohesive Devices Types</th>
<th>Gram.</th>
<th>Lex</th>
</tr>
</thead>
<tbody>
<tr>
<td>Frequency</td>
<td>1086</td>
<td>900</td>
</tr>
<tr>
<td>Averaged Score Per Essay</td>
<td>63.88</td>
<td>52.94</td>
</tr>
<tr>
<td>Percentage</td>
<td>54.73%</td>
<td>45.26%</td>
</tr>
</tbody>
</table>

The high frequency of the aforementioned grammatical cohesive devices derives mostly from reference (34%) and conjunction (20%). In the other side, reiteration contributes most in lexical cohesive devices use at 43% while collocation only counts 2%.

This finding supports Kargozari and Ghaemy (2012) in that grammatical cohesive devices score higher than the lexical ones. Besides, this finding also supports the study by Tsareva A. (2010) in that the use of reference and conjunction is the most common types of grammatical cohesion, whereas substitution and ellipsis are not frequently represented.

6.1.1 Grammatical Cohesion Use
Reference Devices Use
Reference is divided by three types: personal, demonstrative, and comparative. Besides, reference is sub-categorized into exophora and endophora—which is further divided into anaphora and cataphora.
**Based on Types of Reference**

Based on data analysis, it is found that personal reference is noted as the most-frequently-used reference which the used reach 345 times, followed by demonstrative reference with 276 times, and comparative reference with 61 occurrences which correlate with Meisuo, Z. (2000) whose finding reports the same about the use of reference. Table 2 describes the overall frequency, averaged score per text, as well as the percentage of reference types used in the students’ argumentative writings.

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Frequency</td>
<td>345</td>
<td>267</td>
<td>61</td>
</tr>
<tr>
<td>Averaged Score</td>
<td>20.29</td>
<td>16.23</td>
<td>3.58</td>
</tr>
<tr>
<td>Essay Percentage</td>
<td>50.58%</td>
<td>40.42%</td>
<td>9.00%</td>
</tr>
</tbody>
</table>

As seen in Table 2, personal reference strikes are most frequently used at 50.58% and used about twenty times in each argumentative writing. One particular personal reference in the essays is the use of personal pronouns, such as ‘they’ that refers to others, ‘I’ and ‘you’ as ‘we’ to the author and the readers.

Example 1: *As we know, in this millennium era, there are so many people who have gadgets in order to provide them easy way of living.* (Essay 3, original text)

The use of pronoun ‘we’ refers to the author and the readers, while pronoun ‘them’ refers to the people.

The use of demonstrative reference is 40.42%. The occurrence of this type of reference is dominated by neutral proximity and non-selective ‘the’ as well as near proximity and selective ‘this’. For example:

Example 2: *Nowadays, people prefer using their own vehicle to go somewhere. This situation makes the traffic so crowded.* (Essay 9, original text)

In the example above, the demonstrative reference ‘this’ indicates closeness with the readers. Demonstrative reference ‘the’ in ‘the traffic’ is used with an assumption that the readers have already grasped the context in the previous clause so that they probably will not ask ‘which traffic?’.
Comparative reference device is reported as 9% or about three times per essay. This type of reference is dominated by a particular comparative/superlative modifier (-er and -est) or the sub-modifier (more and the most).

Example 3: *It is because personal transportation is cheaper, can be used whenever we want, and more comfortable.* (Essay 13, original text)

This finding suggests that the students might find it difficult to use other comparative expression such as ‘as + adjective + as’ or adverbs like ‘identically’, ‘similarly’, ‘likewise’, and the like.

**Based on Ways to Retrieve Identity**

Halliday and Hasan (1976) divide *reference* based on how identity of a semantic element is retrieved in the text. They divide it into two, namely endophora and exophora. Based on the analysis, it is found that endophoric reference is noted as the most-frequently-used reference (frequency=272), which comes from anaphora (frequency=253) and cataphora (frequency=19); while exophora (frequency=73) is from exophora (frequency=68) and homophora (frequency=5).

Tables 4 and 5 below report the overall frequency, averaged score per text, as well as the percentage of the two reference categories and the use of endophora.

**Table 4: Sub-Category of Reference in Argumentative Writings**

<table>
<thead>
<tr>
<th>Reference Sub-categories</th>
<th>Exo.</th>
<th>Endo.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Frequency</td>
<td>73</td>
<td>272</td>
</tr>
<tr>
<td>Averaged Score Per Essay</td>
<td>4.29</td>
<td>16.00</td>
</tr>
<tr>
<td>Percentage</td>
<td>21.15%</td>
<td>78.85%</td>
</tr>
</tbody>
</table>

From the table above, it is relatively obvious that the use of endophoric reference—which is 78.85% or about sixteen counts in every essay—is remarkably higher than the exophoric one—which is 21.15% or only four counts per essay.

Exophora or exophoric reference is a reference in which the interpretation of it lies outside the text. Based on analysis, the use of this reference in the argumentative writings is mostly in the use of ‘I’, ‘we’, and ‘you’ that refer to the entity outside the text.

Example 4: *I am not disagree that public transportation in Indonesia, or we usually called it Angkot, is efficient.* (Essay 1, original text)

Personal references ‘I’ and ‘we’ above are used exophorically to refer to ‘the author’ and ‘the author as well as the readers, respectively. They are exophoric since both the author
and the readers are apparently not in the text; they are both entities outside the text. The use of anaphora or anaphoric reference is reported in Table 5.

**Table 5: Endophoric Reference in Argumentative Writings**

<table>
<thead>
<tr>
<th>Reference Sub-categories</th>
<th>Endophora</th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Anaphora</td>
<td>Cataphora</td>
<td></td>
</tr>
<tr>
<td>Frequency</td>
<td>253</td>
<td>19</td>
<td></td>
</tr>
<tr>
<td>Averaged Score Per Essay</td>
<td>14.88</td>
<td>1.12</td>
<td></td>
</tr>
<tr>
<td>Percentage</td>
<td>93.01%</td>
<td>6.09%</td>
<td></td>
</tr>
</tbody>
</table>

Endophora or endophoric reference refers to a reference in which its interpretation lies within the text. Halliday and Hasan (1976) divide *endophora* into *anaphora* and *cataphora*.

As shown in Table 5, the differences between these two references are relatively clear. This finding supports Hessamy and Hamedi (2013) in that the use of anaphoric reference is far more frequent than the cataphoric one. After all, the uses of both are all represented by personal reference. For anaphora, the most frequently used are: ‘they’ and ‘it’.

Example 5: *On the contrary, there are many students who think that learning Morphology is useless for it bores them.* (Essay 8, original text)

Table 5 shows two anaphoric references ‘it’ and ‘them’ that refer to ‘Morphology’ and ‘students’, respectively. The identity of these elements lies before the references. In the same way, the use of cataphora is also represented by personal reference, most frequently used as ‘it’.

Example 6: *It takes a lot of time and effort to improve English pronunciation.* (Essay 10, original text)

As seen, cataphora in Example 6 shows the identity of ‘it’ being retrieved after reading the rest of the clauses after the reference. This type of reference is recommended in writing for its objectivity (Emilia, 2011:164-165).

**Substitution Use**

As shown in Table 6, *substitution* is one of the cohesive devices least frequently used in students’ argumentative writings. From all collected essays, there are only four occurrences of *substitution*—one count for clausal, three counts for verbal, and none for nominal substitution. Table 6 reports the overall frequency, averaged score per text, as well as the percentage of the substitution devices in students’ argumentative writings.
Table 6: Substitution Use in Argumentative Writings

<table>
<thead>
<tr>
<th>Substitution Types</th>
<th>Nominal</th>
<th>Verbal</th>
<th>Clausal</th>
</tr>
</thead>
<tbody>
<tr>
<td>Frequency</td>
<td>0</td>
<td>3</td>
<td>1</td>
</tr>
<tr>
<td>Averaged Score</td>
<td>0</td>
<td>0.17</td>
<td>0.05</td>
</tr>
<tr>
<td>Percentage</td>
<td>0</td>
<td>75%</td>
<td>25%</td>
</tr>
</tbody>
</table>

It should be noted that Hessamy and Hamedi (2013) and Mawardi (2014) report the same finding about substitution being least frequently used for its greater complexity than that of reference. Furthermore, Mawardi (2014) points to language limitations of non-native students in the use of substitution.

Example 7: *People with open-minded heads can solve the problems better than who do not* (Essay 11, original text)

In Example 7, the word ‘do not’ substitutes a verb group of ‘have open-minded heads’.

Ellipsis Use

The finding on ellipsis use in this study is in line with Hessamy and Hamedi (2013) who assert that ellipsis is the least frequently used cohesive device in argumentative writing. There is only one ellipsis used in all collected essays in the study. The only one use of ellipsis is a clausal ellipsis as shown below:

Example 8: *It doesn’t matter for them whether the sentence structure that has been produced is good or not.* (Essay 5, original text)

The example illustrates that the bold word ‘not’ is in an elliptical form of ‘[it is] not [good]’.

Conjunction Use

With its predominant occurrences (23.47%) conjunction is one of the highest contributors in grammatical coherence after reference. Additive conjunction (frequency=198) has the largest percentage of use, followed by temporal (frequency=82), causal (frequency=60), and adversative (frequency=59). Table 7 illustrates the overall frequency, averaged score per text, as well as the percentage of the use of conjunctive devices in students’ argumentative writings.
Table 7: Conjunction Use in Argumentative Writings

<table>
<thead>
<tr>
<th></th>
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<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Frequency</td>
<td>198</td>
<td>59</td>
<td>60</td>
<td>82</td>
</tr>
<tr>
<td>Averaged Score Per Essay</td>
<td>11.64</td>
<td>3.47</td>
<td>3.52</td>
<td>4.82</td>
</tr>
<tr>
<td>Percent</td>
<td>49.62%</td>
<td>14.78%</td>
<td>15.03%</td>
<td>20.55%</td>
</tr>
</tbody>
</table>

This finding is in line with what is reported by Bae (2001) whose finding points to additive and temporal as the most dominant conjunctive devices used. The analysis in the study finds additive conjunction devices being used in half of the total use of conjunction. Additive devices in the collected essays are mostly ‘and’ and ‘also’, followed by some exemplifying additive conjunctions like ‘for example’, for instance, and ‘like’.

Example 9: *First, some cartoons and animations are not only funny and entertaining but also contains many moral, educational and religious values which are good for kids.* (Essay 5, original text)

Example 10: *It reduces other problems that concern with population growth, for instance the provision of job that leads to an unemployment problem.* (Essay 12, original text)

In Example 9, the additive device ‘also’ is used to coordinate clauses in term of additional information; while in Example 10, the additive conjunction ‘for instance’ is used to provide example—which is the addition of the previous clause.

It should be noted that temporal conjunction comes as the second most frequently-used conjunction at 20.55%. It appears in a sequential form as, ‘first’, ‘second’, ‘last’ or *having conclusive meaning* as ‘to conclude’ and ‘finally’.

Example 11: *First, with using public transportation we can help the government ... Second, we can save more energy... Third, we can prevent the traffic jam* (Essay 9, original text)

Example 12: *No linguist who can avoid his job from words, therefore linguist....* (Essay 8, original text)

In both Examples 11 and 12, the bold words are considered temporal because they indicate sequence of arguments. Thus, when the author uses ‘first’, the readers will most likely think that there will be more others.

After *additive and temporal, causal conjunction* is used rather frequently at 15.03% of all the conjunction types. The use of ‘because’ is apparent in this type of conjunction.
Example 13:  *They just take the left side before they turn to the right because they think everything is alright.* (Essay 4, original text)

The use of ‘because’ in Example 15 is considered *causal* for its function in connecting the clauses that precede and follow it in a cause-effect relationship.

*Adversative conjunction* appears as the least frequently used in the students’ argumentative writings at 14.78% --rather similar to the use of *causal conjunction*. The use of ‘but’ and ‘however’ are noted as the most commonly used.

Example 14:  *It might be more expensive than the first way I have stated above, but it will be certainly cheaper than using new materials.* (Essay 17, original text)

The word ‘but’ shown in Example 14 is an *adversative device*. It points to one clause being in contrast with the other.

**6.1.2 Lexical Cohesion Use**

**Reiteration Use**

Based on data analysis, it is found that reiteration is the highest of all cohesive devices used in argumentative writings as 43.75% of all the cohesion occurrences. As part of lexical cohesion reiteration stands as 88.54%. Among the six sub-categories of reiteration, repetition (frequency=774) is accounted for the largest percentage of use, followed by synonymy (frequency=54), superordinate (frequency=39), and general noun (frequency=2), as shown in Table 8. The table illustrates the overall frequency, averaged score per text, as well as the percentage of the use of reiteration devices in students’ argumentative writings.

<table>
<thead>
<tr>
<th>Types</th>
<th>Repet</th>
<th>Synon</th>
<th>Sprordn</th>
<th>G.Wrd</th>
</tr>
</thead>
<tbody>
<tr>
<td>Frequency</td>
<td>774</td>
<td>54</td>
<td>39</td>
<td>2</td>
</tr>
<tr>
<td>Averaged Score Per Essay</td>
<td>45.52</td>
<td>3.17</td>
<td>2.29</td>
<td>0.11</td>
</tr>
<tr>
<td>Percent</td>
<td>88.54%</td>
<td>5.82%</td>
<td>5.27%</td>
<td>0.28%</td>
</tr>
</tbody>
</table>

This finding is in accordance with Rahman (2013) and Mawardi (2014) whose findings similarly suggest the frequent use of repetition to the extent of an overuse by non-English-native students. As seen in Table 8, the percentage of repetition is the highest at 88%.

Example 15:  *Every student, who learns linguistics, must; also, learn Morphology. Since learning Morphology is the basic step to be a linguist, Morphology becomes an important course for students in language major who wants to be a linguist* (Essay 8, original text)
There are some repetitions in the paragraph above, which are: student-students; learn-learn-learning; linguistics-linguist-language-linguist; and Morphology-Morphology.

After repetition, synonymy (5.82%) comes as the second-most-dominantly used reiteration device.

Example 16: Moreover, at some point video games even give some good influences to children...video games could also help children's growth in a positive way. (Essay 14, original text)

Example 16 is taken from two parts of one essay: the first and the last paragraphs. Both ‘good influences’ and ‘positive way’ are semantically similar. Both phrases refer to the same concept.

Similar to synonymy, the use of superordinate stands next at 5.27%.

Example 17: Most of the condition of Angkot are not good. When rain comes, the windows could not be closed.... (Essay 1, original text)

Example 17 illustrates the use of superordinate in which ‘the window’ is a part of ‘angkot’.

The least used reiteration device is general word (0.28%). There are only two occurrences of this type of reiteration.

Example 18: I am not disagree that public transportation in Indonesia, or we usually called it Angkot, is efficient. (Essay 1, original text)

In Example 18, the general word for ‘public transportation in Indonesia’ is ‘Angkot’.

**Collocation Use**

Collocation is the third-least-used-type of all cohesive devices after ellipsis and substitution. There are 31 occurrences in all essays, which counts 3.44 % of the lexical types in cohesive devices. Collocation is a pair of words which are associated with one another in the same lexical environment. It can also be derived from oppositeness.

Example 19: People with open-minded heads can solve the problems better than who do not. (Essay 11, original text)

Example 20: However, I think that is not quite right because cubicles give more values than a private office or hotdesking. (Essay 2, original text)
In Example 19, the collocation is between the word ‘solve’ and ‘problem’ that frequently co-occur in the same lexical environment. While in Example 20, the collocation derives from oppositeness between ‘cubicles’ and ‘private office’ or ‘hotdesking’.

6.2 Functions of Cohesive Devices in Argumentative Writings

In investigating the functions of cohesive devices in students’ argumentative writings, it is inevitable that the analysis is related to the structure of argumentative writing in three stages, namely thesis, argument, and conclusion.

**Thesis** is a stage in which the writer usually takes his/her position and outlines the main arguments to be presented. **Argument** is a stage in which the writer restates his/her previously outlined arguments, then develops and supports each argument. While in **conclusion**, the writer restates his/her position as well as summary of the arguments explained before.

To answer the second research question, the analysis is meant to examine the functions of particular cohesive devices in three stages of the argumentative writing structure.

6.2.1 Functions of Grammatical Cohesion

**Function of Reference**

From the analysis, all the collected argumentative writings use *deductive* organizational pattern in which the information is arranged from general to specific. **In the thesis stage**, *reference* is used to describe a general opinion. For this reason, it is not surprising when all of the writings use a plural personal reference ‘they’ to refer to ‘many people’, ‘some parents’, or simply ‘people’ in the first or second sentence(s). This is simply because the writers intend to distance their opinion from ‘others’.

Example 21: *People* get an upgrading of their study when *they* become university student (Essay 11, original text)

In Example 21, a personal anaphoric reference ‘they’ is used to refer to people in general. Based on the structure of argumentative, it is used to present a controversial statement as a gambit which functions as an attention getter.

The analysis also shows that ten out of seventeen argumentative writings use the first-person pronoun ‘I’ and ‘we’ to refer to the writer as and/or the reader as well as the readers. Moreover, the use of the second-person pronoun ‘you’ for the readers is also found in six argumentative writings. It is possible that the writers may want to create a sense of closeness with the readers or they may intend to make their writings more engaging. These results reveal that most of the student-writers are comfortable using the first- or second-person to make their writings personal and perhaps more engaging.
Example 22: *I agree that by using public transportations the road can be neater.* (Essay 13, original text)

As seen in Example 22, the writer obviously intends to establish his/her position in the argument. It should be noted that the dominant use of anaphoric reference as opposed to cataphoric reference—in three stages of argumentative writing—suggests the students’ preference for a personal structure with the use of the first-pronoun rather than the *impersonal* third-pronoun.

Example 23: *It actually can be fun to play with words.* (Essay 8, original text)

Example 23 is cataphoric with the use of ‘it’ which can only be retrieved after the readers have gone through the entire clause. This is a rather rare occurrence because most writers prefer using a personal one (93% as anaphoric reference). This finding points to a need to call to students’ attention to the use of the third-person pronouns for objectivity in making an argument (Emilia, 2011).

A *demonstrative* reference appears as ‘the’ and ‘this or these’.

Example 24: *…Dora the Explorer. This cartoon is very suitable and appropriate for kids to develop these skills* (Essay 15, original text)

The use of ‘this’ and ‘these’ in Example 24 shows an anaphoric function as a scale or *proximity* to indicate *closeness* in which the identity can be retrieved from the preceding clause.

A *comparative* reference, however, is the least-used reference device. This reference type is commonly found in the form of ‘more’ or ‘-er’.

Example 25: *It is because personal transportation is cheaper, can be used whenever we want, and more comfortable.* (Essay 13, original text)

Example 25 shows a comparison in terms of quality expressed as an *adjunct*. The role of a comparative reference is to link a language item semantically with its environment (Tsareva, 2010). As shown in Example 25, the reference is expressed by means of *adjective* in its comparative form—‘cheaper’ and ‘more comfortable’ in the environment of transportation. This type of reference functions in indicating a superior relationship of one thing over the other. Thus, it can be inferred that the use of *comparative reference*—in all stages of argumentative writing—is meant to reflect the writer’s support of one particular person/thing/viewpoint.
Function of Substitution and Ellipsis

The function of substitution is quite similar to that of reference. While reference is of semantic relation, substitution is of lexicogrammatical relation. The function of substitution in the stages of argumentative writing—thesis, argument, and conclusion—is a resource referred to a particular element whose identity is recoverable (Schriffin, Tannen, & Hamilton, 2001; cited in Hung & Thu, 2014). There are only a few occurrences of substitution in the collected argumentative writings.

Example 26: No linguist who can avoid his job from words, therefore linguists have to deal with words and understand the concepts more than other people do. (Essay 8, original text)

Example 27: It doesn’t matter for them whether the sentence structure that has been produced is good or not. (Essay 5, original text)

The underlined phrase in Example 26 is a verbal substitution in which the word ‘do’, substitutes a verb group ‘deal with words and understand the concepts’. In Example 27 above, the word ‘not’ is an elliptical form of ‘[it is] not [good]’.

As mentioned earlier, ellipsis is basically similar to substitution in that it is a substitution in which a nominal, verbal, or clausal group is substituted with zero or nothing. The function of ellipsis in argumentative writing is also to remind the readers of the topic under discussion—be it major or minor. It is also used to avoid redundancy in word use.

Function of Conjunction

It was found that that the use of adversative conjunction in the thesis stage is evident as a marker in introducing the writers’ ideas which are contrary to the general statement given earlier in their writings. Of all collected argumentative writings, fourteen writers (82%) use adversative conjunction such as ‘however’, ‘but’, ‘whereas’, and ‘on the other hand’ in this stage.

Example 28: Freshmen are conventionally told to join the student association in their college. However, as freshmen, academic life has things that are far more important and more useful than organization. (Essay 7, original text)

In Example 28, the author introduces a general statement that freshmen are supposed to join the student association in the first clause; then the author says that academic life is more important than the student organization. The use of ‘however’, then, is crucial in that it affirms that the relation between these two clauses are adversative. As seen, the position of the author is against the assumption on joining students association.

In the argument stage, a temporal conjunction is common in students’ argumentative writing. The students used ‘first(ly)’, ‘second(ly)’, or ‘last(ly)’ to show the order of their reasoning as well as to support their thesis statement in the first stage. These temporal
conjunctions are used to signal that there would be other arguments. The conjunctive device serves to build up a sequence of arguments.

Example 29: *The first effect...is they can contribute cause of traffic accident...The second effect is the people who cannot drive properly causes the traffic jam...* (Essay 4, original text)

In Example 29, the temporal conjunctive devices indicate a new stage of the writers’ arguments and at the same time signal a sequence of these arguments. It should be noted that additive and causal conjunctions are also found in this stage.

Example 30: *It reduces other problems that concern with population growth, for instance the provision of job that leads to an unemployment problem* (Essay 12, original text)

Example 31: *Moreover, the children who are playing in the outside are usually have more friends.* (Essay 3, original text)

Example 32: *We can see that Angkot have caused traffic jam everywhere, because they always stops in every places that they want.* (Essay 1, original text)

Example 33: *As a result, the misunderstanding in communication can be also avoided if someone can produce words correctly, because different pronunciation has different meaning.* (Essay 5, original text)

The functions of the *additive conjunctive device* in argumentative writing are to exemplify and clarify. In Example 30, the use of ‘for instance’ as an additive conjunction is to exemplify the argument that has been made earlier. While in Example 31, ‘moreover’ functions as a clarifier for the argument. In addition, 'moreover' is used to emphasize an additional point that is related to the previous sentences. It is used at the beginning of the sentence that draws the readers’ attention to the writer’s opinion expressed earlier in the text. Therefore, the use of *additive conjunction*—similar to temporal conjunction—is to indicate support for the previous argument.

In the same way, the function of the *causal conjunctive device* is to support the previous argument in the form of a reason, a result, or a purpose. In Example 32 and 33, the use of ‘because’ and ‘as a result’ is to indicate the given reason and result, respectively.

In conclusion stage, finding shows that temporal conjunction appears in this stage as a marker that signals conclusive boundary. In the argumentative writings, the students employ ‘so’, ‘to conclude’, ‘therefore’, and ‘from all of that’ before restating their arguments, for instance:

Example 34: *To conclude, getting a good English speaking ability in 3 weeks is impossible...* (Essay 10, original text)
In Example 34, the *temporal conjunctive device* ‘to conclude’ has a culminative meaning in rewording or summing up the preceding discussion. The conjunction with culminative meaning is evident in the conclusion stage of argumentative writing. In this stage, the writer restates the previous propositions and arguments.

As shown in the given examples, the use of conjunctive devices conjunction are to clarify and affirm the relationship between clauses—be it additive, adversative, causal or temporal. The use of these devices can clearly position the writer’s standpoint.

### 6.2.2 Function of Lexical Cohesion

#### Function of Reiteration

As seen in the *thesis, argument, or conclusion* stage, the students rely heavily on *repetition* to sustain the continuity as well as to remind the readers of the topic under discussion.

Example 35: *Personal transportation is cheaper than most public transportations. Public transportations have a fixed price while personal transportation does not. It is Personal transportation, such as bikes and cars, use volume of gas depend on the destination. For example, if public transportation is paid Rp 5.000 from A to B, personal transportation can reduce the cost to Rp 2.000.* (Essay 13, original text)

In Example 35, the word ‘transportation’ is repeated for seven times—three times for public transportation and four times for the private one.

*Reiteration* can be in the form of *repetition, synonymy, superordinate, and general word.* As shown in Example 35, *repetition* is a *reiteration cohesive device* that is used most frequently. It is simply because there is a move in the argument stage, the writers need to rephrase and repeat their propositions toward the end of the paragraphs—from the beginning to the end. Such a move is intended to establish a chain-like attempt in reminding the readers of the previous points. This results in repetition as a prominent cohesive device being used.

It was also found that the use of *synonymy* is quite significant. This could stem from the writers’ effort in avoiding the use of repetition.

Example 36: *Economically, cubicles can save company’s financial better by saving space.* (Essay 2, original text)

In Example 36, the word ‘cubicles’ and ‘space’ describe the same thing—office space. The function of synonymy in all stages of argumentative writing is to repeat the same word in the same way in a text. It is considered better than repetition (Paltridge, 2006: 134).

The function of synonymy, moreover, is similar to the one of other reiteration devices like superordinate and general word. Both of these reiteration devices function to refer to the
same referent and to remind the readers of the previous item (Halliday & Hasan, 1976). For example:

Example 37: *When rain comes, the windows could not be closed or the water from outside could still seep into the Angkot and make the passengers wet.* (Essay 1, original text)

Example 38: *Since you make a change of pronunciation of the word “snack” which is supposed to be /snæk/, your friend will think that you are asking him to eat a kind of reptile which has a long cylindrical body and no legs.* (Essay 5, original text)

As shown in Examples 37 and 38, the use of superordinate *reiteration* device is exemplified in Example 37 has a part-whole relationship; both refer to the same entity ‘Angkot’. Example 38, however, is one of two occurrences of general word use. The word ‘snake’ is referred in a general word as ‘a kind of reptile which has a long cylindrical body and no legs’.

This finding is in line with what is found by Ahmed (2008), El-Gazzar (1994), and Guthrie (2008) whose findings indicate the excessive use of repetition in comparison to other reiteration devices. It was obvious in the students’ writings that they tended to use the same vocabulary item to convey their ideas and support their argument; their limited vocabulary repertoire resulted in repetition of word use. Students’ reliance on repetition was noted by Hung and Thu (2014) that repetition in students’ writing would inevitably weaken their essay quality. In other words, the quality of one’s writing is determined by the use of devices to achieve textual cohesion.

**Function of Collocation**

Collocation refers to a pair of words that frequently co-occur in the same lexical environment. Furthermore, it can also be derived from oppositeness.

Example 39: *People with open-minded heads can solve the problems better than who do not.* (Essay 11, original text)

Example 40: *Vehicles need fuel for energy. Fuel is not unlimited. Sometime, it can be empty if we use for a long time.* (Essay 1, original text)

In Example 39, the collocation exists between the word ‘solve’ and ‘problem’ that frequently co-occur in the same lexical environment. While in Example 40, the collocation is derived from semantic oppositeness between ‘unlimited’ and ‘empty’. From these examples, it can be seen that the function of collocation in overall argumentative writings—thesis, argument, and conclusion stages—is to create such a meaning-relations-chain between one element and the other in terms of frequent co-occurrences and oppositeness.
The functions of cohesive devices can be summarized into two major functions: (1) reminding the readers of the points—either major or minor—under discussion (the use of reference, substitution, ellipsis, reiteration, or collocation) and (2) clarifying and affirming a semantic relationship between clauses so that the position of the author is clear (the use of conjunction).

6.3 Investigation on the Correlation

To answer the research question on correlation between students’ knowledge on cohesion and their writing performances, the researchers conducted a cohesion test to measure students’ knowledge on cohesive devices. The second measurement was to score the students’ overall writing performances. The researchers used Pearson Correlation to examine the relationship between the students’ knowledge on cohesion and their writing performances. The result is presented in Table 9 below:

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<th>Table 9: Overall Correlations</th>
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The correlation matrix in Table 9 indicates a non-significant correlation between students’ cohesion knowledge and their writing performances; it shows negative correlation ($r = -0.006$). Moreover, a further investigation by adding the statistical number of grammatical and lexical cohesive devices results in a weak and non-significant correlations between: (1) writing performances and the number of grammatical and lexical cohesion devices ($r = 0.254$) and ($r = 0.393$) respectively; (2) writing performances and total number of cohesive devices ($r = 0.437$)—which indicates a weak correlation; (3) cohesion knowledge and total number of cohesive devices ($r= 0.054$); and (4) the cohesion knowledge and the number of grammatical and lexical cohesion devices ($r = 0.102$) and ($r = 0.147$), respectively. It is evident that the numbers of cohesive devices and cohesion knowledge are shown not to be significantly related. These mean that one’s better knowledge on cohesion does not necessarily guarantee one’s better writing performance.

Tables 10 and 11 below show the correlation between cohesion test as well as writing score and the subtypes of grammatical and lexical devices, respectively.
Table 10: Grammatical Correlations

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**. Correlation is significant at the 0.01 level (2-tailed).

Table 10 shows a weak correlation between students’ writing scores and the total number of reference devices use (r = 0.407). It suggests that the more the students use reference, the better their writing is. It is however a non-significant correlation.
The correlation matrix in Table 11 above shows a non-significant correlation between overall reiteration devices use and both students’ knowledge on cohesion and their writing performances. The total collocation devices use, however, shows a negative correlation with cohesion knowledge and writing performances \( r = -0.212 \) and \( r = -0.106 \), respectively.

These findings are in line with some previous research studies, namely Bae (2001), Tapper (2005), and Witte and Faigley (2008), whose findings point to a weak correlation between statistical number of cohesive devices and writing quality. The findings in this present study also support other previous research studies, particularly Tierney and Mosenthal (1981), Meisuo (2000), Dueraman (2007), and Dastjerdi and Samian (2011). These four studies even reveal no correlation between cohesive devices and writing quality. These results confirm that cohesive devices alone could not be a reliable indicator of the quality of writing, and neither the knowledge on cohesion be indicator of writing performance.
7. Conclusion

In response to the first research question, identification of cohesive devices in argumentative writings show the occurrence of grammatical cohesive devices slightly more frequent than lexical ones. The distribution of its subtypes, however, suggests otherwise, because reiteration appears as the most-frequently-used cohesive device, followed successively by reference, conjunction, collocation, substitution, and ellipsis. These findings signify the subtype of reiteration, namely repetition being heavily used by the students.

Related to the reference device, the findings show that anaphoric reference is used more frequently than the cataphoric one. This finding implies that the students are more comfortable with using a personal-structured sentence rather than the impersonal one. As a matter of fact, writing an argumentative text requires the author to use more impersonal sentence structure to achieve objectivity.

As for the realization of conjunction, it was found that additive conjunction was dominantly used by the students, followed by temporal, causal, and adversative ones.

It was found that ellipsis and substitution turn out to be the least-used two devices in the students’ writings. Perhaps both devices have more complex rules than reference does. Moreover, the ellipsis device is noted for is use in a spoken rather than written discourse.

As for the second research question, the findings point to two major functions: (1) reference, substitution, ellipsis, reiteration, and collocation function to remind the readers of the points—either major or minor—under discussion, and (2) conjunction functions to clarify and affirm semantic relationship between clauses so that the position of the author is clear. All devices are meant to contribute to the unity and connectedness in argumentative writing.

The third research question was on whether or not students’ knowledge on cohesion correlates with their writing performances. The results show a negative correlation ($r = -0.006$). A further analysis by adding other variables of cohesion use also reveals a weak and non-significant correlation.

8. Recommendations

Based on the results of this study, some recommendations are necessary to be made especially for teachers and academicians as well as those who are interested in doing research on cohesion in the future.

The findings suggest that teachers should teach or familiarize students with the use impersonal sentence structure with third-person pronouns to the students in order to make their argumentative writings more objective. Moreover, students should be assisted to expand their language repertoire both in vocabulary and structure so that they can argue for their standpoint more effectively.
Despite the finding on a weak or even no correlation between the three variables, namely students’ knowledge of cohesion, their writing performance, and further, statistical number of cohesive devices, it is perhaps for teachers not to make a quick conclusion that cohesive devices are not important. It should be noted that the use of cohesive devices is to enhance the quality of writing.

As for recommendation for further research into the use of cohesive devices, those who are interested may consider a specific type of cohesive devices perceived as affecting the quality of writings in description, narration, or persuasion as needed by particular groups of learners.

9. The Authors

Nanta Hananta is currently an academic staff member at the English Education Department of Indonesia University of Education. Her research interest is in the areas of ESL writings and linguistic applications to teaching of language skills at the tertiary level of education.

Didi Sukyadi is a Professor of Linguistics at the English Education Department of Indonesia University of Education. He is currently a member of academic senate of Universitas Pendidikan Indonesia (UPI), and the Secretary General of The Association of Teaching English as a Foreign Language in Indonesia (TEFLIN). He has been actively involved in research related to linguistics and teachers’ professional development in language education.

10. References


