Cohesion in Undergraduate Theses: A Discourse Analysis

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Abstract: As a productive skill, writing is closely linked to the use of cohesion properly. To this point, cohesion dealing with words and phrases establishes logical relationships among phrases or sentence boundaries. Accordingly, this research aims to find out (1) types of cohesion, (2) the most frequently used cohesion, and (3) university students' difficulties in applying types of cohesion in writing undergraduate theses. The method of this research is a discourse analysis that mainly focuses on an interrelated communication of ideas within parts of the theses. Using documents and interviews, the research data analysis is specifically concerned with 266 cohesion-related data pertaining to five types of cohesion, namely repetitions of key words (18%), use of reference words (12%), relevance (24%), order (26%), and linking or transition words (20%) in undergraduate theses. As the interview result indicates, such types of cohesion contribute to the development of ideas and specificities of lexical, syntactical and linguistic components in academic writing contexts, but the thesis writers find it hard to master the proposed topics and apply types of cohesion comprehensively.

Keywords: Cohesion, repetition of key words, reference words, relevance, order, transition words

1. Introduction

Cohesion is designed to deal with words and phrases that generate a pattern of relations between lexical elements and structures to build an integrated and logical text (Trebits, 2009). In what follows, an analysis of cohesion aims to connect central concepts to the context of academic writing intended to pursue standards of communication, writing styles, textuality, and a practice of discourse. This discourse structure of various sections in the genre of undergraduate theses explores an analysis of discourse to tie phrases or sentences in types of cohesion: reference, substitution, ellipsis, conjunction, and lexical cohesion (Halliday, 1994; Halliday&Hasan, 1989) linguistically. In short, cohesion integrates types of words, phrases or sentences within a discourse relationship and an appropriate discourse analysis.

In this sense of relationship, references defined as cohesive devices in a text that can only be interpreted to some other parts of the text or to the world experienced by the sender and the receiver of the text. Substitution outlines the use of pro-forms to represent previously mentioned entities or events in the form of types of nominal, verbal and clausal substitutions. Ellipsis is the omission of clauses, phrases or words that can be recovered from other parts of the discourse. Conjunction is a device for marking logical relationships in a discourse. Lexical cohesion is a linguistic device that occurs when two words in a text are related in terms of their meaning. Lexical cohesion takes the form of (a) reiteration: repetition, synonyms or near-synonym, superordinate and general word; and (b) collocation: the regular pattern of partnerships between words and inter-sentence semantic ties (Halliday, 1994; Halliday&Hasan, 1976; Johnson, 1992; Alotaibi, 2015& Wales, 2001).

Under this cohesion framework, therefore, a number of words, phrases and sentences have to be explored deep into the kernel of the undergraduate theses particularly the discourse analysis of introduction sections. In comprehending cohesion, learners can practice interpreting what pronouns refer to in the context, what the conjunction relationships between sentences are and how different words are used to refer to the same idea (Nation, 2009). In other words, cohesion is contextually used involving pronouns reference, and conjunction relationships to connect ideas in words, phrases and sentences.

The main objective of this research is to find out types of cohesion in undergraduate theses within a discourse analysis context that can be fully explored. The specific objectives are to find out the most frequently used types of cohesion and the students' difficulties in applying types of cohesion when writing undergraduate theses. The onset of conducting a research on the cohesion of student-produced genre of writings contains invaluable insights, major issues, pertinent findings, and consistent efforts to pursue a comprehensive overview of writing undergraduate theses. Arguably, every segment in the discourse analysis of this research can help identify issues under discussion, questions that have been posed, solutions that have been devised, and consequences that have come of those solutions.

2. A Review of Relevant Theories

Principles of Cohesion

Cohesion means linking phrases together, so that the whole text is clear and readable achieved by several methods such as the use of conjunctions, the linking of phrases and sentences with words like he, they and that refer back to something mentioned previously (Bailey, 2006). In general term, cohesion refers to the connectivity of ideas in discourse and sentences to one another in text, thus creating the flow of information in a unified way. In addition, in textbooks on writing and composition, cohesion can also refer to the ways of connecting sentences and paragraphs into a unified whole (Hinkel, 2004).

In addition, cohesion deals with non-structural text-forming relations (Halliday and Hasan, 1976). In this sense, cohesion is a way that internal coherence appears in the text through diverse linguistic devices. It is, therefore, reasonable to
assert that the textual product resulting from the action of different cognitive and metacognitive processes (Palmer, 1999) is related to semantic ties or relations of meanings that exist within the text (Halliday & Hasan, 1976). Within a text, cohesion contains a quite detailed description of linguistic resources in English that can establish cohesive ties between sentences (Swales, 1990; Fakuade & Vargs, 2007), and an intertextual link as the presupposing and the presupposed (Halliday & Hasan, 1976).

The crucial role of cohesion in a text is to differentiate features related to comprehension and writing (McNamara, 2013), so readers know various lexical relations, besides knowing the sense of the words and functions or connectives (Myers, 1991) and reverse cohesion effect that only appears for less skilled, high-knowledge comprehenders (O’Reilly & McNamara, 2007). Cohesive cues such as semantic overlap between sentences and paragraphs and connectives between sentences have been consistently pointed to as crucial components of skilled writing (McNamara, 2013). Moreover, cohesion is created by interlocking lexico-grammatical patterns and overlapping lexical items (Mahlberg, 2006).

Reference

With respect to reference, Eggins (1994) emphasizes that referencing cohesion functions to retrieve presupposed information in text and must be identifiable for it to be considered as cohesive (Mahlberg, 2006). Reference contains expressions or words whose meaning can only be referring to other words in a text (Fakuade & Vargs, 2007). In a written text, referencing indicates how the writer introduces participants and keeps track of them throughout the text. There are two general types of reference: exophoric referencing that refers to information from the immediate context of situation, and endophoric referencing that refers to information that can be retrieved from within the text. This endophoric referencing is the focus of cohesion theory. Endophoric referencing can be divided into two types: anaphoric, and cataphoric. Anaphoric refers to any reference that points backwards to previously mentioned information in text, when the information needed for the interpretation is in preceding portion of the text (Halliday & Hasan, 1976).

Cataphoric refers to any reference that points forward to information that will be presented later in the text, when the information needed for the interpretation is to be found in the part of the text that follows. For cohesion purposes, anaphoric referencing is the most relevant as it provides a link with a preceding portion of the text (Halliday & Hasan, 1976). McNamara (2013) coined a term referential cohesion to represent words and ideas that overlap across sentences and the entire text, forming explicit threads that connect the text for readers. Reference includes pronominals (he, him, she, her, etc.), demonstratives and definite articles (this, that, the, etc.) and comparatives (more, other, etc.) (Yde & Spoelders, 1985).

3. Research Method

The method used in this research is naturalistic-interpretative in nature. The purposes of using this method are threefold: (i) the researchers are part of the researched world and the data are presented in terms of respondents rather than researchers (Cohen, Manion, & Morrison, 2000); (ii) it gives an interpretation and a description of qualitative data in the form of words rather than numbers and statistics and (iii) it develops conceptual categories and supported assumptions (McDonough & McDonough, 1997).

Participants

The participants were twenty undergraduate theses writers selected based on their fields and experiences. They were selected using a purposive sampling approach that sufficiently provides maximum insight and understanding and relevant information about the topics (McDonough & McDonough, 1997).

Data Collection Technique

The data collection procedures involved a preparatory phase that consists of two steps: (i) choosing undergraduate theses documents to be researched and (ii) contacting twenty undergraduate theses writers at the English Education Study Program of Universitas Sarjanawiyata Tamansiswa Yogyakarta, Indonesia. The data collection procedures also deal with an implementation phase that covers four elements: (i) the researchers studied the documents, (ii) analyzed their cohesion domains, (iii) conducted unstructured tape-recorded interviews with respondents, collected the data, transcribed and (iv) analyzed them.

Data Classification

There are two types of data used in this research. First, the primary data that comprise original undergraduate theses taken from the English Education Study Program of Universitas Sarjanawiyata Tamansiswa Yogyakarta, Indonesia. The researchers chose undergraduate theses for two reasons: (a) they were written in English language and contain cohesion as one of the linguistic features, (b) the documents have the level of difficulties in that the researchers were to be challenged to study them. Second, the secondary data comprisresults of tape-recorded interviews with twenty undergraduate thesis writers. They became informants who gave the researchers information or data about strategies in dealing with cohesion during the consultations of thesis writing. The secondary data supported the primary data.

Data Analysis Technique

The researchers will focus on three domains of analyses:

1) The analysis of primary data limited to the categories of cohesion: reference, substitution and ellipsis, conjunction and lexical cohesion

2) The analysis of interviewed data that consist of: the strategy codes through which the interview questions are used to know thesis advisors' strategies, ideas or opinions in dealing with cohesion.

4. Findings and Discussion

As mentioned in the review of relevant theories, cohesion means linking phrases together, so that the whole text is clear and readable achieved by several methods such as the use of conjunctions, the linking of phrases and sentences with words like he, they, and that refer back to something
mentioned previously (Bailey, 2006). In a general term, cohesion refers to the connectivity of ideas in a discourse and sentences to one another in a text, thus creating the flow of information in a unified way. In addition, in textbooks on writing and composition, cohesion can also refer to the ways of connecting sentences and paragraphs into a unified whole (Hinkel, 2004).

The Repetition of Key Words
The typical cohesion feature of an academic article is the repetition of certain key words within sentences in a paragraph. This, in turn, leads to the re-emphasis of main idea consistently addressed to convey the message, that is, a demonstration of the writer’s knowledge of lexicons and other systems of rules to create a text. In what follows, the goal of writing is not only to raise awareness of lexical accuracy, but also to retain the writing development as indicated by how the word language and languages are repeated inevitably.

Sample 1: The repetition of key words in a paragraph
Language is a communication instrument used by people to communicate with each other. Hence, people create language that might be understood by their community. Nowadays language grows continually and people use language to deliver and express their feeling and thought. Besides, it is also used to get or collect information they need. In this globalization era, English is more essential than other languages because it has become the “lingua franca” or introductory language for international communication. People speak English around the world not only to communicate but also to share information about cultures and customs. In addition, English is significant in several areas, such as technology, medicine, business, mass media, and it is inevitable that other languages would be influenced by English (P01 Text01).

Use of Reference Words
To put this more differently, reference is an integral part of cohesion in that it points back to a previously mentioned idea (anaphoric reference). Reference words should not be used by themselves, but should be combined with important words or phrases from previous sentences or paragraphs. In the following paragraph, reference words are used not only to tie sentences and paragraphs, but also to clarify the idea expressed. Among the money reference words that can be used are this, these, that, those and such including pronouns, possessive pronouns, objective pronouns and other phrases the former, the latter, the first, the second (Bailey, 2006& Arnold, 1993).

Sample 3: Reference words
Teaching writing requires more attentions in detail. There are complex rules in writing that cannot be ignored. When students write something, they should have good ability in writing but most students have difficulties in word spelling, punctuation marks, vocabulary, grammar, and idea of writing. The first thing that they have to understand is getting the idea to write. That is the soul of writing because it contains messages to be delivered to readers. It is the main problem that the researcher tries to solve by conducting this research. However, the researcher finds it difficult for students to get and generate ideas. They are confused about what they will write. It happens because they are only given examples of text types. After that they should write or produce texts with limited guidance (P06 Text02).

Sample 3 shows reference words that hold a piece of paragraph together. In other words, if a paragraph is cohesive considerably, it sticks together from sentence to sentence, and from paragraph to paragraph. To avoid the repetition of the subject students, the pronoun they is used in the sentences, “When students write something, they should have good ability in writing but most students have difficulties in word spelling, punctuation marks, vocabulary, grammar, and idea of writing. However, the researcher finds it difficult for students to get and generate ideas. They are confused about what they will write. It happens because they are only given examples of text types. After that they should write or produce texts with limited guidance.” In addition, the phrase the first refers forward (cataphoric reference) to the phrase getting the idea to write in the sentence, “The first thing that they have to understand is getting the idea to write.”

Relevance
Relevance is a simple way to build cohesion between sentences by looking at the meaning of a sentence and
compare it to the point of the next sentence. Sentence should be closely related, but if not, the readers’ attention will lose; guessing the meaning is at stake. Even if two sentences are identical, the writer does not add any new information to the work, and the readers will be annoyed (http://www.clarkson.edu/writingcenter.docks/value pronouns.pdf).

**Sample 4: Unclear relevance**

As a part of learning, writing is a difficult task for several students. *It requires grammatical and rhetorical devices and motivation. When producing writing, students have to be able to write using appropriate words and correct grammar, express their ideas and make the conclusion of the steps to develop (P02 Text10).*

**Order**

In writing, order means the sequence in which ideas are presented: what comes first, what comes next, and so on (Anker, 2010). Order in a paragraph should have sentences typically written based on common ways namely chronological order, cause and effect, clarification, and compare/contrast (http://www.clarkson.edu/writingcenter.docks/value pronouns.pdf).

**Sample 5: Chronological order**

Learning English covers learning the four language skills, such as; listening, reading, speaking and writing. Reading is one of language skills that becomes the objectives of language teaching in Indonesia. Everyone knows that reading is an important skill. There are two reasons why reading is important: a) by reading students can get information needed, in this case they want to know about various things, b) by reading people can get pleasure, happiness or satisfaction. In reading, the language is expressed in the forms of sentences in the paragraph or it is sometimes called text (P01 Text15).

The sentences orders in **Sample 5** are logical because they maintain cohesion and all sentences are correlated followed by two significant reasons of reading in chronology: a) by reading students can get information needed, in this case they want to know about various things, b) by reading people can get pleasure, happiness or satisfaction. The function of this chronological order is to provide information as accurately as possible so that readers develop their logical skills through the content of the text. Certainly, reading is important to get specific information on thinking logically.

**Linking or Transition Words**

The linking or transition words in this study of cohesion pertain to the phrase-level coordinating conjunctions and sentence transitions (e.g. and, but, so, yet) and these are used to establish a connection between two or more equally important ideas, including sentence transitions (e.g. however, in addition, moreover) and complex conjunctions (also, besides, otherwise) that have the function of combining sentences and coordinating ideas.

Similarly, academic texts used in this study devote substantial attention to the uses of conjunctions to organize ideas and indicate logical relationships between portions of texts, for example, a phrase-level conjunction and sentence transitions organized according to their syntactic, semantic, and lexical functions and state that these serve as a bridge connecting one paragraph, sentence, clause, or word with another.

Here are the conjunctions in the academic texts of this study: a) Phrase-level/Coord inators: also, and, both ... and, but, either ... or, neither ... nor, nor, not only ... but also, or, (and) then, yet; b) Sentence Transitions (by frequency and meaning): Enumerative (first-ly), second(-ly), third(-ly) Fourth(-ly) ... next, then; in the first/second/third ... p lace; first/secondly third ... of all; for one thing, to begin/start with, in conclusion, to conclude, finally, last(-ly), at last;

c) Additive--above all, additionally, (once) again; in addition, likewise, similarly, in the same way, by the same token, even worse, furth ermore, moreover; also, besides, then, still, yet, nevertheless, nonetheless, again, then (again);d) Summative - all in all, altogether, in sum, therefore, thus, to summarize, to sum up; e) Resultative-accordingly, as a result, as a/ in consequence, consequently, hence, now, (and) so (excluding adverbial subordinators). Concessive-after all, all the same, anyhow, anyway(s), at any rate, at the same time, besides, else, however, in any case/event, for all that, nevertheless, on the other hand, (better/and) still, that said, though (in the sentence final position only), (but) then/ yet (distinguished from the phrase-level coordinator, in the sentence final or initial position only).

Focusing, contrastive, temporal, transitional words - as a matter of fact, by the way, conversely, incidentally, in contrast, in fact, meantime/while, in the meantime/while, eventually, originally, on the contrary, otherwise, rather, somehow, subsequently. Logical/semantic conjunctions/prepositions: as well, because of, besides, despite, except (+noun phrase), for that reason, in contrast (to/with), in spite of/instead of in place of that case, in the event of, in/this sort of, in a way, like, too, unlike.

The use of such phrase conjunctions assume a certain degree of syntactic and systematic interconnectedness among phrases and sentences when parts of text are related in meaning. Halliday and Hasan (1976) emphasize that relationships between ideas are not merely dependent on the presence of conjunctions but are derived from the functional and meaningful basis of text, i.e. text unity relies on the content and ideas in a text rather than on punctuation or other textual conventions. In short, coordinating conjunctions in the text without connectivity of ideas and
their meanings results in a chaining of phrases/clauses and a fragmented writing style (Swales, 1990).

The Most Frequently Used Cohesion

The standpoint of cohesion in the undergraduate theses indicates that among the total of 266 data, order is the most frequently used category (26%), followed by another category called relevance (24%), linking or transition words category (20%), repetition of key words (18%) and the use of reference words category (12%), as illustrated in the following table.

<table>
<thead>
<tr>
<th>No</th>
<th>Types of Cohesions</th>
<th>Frequency</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Repetition of key words</td>
<td>48</td>
<td>18%</td>
</tr>
<tr>
<td>2</td>
<td>Use of reference words</td>
<td>32</td>
<td>12%</td>
</tr>
<tr>
<td>3</td>
<td>Relevance</td>
<td>64</td>
<td>24%</td>
</tr>
<tr>
<td>4</td>
<td>Order</td>
<td>69</td>
<td>26%</td>
</tr>
<tr>
<td>5</td>
<td>Linking or Transition Words</td>
<td>53</td>
<td>20%</td>
</tr>
<tr>
<td></td>
<td>Total</td>
<td>266</td>
<td>100%</td>
</tr>
</tbody>
</table>

Table 1 shows that linking or transition words (phrase-level/coordinates, sentence transitions, additive, resultative, concessive-after, focusing, contrastive, temporal, transitional words and logical/semantic conjunctions/prepositions) play important roles to generate the phrase-level coordinating conjunctions and sentence transitions and, regardless of their incorrect use in the theses, in fact, the organization of ideas among sentences is set to establish a connection between two or more equally important ideas, including sentence transitions and complex conjunctions.

Most of all, the typical features of academic texts namely a focused attention on the uses of conjunctions to organize ideas and logical relationships between portions of texts pertaining to a phrase-level conjunction and sentence transitions based on syntactic, semantic, and lexical functions to connect paragraphs, sentences and clauses. As Halliday and Hasan (1976) put, relationships between ideas are not merely dependent on the presence of conjunctions but are derived from the functional and meaningful basis of text, i.e. text unity relies on the content and ideas in a text rather than on punctuation or other textual conventions.

Students’ Problems in Generating Cohesion

The researchers interviewed four university students to find out problems they faced in writing undergraduate theses. The first students could not relate the proposed topic with its discussion in terms of paragraph, and it is hard for him to keep consistent with using key words repetition and linking or transition words (and, but). The second speaker could not understand the use of reference words, key words repetition and linking or transition words. The third students had a problem with the repetition of key words (a lexical cohesion), order the sentences and the use of reference words (a substitution). The last students also found it hard to differentiate between the repetition of key words (a lexical cohesion) and the use of reference words (a substitution).

Regardless of those weaknesses, the students want to develop their writing competence further in terms of applying a type of references especially linking or transition words that connect phrase-level conjunctions, transitions and the organization of ideas. Above all, the organization of ideas is set to build logical relationships between a phrase-level conjunction and sentence transitions. They pertain to syntactic, semantic, and lexical domains to function in words, phrases, and sentences.

5. Conclusion and Suggestion

5.1 Conclusion

The cohesion used by undergraduate theses writers have pointed out that less skilled writers tend to be prematurely distracted by concerns about grammar and mechanics. Therefore, it has been believed that having less skilled, the theses writers focus on grammatical correctness during the revision and it would only intensify their preoccupation with correctness and make them less attentive to important aspects of writing namely content and rhetoric.

This study found that the cohesion used in undergraduate theses pertains to a focus on types of cohesion in the repetition of key words (14%), use of reference words (19%), relevance (16%), order (20%) and linking or transition words (31%). Most of all, linking or transition words are the most frequently used cohesion implying that linking or transition words are important to connect ideas and generate logical relationships between portions of texts.

The interview results show that the four students could not use key words repetition, order and linking or transition words (and, but). Regardless of those weaknesses, the students want to develop their writing competence further in terms of applying types of references especially linking or transition words that connect phrase-level conjunctions, transitions and the organization of ideas. Above all, the organization of ideas is set to build logical relationships between a phrase-level conjunction and sentence transitions.

5.2 Suggestion

There are three suggestions that might be addressed in this section. First, other researchers interested in studying cohesion are required to put more emphasis on other texts outside the academic field of undergraduate theses. Second, university students should be aware of doing a research on cohesion with respect to seminar papers. Third, other researchers can use the mixed methods in combining participants’ perspectives and perceptions in order to elicit more reliable research results.

References

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