Evaluation of Micro and Macro-level Coherence of Students Argumentative Essays in ESAWEEK Writing Competition

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Abstract

One of the most important aspects of writing a meaningful text is to achieve its coherence within the text. This study evaluated students' argumentative essays' micro and macro-level coherence in the ESA WEEK writing competition. This research is a qualitative study in the form of a discourse analysis approach by using the theory through the lens of micro and macro-level coherence (Thornbury, 2005). This study reveals several findings. Almost all the texts are sufficient to have good logical relations. The most frequent connections are additive and causal ties. In terms of logical relationships, the most frequent pattern in the texts was the zig-zag pattern, and the rarely used was the multiple rheme pattern. Even though all patterns were in texts, some rogue sentences were still found in each text. The keywords could represent the texts' topic or theme in almost every paragraph. It made readers guess the main issue quickly. Some writers could build a schema well, but others could not. Most of the texts organized in argumentative essays structure has Introduction-Body-Conclusion. This study can be used as a consideration to write meaningful and coherent text and references in the same field of discourse analysis.
INTRODUCTION

Writing is one of the crucial aspects of communication. Writing is also one of the language skills, besides listening, speaking, and reading, which encourages language learners to produce their text by developing their ideas. Writing text is not as simple as mentioning anything in mind. Writing a text is the highest skill in creating a domain in revised Bloom's taxonomy suggested by Bloom (2001). The most important aspect of writing is a meaningful text. Writing a meaningful text, especially essays, needs to build coherence with the text.

Coherence is more than simply a function of its cohesive ties (Thornbury, 2005). Cohesive ties will be occurred by applying cohesive devices to achieve cohesion. Based on Thornbury, cohesion has the role of building up sentences in any given text. Hence, cohesion has a relation to the broader concept of coherence. It is the prerequisite of text coherence (Halliday & Hasan, 1976).

There are two levels of coherence that the writers should be aware of. Those are micro-level and macro-level coherence. Micro-level coherence consists of a logical relationship, thematic progression, and readers' expectations. In addition, macro-level coherence consists of topics, schema, and scripts. Cohesion and coherence are crucial features to measure whether the text is intelligible or worthless.

One of the significant English competitions for adult learners is an essay competition. By joining an essay competition, the participants demonstrate and improve their skills and share their opinion, which is possible to get attention from the policy giver. Demonstrating compelling arguments related to the topic and organizing the text in stages can achieve the communicative purpose of persuading readers (Widhiyanto, 2017). Hence, their essays should have features of meaningful texts consisting of cohesion and coherence.

Some studies about cohesive devices have been conducted by Malgwi (2015); Crossley, Kyle, and Mcnamara (2016); Bahaziq (2016); Safitri and Bahri (2017); Chunxia (2018); and Amperawaty (2019). The studies showed that the significant contribution of cohesive devices was grammatical cohesion then, followed by lexical cohesion. Based on the results, they indicated that using cohesive devices could make the cohesion of the text. Other studies about cohesion and coherence have been conducted by Sumarna (2013); Ang (2014); Ahmed (2016); Alsaawi (2016); Karadeniz (2017); Al-Hindawi and Abu-Krooz (2017); Gafiyatova et al. (2017); Aslımyetiş (2017); Suwandi (2016); Tamunobelema (2018); Andovita, Rahmat and Pujiati (2019); and Priangan, Saleh and Rukmini (2020). Those studies had similarities in investigating cohesion and coherence markers, especially in written texts. Most of them used EFL (English as Foreign Language) learners as the subjects of the study. Results of the studies concluded that students faced cohesion and coherence problems. Examining coherence studies in a spoken and written text has been conducted by Manipuspika (2014); Karnedi (2015); Alfarwan (2015); Crossley et al. (2016); Fitriati and Yonata, 2017); Nahatame (2017); Mamduhan, Fitriati, and Sutopo (2019). The results showed that the students had a bit of weakness in achieving coherent texts due to a lack of optimization of cohesive devices in conjunctions to create interconnectedness of the whole sentences in the texts. As the explanation of the previous studies, it could be assumed that the text coherence and cohesion is still an interesting topic to investigate. Some of them used the cohesion and coherence software to examine cohesion and coherence, so the analysis of the cohesion and coherence was less understood in terms of judgment. Those studies were statistical analyses rather than evaluative analyses. All of the research used English students as the sample, so the results were cohesive and coherent. It assumed that the students exactly had adequate writing skills. In the recent study, the researchers replicated the research to examine the different samples of an argumentative essay. The novelty was that the non-English learners wrote in the essay competition as the study sample. Moreover, the
researchers did not use cohesion and coherence software to analyze and evaluate as Crossley used. This current study used the theoretical framework of cohesion and coherence. This study examined micro-level coherence in terms of logical relationships and thematic patterns. It evaluated the macro-level coherence in crucial words, schemas/generic structure, and scripts in argumentative essays.

Writing an argumentative essay is a popular activity for academic students. They can systematically arrange their ideas and opinions related to the crucial issues relating to their lives, which displays their enthusiasm and care. Hence, by evaluating coherence in the essays, readers or students can pay more attention to achieving the text's coherence.

METHODS
This study is a qualitative study with discourse analysis and a simple quantitative method to find out the frequency of keywords used by the participants to display the topic of their texts. The researchers analyzed written text in argumentative essays by participants of the ESAWEEK Essay competition at Universitas Negeri Semarang. First, the researchers read all the texts and broke them down into clauses, then analyzed the micro-level coherence (logical relationship and thematic progression) and the macro-level coherence (keywords, schema, scripts) using a theoretical framework by Thornbury (2005) to examine the quality of the texts.

RESULTS AND DISCUSSION
This section presents the research findings related to logical relationships, thematic patterns, keywords, schemas, and scripts.

Logical Relationship
The logical relationships display the connection between two sentences or more. Usually, the logical connection is implicit connections that can make the sentences make sense to each other. By analyzing the logical relationship, the researchers can assume how the sentences relate, whether they make sense, and how the sentences are organized. An example of an analysis of a logical relationship in text one can be seen as follows.

Additive Relation
An additive relation was a relation between two sentences. The second sentence explained more details and specified the first sentence (Thornbury, 2005). This relation was the most frequent relation used by the writers. The example of the additive relations is shown in the following sentences.

Ever since affordable technology has paved its way into the world, most institutions have tried to integrate technology into our daily lives(1). We've seen how technology is slowly being implied into the homes of families, the curriculum of schools, or even during social settings(2). For example, it is not rare for homes to be equipped with at least a computer and a working Wi-fi(3). [Text 1, Paragraph 1, Sentence 1-3]

The relation between sentence one and sentence 2 was additive because the second sentence gave the details about "technology into our daily lives" mentioned in the first sentence. Although both sentences did not have an explicit connection, it still could be assumed that they had an additive relation. It was also stated by Thornbury (2005) that two sentences could make sense with implicit logical connections and create the feeling of text making sense. To make sense of the text, the usual writer also used explicit logical connections to build an additive relation that could be seen in the third sentence. “for example” was the explicit connection. This connection helped readers expect more detail in the following sentence or clause.

As researchers stated in the previous paragraph, most texts used implicit connections, such as text 2. The following sentences showed the additive relation with the implicit connection.

Bullying has been an alarming, perpetual problem all over the world nowadays(1). The worst bullying case lately occurred in Busan, South Korea; a junior high school girl was bullied by being beaten
using iron pipes, glass, and bottles (2). [Text 2, Paragraph 1, Sentence 1-2]

The first sentence was about bullying that had happened worldwide, and then the second sentence gave more details by mentioning the example of bullying cases in South Korea. Therefore, it could be classified that these two sentences had an additive relation without explicit connections. From that example, researchers could assume that the writers of the text comprehended and were capable of connecting sentences to make sense.

Adversative Relation

Adversative relation is a relation between the second sentence showing a contrast statement from the first sentence (Thornbury, 2005). This relation was not found in a high frequency of the ten texts, but the writers still used it. The examples of the relation in the texts are displayed in the section below.

This is extremely useful since not schools, especially public schools, are equipped with the necessary materials that provide much more information about their school subjects outside their textbooks (18). However, it is not rare for those same children to use the Internet for entertainment purposes as well (19). [Text 1, Paragraph 4, Sentence 18-19]

Sentence 18 told about the educational purposes for children given by the Internet, and a contrary explanation followed it in sentence 4 that students also used the Internet to have entertainment purposes. This relation usually had explicit connections such as; however and but. The use of “but” was the explicit connection, and it is also found in text 4, shown in the following example.

This data shows that violence in Indonesia is more often experienced by girls (23). Ironically, Indonesia has several laws and regulations that protect children from violence (24). Such as Rule Number 35 the Year 2014 on Child Protection, Presidential Instruction Number 5 of 2014 on National Movement of Anti-crime against children, and Rule number 11 of 2012 on Child Criminal Justice System (25). But it all seems cannot control the increase of Bullying like it is happening under the government’s nose itself all the time (26). [Text 4, Paragraph 3, Sentence 23-26]

Sentence 26 displayed the contrast statement of sentence 25 using “but” as the explicit connection. Sentence 25 told about the rules, and sentence 26 stated that the rule still could not control the increasing number of bullying cases. In the same paragraph above, one example of adversative relation appeared in sentences 23 and 24. Sentence 24 mentioned the contrast condition to sentence 23. It told about the number of laws and regulations against violence to protect children, but the previous sentence showed that violence in Indonesia was more experienced by girls. "Ironically" was the explicit connection to help readers guess the further explanation of the sentence. Some examples above show that writers could apply the explicit connections of adversative relation to connect the sentences and build a comprehended text.

Causal Relation

A causal relation was a relation between two sentences in which the second sentence gave the reason for the situation or request mentioned in the first sentence (Thornbury, 2005). Causal relations were the second relation that was found in the texts. Those relations were signaled by explicit connections such as because, as, since, and therefore. However, some of them also used implicit connections. The use of explicit connections is explained in the following sentences.

Technology makes our children become too absorbed with their world that they often do not need to interact or socialize with other people because that need is already fulfilled by using technology (16). [Text 5, Paragraph 2, Sentence 16]

Sentence 16 used “because” to connect clause to clause. The relation of the sentence was causal because the last clause told about the reason for the previous clause, which stated that
children did not need to interact with other people.

Not only could explicit connections imply the causal relation, but implicit connections also could imply it—the following sentences displays how sentences connect without explicit connection to reveal causal relation.

The Internet is the most integrated piece of technology in society (12). Nowadays, there has been an increasing feat of the use of the Internet and social media, especially by children (13). According to a study conducted by UNICEF from 2011-2012, 42% of its 400 respondents are users of the Internet whose ages range from 10-13 years old, whereas 39% of those 400 respondents are elementary school students (14).

Sentence 12 and Sentence 13 had a causal relation because sentence 13 explains why technology was the most integrated piece of technology mentioned in sentence 12. Even though there were no explicit connections, it could be assumed that sentence 13 tried to give the reason. It also happened concerning sentences 13 and sentence 14. Sentence 14 provided the reason by mentioning the research that supported the statement of sentence 13.

Temporal Relation

Temporal relation was between two sentences where the chronological order of events was implied rather than explicitly stated (Thornbury, 2005). In ten texts that were analyzed, some temporal relations were found. A small number had explicit connections, most of which were implicit, displayed in the following examples.

She was bullied because of unusually long and bearing a facial scar; she was called -Gorilla Scarface-by classmates (39). She could not be longer bear her classmates' taunt until she finally snapped and took her own life (40). [Text 2, Paragraph 4, Sentence 39-40]

Sentence 39 and 40 showed the temporal relation because sentence 40 provided the next event of the statement in the previous sentence even though there was no explicit connection. However, the explicit connection was found in sentence 40, "finally," connected clauses in sentence 40, which told about chronological orders. Another temporal relation with implicit connections was found in text 2, as displayed below.

Parents, teachers, and policymakers should be concerned and understand how dangerous bullying impacts (44). When they are concerned and understand it, children can be more protected from bullying; children can get great treatment when they are bullied, and in the future bullying can be prevented (45).[Text 2, Last Paragraph, Sentence 3-4]

Sentence 45 displayed the further chronological order of sentence 44's statement by adding the clause "When they concern and understand it". "They" is the reference of parents, teachers, and policymakers to give a connection between sentence 44 and sentence 45. So the readers could comprehend the text easily.

Most relations used by text writers in developing argumentative essays were additive relations and causal relations with implicit connections. It was not surprising because the most ideal of the sentences show the writers' arguments by providing reasons and evidence to persuade readers that had been stated by Oshima and Hogue (2006). In line with Widhiyanto (2017), in writing arguments, writers have to convince readers about their positions by giving evidence and making a claim in various kinds of argumentation in a good way in developing it. So, readers agreed with the writers' opinions. To develop comprehension and coherence, sentences with reasons and evidence should apply suitable relations and connections. Therefore, most relations in argumentative essays were additive and causal relations.

As stated in the previous explanation, texts were used with various explicit and implicit connections in high quantity appropriately. The low or high amount of using connections was not guaranteed text coherence. The most critical aspect was using the logical relations appropriately, accurately, and adequately (Fitriati & Yonata, 2017). It could be concluded that writers could use the proper logical relationship, so it helped readers focus on the text, and most of the texts were coherent. They provided a logical relationship, answered readers' expectations, and made them maintain the topic
in their minds to understand the text easily. Readers always had their assumptions about the following sentence when they read the first sentence. Then, they would think the same when reading the following sentences, when the sentences were connected and made sense to their assumptions from the beginning, so they would keep reading the text (Widhiyanto, 2017).

**Thematic Pattern**

There were three main thematic developments or thematic progression based on Eggins (2004), namely constant or reiteration pattern, zig-zag pattern, and multiple-rheme pattern. Three kinds of thematic patterns were found in ten argumentative essays students, which had been analyzed.

**Constant or Reiteration Theme Pattern**

Based on Eggins (2004), a constant or reiteration theme was the way to provide cohesion by repeating simple elements such as lexical cohesion. It was found in every argumentative essay's students. Those were 222 clauses with constant theme patterns. It was a simple way to connect a sentence. It meant that this theme pattern almost organized the text.

**Zig-zag Theme Pattern**

The second kind of thematic pattern was the zig-zag theme pattern. It was the way to achieve cohesion in the text by building on newly introduced information (Eggins, 2004). There were 295 clauses with a zig-zag theme pattern in 10 argumentative essays. This kind of thematic pattern dominated the development of the text created.

**Multiple Rheme Pattern**

Based on Eggins (2004), a multiple rheme pattern was a way to provide cohesion in the theme, which introduced some different pieces of information, each of which was then picked up and made theme in subsequent clauses. It was found in some argumentative essays' students. Those could be seen in the text (1), (2), (3), (4), (5), and (7). It was the fewer patterns than the two kinds of patterns. It meant that it was an unusual development pattern used in this text.

Most writers used the zig-zag theme pattern to develop themes and rheme in argumentative essays. This study was similar to a previous study by Fitriati and Yonata (2017) that also investigated coherence in the argumentative text. This pattern was the most used in developing argumentative text. It helped writers properly provide new information in rheme slot in delivering the arguments such as evidence and writers' personal opinions. The zig-zag pattern of thematic progression was used when the writer wanted to build continuity within a text. The zig-zag pattern occurred when the comment in the previous sentence became the topic in the following sentence (Priangan, Saleh and Rukmini, 2019). These results differed from those of Mamduhan, Fitriati and Sutopo (2019), who showed that a constant theme pattern was the dominant pattern in writing narrative texts. It was because of the different kinds of text and personal styles of writers.

**Rogue Sentences**

Logical relationships and thematic patterns were aspects of micro-level coherence. There were still some clauses or sentences that did not have a connectedness to each other, which was called a rogue sentence. Some rogue sentences were found in each text. Only text 10 had the most rogue sentence of all of the texts. That was 67 rogue sentences of 97 sentences. Besides, the remaining texts were fewer than half the number of sentences. Few rogue sentences might not influence the coherence of the whole text. Unfortunately, this text still had a spot lack of coherence. It could influence text flow and smoothness, especially readers' expectations. Readers could not achieve their expectations when the old information was not answered when they found the new information (Fitriati & Yonata, 2017). It meant that fewer rogue sentences were better to build coherence in the text, and the more rogue sentence made the text difficult to understand and could not achieve good coherence.
Keywords

Keywords were some of the same words found in the text in significant high frequency, which indicated the relation of those words to what the text is about.

Table 1. Example of keywords in Text 1

<table>
<thead>
<tr>
<th>Title</th>
<th>Kids of the Future: The Importance of Teaching Internet Safety to Young Children</th>
</tr>
</thead>
<tbody>
<tr>
<td>Keywords</td>
<td>technology (19), internet (36), internet safety (11), children (40), school (14)</td>
</tr>
</tbody>
</table>

From Table 1, it could be seen that some words were used many times. "technology" was used 19 times, "internet" was used 36 times, "internet safety" was used 11 times, "children" was used 40 times, and "school" was used in 14 times. It meant those keywords supported the title. It meant all of them to relate to the title of the text. Finding those keywords in the text also helped readers get the text's point.

The other keywords were found in text 2. Those are displayed in Table 2.

Table 2. Example of keywords in Text 2.

<table>
<thead>
<tr>
<th>Title</th>
<th>Bullying can be Red Flight for Children Psychological Development</th>
</tr>
</thead>
<tbody>
<tr>
<td>Keywords</td>
<td>bullying (38), children (6), children's psychological development (5), negative impact (5)</td>
</tr>
</tbody>
</table>

Table 2 shows that "bullying" was used 38 times, "children" was used six times, "children's psychological development" five times, and "negative impact" was used five times. Those keywords supported to development of the title of the text. It meant that the title and the keywords relate to each other to focus on a specific topic.

In-text 3, there were also some keywords displayed in Table 3.

Table 3. Example of keywords in Text 3

<table>
<thead>
<tr>
<th>Title</th>
<th>Psychological Effects Caused by Bullying</th>
</tr>
</thead>
<tbody>
<tr>
<td>Keywords</td>
<td>bullying (19), victim (7), children (5), disorder (21)</td>
</tr>
</tbody>
</table>

Table 3 presents that there were four dominant words. Those words were "bullying," which was used 19 times, "victim" was used seven times, "children" was used five times, and "disorder" was used twenty-one times. These keywords led readers to a specific topic about the bullying effect, which is related to the text's title. Considering the keywords mentioned many times in the text and the title, it could be assumed that the use of the keywords was appropriate and could help readers understand the text's topic.

Keywords that had a high relation to the topic were an essential step in writing a text. Keywords in the text were one of the crucial aspects to build a focus on the topic of the text. In line with Fitriati and Yonata (2017), repeating the same words adequately indicated that writers wanted to emphasize the specific topic presented in the text. It is also stated by Suwandi (2015) that students usually use word repetition to carry and advance the theme of discourse. Those led readers to build a picture in their minds.

Providing some essential words that relate to the title or the topic of the text was helpful for readers to get preliminary information about the text. Most keywords related to the title were mentioned more than five times in this study. It also put in the appropriate sentences and paragraphs. So, it could be assumed that writers could apply keywords accurately.

Schemas

A schema was a simple knowledge picturized by people's imagination based on their previous knowledge of their mind. On another side, the schema was a construct of familiar knowledge (Widdowson, 2007). Therefore, some schema was represented by reference to the sentence, which could lead to building a particular schema. Some references which built a specific schema were called a frame of reference. The frame of reference was found in all the texts. The frame of reference was analyzed in each
paragraph. For example, some keywords below led readers to focus on an appropriate frame of reference. Those were technology, our daily lives, the homes of families, the curriculum of schools, and social settings. Words seemed to guide readers to the "technology dominates our social situation" schema.

From the frame of reference in paragraph 1, it could be predicted that the following paragraph might explain how technology is used nowadays. The first test consisted of 16 paragraphs, so it should be 16 schemas which makes much sense. The writer led readers to focus on the specific schema in each paragraph. First, it was about technology in a social situation. Then, it was followed by a schema about the use of technology by children. More specific the following paragraph was about children's use of the internet, internet safety, the other side effects on young children, and the conclusion. From the first paragraph until the last paragraph, those were related, leading readers to understand the whole text smoothly. The schemas of paragraphs were developed in sequence from general to specific that relate to each other. A good schema was started from broader to narrower and ended with a conclusion (Fitriati & Yonata, 2017). It helped readers focus on the introduction paragraph and then build a specific text genre, all of which were analytical exposition text.

Scripts

Based on Thornbury (2005), the script was a way that readers predicate the next step; it seemed like a sequence of a text. Each text always had a specific sequence in developing one paragraph to another. The texts analyzed in this study were argumentative, so they should be ordered in an argumentative script. All writers used the way of arranging argumentative by the same structure: Introduction-Body-Conclusion. That was the simple and familiar structure of the argumentative text. It was explained by (Oshima & Hogue, 2006) that the generic structure of argumentative had Introduction-Body-Conclusion. More specifically, argumentative text was divided into two kinds of exposition text; analytical and hortatory exposition, which differed based on the point of view (Aunurrahman, Hamied, & Emilia, 2017). As stated by them, it should consist of topic sentence-support sentence-concluding sentence in each of the parts. Unfortunately, some texts missed the concluding sentences. It might decrease the quality of coherence in texts because all paragraphs should tie and relate to previous and next paragraphs and also could guide readers to predict what the next paragraphs are about. Based on how the writers developed the texts and provided their opinion by presenting reasons and evidence, these texts were categorized as analytical exposition texts. It was because each text provided writers' position to argue an issue or a thesis from their point of view, followed by arguments that support the thesis, summary, and recommendation (Aunurrahman, Hamied & Emilia, 2017). The writers also used a variety of points of view. Most of them used the third point of view, but some of them used the third and first point of view in one text. It was the uniqueness of argumentative essays that focus on how they persuade readers that what they argued was true.

From the text coherence analysis, it could be made an assessment that all texts were coherent at the level of average. All text accurately used lexical relations and thematic patterns even though rogue sentences were still found. However, in the macro-level coherence in terms of developing keywords, schemas, and scripts, the texts were coherent. Thus, there were some important aspects to developing a coherent text. First, it was not only putting cohesive devices in each sentence but using them appropriately, accurately, and adequately. The second was the relation of each sentence to answer readers' expectations. Third, making sense of the entire text was crucial to achieving coherence. In this phenomenon, the researchers hoped all English teachers and language learners who have a passion for writing should have a big concern to teach and learn about how to develop a cohesive and coherent text.

Conclusions

Almost all the texts were sufficient to achieve logical relation between the preceding
sentences to the following sentence. The most frequent kinds of relations were additive and causal relations. The analysis of the thematic progression of the text was found that the most frequent pattern in the texts was a zig-zag pattern and the most rarely used was a multiple rheme pattern. Even though all patterns were found in texts, many rogue sentences were also always found in each text. Made when reading the text, the sentence did not have a related idea. The keywords could represent the topic or the theme of the texts. Those keywords were found many times in almost every paragraph making readers guess the main topic easily. The schema of the texts was represented by the frame of the reference that used in the text. The schema in the text was analyzed in each paragraph. Some of the writers could build a schema well, but others are not. From the analysis of the scripts, most of the texts were organized in argumentative essays structure, especially analytical exposition text which has introduction-body-conclusion. Therefore, in general, most texts achieved coherence at an average level because they still missed some little aspects, such as rogue sentences and conclusion sentence.

REFERENCES


