

Full Length Research Paper

Grammatical cohesion in students' argumentative essay

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This study analyzed quantitatively and qualitatively the cohesive devices used by undergraduate students in their argumentative essay. One-hundred and four essays were collected and assessed by two interraters, but only 64 essays statistically qualified as the corpus of the study. Halliday and Hasan (1976) concept of grammatical cohesion was used as framework for the analysis of the essays. Reference had the highest frequency which is 90.67% of the total cohesive devices with mean score 53.37. Conjunction occurred 326 times in the essays, which is 9.08% with mean score 5.34 while substitution was the least used type of cohesive device which is only 0.25%. The cohesive devices are not significantly correlated with the quality of the students' essay. The resulting r using Pearson r is -0.054 which is not significant at 05 level of significance. Based on the qualitative analysis, it was found out that certain cohesive types assisted the students in the argumentation process. For instance, the use of adversative conjunctions helped the students establish counterclaims. However, 'but' is the most frequently used adversative conjunction by the students which may signify that their knowledge on the use of this kind of cohesive device is limited. There were instances where the students can use concessive like "yet or however" to establish stronger claims. Hence, qualitative analysis supports the concept of form and function. In the students' argumentative essays, certain forms were chosen over the others for a specific purpose that supports the overall objective of an argumentative text.

Key words: Cohesion, coherence, grammatical cohesion.

INTRODUCTION

Text refers to "any passage, spoken or written, of whatever length, that does form a unified whole" and is "best regarded as a semantic unit." A text has "linguistic features which can be identified as contributing to its total unity and giving it texture" (Halliday and Hasan, 1976: 1-2). Texture is provided by cohesive relation that exists between cohesive items. Cohesion distinguishes texts from non-texts and enables readers or listeners to establish relevance between what was said, is being said, and will be said, through the appropriate use of the necessary lexical and grammatical cohesive devices. Cohesion occurs when the semantic interpretation of some linguistic element in the discourse depends on another. It is the foundation upon which the edifice of coherence is built (Halliday and Hasan, 1985: 94) and is an essential feature of a text if it is judged to be coherent

(Parsons, 1991: 415; Castro, 2004: 215). Likewise, Cox et al. (1990) in Palmer (1999) stated that cohesion is important both to the reader in constructing the meaning from a text and to the writer in creating a text that can be easily comprehended.

Furthermore, cohesion refers to the linguistic features which help make a sequence of sentences a text. It occurs in a text through the use of devices that link across sentences. According to Connor (1984), it is defined as the use of explicit cohesive devices that signals relations among sentences and parts of text. Cohesion is concerned with the ways which the components of text are connected. In short, it is a relationship between lexical items and structures which are put together to construct a unified text. Cohesion is also one among the seven standards of textuality according to de Beugrande and Dressler (1983) in Trebits (2009).

Cohesion is created through grammatical and lexical forms. Grammatical cohesion includes reference,

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substitution, ellipsis and conjunction while lexical cohesion includes reiteration and collocation. These two kinds of cohesion help create texture or the property of being a text.

Coherence, on the other hand, according to McCagg (1990) refers to the logical relationship of ideas. Further, it refers to a semantic property of textuality. It is an aspect of comprehension that is established in the mind of the reader as a result of perception of relatedness among a text's propositions and between the text and the knowledge that the reader possesses of the world.

According to Halliday and Hasan (1976), while coherence may be dependent on external factors such as the background of the reader and "context of the situation", it may also be dependent on textual cohesion. However, they also explain that a text can achieve coherence even in the absence of intersentence cohesion, so long as the semantic cues are available for readers to deduce from their background knowledge. It can be said, therefore, that coherence may also depend on reader's prior knowledge or "what they know" about the topic, and at times, on their cultural background even in the absence of explicit cohesive devices connecting one sentence to another.

However, a comprehension problem may also occur if there is limited background knowledge on the relatedness of sentences in a text. In such cases, readers rely much on a coherent text with appropriate explicit signals to compensate for lack of prior knowledge.

A text is coherent when a reader understands the function of each succeeding unit of text in the development of its overall or global meaning. Widdowson in (Wikborg, 1978). However, in order to understand the importance of cohesive devices as grammatical and lexical structures, it is also highly important to consider their contribution in the meaning-making process of the text.

Contrary to the general notion of text as a product of combining sentences, it is an actualization of meaning represented by sentences. The meaning or "what is meant" is selected by the speaker/ writer from a set of options that constitutes meaning potential. Hence, a meaning can be represented through a variety of grammatical forms, but the selection is based on the best option that can convey meaning most effectively. This is done because the text is not only seen as a linguistic form but also a means for social interaction.

When students write compositions as course requirement, they need to establish clear relations between one sentence and the next by connecting those statements together. Good compositions establish a sense of direction by making explicit connections among their different parts, so that what is said in one sentence or paragraph not only sets up what is to come but is clearly informed by what has already been said. Connections can be done by using transition terms, adding pointing words, using key terms and phrases,

repeating words but with a difference (Graft, 2006).

And for readers to follow a writer's flow of thought, he/she needs to connect his/her sentences to each other and also to mark the kind of text the writer is making, which is achieved by the use of transitions. Transitions are usually placed at or near the start of sentences so they can signal to readers where the text is going whether in the same direction it has been moving, or in a new direction. Transitions tell readers whether the text is reaffirming a previous sentence or paragraph, adding something to it, offering an example of it, generalizing from it. Transitions not only guide readers through the twists and turns of arguments, but also help ensure that the writer has an argument. The more a writer uses transitions, the more the writer is able not only to connect the parts of a text but also to construct a strong argument (Graft, 2006).

LITERATURE REVIEW

The following related studies present findings on two important areas of concern in this present study: first, the relationship of the use of explicit cohesive devices to the quality of writing, and second, the functional role of cohesive devices as related to the generic structure and general purpose of the text.

The study of Johnson (1992) sought to find out the relationship of cohesion to overall writing quality of a text or coherence. To achieve this, she correlated the amount and type of cohesive devices used in three groups of students' essays to the overall quality rating of these essays given by the respective writing teachers of each group. The three groups are as follows: Malay students writing in Malay, English native speakers writing in English, and Malay students writing in L2 English. The t-test procedure revealed that there is no significant difference between the amount and number of cohesive ties used to the overall quality of essays among the three groups. However, it was also found out that Malay essays rated as "good" contain more semantic ties, such as repetition and collocation. In contrast, English essays written by native speakers rated as "good" exemplify the use of more intersentence syntactic cues.

Furthermore, a more revealing result of the study has provided that the type of cohesive device used, such as the significantly larger number of semantic cohesive devices in Malay essays, has something to do with the method of topic development employed in writing. The Malay group used descriptive and argumentative/persuasive as method of development which called for the expression of mood and personal feelings. Moreover, a culture specific writing technique in Malay calls for the use of "exaggeration" in essays of description and persuasion, thus requiring students to use more semantic cohesive devices of repetition. On the other hand, the English native speaker group, used

exposition as method of development. Consequently, a larger amount of syntactic cues was used to concretize examples, support details, and connect the conclusion to details given in the essay.

The study of Field and Oi (1992) sought to compare the internal conjunctive cohesive devices used in argumentative essays of three groups of Cantonese L2 speakers of English and L1 speakers. Further, the use of the internal conjunctive cohesion was compared and analyzed based on the positioning of devices within the text. Particularly, the internal conjunctive cohesion (ICC's) were found in the following positions: initial paragraph position, initial sentence position and not being in initial position. The ICC's were also classified according to Halliday and Hasan's category of conjunctions which are the additive, causal, adversative and temporal relations. The results revealed that the Cantonese L2 speakers used significantly more cohesive devices than L2 speakers. In the analysis of the positioning of the devices, it was found that the ICC's for both L1 and L2 speakers are most frequently found in the initial sentence position (ISP). However, it was found that L1 speakers use the not in the initial sentence position (NIP) significantly more than Cantonese writers. Also, the results showed that the conjunctions for additive relations are the most frequently used. The discussion provided that, although there is a significantly higher use of ICC's in L2 writing, the frequency of ICC's depends only on natural style of the writer. There are no reasons provided as to why the use of ICC's is higher in L1 writing. The differences of the use of ICC's among the three groups of Cantonese students were explained through teacher, classroom teaching and textbook influence in English instruction. The frequent use of adversative relations is said to be based on the obvious fact that the writing mode is argumentative.

Palmer's (1999) study is concerned with coherence and cohesion in the English classroom. The purpose of his study was to analyze the way non-native English language students create coherent texts. Results have suggested that lexical reiteration is often used by ESL students in order to create coherent texts. He recommended the enhancement of the teaching of coherence and cohesion in English lessons, in an attempt to join any theoretical approach to both reading and writing instruction with a more practical activity. A good initial step would be to give the students a text and ask them to underline all the personal pronouns appearing in the text and later introducing concepts such as anaphora and cataphora. Language teachers should keep in mind that the use of cohesive devices will help both the reader and the writer.

As in Johnson's study, Meisuo also (2000) investigated qualitatively the relationship of cohesive ties in the expository essays of Chinese students with their quality of writing. The study revealed that lexical category had the highest percentage of ties, followed by conjunctions

and references which suggests a general pattern of cohesive features in the expository composition of Chinese undergraduates. However, unlike Johnson's study, Meisuo included quantitative finding which revealed cohesive features such as errors, ambiguity, overuse and misuse of cohesive devices. Karasi (1994) reported a similar finding about the frequency order of cohesive categories in her study of expository essays of secondary students in Singapore, though her subjects used slightly more reference ties than conjunctions.

Furthermore, Meisuo's study found that there was no significant relationship between the number of cohesive ties used and the quality of writing, or there was a significant difference between the highly-rated and poorly-rated essays in the frequency of use of cohesive ties. The findings seem to suggest that the number of ties alone could not be a reliable indicator of the quality of writing. The findings are supported by Tierney and Mosenthal (1983), Connor (1984), Allard and Ulatowska (1991), Johnson (1992) and Karasi (1994). More features occurred in the area of conjunctions. The qualitative analysis shows that Chinese students tended to overuse additive and temporal devices and to misuse adversatives. Similar findings are found in Hu et al. (1982), Johns (1984), Crewe (1990) and Field and Yip (1992). The overuse of temporals (for example, firstly, secondly, etc.) is another characteristic feature of the compositions written by Chinese students, who adopted this enumerative style extensively in order to list points and ideas. There was some difference, however, between the better writers and the weaker ones in the use of temporal devices. The former tended to use temporal devices in a clear and effective manner (a strong point in fact) whereas the latter tended to use them only to list random and sometimes confusing ideas. Apart from the feature of overuse of additives and temporals, misuse of adversatives is also prominent in the essays studied. Students used such adversatives as "but, however and on the other hand" without any explicit or implied contrast, instead they were often given an additive function. Johns (1984), and Field and Yip (1992) reported similar findings in their studies on the writing of Chinese tertiary-level teachers and Hong Kong Form 6 students.

One of the implications of Meisuo's study is to explain to students clearly with adequate examples the meaning and correct use of reference items and conjunction devices in English, incorporating the well-developed taxonomy of cohesive devices by Halliday and Hasan (1976, 1985, 1994) and also their detailed description about the correct use of these devices. This explanation is necessary because very often students use, for instance, a conjunction without really knowing its semantic force or the logical meaning behind it (Field, 1994: 139); hence, misuse. Another thing is to focus on the typical misuse in using these two types of cohesive devices so as to enable them to write better English

compositions, which may be accomplished either through specially designed instructional materials (for example, the Computer-Assisted Instruction developed by a team of English teachers in Harbin Technological University, Wang et al., 1993: 38), or through examining compositions written by the students themselves.

In a study conducted by Liu and Braine (2005), 50 argumentative texts were analyzed to find out if the frequency of cohesive devices used by Chinese students in their argumentative essays was correlated with the quality of writing as determined by two raters. Data analysis revealed that there was correlation, which means that a higher frequency of cohesive devices led to higher essay score. In addition, it was found out that among the three cohesive categories analyzed, lexical cohesive items were most frequent, followed by reference items. Conjunctions were the least frequent. Furthermore, qualitative analysis also identified some cohesive features like use of variety of conjunctions and misuse of conjunctions.

Crossley and Mcnamara (2010) investigated the roles of cohesion and coherence in evaluations of essay quality. They analyzed expert ratings of individual text features, including coherence, in order to examine their relation to evaluations of holistic essay quality. The results suggest that coherence is an important attribute of overall essay quality, but that expert raters evaluate coherence based on the absence of cohesive cues in the essays rather than their presence. This finding has important implications for text understanding and the role of coherence in writing quality.

McNamara, et al. (2010) in Crossley and Mcnamara analyzed 120 argumentative essays written by college undergraduate and scored by expert raters using a holistic rubric. The essays were scored on a 1 to 6 scaled SAT rubric and then categorized into two groups: essays judged as low versus high quality. The results indicated that there were no differences between these two groups according to indices of cohesion (for example, word overlap, causality, connectives). By contrast, indices related to language sophistication (lexical diversity, word frequency, and syntactic complexity) showed significant differences between the groups. The results of this study provide initial indications that text cohesion may not be indicative of essay quality. Instead, expert raters judged essays as higher quality when they were more difficult to process (less familiar words, more complex syntax).

Of the studies reviewed, only Liu and Braine (2005) found correlation between the frequency of cohesive devices and quality of writing. Johnson (1992), Field and Oi (1992), Palmer (1999), Meisuo (2000), Mcnamara (2010) and Crossley and Mcnamara (2010) did not find significant relationship between the cohesive devices and the students' essays. This study also looked at the significant relationship between the cohesive devices and the quality of writing of the students. Likewise, the studies reviewed revealed that lexical cohesive devices were the

frequently used cohesive devices by students. However, this study did not include lexical cohesive devices in the analysis of the students' essays.

Research questions

The main objective of this study is to analyze the cohesive features in the argumentative essay of undergraduate students. The specific objectives of this study are phrased in the following research questions:

- 1) What cohesive devices are used by students in their essay? How frequent are they used?
- 2) Is there a relationship between the number of cohesive devices and the quality of writing?
- 3) What are the common cohesive features used in the development of the students' argumentative essay?

METHODOLOGY

Design

This study analyzed quantitatively and qualitatively, using Halliday and Hasan's (1976) taxonomy, the cohesive devices used by undergraduate students in their argumentative text. One hundred four essays were collected but only 61 became qualified as corpus of the study after the inter-rating. A frequency count was done to account for the reference, substitution, ellipsis and conjunction devices used in the essays. Text analysis was done to describe the cohesive features in the students' essays.

The corpus and procedure

One hundred four argumentative essays were collected from undergraduate students. The essays underwent inter-rating, and after which only 61 essays statistically qualified as corpus of this study. The inter-rater reliability result using Cronbach Alpha is 0.81 which means that there is almost perfect agreement between the raters as regards the quality of the essays.

The average mean of the essays is 18.81 and standard deviation is 2.86 which both indicate that the essays rated by the inter-raters possess the qualities of a well-written composition and that the students' writing ability is not far from one another.

The Alpha result was further confirmed using Kendall's Tau Correlation, the statistical tool used to determine the relationship when ranking is used like in rubrics ratings. The result of the analysis is 0.533 which is significant at 0.05 level of significance. The critical value for the Kendall's tau_b is 0.25. This also means that there is agreement between the raters.

After the interrater, the cohesive devices- pronouns, definite article 'the', conjunctions, words that substitute for another word were underlined, and accounted for.

The researcher decided to analyze argumentative essay since it is one of the most common forms of text that undergraduate students write to fulfill their course requirements in a writing course, for instance in English 102/ Expository writing or English 101b/communication skills 2 and it can be considered a form of academic writing because it is written for assessment of an academic audience (Mei, 2006). Initially, the researcher wanted to analyze the Introduction part of the students' essay; however, there are some essays which did not have 400 words in the said part. And so the analysis has gone to second, third or even the last

paragraph of some essays. The consideration has been the number of words regardless of the part which has become a limitation of this study.

The inter-raters

To assess the quality of the essays, the researcher adapted a Rubric and asked two teachers of English in the tertiary level to grade them. They were asked to assess the essays according to content, mechanics, organization, etc. They have handled an English writing course. They have had training, like attending seminars, in the use of Rubric as a tool to assess skills-based output of students. The inter-raters have almost perfect agreement as proven by the Cronbach Alpha which is 0.81. The inter-raters were not the teachers of the students who wrote the essays.

The writing task

The students enrolled in English 2 /Expository writing during the first semester and English 101b/Communication Skills 2 during second semester in the school year 2008 to 2009 were given a reading assignment. The students enrolled in Expository writing were second year Political Science students while those enrolled in Communication skills 2 were first year Computer Science in the University of Santo Tomas. Expository Writing and Communication Skills 2 are required English Writing courses in the University taken during the first year of the students. Their ages range from 16 to 18 years. They have finished six years of elementary and four years of secondary schooling with English as the medium of instruction in most school subjects. They speak Filipino or another native language and English at home as their medium of expression.

The students were asked to read about the Oil Deregulation Law in the Philippines. This topic was chosen because at the time this study was conducted, the continuous oil price increase was the major concern/problem of many people; thus, the researchers thought of the argumentative essay as a venue for the students to express their opinions.

The students were then asked to express their opinions in an essay of 400 to 700 words. The proposition/ topic for the argumentative essay is "That the oil deregulation law in the Philippines be abolished." However, some students wrote on other topics like Reproductive Health Bill and The State.

Since the process-approach is used in teaching writing to these students, they were asked to write three drafts, the last draft being the final essay. All drafts were submitted to their teacher but only the final draft was analyzed in terms of grammatical cohesion.

Framework for analysis

Halliday and Hasan's (1976) and Halliday (2004) concept of grammatical cohesion were used to analyze the essays. According to them cohesion can be grammatical or lexical. Reference, Substitution and Ellipsis and Conjunctions are the types of grammatical cohesion or cohesive relation. This study focused only on grammatical cohesion and did not analyze lexical cohesion.

Reference has the semantic property of definiteness or specificity. Personal, demonstratives and comparatives are the types of reference. Personal reference includes personal pronouns, possessive determiners and possessive pronouns. Demonstrative reference is by means of location while comparative is indirect reference by means of identity or similarity.

Substitution is the replacement of one item by another, in wording. Example: My axe is too blunt. I must get a new one (Halliday, 1976). Nominal, verbal and clausal are the types of substitution.

Ellipsis is the omission of an item. The three kinds of ellipsis are nominal, verbal and clausal ellipsis. Nominal ellipsis means the omission of noun. For example, This is a fine hall you have here. I have never lectured in a finer. (hall), hall is the omitted noun in this instance. Verbal ellipsis is the omission of verbs, for example, Have you been swimming? – Yes, I have (been swimming) is the omitted verb phrase in this example. Clausal ellipsis is the omission of a clause for example, John didn't tell me [(that) he was coming], that he was coming is the omitted clause in this instance.

Conjunctions are cohesive elements not in themselves but by their specific meanings. They express certain meanings which presuppose the presence of other components in the discourse. Conjunction is one type of cohesion, which specifies additive, adversative, causal or temporal relations between what has been said previously and what follows. Elaboration, extension and enhancement are the types of conjunction. The sub-types are apposition, clarification, addition, variation, spatio-temporal, manner, causal-conditional and manner.

Apposition and clarification are the two types of elaboration. In apposition, some element is presented or stated again either by apposition or by example. In elaboration, some element is reinstated, summarized, made more precise, or clarified. The sub-types of clarification are corrective, distractive, dismissive, particularizing, resumptive, summative and verificative.

Extension involves addition or variation. Addition can be positive, negative, adversative. Variation includes replacive, subtractive and alternative types.

Spatio-temporal, manner, causal-conditional and matter are the various types of enhancement. Examples of spatio-temporal are here, there, behind, nearby, in the same place, anywhere else. Temporal can be simple and complex. Manner is created by comparison, by reference to means; comparison may be positive or negative. Causal-conditional expresses result, reason or purpose. Conditionals can be positive, negative, concessive. Matter is established by reference to the 'matter' that came before; this relation can be positive or negative.

Statistical tools

The following statistical tools were used to analyze the data: Cronbach Alpha and Kendall tau was used to determine agreement between raters when assessment tools like Rubric is used.

Pearson r was used to determine the relationship of the frequency of the cohesive devices with the quality of the essay.

RESULTS AND DISCUSSION

Here, the quantitative and qualitative findings of this study are dealt with.

Research question 1

What are the cohesive devices used by the students in their argumentative essay? How frequent are they used? Table 1 presents the frequency of cohesive devices per type with corresponding mean and standard deviation. As can be seen from the table, reference had the highest frequency which is 90.67% of the total cohesive devices with mean score 53.37. Conjunction occurred 326 times in the essays, which is 9.08% with mean score 5.34 while substitution was the least used type of cohesive device, which is only 0.25%. It is apparent that reference is

Table 1. Frequency of cohesive devices.

Variable	Conjunction	Reference	Substitution	Total
Total	326	3255	9	3590
% based on total	9.08	90.67	0.25	100.00
Mean	5.344262295	53.37704918	0.131147541	58.85245902
Stdev	2.529066006	11.36392528	0.340363033	11.40443783

Table 2. Frequency of conjunction.

Types	Sub-types	Function	Total	(%)
	Apposition	Expository	1	0.31
		Exemplifying	4	1.23
Elaboration	Clarification	Corrective	1	0.31
		Dismissive	2	0.61
		Summative	1	0.31
		Verificative	8	2.45
Extension	Addition	Positive	68	20.86
		Adversative	77	23.62
	Variation	Replacive	2	0.61
		Subtractive	1	0.31
Enhancement	Spatio-Temporal/ Temporal	Following	20	6.13
		Simultaneous	4	1.23
		Conclusive	3	0.92
		Durative	2	0.61
	Manner	Comparison	4	1.23
		Means	25	7.67
	Causal- Conditional	General	55	16.87
		Result	11	3.37
		Reason	1	0.31
		Purpose	4	1.23
Conditional positive		5	1.53	
Concessive		27	8.28	
Total			326	100.00

significantly more frequently used than the other types of cohesive devices. The use of reference cohesive items like personal pronouns and demonstratives is important because they provide the concept of identifiability and establish anaphoric relations. Karasi (1994) reported the same findings; however Liu and Braine (2005) and Meisuo (2000) found more lexical ties than cohesive in the students' essays they analyzed since lexical cohesion was part of their analysis.

The Table 2 shows the frequency of use of conjunctions as cohesive device. As seen from the table, extension-addition-adversative is the most frequently

used conjunction with 77 counts or 23.62%, followed by extension-addition positive with 20.86%. The enhancement-causal-conditional-general conjunctions comprised 16.87% of the total. The percentage of enhancement-causal-conditional-concessive is 8.28% while enhancement-manner-means is 7.67%. The high percentage of use of addition-adversative, addition-positive, causal-conditional-general, concessive and enhancement-means as cohesive devices may be attributed to the type of essay the students wrote. In argumentative text, the purpose of the writer is to establish a claim and convince readers that the claim is

Table 3. Frequency of reference cohesive device.

Type of reference			Total	(%)
Personal	Existential	Head	566	17.42
	Possessive	Head		0.00
		Mod	303	9.32
Demonstrative	Selective	Head	94	2.89
		Mod	209	6.43
		Adverb	69	2.12
	Non-selective		1987	61.14
Comparison	General	Mod	16	0.49
	Specific		6	0.18
			3250	100.00

Table 4. Frequency of substitution cohesive device.

Type	Frequency	(%)
Nominal	4	44.44
Verbal	3	33.33
Clausal	2	22.22
Total	9	100

valid through a set of supporting points. The writer also clearly take a stand and write as if he/she is trying to persuade readers to adopt new beliefs or behavior.

The nature of additives, conditionals and concessive makes it possible to strengthen claims by establishing strong connection with their supporting premises.

The demonstrative non-selective reference has the highest occurrence of use, which is 61.14%, among the types of reference as seen in Table 3. The personal existential-head reference occupies 17.42% while the personal-possessive-modifier is 9.32% of the total number of reference items. The high frequency of use of reference as cohesive device may be attributed to the fact that types of reference are used grammatically as part of a sentence as either subject, modifier or object. The relationship between things or facts may also be established with the use of reference items. The low frequency of comparison both general and specific as cohesive device could suggest that there is no need to compare ideas/things in an argumentative text or the students might have used other devices to compare aside from more, less, other, etc.

Table 4 shows that there is only nine occurrence of substitution as a cohesive device in 61 essays analyzed. There were four instances of nominal, three verbal and two clausal. Substitution may not have been often used since indefiniteness may not support claims. Students tend to be wordy to provide more evidence for arguments.

Table 5 presents the score given by the interraters and the number of grammatical cohesive devices in each essay. These numbers were correlated to find out if they have significant relationship

Research question 2: Is there a significant relationship between the number of cohesive devices and quality of writing?

The resulting r using Pearson r is -0.054 , which is not significant at 0.05 level of significance (Table 6). The critical value for the r is also .25. The total score did not also correlate with the ratings of raters 1 (-0.030) and 2 (-0.060) Therefore, the cohesive devices are not significantly correlated with the quality of the students' essay.

Research question 3: What are the common cohesive features used in the development of the students' argumentative essay?

To identify the common cohesive features used by students in their argumentative essay writing, the same set of essays was analyzed qualitatively using Halliday and Hasan's framework. Each category or type of cohesive device was analyzed to identify the most

Table 5. Frequency of cohesive devices and interrater average.

Essay #	Total per essay	Interrater score	
		Rater 1	Rater 2
1	46	21	19
2	46	20	18
3	52	20	18
4	67	25	21
5	62	22	18
6	76	22	21
7	53	25	22
9	65	25	22
11	54	23	20
12	57	22	18
13	53	23	23
17	48	18	19
18	44	22	18
20	55	19	15
21	40	20	20
23	56	25	22
25	51	25	19
26	49	21	18
28	56	19	20
31	68	13	12
32	64	15	13
33	69	17	14
34	76	23	19
35	70	19	15
36	48	17	18
37	65	20	18
40	71	21	19
42	75	23	19
43	69	25	22
44	81	18	14
45	61	18	14
47	84	18	13
48	46	18	16
50	70	20	15
52	67	20	15
55	64	19	16
56	51	18	18
58	65	22	21
60	63	16	15
63	57	21	22
64	70	22	19
65	74	17	18
66	65	23	20
67	40	19	17
68	61	19	16
69	51	17	15
70	58	16	15
75	52	18	19
76	57	21	21
85	62	18	15

Table 5. Contd.

86	39	15	15
87	60	23	18
90	52	18	16
93	42	18	14
94	59	15	12
96	61	22	17
98	70	21	15
99	42	23	17
101	32	23	17
103	52	22	16
104	77	15	21

This table presents the scores given by the interraters.

Table 6. Correlation coefficient of the essay scores and the frequency of cohesive devices.

Correlations		Total_Score	Rater_1	Rater_2	Average_Rater
Total_Score	Pearson correlation	1	-0.030	-0.060	-0.054
	Sig. (2-tailed)		0.816	0.647	0.681
	Sum of squares and cross-products	7803.672	-61.557	-113.836	-144.615
	Covariance	130.061	-1.026	-1.897	-2.410
	N	61	61	61	61
Rater_1	Pearson correlation	-.030	1	0.686**	0.858**
	Sig. (2-tailed)	0.816		0.000	0.000
	Sum of squares and cross-products	-61.557	522.852	337.279	598.705
	Covariance	-1.026	8.714	5.621	9.978
	N	61	61	61	61
Rater_2	Pearson correlation	-.060	0.686**	1	0.962**
	Sig. (2-tailed)	0.647	0.000		0.000
	Sum of squares and cross-products	-113.836	337.279	462.918	631.557
	Covariance	-1.897	5.621	7.715	10.526
	N	61	61	61	61
Average_Rater	Pearson correlation	-.054	0.858**	0.962**	1
	Sig. (2-tailed)	0.681	0.000	0.000	
	Sum of squares and cross-products	-144.615	598.705	631.557	1680.294
	Covariance	-2.410	9.978	10.526	27.546
	N	61	61	61	62

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

frequent patterns in the argumentative essays. The following data show the results of the analysis with the most common features of the cohesive devices in relation to the function of argumentative texts. Some extracts from students essays were also given as examples of the cohesive features.

Conjunctions

The data on the frequency of conjunctions as cohesive devices show that adversative type of conjunctions was most frequently used in the students' writing. This is somehow expected as the nature of argumentative texts

dictates the use of opposing or negating linguistic devices to establish counterclaims or counter arguments. The following excerpts from students' essays provide examples of these adversative relations:

A. Frequent use of adversatives

Example 1: But, the gaining popularity of openness and the high percentage of poverty has somehow wavered the strong faith of the Filipinos. (Essay 31, paragraph 4, sentence 3).

Example 2: Some giant companies, on the other hand, cited the rise in the international prices as the reason for the increase. (Essay 33, paragraph 2, sentence 2)

Example 3: But, being a very Catholic country that we are, the religious sector who calls themselves as 'pro-lifers' are very much against this bill. (Essay 18, paragraph 3, sentence 1).

Example 4: But, the Church will educate people not to follow anti-life laws on moral grounds (Essay 25, paragraph 4, sentence 3).

Example 5: ... But it is also to help decrease the poverty rate of the Philippines (Essay 20, paragraph 3, sentence 3).

Example 6: There are, on the other hand, subjects that disintegrate the positive outcomes of the VAT. (Essay 9, paragraph 1, sentence 7).

The examples given show that adversative conjunctions extend previously-given information in the text to add opposing information. For instance, In Example 1, the conjunction 'but' suggests negative effects as opposed to the positive information given beforehand. In Example 2, an opposing reason was given as additional information to the previous one.

Data analysis for adversative conjunctions also shows that there is a significantly high occurrence of adversative conjunction 'but' in the students' essays. While there are instances where there are other adversative conjunctions were used, the high frequency of 'but' may signify that the students' knowledge and use of adversatives was limited. Also, it can be surmised from the examples that the simple and common adversative 'but' was used when a concession or concessive device can be used for stronger statements. For instance, the use of the concessive 'yet' or 'however' can suggest stronger argumentative claims.

B. Use of causal-conditional

The causal-conditional conjunctions also appeared frequently in the students' writing. The following extracts illustrate how they were used in the argumentative essays:

Example 1: Because of this, companies earn more while

the major stock holders enjoy the benefits they get from their company (Essay 35, paragraph 2, sentence 4).

Example 2: Therefore, it does not have any bias for or against natural or modern family planning method (Essay 17, paragraph 2, sentence 3).

Example 3: The use of contraceptives in the Philippines is not published. It is a free mark market. Therefore, this bill is unnecessary. (Essay 31, paragraph 5, sentence 1)

Example 4: So what the government does is that they hide the supplies for a much greater price (Essay 42, paragraph 3, sentence 3).

Example 5: Consequently, these could be an indirect call for oil companies to take advantage of the policy, hiking prices of all petroleum products by an astonishing 53.5% since the Oil Deregulation Law came out (Essay 60, paragraph 2, sentence 4).

The causal-conditional general conjunctions are used in the argumentative essays to signal specific effects of the previously given information. For instance, Example 1 shows that the conjunction 'because of this' signals the effect of high demand of oil price hike which results in the high income of oil companies.

The high frequency of causal-conditional conjunctions was also somewhat expected since cause and effect relationships are necessary in argumentative essays to establish evidence for argumentative claims. Causal-conditionals are used to predict "what may happen" if a certain proposition in the argument is to be done. Aside from general causal-conditional conjunctions, other specific conjunctions were also used by the students.

C. Use of concession

Concessions are specific causal-conditional conjunctions. Concessive devices are special forms of opposing or negating devices. The following are extracts showing how they were used in the students' essays:

Example 1: The Philippines is no longer considered as part of the Third World Country list, however, this does not mean that the economic stability of the country is in great shape (Essay 9, paragraph 3, sentence 1).

Example 2: You can easily see that poor families are already hampered with expenses; yet they still end up with more children than they desire (Essay 21, paragraph 2, sentence 3).

Example 3: However, different institutions such as the Catholic Church were alarmed with the issue and held many protests against the passing of such bill (Essay 17, paragraph 1, sentence 4).

The examples show that concessives also signal opposition or contrast to the previously-given information. However, unlike the more common adversative conjunctions, concessives do not only oppose or negate the previous information. Concessive conjunctions suggest

that there is considerable truth in the previous claim or argument but the other premise is deemed to be stronger. For instance, example 1 shows that the previous information that 'the Philippines is no longer part of the Third World country' is considered to be true, but the following premise that 'the economic stability is not insured' is a more important claim.

The use of concession is highly important in argumentative essays since they can establish stronger arguments. Also, the act of considering other claims aside from personal arguments suggests a higher level of maturity in argumentation and critical thinking among students. However, data show that although concessives were used in the students' essays, the frequency was lower compared to the more common adversative 'but'.

D. Use of additive

Additive conjunctions are also highly frequent in the students' essays. The following gives examples of how these additives were used:

Example 1: Also, most of the religious leaders have labeled the bill as the "Anti-Life Bill" or Act. (Essay 23, paragraph 3, essay 2).

Example 2: Also, pro-life groups strongly oppose certain forms of birth control, particularly hormonal contraception. (Essay 2, paragraph 1, sentence 6).

Example 3: And, as it continues people's burden increases and the government started to think of a plan to lessen it. (Essay 40, paragraph 4, sentence 5)

The examples clearly show that additive conjunctions simply add new information to previous information. This signals that there is continuity of ideas within the text. While additives are highly important in establishing idea relations, there is not much variety of additives use in the students' essays. Instead, they were limited to 'also' and 'and'. This may suggest that the students' knowledge of conjunctions may be limited, or they are more open and comfortable using the more common ones rather than other alternative like 'moreover', 'furthermore', 'in addition' and other conjunctions that establish extension.

E. Use of manner-means

The following excerpts from the students' essays show how they used cohesive devices to give an answer to the problem at hand or give the effect of something:

Example 1: Under the Oil Deregulation Law (Republic Act no. 8479), the government will no longer interfere with the pricing, exportation, and importation of oil products. Thus, it will give the oil companies the privilege to freely adjust their oil prices. (Essay 76, paragraph 2, sentence 3).

Example 2: They are blaming the ODL for the oil price increase on gasoline and other petroleum products; thus, they claim that with these products' high-rise prices, the oil companies gain more-than-what-they-need revenue from the most important source of energy today. (Essay 68, paragraph 1, sentence 3).

Example 3: People are more likely to budget their income, thus giving a smaller allocation for oil. (Essay 45, paragraph 3, sentence 4).

Example 4: From simple household commodities to industrial merchandises, the prices of different goods will also increase due to the fact that somehow in the production or transportation of these merchandises, a part of the manufacturer's or retailer's capital was spent on oil. Thus also increasing the prices of their products. (Essay 44, paragraph 3, sentence 2 and 3).

An argumentative text is like a problem-solution composition. Thus, the use of cohesive devices that would show manner or means is inevitable. Since the students wanted to give or suggest solutions to the given problem/proposition or to give the consequence of an action, they need to use words that would signal they are coming up with a solution or they are giving the effects of a certain situation. In example 1 and 2, the effects of the Oil Deregulation Law are explained. In example 3, the effect to an individual's budget allocation of oil price increase is cited while in example 4, the reason why prices of some commodities increase is explained.

References

Frequent use 'the'

The number of reference conjunctions in the students' essay is significantly higher than the other two types. This is attributed to the high frequency of the non-selective demonstrative 'the'. The following provides examples of how 'the' was used:

Example 1: The rapid growth of the Philippines which blew up to 2.04% per year became the first and foremost reason of this proposition. (Essay 18, paragraph 2, sentence 2).

Example 2: The bill has nine sections and is primarily concentrated upon regulating and proposing the ideal family size and the health care benefits mothers and other women may receive if the bill is to be implemented. (Essay 13, paragraph 1, sentence 11).

Example 3: The global financial major crisis that is affecting major countries in the world has already found its way to the Philippine shores. (Essay 48, paragraph 1, sentence 1).

The demonstrative reference 'the' is a specifying agent. It indicates that the item referred to is identifiable although it does not identify exactly the referent within the text unlike the selective demonstratives. As a cohesive

device, 'the' can also link previous information to new information in the text. For instance, in example 1, 'the' which precedes the phrase 'rapid growth' suggests that the information has already been mentioned previously in the text, thus building anaphoric relations (referent is found prior to the pronoun). In other instances, the referent may be exophoric or not found within the text. In this case, 'the' as a cohesive device suggests that the succeeding item is specific and the reader knows exactly the specific item being referred to.

The high frequency of 'the' in the students' argumentative texts may be caused by the students' intention to specify information that can establish common ground with the reader. For instance, the phrase 'the bill' in example 2 suggests that the readers know exactly what bill is being talked about. The information about the bill has been previously given in the text.

This/ these/ that/ those/ there

Unlike the non-selective 'the', selective demonstratives can identify the item being referred to. The following are examples of how the demonstratives were used in the students' essays:

Example 1: This bill has raised the eyebrows of the Catholic hierarchy here in the Philippines. (Essay 31, paragraph 3, sentence 1) – modifier.

Example 2: These abuses are obviously done in the form of unreasonable increases of prices of petroleum products. (Essay 28, paragraph 4, sentence 1)- modifier.

Example 3: However, the religious sectors are very much against this bill since they believe that it promotes the legalization of abortion and still thinks that Natural Family Planning is way better since it is in accordance to the teachings of God which is to promote life.(Essay 18, paragraph 1, sentence 4).

The selective-demonstratives are typically used to indicate distance. For instance, 'this' and the plural counterpart 'these' indicate nearness, while 'that' and the plural 'those' indicate remoteness of the item being referred to. However, the extracts show that the demonstrative were usually used as to link ideas to previously given information rather than indicate distance. In example 1, the demonstrative 'this' which precedes the word 'bill' suggests that a related information about 'the bill' has been mentioned prior in the text. The same use is shown in example 2 with the demonstrative 'these' which refers to the plural 'abuses' which idea has been mentioned previously. In example 3, 'they' clearly refers to religious sectors. The use of those reference items establishes anaphoric relationship.

Our-we-us

Personal pronouns are typically used to substitute for

nouns to avoid repetition and redundancy. More than that, personal pronouns can also establish cohesion within the text by providing links between the referent and the pronoun itself. The following extracts are examples of how some personal pronouns like 'our', 'we' and 'us' were specifically used in the argumentative essays:

Example 1: Nowadays, Filipinos are suffering different types of circumstances that challenge our capability to survive (Essay 45, paragraph 1, sentence 1). The most noticeable issue our present economic state is the continuous and uncontrollable Oil Price Hike (sentence 3).

Example 2: We are not sure of the stability of our peso versus dollar (Essay 35, paragraph 4, sentence 3).

The use of first person plural personal pronouns in the students' essays did not only establish anaphoric relations but also provided argumentation techniques. In example 1, 'our' indicates the writer is aware that his/her readers are part of the problem involved in the issue. The statement which is part of the introduction of the text was used to establish common ground or knowledge with the reader of the text. In example 2, the pronoun 'we' also indicates that the writer is arguing for all the others who are involved in the problem or issue. This example may also suggest that the when students used the plural personal pronouns they assume that others argue or reasons in the same way. In addition, when plural personal pronouns were used, the idea within the statement is usually generally accepted fact or popular opinion. For instance, the poverty in example 1 and economic instability in example 2 are generally accepted truth in the social context.

Personal opinion/evaluation

The singular personal 'I' also has a distinct use in the students' argumentative texts. The following provides examples:

Example 1: In my opinion, I would like to revise the law that will give equal rights to everyone (Essay 103, paragraph 5, sentence 1).

Example 2: I strongly believe that he who controls the oil have the power to dictate which direction the nation will undergo (Essay 52, paragraph 2, sentence 5).

Unlike plural personal pronouns which were used for generally-accepted truth, singular-personal 'I' was used to indicate personal opinion of the writer. In the examples shown, the writers used 'I' to express their proposition and suggest solution regarding the problem or issue.

Misuse of adversatives and other cohesive devices

There were also cases of conjunction misuse identified

during the analysis. The following extracts provide examples:

Example 1: But on the other hand, there are some advantages in the law. (Essay 34, paragraph 3, sentence 1).

Example 2: For short, its supply is decreasing and the demand seems to inflate by the moment. (Essay 90, paragraph 2, sentence 3).

Example 3: Our country's economy is fading due to the domino effect started in the unstoppable increase of the value of oils. Oil plays an important role in the society because it makes transportation possible. They deliver goods and products from one place to another. (Essay 6, paragraph 2, sentence 3).

Example 4: They used the term "post" because what was going to take modern state's place was still undetermined but they were sure that it would be different from the modern state. They stated changes in modern states government, nationhood and economy. (Essay 7, paragraph 3, sentence 1 and 2).

Example 1 shows the combination of two adversative-additive conjunctions 'but' and 'on the other hand' to signal opposing ideas. This example shows redundancy since one will do without the other, although 'on the other hand' has comparative implications. In some other instances, students also combined positive-additive conjunctions 'and also' to signal continuity.

Example 2 shows prepositional confusion. Instead of using 'in', the preposition 'for' was used. Other instances of this misuse also show how students substitute conjunctions or parts of the conjunctive phrase with other words.

Example 3 shows unclear reference of pronoun. 'They' has no word to refer to, thus no anaphoric relation is established in the sentence. The same is true in example 4.

Conjunction misuse reveals that students tend to be redundant and wordy even in their use of conjunction. It also reveals prepositional and collocational confusion which is common among second language learners while unclear reference of pronoun leads to vague development of ideas in their essays.

Conclusions

The findings of this study show that reference is the most frequently used cohesive device (90.67%) followed by conjunctions (9.08%) and substitution (0.25%). No instances of ellipses were found since according to Halliday and Hasan (1976) they appear more in oral discourse than in written discourse.

It was found out that there was no significant relationship between the cohesive devices and the quality of writing. The Pearson-r correlation result is -0.54 which is not significant at 0.05 level of significance. The critical

value for r is 0.25. The total score of the essays using Rubric did not also correlate with the ratings of raters 1 (-0.030) and 2 (-0.060). Therefore, the cohesive devices are not significantly correlated with the quality of the students' essays.

This result suggests that the high frequency of cohesive devices in the students' essay is not a clear gauge of the quality of writing. Meisuo (2000), Johnson (1992), Karasi (1994) in Meisuo, Connor (1984) in Meisuo, Allard and Ulatowska (1991) in Meisuo, reported the same findings. However, Liu and Braine (2005) found out a significant relationship between the frequency of cohesive devices and the overall quality of writing. Liu and Braine's analysis of lexical cohesive ties suggests that sentences which are functionally more important to the development of the text contain more cohesive ties than other sentences less important functionally. Liu and Braine may have found significant relationship between the cohesive devices and the overall quality of writing because their study included lexical cohesion. According to Connor (1990: 83) "One of the characteristics of coherence, on the other hand, is that it allows 'a text to be understood in a real-world setting' (Witte and Faigley, 1981: 199) and thus contributes to an understanding of its quality. Writing quality is defined, in part, as a fit of a text to its context, which includes the writer's purpose, the discourse medium, the knowledge of the audience, and so on."

Based on the qualitative analysis, it was found out that certain cohesive types assisted the students in the argumentation process. For instance, the use of adversative conjunctions helped the students establish counterclaims. However, 'but' is the most frequently used adversative conjunction by the students which may signify that their knowledge on the use of this kind of cohesive device is limited. There were instances where the students can use concessives like yet or however to establish stronger claims.

In addition, reference items like this, that, among others established connection between previously given information to new information in the text. Demonstratives were used to relate new information to those which have been mentioned before in the text. The definite article 'the' was frequently used because of its specifying agent property. The high frequency of its occurrence may also be attributed to the students' objective to establish common ground with the reader. Further, plural personal pronouns were used in the argumentative essays to suggest writer's awareness that he/she is arguing for a group and that the problem of the topic includes others; thus, establishing common ground with the reader. Also, plural personal pronouns were used for widely-accepted truth or popular belief or opinion, while singular personal pronouns were used for personal judgment and opinion regarding the issue involved in the argumentation.

Hence, qualitative analysis supports the concept of form and function. In the students' argumentative essays, certain forms were chosen over the others for a specific

purpose that supports the overall objective of an argumentative text.

Implications for language teaching and research

The findings of this study generated some pedagogical implications for the teaching of writing, the second language learners of English in the tertiary level and for research.

The first implication is concerned with addressing redundancy and misuse of conjunctions in the students' writing. While it was found out based on quantitative analysis that there is no direct relationship between frequency or number of cohesive devices to overall quality of writing, quantitative analysis shows that choosing effective cohesive devices for a specific purpose of the text helped much in the writing process. For instance, the cohesive devices which aided in establishing arguments within the texts supported in achieving the text's main objective. It is for this reason that variety of cohesive structures in different categories should be taught to students to avoid redundancy and repetition. Based on analysis, the high frequency of the adversative 'but' may suggest students' limitation of use to the most common conjunctions. The same is true for additives which are mostly limited to 'and' and 'also'. Alternative positive-additive conjunctions should be re-emphasized in teaching language forms in writing. It was also found out in some instances that misuse of cohesive devices is caused by prepositional or collocational confusion which is common among second language learners. Therefore, the teaching of writing should also address these second language pitfalls.

The second implication is concerned with the relationship of form and function of text. Language teachers must make the students understand the connection between the form and the function of language which will help them become aware how stretches of language can be coherent without being cohesive or cohesive without being coherent. For instance, the importance of concessive devices should be further emphasized as more effective argumentative tools than the adversative 'but'. While adversatives may establish negation or opposition, concessions which consider the other side of the argument to some degree can develop in the students a more mature tone in their argumentation. In teaching writing, it is suggested that the relationship between form and function be emphasized to students. That is certain language forms

are selected over the others because they are more effective in performing a certain function. Furthermore, students should be taught the functions most relevant to their needs since certain language forms perform certain communicative functions and that functions are the means for achieving the ends of writing. (Hyland, 2003).

The third implication is concerned with research. Further studies that will analyze undergraduate students' essay should be conducted. The whole essay could be analyzed in terms of grammatical and lexical cohesion, since it is a limitation of this study. The organizational moves students employ when they write argumentative text may be a point of study. Other academic papers that undergraduate students write could be a good corpus.

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