

JUL 6 1995

EDUCATION LIBRARY

**THE INFLUENCE OF TOPIC KNOWLEDGE ON ARGUMENTATIVE
WRITING FROM ESL STUDENTS IN UNIVERSITY SETTINGS**

A monograph submitted to
the Faculty of Graduate Studies and Research McGill University
in partial fulfillment of the requirements
for the degree of Master of Education
in Education in Second Languages

by

Robin-Eliece Mercury

Department of Education in Second Languages

Faculty of Education, McGill University

Montréal, Canada

© April, 1995

BDA 2310

ABSTRACT

This research paper investigated whether a higher level of topic knowledge affects the ability of English as a second language (ESL) university students to produce better written arguments. Using a scoring scale based on the work of Stephen Toulmin (1958), improvement was measured in the presentation and development of six rhetorical features: *claims, data, warrants, rebuttals, counterarguments* and *propositions*. A total of ten essays were collected and evaluated by two raters (N = 5, two essays per writer) using the Toulmin criteria on an ordinal scoring scale (see Appendix B). The first set of essays were written from a Test of Written English (TWE) writing prompt, and the second were written from a prompt designed to allow writers to write on a topic they knew. It was hoped that the latter writing prompt was then written from a comparatively higher level of topic knowledge. Both essays, through qualitative descriptions, were compared for any rhetorical differences--Toulmin-based or not.

Because a quantitative analysis was not sufficient to explain most of what was actually "going on" rhetorically in both sets of essays, detailed observations were made on both the first and second essay that a) described the rhetorical features, their development and organization, b) explained from a rhetorical standpoint why there was disagreement in the evaluations between the two raters, and c) used examples taken from the writers' texts to

show the instrument used in this study was not sensitive to features and patterns different from those Toulmin described.

These results appear to illustrate that a higher level of topic knowledge may not be sufficient knowledge for ESL students to write an acceptable essay in terms of its rhetorical content. Although writers wrote more complete and clearer propositions in the essay that prompted writing on topics writers knew, they chose to use rhetorical features and organizations they were most familiar with to construct their arguments--those accounted for or unaccounted for in the scoring instrument. This point may be more relevant to newly-arrived ESL students who lack the experience of studying in an English *milieu* and writing for an English-speaking evaluator--as the writers did here.

This research was viewed very much as a pilot study which only provided a start in designing a larger study ($N \geq 15$) on the effects of topic knowledge. A larger study might confirm the types of observations reported herein by collecting additional details on the evaluation practices of the raters and information from the writers that would indicate how writers actually approached the writing task rhetorically.

ACKNOWLEDGEMENTS

First and foremost, I would like to extend my heartfelt thanks to Dr. Janet Donin. Her advice and support have proved to be absolutely invaluable in the successful completion of this monograph.

Special thanks go to my sister, Brandée who has always had faith in me and encouraged me to go the distance.

Finally, I want to express my appreciation to Joan Ballard who had constantly prodded me to "go back and get your Masters!" All I can say is Joan, you were right! Thank you.

TABLE OF CONTENTS

	Page
ABSTRACT.....	ii
ACKNOWLEDGEMENTS.....	iv
TABLE OF CONTENTS.....	v
INTRODUCTION.....	1
LITERATURE REVIEW.....	6
Text Linguistic Analyses.....	8
Cognitive Perspectives.....	10
Other Research Designs Used to Study Argument Writing.....	13
METHOD.....	15
Subjects.....	15
Materials.....	16
Procedures.....	18
Instrument.....	19
Further Explanations of the Rhetorical Features Used in the Instrument.....	21
RESULTS AND DISCUSSION.....	23
The Use of Nonparametric Tests.....	24
Explanations of the Tables.....	29
An Analysis of the Rank Order Correlations.....	31
Essay #1: Assigned Topic.....	31
Essay #2: Writer-selected Topic.....	35

Observations on Rhetorical Development and Organization.....	39
Essay #1: Assigned Topic.....	41
Essay #2: Writer-selected Topic.....	44
CONCLUSIONS.....	50
Limitations and Implications.....	53
NOTES.....	55
REFERENCES.....	56
APPENDIX A Personal Questionnaire Used Prior to The Writing Prompts	62
APPENDIX B Scoring Guide For Toulmin's Criteria for Argumentation	64
APPENDIX C Writing Prompt Sheets for Essay #1 and Essay #2	68
APPENDIX D Two Sets of Argumentative Writing Written by Five ESL University Students	70

TABLES

Table 1	Scores on Scoring Guide for Toulmin's Criteria and Rankings for Essay #1: Assigned Topic	26
Table 2	Scores on Scoring Guide for Toulmin's Criteria and Rankings for Essay #2: Writer-Selected Topic	26
Table 3	Coefficient T Values Corrected for Tied Observations for Essay #1: Assigned Topic	27
Table 4	Coefficient T Values Corrected for Tied Observations For Essay #2: Writer-Selected Topic	28

INTRODUCTION

In an English-speaking university setting, students' success largely depends on the quality of their writing, particularly in how well they can compose arguments. This is the one genre most commonly assigned across several disciplines (Bridgeman & Carlson, 1983, 1984; Hamp-Lyons & Reed, 1990), and it is assigned at least once per semester (Horowitz, 1986), depending on the programme of study. For English as a second language (ESL) students in these universities then, it is inevitable they will also have to compose and submit argumentative essays for evaluation. However, research shows that ESL students' compositions tend to receive lower evaluation scores than those essays composed by their native English-speaking counterparts (Hinds, cited in Land, Jr. & Whitley, 1989; Land, Jr. & Whitley, 1989). It appears in holistic evaluation practices for argumentative writing, professors usually focus much of their attention on the ways in which their students develop their arguments rhetorically. In the second language literature, for instance, (Carrell & Connor, 1991; Connor, 1991) it has been reported that in holistic scoring anywhere from 30 - 45% of the variance in evaluation scores was due to such aspects of argument writing as the clarity of the claim, the relevancy of the supporting data, and the logical, credible links between the two. If this is the case, a possible explanation for such a difference in evaluation scores may be partly due to the professor's failure to identify, in an ESL argument, the types of rhetorical features he or she expected to find, and how he or she

assessed the development and organization or those that were present. Moreover, ESL students may not be incorporating those rhetorical features that for English-speaking professors, signal a well-written argument. If successful argument writing largely depends on how well writers can incorporate those rhetorical features associated with argument into their own work, it is essential then, for ESL writers to understand fully and to be able to use those rhetorical features English-speaking professors expect to find in an argumentative essay.

One philosopher of rhetoric that has identified the basic rhetorical features of argument is Stephen Toulmin (1958), and they are: *claim, data, warrants, rebuttals, counterarguments* and *propositions*. How do these features interact to create an argument? Based on the explanations given by Stein and Miller (1993), Toulmin's work (1958) and the conventions of Aristotlean rhetoric, argument is the presentation of a particular claim or stance (*claim*) that is then supported by appropriate evidence or data (*data*). A strong and valued argument requires that the evidence must be related to the claim in such a way so as to make it plausible (*warrants*), and that the overall argument is logically compelling. Good argument is not dogmatic (Fitzgerald, 1988; House cited in Fournier & Smith, 1993) nor narrow in scope; rather it should acknowledge other credible but opposite perspectives on the issue (*rebuttals*), and contrast them to the conditions and circumstances in which the claim being made is the most plausible and reasonable

(*counterarguments*). The claims themselves need not be complex (Knudson, 1992a; Stein & Miller, 1993), but arguments prepared and evaluated in academic settings should be complex in that they reflect relativistic thought (Perry's term, see Hayes, 1988). This is to say, the argument writer must acknowledge the constraints social, cognitive and sociolinguistic contexts (Stein & Miller, 1993) place on what can be discussed and how it can be expressed. At the same time, the writer must also acknowledge and deal with the complexities of presenting the qualifications under which the argument has credibility or a degree of "truthfulness" (Hayes, 1988).

In sum, argumentative essays can be on simple-sounding topics, but they cannot be produced simplistically. Argument writing involves many rhetorical traits which must be arranged in ways that will not only support the writer's claim(s), but will make it or them acceptably plausible and reasonable.

The above description of argument in terms of those six rhetorical features illustrates the type of explicit, deductive style of argument that is generally preferred in English-speaking university settings. Particularly for ESL university students understanding the argumentative pattern described above would be a start in successfully composing an argument. Furthermore, it may also be useful to discover a factor (i.e., topic knowledge; amount of time already spent in an English academic *milieu* ; knowledge of the morphosyntactic structures appropriate for argument) that might effect a

general improvement on the presentation of the rhetorical features related to this type of argument. In other words, are there other types of knowledge directly related to argument writing that if increased, could positively affect an ESL writer's ability to write deductive, explicit argument? With all the previous research done on topic knowledge that reports its positive benefits on the final written product of English-speaking students (Chesky & Hiebert, 1987; McCutchen, 1986), it would be interesting to study its effects on the work of newly-arrived ESL students, and add to the few studies (i.e., Tedick, 1990a) already published in this area any additional findings. For the sake of clarity, a newly-arrived ESL student means an individual who, up until the point of this study, had never worked or studied outside their non-English-speaking country.

As mentioned above, there already seems to be a relationship between topic knowledge and text quality. This relationship seems to reveal that the writer's level of subject-matter knowledge plays a large part in determining the writer's capability of producing a good quality text.

In her early work with twelfth grade native-speakers of English, Emig (1971) reported that writers who write about subjects they know produce texts which contain well-developed, smoothly connected ideas that, as a whole, create an enriched piece of writing. In contrast, Langer (1983) states, "when students know little about a topic their language, organization, and coherence are likely to seem tight, restricted and contrived--or fall apart altogether" (p.5).

If topic knowledge influences the quality of written products to such an extent as these observations suggest, it may be further useful to discover how it affects the previously-described aspects of rhetoric in good argumentative writing. It may be discovered that a high level of topic knowledge, in itself, does not necessarily lead to an ESL writer writing well on a subject. First language researchers have found this to be the case (i.e., McCutchen, 1986). However, it seems that, for ESL writers, the level of knowledge for a particular topic is one of the important elements responsible for writers producing, specifically, good argumentative texts (Connor, 1991; Connor, Gorman & Vähäpassi, 1988; Tedick, 1990a, 1990b). According to these analysts, high levels of topic knowledge enable writers to develop their ideas sufficiently with the most appropriate supporting details and vocabulary.

Given the fact that the above-described rhetorical features are important in a successfully written argument, and topic knowledge may affect how ESL university writers develop and/or organize these features, this study will combine an analysis of argument writing by ESL students with a description of the effects of topic knowledge on the actual written product. Specifically, this study will describe the arguments new ESL students actually wrote in terms of the six rhetorical features Toulmin's (1958) work provides, and will also study the effect topic knowledge has on writers' abilities to produce a better argument in terms of the Toulmin model.

To this end then, two samples of argumentative writing taken from the same group of ESL university students enrolled in an ESL programme at a Canadian university were collected and analyzed in this study. One sample written from a writer-selected topic, assumed to encourage writing from a high level of knowledge, and a second sample written from a prompt that should tap comparatively lower levels of topic knowledge, were studied primarily using Knudson's (1992a) Toulmin-based argument measurement model which focusses on the argumentative rhetorical traits listed above. Any differences or absences in the presentation and development of these traits between and among the writers' essays were depicted and assessed using this model.

LITERATURE REVIEW

Whether ESL university students writing on familiar topics write better arguments rhetorically is an issue that has not been studied extensively. Perhaps allowing students to write on topics of their own choosing (presumed to be familiar topics) has posed many problems in research design for researchers who need to control the written product in order to do across product comparisons. If a student selects a topic that best suits a narrative, another chooses one and writes an informative synthesis, and still a third writer submits a critique, the researcher cannot possibly make any generalizable observations about the role(s) of topic knowledge.

However, in reference to earlier comments made in the introduction, a few studies have attempted to describe the relationship between topic knowledge and rhetorical/ linguistic improvements in writing among native-speaking students. These studies tried to prompt subjects to write from their level of topic knowledge while controlling for the topic, and measuring, in some way, the writer's knowledge on that topic (Langer, 1983; McCutchen, 1986). Other studies controlled for the level of topic knowledge by providing subjects with all the relevant information they would need to complete the writing assignment, and by not allowing the writers to use any other information they may know (Hilgers, 1982).

As an example of the former type of writing research, McCutchen (1986) developed "a scoring study designed to assess and control for content knowledge. A 30-item completion test tapping knowledge of the terminology and rules of football was administered to approximately 300 children" (p. 434). This allowed for the division of the researcher's sample into the discrete categories of low and high knowledge writers of football. McCutchen reports that children in grades 4, 6 and 8 who were knowledgeable about football wrote more coherently and more relevant details on the play of the game than writers who had little knowledge of football. Both groups of writers provided elaborations on their ideas or opinions, but the high knowledge students wrote about more ideas and used more specific details or examples

to support them than low knowledge writers. These latter writers wrote in generalities and discussed significantly fewer ideas in their football essays.

Even though McCutchen looked at the writing of young children who were native-speakers of English, are the implications of her observations generalizable to a university ESL student population? That is, do high levels of topic knowledge affect the writing of college ESL students in similar or other rhetorical ways as they do McCutchen's children?

Text Linguistic Analyses

Several studies attempted to answer this question by, first, defining "quality text" in terms of the linguistic features contained within it (Lindeberg, 1985; Schneider & Connor, 1990; Tedick, 1990a). In this way, any improvements or differences influenced by topic knowledge could be concretely measured *via* text linguistic analysis (See Enkvist, 1987 for an exhaustive yet excellent orientation on the use of Text Linguistics.). An example of one such study is Lindeberg's (1985) descriptive analysis of cohesion and coherence patterns as indicators of quality text that could distinguish between good and poor expository writing. She compared high and low rated essays in terms of these coherence or cohesion patterns so as to discover the ways in which a good writer wrote more effectively than a poor writer. For instance, Lindeberg reported most of the poorly written essays seemed to follow an assertion-after-assertion (or a series of a assertions) topical structure pattern which indicated, according to the researcher, that the

writer was simply moving from topic to new topic without providing any information on how the two assertions were related. Many of the good essays, however, followed assertions with elaborating specifics (i.e., ASSERT - SPECIFY) or with relevant details connected to the assertion in some way (i.e., ASSERT - RESULT; ASSERT - CONTRAST; ASSERT - CAUSE). (See Lindeberg, 1985, pp. 85-88 for details). Based on this work, Lindeberg concluded that writers of good essays organized, explained and connected their ideas in a logical fashion while poor writers could illustrate only a few relational connections between ideas. While Lindeberg stresses her work to be in a very tentative stage, it does use textual traits to show evidence of good writing. What needs to be asked here is can good or even appropriate content be guaranteed simply because the ideas *themselves* are well-connected by surface-level features? In other words, do “good connections” represent the goodness of what is being connected? How are issues dealing with relevant and irrelevant content approached in this type of analysis?

A further problem with the text linguistics approach in studying what makes for good writing is surface-level features do not account for all of the strengths nor weaknesses particular to argumentative writing. Enkvist (1990) discussed the problems of relying on cohesion patterns as a measurement of good writing. As he clearly explained in his paper, what, for example, made a text coherent if there are no cohesive markers? Can

sentential cohesive ties provide a clear view of an essay's even broader organizational structure or hierarchy of ideas? Enkvist suggested that the logic of an argument can be achieved beyond what is written down on the page. Moreover, and perhaps quite importantly, the content of the argument and in what context that content is being read count a great deal in successful writing.

Cognitive Perspectives

At the beginning of this paper, I mentioned it appears that the level of knowledge for a particular topic is one of the essential elements responsible for writers producing, specifically, good argumentative texts. In terms of cognition, how is the level of subject or content knowledge involved in producing good argument? One suggestion is writers who have a sufficient level of subject-matter knowledge are more likely to plan and organize their ideas effectively (Kucer, 1987; Stein, 1986; Tierney & Pearson, 1983). For example, Tierney and Pearson (1983) posited that writers with prior knowledge of the topic could quickly focus on a desired (i.e., writer-chosen) range of appropriate issues, and could use this range to guide their selection of relevant source material as their required support. Prior knowledge then, might help the writer get to a level of specifics when he or she is deciding on what he or she wants to say. Moreover, Kucer (1987) discussed how essay content must be organized in such a way that it is meaningful and clear. Kucer argued that writers used prior knowledge to select, elaborate on and

sequence ideas and information necessary to achieve meaningfulness and clarity. In reference to his contemporaries, Kucer noted that their research finds "[r]eaders and writers must seek to relate elements of meaning to one another so that they form a consistent whole...[i]n the attempt to create meaning, the language user must strive for coherence in and continuity of content" (p.38). So, it may be that topic knowledge is essential in that it underlies how the writer connects his or her content when creating meaning in order to achieve this sense of continuity of content for his or her reader (cf. Spivey, 1990).

A second point related to the first suggestion, is writers with a fair amount of topic knowledge can combine what they know from personal experience or from what they have learned previously with the most appropriate authoritative sources (Spivey, 1990; Squire, 1983; Stein, 1986). In effect, instead of regurgitating data from those sources in support of his or her claims, the argument writer moves the discussion along by using his or her personal knowledge to address the issues further, thereby making the argument appear "fresh", somewhat original and interesting to read.

According to Hamps-Lyons (1990) and Bridgeman & Carlson (1984) many English and social science faculty members valued this in student writing while other faculty members did so to a lesser degree. Prior knowledge, then, seems also to contribute to the "freshness" of the argument, the

sophistication of its organization of content, and to a furthering (not a redundant) discussion of the issues presented.

In cognitive psychology, a few researchers have studied the influence(s) of prior knowledge primarily in reading comprehension (e.g., Gerrig, 1988; Langer & Nicolich, 1981; Rosenblatt, 1978). However, fewer have ventured into the area of the effects of prior knowledge on writing performance (Chesky & Hiebert, 1987; Langer, 1983). Yet, the work done with respect to the above-mentioned scholars has all been in the study of first language use and development. If few studies have, in fact, been completed in the field of first language there are far fewer designed and completed in the field of second language. Nonetheless, what is important to note for the purposes of this discussion is that drawing on the observations from studies that have been done, it appears that the level of topic knowledge may significantly affect the rhetorical quality of written arguments, and may be positively related to their comparatively higher evaluation scores. Some researchers have, in fact, suggested that a writer's level of subject knowledge predicts the quality of the written product (Knudson, 1992a only suggests this; Langer, 1984). Referring to the former conclusions, they do not imply that prior knowledge necessarily leads to writers composing academically satisfactory texts--the use of writing conventions, an awareness of available rhetorical modes, etc. all play a part in a well-written text. However, assuming a good linguistic aptitude, subject knowledge, as Stein and Miller

(1993) observed, plays a role in the “representation [i.e., the shape] of the argument itself” (p. 306).

Other Research Designs Used to Study Argument Writing

Now, I would like to comment on the way in which argumentative writing samples were produced in many other studies. Some researchers interested in the effects of subject matter knowledge on English as a first language writing collected and analyzed, by whatever method, one writing sample produced by a writer who had either high or low knowledge on the topic, and for comparison, collected writing samples from another writer who had the opposite level of knowledge on the same topic (Fitzgerald, 1988; McCutchen, 1986). In effect, the researcher received one writing sample *per* writer, and labelled it a sample influenced by either the writer’s low or high knowledge. Similar designs are described in Chesky & Hiebert (1987) and Langer (1983).

For testing or analyzing the effects of subject matter knowledge on the final written product, the above-described data collection design is problematic. Researchers cannot confidently conclude that the writing produced by high knowledge writers is generally better than what is produced by low knowledge writers, given the same topic, nor that these studies prove topic knowledge plays a large part in a writer’s ability to create a good piece of text. While, intuitively, this may be true, these types of studies have not truly shown it to be the case. In the first language studies, writers were matched

where the first in the pair was rated to have high prior knowledge on the topic, and the second writer of the pair had a low level of prior knowledge. One can question the nature of the matching procedures done in these studies. It is highly likely that each writer, regardless of the level of topic knowledge, was affected by many other factors not easily controlled in a matched pair design. For example, high and low knowledge writers were perhaps matched based on elementary criteria such as IQ scores, age, grade levels, teachers and previous writing test scores, but other factors that could not have been controlled for probably confounded the results such as motivation, historical experiences with writing extended texts, attitude, life experiences--the list can go on. While statements can be made about any consistencies found in the quality of the samples across high knowledge writers or low knowledge writers, statements about the differences measured or described *between* the two levels of writing in terms of the level of subject knowledge are dubious at best. Controlling for as many independent variables by designing a more sensitive study would be needed in addition to a paper that would analyze the differences in high- and low-knowledge-based texts written by the *same* writer. In other words, differences in these two types of writing can best be described or measured with writing samples taken from the same writer, and subsequently, patterns, if found across the various writers' performances, could *then* be said to have been likely influenced by the level of knowledge.

This present study will attempt to do just this. Even though there have been others who have designed similar studies (Tedick, 1990b, for example), their numbers remain far too few. It is hoped, then, that this study will add to the existing information on the effects prior topic knowledge has on the argumentative writing outcomes of ESL students.

Keeping in mind the problems with the early research discussed above, this study was designed to collect from a group of writers two writing samples from each ESL student in which he or she will write on a topic of which he or she is knowledgeable and on a topic which he or she has comparatively less knowledge. By controlling for rhetorical genre, it will then be possible to make comparisons between both pieces of writing collected from each writer and look for patterns across writers' performance in terms of the independent variable: the level of topic knowledge.

METHOD

Subjects

The subjects in this study were international non-native speaking students who volunteered to participate in this study. These students were not regular full-time university students, but they were enrolled in an accredited university ESL programme as pre-entry level candidates. All the subjects were placed at the advanced level in the programme according to their ELI (English Language Inventory) scores and their results on the

programme's own diagnostic reading and writing tests and interviews. This group of students was chosen as subjects for this study because in their writing, they may not be as restricted in their linguistic fluency as lower level students.

In order to control for background (past) experiences in English, writing samples were chosen from students who had never worked or studied in an English-speaking country. Basically, the writing of new international students were analyzed.

Materials

In order to control for previous experience in English, participants were asked to fill out a short questionnaire (see Appendix A) designed to help determine who were the new international students, what other languages they spoke or wrote, to discover each writer's field of interest or expertise and to obtain standardized test score(s), if any.

The actual writing samples were generated in two stages. In the first, students were asked to write a one to two-page essay on a general topic. The topic was one in which the amount of prior knowledge would have likely been at the same level across writers. Writing prompts in the TOEFL's Test of Written English (TWE) are good examples of this type of writing task. For example, the TWE writing prompt used in this study was:

A company has announced that it wishes to build a large factory near your community. Discuss the advantages and disadvantages of this new influence on your community. Do you support or oppose the factory? Explain your position.

TWE was not designed to have ESL writers write on subjects in which they would have a low level of knowledge. However, these writing prompts may have had this as a consequential effect because writers were drawing on no more than a general (i.e., not a specialized) level of knowledge; perhaps, just enough to relate to the situation depicted in the prompt before writing on it. For instance, the prompts do not use specific topics for discussion which would otherwise give some writers a greater advantage if they were coincidentally experts on that topic (cf. Hoetker & Brossell, 1986).

The second writing prompt had been created by Diane Tedick (1990a).

Every field of study has controversial issues. Debate over these issues often occurs among professionals in the field and leads them to conduct research in order to look for evidence to support one position on the issue over another or others. Choose a current controversial issue [about which you know much] in *your* field of study. Discuss the controversy and explain your position on the issue, being sure to provide examples to support your position (p. 127).

In addition, in the IEA study of written composition (Gorman, Purves & Degenhart, 1988) Connor, Gorman and Vähäpassi (1988) suggested that it would be fair to include what aspects of the resulting writing would weigh most importantly in the evaluation in a writing prompt expressly used for assessment purposes. So, the following information was added at the end of both writing prompts:

The essay will be judged on what you have to say [i.e., the issue(s) you want to discuss], and how well you support it (them) [i.e., your evidence and/or examples and how they are related to the issues you are discussing]. Your essay will also be judged on how well you

organize and present your viewpoint, and how clearly you express yourself.

The Tedick prompt was quite appropriate for the design and goals of this study because 1) subjects were prompted to write in the rhetorical genre similar to the first prompt, and 2) it asked that each writer write in his or her own area of study or expertise. It would then be possible to assume in the latter case, that writers would write about topics on which they had high levels of subject knowledge. Because the focus of this study was on the effects of each writer's prior topic knowledge and perhaps on his or her knowledge about argument writing in English [the two types of knowledge may be difficult to separate for measurement purposes (Hamp-Lyons, 1991; cf. Stein, 1986)], the participants' writing teacher was asked not to give or offer any "remedial" instruction that would be directly related to both of these writing tasks. The aim of the writing tasks was to induce ESL writers into drawing on what they already knew in helping them to produce a response text. Of course, the teacher was asked to clarify, if necessary, the meanings of each writing prompt before the students wrote their essays. (Please see Appendix C for the actual assignment sheets students received.)

Procedures

In the period of a 12 week semester course, volunteer international students who were in advanced level classes at an accredited ESL university programme were asked to fill in a short questionnaire. The questionnaire asked subjects to provide information about their past professional or

academic experience in an English-speaking environment. In addition, subjects were asked to describe what their fields of interest or expertise were. Subjects were asked to complete these questionnaires so that a control for English-speaking experiences could be established, and similar linguistically proficient writers could be grouped together.

At the time that the questionnaires were completed, the writing instructor assigned the first writing prompt as homework to be turned in the following class. No later than one week after the first assignment, the instructor gave the subjects the second prompt as homework again to be turned in the following class. Both writing samples were evaluated using Knudson's (1992a) Toulmin-based measure for describing and assessing the quality of the argument in an essay.

Instrument

Connor (1991) developed a holistic scoring scheme based on Toulmin's (1958) discussion of rhetoric. The scale described the required rhetorical elements of argument which are *claim*, *data*, and *warrants*, and assigned each one a range of scores from 1 to 3. Connor explained that generally, a score of 1 represented little or no evidence of the rhetorical feature being included in the essay while, in contrast, 3 indicated that the writer extensively developed the feature using specific, highly relevant examples or reasons where they were appropriately needed. Although it was felt that this evaluation model offered a very good start in argument assessment by providing some basic

descriptions on what should be assessed in each rhetorical feature, a more detailed evaluation scheme was needed to assess the essays in this study. Thus, Knudson's (1992a) model was selected because it expanded the range of scoring scales for each criterion (0 - 6), and added further to the information Connor provided in the explanation of each criterion. Even though Connor's model focussed on the three necessary features of argument, Knudson included three more features, *proposition*, *opposition* (rebuttal), and *response to opposition* (counterargument), that signal a more sophisticated and thoroughly presented argument (refer to previous discussion on the nature of argument p. 2-3). For these three criteria, I had also selected a scale range of 0 - 6 for the sake of scoring consistency. A score of zero in any of the argument features indicated that the trait was absent from the argument. (Please see Appendix B for complete details.)

In general, features which would distinguish an argumentative essay in terms of rhetorical traits are *claims*, *data* and *warrants* [Toulmin's (1958) terms], in addition, there are *proposition(s)*, *opposition* (rebuttals) and *responses to opposition* (counterarguments) [these terms are also explained by Knudson (1992a)]. These features, then, were analyzed and assessed. The model described each feature and assessed how well the writer succeeded in fulfilling each one in terms of clarity, relevancy, and credibility. Each essay was evaluated on each of these features with a maximum score of six and a minimum score of zero. A score of 6 in *claim*, for example, meant that the

writer produced a specific, explicitly stated opinion with a consistent point of view expressed throughout the essay. The claim should have also been highly related to the prompt, and the arguments offered should have been consistent with the *claim* (Connor, 1991; Knudson, 1992a).

One rater who is a senior ESL graduate student at McGill University and I judged and scored each essay independently using the instrument. The evaluator was trained by the researcher during a period of time that included explanations on what the researcher considered “a well-developed rhetorical feature” in an argumentative essay. The training session took place approximately two weeks before the independent rater received her copies of the writing samples to score. What follows are more specific details on what would illustrate a well-presented rhetorical feature, and I provided this information to and discussed it with the rater during the training session.

Further Explanations of the Rhetorical Features Used in the Instrument

Claim - A writer presents a claim when he or she states what will be argued in the paper. Many times, this is an opinion on an issue or the writer’s belief(s) regarding a certain topic.

Data - These are the evidence, the examples, the writer cites in his or her argument that should directly support his or her claim. Data can come from authoritative sources, personal experience, or from descriptions of socially consensual behaviour or beliefs. Good arguments generally include varieties

of data.

Warrants - These are the reasoned links or ties between evidence and the belief or perspective being argued. They should be explicit and clear in explaining how the data supports the claim, and should be complete leaving a reader little to infer. Warrants can determine the strength of an argument, and clearly tell readers how the writer interpreted the evidence in order to reach the claim that he or she did.

Opposition (Rebuttals) - These are rebuttal arguments encompassing what alternative viewpoints could also stand legitimately on the topic. In other words, given the data and the subject of the writer's argument, these are statements which address alternative ways one can perceive and argue the claim(s).

Counterargument(s) - This is reasoning the writer offers that points out the weaknesses of rebuttal arguments, and directly shows why the writer's initial claim would be the most acceptable, strongest or the most complete.

Proposition - In general terms, propositions are the beliefs (i.e., mores and folkways) currently held by a society. Typically, they are often manifested in public policy or behaviour, and writers usually use them as background or as a frame of reference for their claim(s). For example, "drinking and driving is a public offense, and those who are caught deserve to be punished." Despite the fact that this proposition is very general, it would provide the beginnings of the necessary background information in which a writer would need to

couch his or her claim. By using this proposition, the writer could begin by explaining that since society looks on drinking and driving as a social crime, drunk drivers should serve a mandatory minimum jail sentence, even for their first offense. Propositions, then, typically “set up” the writer’s claim(s) in an argument.

After all the essays have been evaluated and scored on each argumentative feature, the Kendall Rank-Order Correlation Coefficient T will be calculated to illustrate the agreement between both raters in scoring each essay. Further, a word about the suitability of the Wilcoxon Signed Ranks Test for the data presented in this study will be offered. Finally, some detailed observations will be made on the differences found in the essays among the writers and between each writer’s first and second essay.

RESULTS AND DISCUSSION

Before continuing with the discussion of the results, I would like to reiterate the general purpose of this study. Given the fact that the rhetorical features described in the Toulmin model are so important to the writing of a successful deductive argument, this study is attempting a) to describe and analyze the arguments newly-arrived ESL students in university settings actually compose in terms of the rhetorical features in the Toulmin model, and b) to describe the effects the level of topic knowledge has on these students’ abilities to develop and organize those particular features.

The Use of Nonparametric Tests

Nonparametric tests were selected to analyze these data because each dependent variable was measured on an ordinal scale of which the underlying distribution of scores is unknown. First, interrater reliability scores were calculated for each of the six rhetorical features using the Kendall Rank-Order Correlation Coefficient T. The scores, rankings and coefficient T-values are reported below. Secondly, the use of the Wilcoxon Signed Ranks Test was planned to show any change in scores between the first and second essay of each writer and rank those differences accordingly. In other words, this test would have described, "the judgement of 'greater than' between any pair's two values as well as between any two difference scores arising from any two pairs" (Siegel & Castellan, Jr., 1988, p.87). The results from the Wilcoxon Test would have been quite appropriate for this particular study. Even though the results could not prove the writer's level of topic knowledge as the cause for the evaluation changes between essays, they could indicate that there is something affecting those changes. In addition, the test would show whether the differences between each writer's essays were positive or negative. However, despite the test's suitability, it could not be applied to the writing samples in this study. The sample size was too small (N=5), and a large proportion of the difference scores equalled zero. This indicated that there was no change in the particular rhetorical feature between the writer's first and second essay. Nonetheless, scores of zero

discounted a writer from the sample size further decreasing the number of pairs used for the test's calculations. In the end, the results would have been a series of meaningless (i.e., uninterpretable) statistics. Were this study repeated, a much larger sample size ($N \geq 15$) would be needed for the statistic to be, at least, interpretable (Siegel & Castellan, Jr., 1988).

Table 1
Scores on Scoring Guide for Toulmin's Criteria and Rankings

Subjects	Assigned Topic, Essay #1, $RATER_x$											
	Claim		Data		Warrants		Rebuttals		C'arguments ^c		Propositions	
	S ^a	R ^b	S	R	S	R	S	R	S	R	S	R
A	0	1	0	1.5	0	1.5	0	1.5	0	2	2	2.5
B	4	2	0	1.5	0	1.5	0	1.5	0	2	0	1
C	6	4	6	4.5	6	5	6	4.5	6	4.5	6	5
D	6	4	4	3	4	3.5	6	4.5	6	4.5	2	2.5
E	6	4	6	4.5	4	3.5	4	3	0	2	4	4

$RATER_y$												
A	0	1	2	1.5	0	1	2	1.5	2	1.5	0	2
B	4	2	2	1.5	2	2.5	2	1.5	2	1.5	0	2
C	6	4	6	5	6	4.5	6	5	6	5	6	5
D	6	4	4	3.5	2	2.5	4	3.5	4	3.5	2	4
E	6	4	4	3.5	6	4.5	4	3.5	4	3.5	0	2

Note. ^a S = Score. ^b R = Rank. ^c C = Counterarguments.

A=Japanese, B=Japanese, C=Japanese, D=Venezuelan, E=South Korean

Table 2
Scores on Scoring Guide for Toulmin's Criteria and Rankings

Subjects	Writer-Selected Topic, Essay #2, $RATER_x$											
	Claim(s)		Data		Warrant(s)		Rebuttal(s)		C'argument(s) ^c		Propositions	
	S ^a	R ^b	S	R	S	R	S	R	S	R	S	R
A	6	4	4	3	4	4	4	4.5	4	4.5	4	1.5
B	2	1	2	1	2	2.5	0	1.5	0	2	4	1.5
C	6	4	6	5	6	5	4	4.5	0	2	6	4
D	6	4	4	3	0	1	0	1.5	0	2	6	4
E	4	2	4	3	2	2.5	2	3	4	4.5	6	4

$RATER_y$												
A	6	4	6	4	6	4	2	1	4	1.5	6	4
B	2	2	4	2	0	1.5	6	4	6	4	0	1
C	0	1	2	1	0	1.5	4	2	4	1.5	4	2
D	6	4	6	4	6	4	6	4	6	4	6	4
E	6	4	6	4	6	4	6	4	6	4	6	4

Note. ^a S = Score. ^b R = Rank. ^c C'arguments = Counterarguments.

A= Japanese, B= Japanese, C= Japanese, D= Venezuelan, E= South Korean

Table 3
Coefficient T Values Corrected for Tied Observations for the Essays on the
Assigned Topic

Rhetorical Feature: Claim(s)

Subjects	A	B	C	D	E		
Rater _x	1	2	4	4	4	T _x = 6	S = 7
Rater _y	1	2	4	4	4	T _y = 6	T = 1.0

Rhetorical Features: Data

Subjects	A	B	D	C	E		
Rater _x	1.5	1.5	3	4.5	4.5	T _x = 4	S = 6
Rater _y	1.5	1.5	3.5	5	3.5	T _y = 4	T = 0.75

Rhetorical Features: Warrants

Subjects	A	B	D	E	C		
Rater _x	1.5	1.5	3.5	3.5	5	T _x = 4	S = 8
Rater _y	1	2.5	2.5	4.5	4.5	T _y = 4	T = 1.0

Rhetorical Feature: Rebuttal(s)

Subjects	A	B	E	C	D		
Rater _x	1.5	1.5	3.0	4.5	4.5	T _x = 4	S = 6
Rater _y	1.5	1.5	3.5	5	3.5	T _y = 4	T = .75

Rhetorical Feature: Counterargument(s)

Subjects	A	B	E	C	D		
Rater _x	2	2	2	4.5	4.5	T _x = 8	S = 6
Rater _y	1.5	1.5	3.5	5	3.5	T _y = 4	T = 0.87

Rhetorical Feature: Proposition(s)

Subjects	B	A	D	E	C		
Rater _x	1	2.5	2.5	4	5	T _x = 2	S = 5
Rater _y	2	2	4	2	5	T _y = 6	T = 0.63

Note. A= Japanese, B= Japanese, C=Japanese, D= Venezuelan,
E= South Korean

Table 4
Coefficient Values Corrected for Tied Observations for the Essays on the
Writer-Selected Topic

Rhetorical Feature: Claim(s)

Subjects	B	E	A	C	D		
Rater _x	1	2	4	4	4	$T_x = 6$	$S = 1$
Rater _y	2	4	4	1	4	$T_y = 6$	$T = 0.14$

Rhetorical Feature: Data

Subjects	B	A	D	E	C		
Rater _x	1	3	3	3	5	$T_x = 6$	$S = -1.0$
Rater _y	2	4	4	4	1	$T_y = 6$	$T = -0.14$

Rhetorical Feature: Warrant(s)

Subjects	D	B	E	A	C		
Rater _x	1	2.5	2.5	4	5	$T_x = 2$	$S = -2$
Rater _y	4	1.5	4	4	1.5	$T_y = 8$	$T = -0.27$

Rhetorical Feature: Rebuttal(s)

Subjects	B	D	E	A	C		
Rater _x	1.5	1.5	3	4.5	4.5	$T_x = 4$	$S = -5$
Rater _y	4	4	4	1	2	$T_y = 6$	$T = -0.67$

Rhetorical Feature: Counterargument(s)

Subjects	B	C	D	A	E		
Rater _x	2.5	2.5	2.5	4.5	4.5	$T_x = 8$	$S = 0$
Rater _y	4	1.5	4	1.5	4	$T_y = 8$	$T = 0$

Rhetorical Feature: Proposition(s)

Subjects	A	B	C	D	E		
Rater _x	1.5	1.5	4	4	4	$T_x = 8$	$S = 3$
Rater _y	4	1	2	4	4	$T_y = 6$	$T = 0.46$

Note. A= Japanese, B= Japanese, C= Japanese, D= Venezuelan,
E= South Korean.

Explanation of Table 1 to Table 4

Tables 1 and 2 report the raw scores each writer received from rater_x and rater_y on his or her arguments written from the assigned topic (Table 1) and the writer-selected topic (Table 2). In addition, each subject's rank within each feature has been reported for the purposes of calculating the measure of association between raters on their scores (this agreement score is shown below in Tables 3 and 4). Because the raw scores were calculated using an ordinal scale, they were neither totalled across features for a sum score value nor totalled across raters for an accumulative value for each feature. As mentioned earlier in this study, each of the six features, *claims*, *data*, *warrants*, *rebuttals*, *counterarguments* and *propositions*, was scored on a range from 0 - 6. A score of zero indicated that that feature was judged to be absent from the subject's essay. A score of 6, on the other hand, indicated that that rhetorical feature was judged to be fully developed and clear, and it was relevant to the writer's claim and to the writing prompt. Overall, there seemed to be no noticeable improvement in scores in comparing the second essay to the first, except in *propositions* (more will be said about this later in this paper). Since there were few subjects, there were many ties in their scores and hence, in their rankings. However, calculations were done to correct for ties in these ranks, and the rank values were used to determine the level of agreement between raters in scoring each feature.

To determine an interrater reliability score, a parametric test (i.e., Spearman rank order correlation coefficient r_s) could not be used here, because many of the assumptions which underlie the use of parametric tests could not be met (i.e., bivariate normality). Therefore, the Kendall Rank-Order correlation coefficient T , a nonparametric test, was used to measure the degree of association between the ranks each rater gave on each feature. Table 3 provides the results (T scores) on the degree of agreement between both raters on each rhetorical feature for the assigned topic essays. Table 4 provides this same information for essays written from topics writers chose.

In calculating the coefficient T values, it is necessary to put the first rater's set of ranks in their natural order (in this case, these were from rater_x). This has been done in both tables. In some cases, writers were sequenced as A B C D and E, but in other cases, writers were sequenced in other orders depending on the natural order of the ranks. For example, in Table 3 for *data*, subjects are sequenced A B D C and E because the natural ordering of the ranks corresponded to this sequence. They are 1.5, 1.5, 3, 4.5 and 4.5. Where there are ties, it was arbitrarily decided to sequence the subjects in alphabetical order. Then, ranks assigned by rater_y were placed beneath those of rater_x for comparison purposes, and to calculate S , "the observed sum of the +1 scores (agreements) and -1 scores (disagreements) for all pairs" (Siegel & Castellan, Jr., 1988, p. 247). That is to say, "the total number of agreements in ordering minus the number of disagreements in ordering is S " (p. 247), and in the

above example, $S = 6$ for *data*. The higher a positive S sum is, the higher the agreement between raters on how subjects were ranked, and inversely, if the S sum is a large negative value, then the raters strongly disagreed as to how the subjects were ranked.

When ties occur, as they did in these results, it is necessary to calculate the value of T_x and T_y (tied ranks from $rater_x$ and from $rater_y$ respectively), and include those results in calculating the coefficient T . Siegel and Castellan, Jr. explain:

$T_x = \sum t(t - 1)$, t being the number of tied observations in each group of ties on the X variable [i.e., ranks assigned by $rater_x$]

$T_y = \sum t(t - 1)$, t being the number of tied observations in each group of ties on the Y variable [i.e., ranks assigned by $rater_y$] (p. 249).

Coefficient T values were calculated for each feature (for a total of six coefficient T values for each set of essays) because the test is only capable of looking at judgements made by, at least, two evaluators on any one variable at a time. For more details in calculating the coefficient T and its significance, please refer to Siegel and Castellan, Jr.'s (1988) discussions on the use of nonparametric tests.

An Analysis of the Rank-Order Correlations

Essay #1: Assigned Topic.

Looking at the coefficient T -values that were calculated, scores on Essay #1 (Appendix C contains all ten essays) in Table 3 across the rhetorical features indicate a somewhat high level of agreement between the raters ($T=$

0.75 for *Data* and *Rebuttal(s)*; $T=1.00$ for *Claim* and *Warrants*). These values suggest that both raters easily identified, if present, all the features in the essays, and agreed on how well these features were developed in the writers' arguments with the exception of *Propositions* ($T= 0.63$). Even though the coefficient T for *Proposition* is moderately high, when it is compared to the other coefficient T 's (see Table 3), it can be seen that the raters disagreed a little more on how well writers provided background information in their arguments.

While both raters identically scored writer B, C and D with respect to propositions, raters disagreed as to whether propositions existed in writers A and E's essays. Referring to Subject A's work on the assigned topic, the proposition may not have been easily identified because the first and last paragraph contain only pieces of what could be a relevant and sound proposition. The writer wrote:

Many large factories have given good influence upon the Japanese economy for a long time. Therefore the Japanese have been able to live wealthily. On the other hand, they polluted their environment and they have been annoyed by their own failures (lines 1- 4)... It is obviously true that it is not easy to solve a problem like pollution which is caused by a factory. Nobody can assert that a factory will never cause pollution this time and in the future. (lines 16 - 19)¹

The underlined sentences seem to contain parts of what could make good background statements from which the writer could argue that he or she opposes the factory because of the environmental costs. Although the reader is left to make connections on how environmental concerns, particularly

long term ones, outweigh the economic benefits the factory might bring, for rater_x, the writer had provided enough information, albeit disorganized, to “set up” his or her claim, and thus, scored a 2. It is ironic, however, that this writer did not write a claim which explicitly stated his or her position on the factory being built in the community. Readers could expect this writer to oppose the building of the factory, however, for rater_y, perhaps the lack of a claim in addition to a proposition that is disorganized and fragmentary made this writer’s proposition difficult to identify, and so, she gave this writer a score of zero. Thus, the difficulty with identifying the proposition in this essay, may be one reason why raters evaluated this writer differently for this feature.

For writer E, both raters strongly disagreed in identifying the proposition. Rater_y judged it or them to be absent, but rater_x gave the proposition a score of 4, indicating that the writer provided relevant background information in which to frame his or her argument, but it was not complete or clear. For example, this writer wrote:

It is a very important and serious issue to decide approval or rejection of building a new factory in a community. To build a factory in a community is not only related to contemporary people or place, but also to people who will live later and their situation (lines 1- 4).

The reasons why this proposition may not be readily identified as such may be due to the fact that it is more clearly connected to the data which has explained the disadvantages as probable health problems for future members of the community (compare the underlined statement with the data in

paragraph 3, Appendix D). Furthermore, the warrants (quoted below) which explain a possible environmental problem as the cause of future health problems re-emphasize the point of the proposition: Decisions the community makes now will also affect others in the future. The writer explained:

There is no way to clean up the polluted soil. As time goes by, our descendants will suffer from polluted, barren soil, forever (lines 27 - 29).

In sum, the proposition that people living presently must think about the effects of their decisions on people in the future, appears to be more tied to this writer's data and warrants than to his or her claim which has been simply stated, "I opposite building of the factory in our community" (lines 29-30). This is the type of claim readers would expect from the writer given the data and warrants developed here; however, it is difficult to judge the proposition as such without first analyzing this writer's data and warrants. So, once again, the results show a discrepancy in the raters' judgements as to whether a proposition has been written at all.

To conclude then, the agreement on scores was fairly high even for *Propositions* in the essay written from the assigned topic. However, the coefficient T for *Propositions* was comparatively lower because, as the examples illustrated, the propositions were incomplete, in disorganized bits and pieces and may have appeared to be related to other rhetorical features

other than the claim. In effect then, the raters may have had to rely more on their inferencing skills which resulted in a lower level of agreement between their scores.

Essay #2: Writer-Selected Topic.

The coefficient T's for essays written on subject matter writers knew were far more surprising than for the first essay. Because it was assumed that Essay 2 was written from a comparatively higher level of topic knowledge, it was also thought that writers would have provided definitive and more complete *Data, Warrants, Rebuttals*, and *Counterarguments* directly relating to a claim. So the scores between the raters should have been consistent. This, however, was not the case. There was little agreement on *Claims* with more agreement on scores for *Propositions* ($T = 0.14$, $T = 0.46$, respectively), yet raters could not agree at all on scores awarded for *Data, Warrants, Rebuttals* or *Counterarguments* (see Table 4). Not only was there no statistical agreement within any of these features, for example $T = 0.0$ for *Counterarguments*, there was strong disagreement within the remaining features. The highest negative T-value was for *Rebuttals*, $T = -0.67$. What might account for these disagreements? Table 2 illustrates the most notable differences in scores. Where rater_x gives scores of zero, rater_y gives fairly high scores, and inversely, where rater_y evaluates the rhetorical features as a zero, rater_x assigns fairly high scores. It is this inverse scoring phenomenon that will be discussed in the following section.

This discussion will focus on the scores writers received particularly in *Counterarguments, Rebuttals, and Warrants* because the coefficient T's indicated the highest level of disagreement occurred within these three categories. *Counterargument* scores for writers B, C and D were at opposite ends of the scale across raters (see Table 2). Why was there such a large difference in scores? Examining the scores in Table 2, raters actually disagreed as to whether counterarguments existed in these writers' texts. In part, the decision might have had to do with what each rater thought was the claim in each essay. For example, the following two excerpts are what rater_x marked as writer B and C's claim (see Appendix D for the entire texts) that scored 2 and 6 respectively. Writer B discussed the bombing of Hiroshima and Nagasaki at the end of World War II, and writer C discussed the UN acquiring a permanent military force for peacekeeping purposes.

- a) It had passed 50 years from the tragedy, but there is still big conflict between America and Japan (lines 6 - 7).
- b) Considering that possibility of crisis which was pointed out by some experts, it is possible to conclude that the peacekeeping operation is more practical and flexible to deal with many different types of conflicts, and the U.N. should not have the permanent forces as a measure of solving international conflicts (lines 41 - 45).

If what are quoted above the claims written in each writer's respective argument, then a counterargument to writer B's claim would have to include ideas such as how this unsolved war-time conflict tends to manifest itself currently in other ways, or the writer could describe issues Japan and the U.S. fight over presently. This kind of information would counter a rebuttal

argument that, for example, could assert there is no conflict any longer between the U. S. and Japan over the bombing of Nagasaki and Hiroshima in World War II. However, there is no suggestion that the author attempted to discount a rebuttal statement in this text. So, rater_x judged *Counterarguments* a zero. The counterargument for the second claim could include a discussion on whether a permanent UN force is in violation of the UN charter, whether it would be a divisive force among UN member states, or other relevant issues. Once again, however, there was no evidence that writer C provided any counterarguments similar to these, but writer C provided data similar to what is described above. The sentences in lines 25-40 describe what are some of the possible disadvantages of having a permanent UN military force, but they are written as examples describing what is seen as potential problems if a permanent UN force is established. Since these data were used to describe the controversial issue and not as the writer's own counterarguments against the establishing of a permanent UN force, rater_x gave zero for this author's counterarguments.

Rater_y, on the other hand, identified the following paragraph as writer B's claim:

Both countries have tried to look at the past. Of course, it is very important to discuss who would have responsibility about this fact. However, the most important thing for the future is not repeating the fault of the past. America, Japan and other all countries in the world should think about our future and we have the same obligation to keep peace. As long as people don't forget about the terrible fact of wars, the peace will have been kept. (lines 20 - 26)

This claim scored a 2 from rater_y indicating that the writer's claim was merely suggestive and veiled in general statements. The rater wrote, "All final (*sic*) paragraph plays with the idea of making a claim." In addition, rater_y reported that there was no claim in writer C's essay, and hence for that writer, evaluated the feature as a zero. Despite both of these scores for *Claim*, rater_y gave writer B and C a score of 6 and 4 respectively for their counterarguments. This raises the question as to what text could have served as counterarguments in either of these cases if there was essentially no claim for them to support. Without a claim a reader would not be able to identify an opposing viewpoint or the subsequent arguments that would make that opposition seem weak (i.e., not compelling). The disagreement between raters as to what text served as each writer's claim had not only influenced what text was identified as *Warrants*, *Rebuttals*, and *Counterarguments*, but also had influenced whether any warrants, rebuttals and counterarguments existed, and if so, were they complete and relevant to the proposed claim.

The above discussion, in part, may have helped to explain why there is such disparity between raters on scores particularly for *Rebuttals* and *Counterarguments*. Yet, it does not actually explain what is "going on" rhetorically in the essays themselves. If raters had such difficulty identifying and evaluating these essays using this instrument, it is probable that these ESL students developed and organized their argumentative essays in ways the instrument simply could not "recognize".

In the following section, a closer look will be taken at how the writers actually developed and organized the content of their essays.

Observations on Rhetorical Development and Organization

In this study's introduction, I asserted that for ESL writers, a high level of topic knowledge does not, by itself, guarantee a successfully written argument in a English-speaking university setting. Even though the sample of writing studied here was small, these essays appeared to support this assertion to a large degree. At the very least, it appears that a high level of topic knowledge may have had an effect on most of these writers in composing better propositions (i.e., background information) in their second essays. Generally, the propositions were rated as clearer, more complete and as providing more information in which writers would frame their claims. For example, writer A in essay 2 not only wrote a good proposition with sufficient information in which she could connect his or her claim logically, the reader can even anticipate what that claim may be. This writer wrote:

Many fields in Japanese history have been researched so far. It is natural for professors to reserch a certain subject that they are interested in. However, there is only one field that they never research in Japan.

From the past to the present, professors and scholars haven't been able to not only search for the historical materials about the origin of the Japanese loyal family but also reserch it (lines 1-6).

Aside from this author's surface errors, she has clearly stated a controversy (a prompt requirement), and can easily use the information she has provided

here to frame her claim. On the whole, as in this example, most of the other writers also wrote better developed propositions. However, for the more salient features of argument--warrants, rebuttals and counterarguments--writers' scores varied greatly across the features and across raters. No real sense of "improvement" was evident when essay 2 was compared to essay 1 in terms of the features being evaluated here. This latter point may be a key observation in this study, because writers may have preferred to use alternative writing strategies in presenting their arguments, strategies and organizations the Toulmin-based instrument may not be sensitive to.

Toulmin (1958) primarily focussed on the descriptions, explanations and uses of argument that English-speaking cultures tend to prefer and easily recognize. Those rhetorical features that explicitly state a problem or point of view and organize the supporting evidence in a deductive way while also attempting to counter opposing viewpoints persuasively, are commonly used in professional (i.e., law practice, advertising) and academic (peruse any academic journal) arenas. Of course, there are other forms of argument rhetoric such as inductive rhetoric, and rhetorical organizations (Hinds, 1990, 1987), but at universities in English-speaking cultures these structures appear to garner lower evaluations than the deductive, explicit argument form (Land, Jr. & Whitley, 1989). It is not suggested that these writers wrote poorer essays *per se*, but rather the data appear to suggest that it was the authors' use of less preferred argumentative forms which resulted in their overall low

scores in both sets of compositions. What follows, then, will be separate discussions of each set of essays which will look at the ways the writers composed and organized their rhetorical structures.

Essay #1: Assigned Topic.

Much research has been done on the issue of cross-cultural writing patterns and strategies (i.e., Grabe & Kaplan, 1989; McKay, 1989). A few of the observations that have been reported in the literature seem to be evident in the essays looked at in this study. One aspect noted was the way writers developed their topics. For example, writing prompt #1 attempted to get writers to defend their position on an assigned controversial issue by arguing why it would be the best under the given circumstances. Even though this was the writing approach required, for essay #1, some writers chose not to defend or explain a position at all. Rather they narrated a past event (writer A), or they mainly explained the advantages and disadvantages related to the controversy, while only hinting at what their own position or opinion might be (writer B). Looking at writer A's composition, generally, the author did not develop the topic as an argument at all. The essay was developed and organized more as a narrative. The author's decision to use narration rather than argument is not a question of whether writer A can compose arguments, essay 2 shows evidence that she can, however, she decided that narration would be the best rhetorical genre to convey her position on the assigned topic.

First, the writer introduced the idea that factories can have a negative impact on their communities. The writer stated, “[factories] polluted their environment and they have been annoyed by their own failures” (lines 3-4). Secondly, the writer then devoted the bulk of her work to narrating what had happened in the 1960’s in Kumamoto, Japan (refer to lines 5-15). While this author had illustrated that industrial pollution, a consequence of operating factories, often times exact terrible environmental and health costs, this conclusion was only implied in the overall development of the paper. The “Minamata disease” example was not structured as evidence in support of a claim--no claim was written. However, I suggest that for this writer, telling the “Minamata disease” story may have served best as the focus of the paper rather than only as datum in support of opposing the building of a new factory. She may have felt that the power (i.e., the persuasive force) of her “argument” laid in the telling of a tragic event. The story was a prime example of what can happen if factories are allowed to operate in a community. The writer may have seen this as sufficient information and reasoning in opposing the building of a factory in her own community. Since the author offered no indications of support for the factory, again, the reader was then left to draw his or her own conclusions on the position of this author being one of opposition to the factory.

Writer B, on the other hand, did not compose a narrative for her first essay, but she did not compose a deductive argument either. This

author's rhetorical structures included listing the advantages of a factory in a community:

After a large factory is built, the industry of the area will develop than before. The community will need more convenient traffic system. The function of subway, bus and highway will be developed a lot. because of increasing the population (lines 3-6).

This was then followed by a list of environmental problems as the disadvantages of a factory (see lines 7-11). The paragraph which follows these disadvantages implies that this writer opposes the factory for more than just the eventual environmental damage it causes. The writer writes:

Next, the atmosphere of city will be changed. It will take long time for people in the community to be accustomed to living in such a situation, their mind want to need more convenient life. It is very difficult to keep traditional events or traditional buildings in an industrial community (lines 12 - 16).

Towards the end of this paragraph (the underlined sentences), the reader understands through his or her own inferencing abilities that the writer would lament the loss of both kinds of "atmosphere", clean air and the traditional quaintness or charm of most small communities. Despite the originality of this part of the essay, the writer has not provided any explicit reasoning which would tie the loss of a town's charm and its traditions to a position of opposing the factory. She concluded, "To keep the environment and culture is more important than to make the community industrial" (lines 19-20), but how is this more important? Once again, the reader would have to provide his or her own reasoning.

In summary, it is interesting to note that this writer does not argue her own opinion on the factory (i.e., to accept it or reject it), but provides a list of advantages and disadvantages as sufficient information for the reader to decide the issue for himself or herself. The closest this writer comes to making a claim is the sentence, "To keep the environment and culture is more important than to make the community industrial" (lines 19-20). However, writer B did not develop this idea any further along the lines of providing her reasons as to why cultural preservation is more important than industrial development. Thus, given the context and organization of this essay, it was difficult to label this sentence as the claim without the appropriately developed features to back it up.

Essay #2: Writer-Selected Topic.

The writing prompt for essay #2 required writers to discuss a controversial issue in an area they knew. As a result, interesting and original essays were collected for analysis, but also this prompt proved to be problematic. In general, the originality of these texts contributed to the overall quality of their content. Yet, despite this, the rhetorical features salient in the successful generation of argument--*warrants*, *rebuttals*, and *counterarguments*--appeared to be underdeveloped or simply omitted in the authors' enthusiasm to explain his or her particular topic. This may appear to have been the author's choice (as in writer D's text) or the writer used an

argumentative structure that, traditionally, does not necessarily require the writer to provide rebuttals or counterarguments (as in writer E's argument).

In writer D's composition he clearly claims that design and construction proposals need to include as many details on certain and potential costs in order to avoid monetary problems in the future. Specifically what type of money problems are not outlined, however. This writer wrote:

An engineering offer needs to be done with precise information in order to avoid many future problems (lines 1 - 2)...what really makes an offer particular and have great importance is information like: who is going to do the new project, how long it'll take, how many hours per person (man-hours) it'll need and finally how much money it is going to be paid for it (lines 5 - 8).

The writer did provide data, likely taken from his own experiences, that described types of disagreements with clientele over subsequent, but inevitable costs. The writer explained:

It is very common to have complains from the client after two or three months of having started the project. It is after some period of time that it can be seen the project is requiring additional labor not considered in the initial proposal. All this new labor will also needs an extra money, but the client doesn't admit it, for he said all those things are part of the project (lines 11 - 15).

These data are relevant to the topic being discussed, but it is unclear where the argument lies. The author used his own personal experiences to affirm that the best way to prepare a construction proposal is to provide as many details as possible related to its costs. Of course, this sounds like common sense, but this author did not argue for or justify the sensibility of preparing

this type of proposal. Rather it seems that his own experiences were to provide enough of an argument in support of his claim to write only detailed construction proposals. Moreover, the author did not offer any clear rebuttals or counterarguments which represented an opposite viewpoint to his claim.

In sum, writer D appeared to approach this opportunity to write on something he knew as a chance to tell readers how he learned a valuable on-the-job lesson in preparing project proposals. The author seemed to have become so caught up in the idea of writing from his own knowledge that he did not argue why construction proposals needed to be so detailed through using specifics. The reader can see that this writer provided the appropriate data in describing what may happen if proposals are not prepared with attention to cost details, but it is arguable that writer D defended the need for engineers to prepare detailed proposals. In fact, this writer may not have prepared an argument on a controversial issue, which was a prompt requirement.

In contrast, writer E clearly explained a controversial issue in his area of expertise. He wrote:

There are many different criticisms on a English novel, The Mill on the Floss of George Eliot. Even though it was written in 18th century, it has a lot of advanced, previous view on society. Especially the author created the main character, Maggie, as a strong-minded and self-confident woman. But she was also affected by her brother and lover very strongly. This character caused so many different opinions on author's thought. Some people say that George Eliot was a feminist and she made Maggie as a ideal woman. Others say that she just wanted to reveal the limitation of a woman. It is a very contraversial issue among English Literature Professors (lines 1 - 9).

Judging from this initial paragraph, the reader would clearly expect this writer to state what is his position on the issue. In the next sentence, the author clearly does so:

In my opinion, George Eliot was a radicalist in feminism, and she made Maggie a woman who represent her own ideal (lines 10 - 11).

Definitely, this writer received high evaluation scores on the Toulmin-based instrument for *propositions*, *claim* and *data*, which he has readily provided in support of his claim (see Appendix D, writer E, essay #2, paragraphs 3 and 4). However, the particular argumentative structures and organizations used in this essay do not require much development, if any, in rebuttals and counterarguments. The author wrote very little in the way of opposing viewpoints or any reactions to them. Yet this is acceptable given the argument form used here.

The Toulmin-based instrument required that an argumentative paper include rebuttals. As a result, this writer received low evaluations in *rebuttals* and *counterarguments*; not because the writer lacked the ability to provide them, but because the style of argument used did not require them. The Toulmin-based scoring guide could not distinguish between these two important aspects of argument writing.

Looking at this essay in further detail may illustrate the points made above. Writer E argued his position on the character of Eliot's protagonist, Maggie, in Mill on the Floss. The author argued using a style immediately

recognizable as what is often used in literary criticism. Interestingly, this ESL student is an English major in South Korea, and obviously, has not only studied various literary works, but has learned to use the types of argument rhetoric preferred in the English literature academy.

For example, a major characteristic of this form is the emphasis placed on developing reasons and citing the evidence which would fully support the writer's claim. Writer E does so; he elaborated with:

When Maggie was very young, we can find out her self-confidence and pride. For examples, when her aunt told her about her dark, tough hair, comparing with cared and beautiful hair of her cousin, she ran into her attic and cut her hair right away (lines 13 - 16).

This example was to illustrate how self-confident and proud the protagonist was while suggesting that, in fact, these were the personality characteristics of George Eliot. The author spent most of his argument in illustrating how Maggie, the story's heroine, represented traits some do find in Eliot.

Towards the end of writer E's essay, there are suggestions for both a rebuttal and a proposed counterargument, but neither feature is fully developed. In explaining an alternative viewpoint on the significance of Maggie, the writer wrote:

Many people say that, Maggie should not have admired her brother too much, should not have given up Stephen, and should not have died in the end. These aspects prove that she was not better than any other common woman character who struggled and failed (lines 32 - 35).

Then, continued by adding a few lines to counterargue:

But her sacrifice is much different from subjective submission. She thought others more than herself she was not only sacrificing, but also

brave. A really brave woman does not submit, but sacrifice (lines 35 - 38).

Readers are left to question what Maggie's sacrifice was, what the writer meant by "subjective submission", and how the protagonist was brave rather than submissive. Unlike the arguments generated in support for the writer's position, these few lines which illustrate and counterargue an opposing perspective are quite general, with no examples taken from the novel as any further "proof" to validate them.

It is apparent this writer understands the nature of argument and can create argumentative texts in a form acceptable in English-speaking academic forums. The problem lies within the nature of the scoring instrument used here. The writer received low marks on *rebuttals* and *counterarguments* because the instrument is not sensitive to the various types or genres of argument available to writers in English-speaking universities. Thus, as in the case of this student, evaluation scores may not be properly assessing what students can produce, but rather assessing as poor some aspects of argumentation when writers were not required to provide them.

To conclude this part of the discussion then, it appears for these writers, topic knowledge was not sufficient to affect an improvement on the development and presentation of *rebuttals* and *counterarguments*. However, in the writer-selected topic essays, the ESL writers appeared to have provided more complete and clearer background information and data in support of and as explanations for their claims.

Furthermore, the increased level of topic knowledge seemed to have also encouraged writers to use rhetorical structures and patterns they already knew and felt comfortable using. Writers may have had more enthusiasm for composing the essay on a topic they could select. This was evident through each essay's originality, but no improvement between the most important features of argument--warrants, rebuttals and counterarguments--was evident in comparing essays on the writer-chosen topic to the essays written on the assigned topic.

CONCLUSIONS

It is important that I re-emphasize the fact that this research was regarded as a pilot study. It was designed to describe and illustrate the effects high (i.e., specialized) and low (i.e., general) levels of topic knowledge had on rhetorical development in ESL argumentative essays. Arguments composed by newly-arrived ESL students who lacked the experience of working or studying in an English-speaking environment were analyzed. The purpose of this was to discover whether topic knowledge was a type of knowledge sufficient to affect how writers used and organized those particular rhetorical features English-speaking professors expect to find in "good arguments".

Detailed observations were reported on two sets of essays that were written from a low and high level of topic knowledge in terms of their rhetorical content, and were compared for any differences. The six rhetorical

features used to depict and evaluate each essay were taken from Toulmin (1958) because earlier research showed that the features he discussed are those that many professors in English-speaking university settings prefer to see in their students' writing (Hamp-Lyons & Reed, 1990; Horowitz, 1986). They were *claim, data, warrants, rebuttals, counterarguments* and *propositions* . Descriptions of those features were compared across topic knowledge levels. Even though no definitive conclusions could be drawn from the small sample of writing collected in this study (N=5, two essays *per* writer), a few unexpected results occurred in both the assigned topic essay and the essays writers wrote on subjects they knew.

First, when the high knowledge essays were compared with low knowledge essays, no real improvement was evident in most of the rhetorical features in either their evaluation scores or in their descriptions except *inpropositions*. In the high knowledge essays, the propositions were rated as clearer, more complete and as providing more information in which writers framed their claims. By writing on topics they knew, these ESL students were capable of explaining 1) a particular issue in their fields of interest, and 2) the contexts in which they were prepared to argue their positions.

Secondly, in both the first and second essay, regardless of topic knowledge, the most salient features of argument--warrants, rebuttals and counterarguments--were either underdeveloped, making their identification

difficult, or were completely absent from the essays. These writers, in their enthusiasm to write, often preferred to use alternative writing strategies in presenting their arguments, strategies and organizations the Toulmin-based instrument was not sensitive to. One writer preferred to write a narration in defense of her position (writer A, essay #1), another listed examples and left the actual claim of her argument up for her readers to decide (writer B, essay #1), while a third related his on-the-job experiences as a sufficient argument to justify his particular opinion (writer D, essay #2). There were other examples, but the point is many of the rhetorical structures used in the students' writing were not among those described by Toulmin nor were they in the evaluation instrument. It seems that many of these authors chose to use rhetorical structures and patterns they were most familiar with, and the level of topic knowledge did not appear to affect most of their rhetorical choices.

Thirdly, while there may have been no major differences in the development of most rhetorical features across both levels of knowledge, the high knowledge essays were quite interesting to read. It appeared, at least, that when given the choice of what to write on, these writers were motivated enough to compose texts that contained original-sounding ideas that contributed to the overall quality of their arguments' content.

Limitations and Implications

Because this investigation was a pilot study, there are important limitations that need to be considered if, for example, a future study were to be designed for this topic. In this study, the sample size was too small ($N=5$) for this researcher to make any conclusive statements about the effects of topic knowledge on the rhetorical content and style of ESL argumentative writing. If the sample size were larger ($N \geq 15$), conclusive statements could be made about the rhetorical patterns and structures used across writers, and the investigator would be able to focus, perhaps, on group differences between the two levels of writing rather than focus so much on individual differences, as was done here. Furthermore, results, including those from the Wilcoxon Signed Ranks Test could be generalized to the population of newly-arrived ESL students writing in Canadian universities.

A second limitation in this study was the reliability of the evaluation tool. Because the Toulmin-based instrument is holistic and relatively new as an argument evaluation tool, undoubtedly, the evaluators' subjectivity affected the scores the writers received. Perhaps for their scoring to have been more consistent, raters would have needed more time to familiarize themselves with this instrument. For instance, judging "test essays" prior to the ones evaluated in this study, would have been one way for the raters to have gained scoring consistency. However, to what degree that would have been possible is unknown since many writers did not use the rhetorical

features described in the instrument. Possibly, the variations in the scores across raters in the writer-selected essay would still have been evident, but to a lesser degree.

The implications of the latter point made above are important. If a portion of the variance in the evaluation scores on rhetorical features is due to ESL writers not using those features expected in argumentation, then some pedagogical emphasis would have to be placed on explicitly presenting and discussing the rhetorical features evaluated in this study: These students need to learn what rhetorical features are expected in their arguments. An ESL writing programme might include a course that could provide specific discussions of the rhetorical nature of successful argument writing in English-speaking universities, and the time for students to practice using those basic features in their own work. Of course, research would need to be done to discover at what point this type of course could prove to be the most beneficial; nonetheless, it seems that ESL students in English-speaking university settings need, at the least, to understand that there are structures and organizations characteristic of argumentative writing in English-speaking universities, and their use is essential for a text to be considered a successful piece of writing.

NOTES

1. The excerpts taken from the students' compositions and used in the text of this paper have not been corrected.
2. Even though this evaluation guide is mainly based on Ruth Knudson's work, the author added further descriptive notes for the sake of meaning and clarity.
3. All of the essays have been reproduced without any corrections or other modifications.

REFERENCES

- Bridgeman, B., & Carlson, S. (1984). Survey of academic writing tasks. Written Communication, 1(2), 247-280.
- Bridgeman, B., & Carlson, S. (1983). Survey of academic writing tasks required of graduate and undergraduate foreign students. Princeton, NJ: Education Testing Service.
- Carrell, P.L., & Connor, U. (1991). Reading and writing descriptive and persuasive texts. Modern Language Journal, 75, 314-324.
- Chesky, J. A., & Hiebert, E.H. (1987). The effects of prior knowledge and audience on high school students' writing. Journal of Educational Research, 80(5), 304-313.
- Connor, U. (1991). Linguistic/rhetorical measures for evaluating ESL writing. In L. Hamp-Lyons (Ed.), Assessing ESL writing in academic contexts (pp.215-225). Norwood, NJ: Ablex.
- Connor, U., Gorman, T., & Vähäpassi, A. (1988). The argumentative task. In T.P. Gorman, A.C. Purves, and R.E. Degenhart (Eds.), The IEA study of written composition I: The international writing tasks and scoring scales (pp. 155-171). Oxford: Pergamon.
- Emig, J. (1971). The composing processes of twelfth graders. Urbana, IL: NCTE.
- Enkvist, N.E. (1990). Seven problems in the study of coherence and interpretability. In U. Connor and A.M. Johns (Eds.), Coherence in

writing: Resesearch and pedagogical perspectives (pp. 10-28).

Alexandria, VA: TESOL.

Enkvist, N.E. (1987). Text linguistics for the applier: An orientation. In U.

Connor and R.B. Kaplan (Eds.), Writing across languages: Analysis of

L₂ Text (pp. 23-43). Reading, MA: Addison-Wesley.

Fitzgerald, K.R. (1988). Rhetorical implications of school discourse for

writing placement. Journal of Basic Writing, 7(1), 61-72.

Fournier, D., & Smith, N.L. (1993). Clarifying the merits of argument in

evaluation practice. Evaluation and Program Planning, 16, 315-323.

Gerrig, R.J. (1988). Text comprehension. In R.J. Sternberg and E.E. Smith

(Eds.), The psychology of human thought (pp. 242-266). New York:

Cambridge University Press.

Grabe, W., & Kaplan, R.B. (1989). Writing in a second language: Contrastive

rhetoric. In D.M. Johnson and D.H. Roen (Eds.), Richness in writing:

Empowering ESL students (pp. 263 - 283). New York: Longman.

Gorman T.P., Purves, A.C., & Degenhart, R.E. (Eds.). (1988). The IEA study of

written composition I: The international writing tasks and scoring

scales. Oxford: Pergamon.

Hamp-Lyons, L., & Reed, R. (1990). Development of the new Michigan

Writing Assessment (Report to the College of LS &A, University of

Michigan). Ann Arbor, MI: English Composition Board.

- Hamp-Lyons, L. (1991). The writer's knowledge and our knowledge of the writer. In L. Hamp-Lyons (Ed.), Assessing ESL writing in academic contexts (pp. 51-68). Norwood, NJ: Ablex.
- Hays, J.N. (1988). Socio-cognitive development and argumentative writing: Issues and implications from one research project. Journal of Basic Writing, 7(2), 42-67.
- Hilgers, T.L. (1982). Experimental control and the writing stimulus: The problem of unequal familiarity with content. Research in the Teaching of English, 16(4), 381-390.
- Hinds, J. (1990). Inductive, deductive, quasi-inductive: Expository writing in Japanese, Korean, Chinese, and Thai. In U. Connor and A.M. Johns (Eds.), Coherence in writing: Research and pedagogical perspectives (pp. 89-109). Alexandria, VA: TESOL.
- Hinds, J. (1987). Reader versus writer responsibility: A new typology. In U. Connor and R.B. Kaplan (Eds.), Writing across languages: Analysis of L₂ Text (pp. 141-152). Reading, MA: Addison-Wesley.
- Hoetker, J., & Brossell, G. (1986). A procedure for writing content-fair essay examination topics for large-scale writing assignments. College Composition and Communication, 37, 328-335.
- Horowitz, D. (1986). What professors actually require: Academic tasks for the ESL classroom. TESOL Quarterly, 20, 445-462.

- Knudson, R.E. (1992a). Analysis of argumentative writing at two grade levels. Journal of Educational Research, 85(3), 169-179.
- Knudson, R.E. (1992b) The development of written argumentation: An analysis and comparison of argumentative writing at four grade levels. Child Study Journal, 22(3), 167-183.
- Kucer, S.B. (1987). The cognitive base of reading and writing. In J.R. Squire (Ed.), The dynamics of language learning (pp. 27-51). Urbana, IL: ERIC.
- Land, R.E., Jr., & Whitley, C. (1989). Evaluating second language essays in regular composition classes: Toward a pluralistic U.S. rhetoric. In D.M. Johnson and D.H. Roen (Eds.), Richness in writing: Empowering ESL students (pp. 284-293). New York: Longman.
- Langer, J. (1983). Effects of topic knowledge on the quality and coherence of informational writing. (ERIC Documentation Reproduction Service No. ED 234 418)
- Langer, J.A., & Nicolich, M. (1981). Prior knowledge and its effect on comprehension. Journal of Reading Behavior, 13(4), 373-379.
- Langer, J.A. (1984). The effects of available information on responses to school writing tasks. Research in the Teaching of English, 18(1), 27-44.
- Lindeberg, A. (1985). Cohesion, coherence patterns, and EFL essay evaluation. In N.E. Enkvist (Ed.), Coherence and composition: A symposium (pp. 67-92). Åbo, Finland: Åbo Akademi.

- McCutchen, D. (1986). Domain knowledge and linguistic knowledge in the development of writing ability. Journal of Memory and Language, 25, 431-444.
- McKay, S.L. (1989). Topic development and written discourse accent. In D.M. Johnson and D.H. Roen (Eds.), Richness in writing: Empowering ESL students (pp. 253-262). New York: Longman.
- Rosenblatt, L.M. (1978). The reader the text the poem. Carbondale, IL: Southern Illinois University Press.
- Schneider, M., & Connor, U. (1990). Analyzing topical structure in ESL essays: Not all topics are equal. Studies in Second Language Acquisition, 12(4), 411-427.
- Siegel, S., & Castellan, N.J., Jr. (1988). Nonparametric statistics for the behavioral sciences (2nd ed.). New York: McGraw-Hill.
- Spivey, N.N. (1990). Transforming texts: Constructive processes in reading and writing. Written Communication, 7(2), 256-287.
- Squire, J.R. (1983). Composing and comprehending: Two sides of the same process. Language Arts, 60(5), 581-589.
- Stein, N. L. (1986). Knowledge and process in the acquisition of writing skills. In E.Z. Rothkopf (Ed.), Review of Research in Education (13) (pp. 225-258). Washington, D.C.: AERA.
- Stein, N.L., & Miller, C.A. (1993). The development of memory and reasoning skill in argumentative contexts: Evaluating, explaining, and

generating evidence. In R. Glaser (Ed.), Advances in Instructional Psychology (Volume 4) (pp. 285-335). Hillsdale, NJ: Erlbaum.

Tedick, D. (1990a). ESL writing assessment: Subject-matter knowledge and its impact on performance. The ESP Journal, 9, 123-143.

Tedick, D. (1990b). Subject -matter knowledge and its impact on ESL students' writing: A descriptive analysis. Paper presented at the annual meeting of the American Educational Research Association, Boston, MA.

Toulmin, S. (1958). The uses of argument. New York: Cambridge University Press.

Appendix A: Personal Questionnaire Used Prior to the Writing Prompts

NAME: _____

YEAR OF BIRTH: _____

DATE OF ARRIVAL IN CANADA: _____

(month) / (year)

NATIONALITY: _____ MOTHER TONGUE: _____

OTHER LANGUAGES: SPOKEN _____ WRITTEN _____

OCCUPATION: _____

What is your area of interest or professional expertise?

Have you had any previous experience studying in any other

English-speaking college or university that is NOT in Canada?

No _____ Yes _____

If yes, where have you studied? _____

Continued ...»

How long did you study at this institution? _____ week(s)

Have you previously taken any courses offered at an English-speaking college or university in Canada?

Yes _____ No _____

If yes, which college or university? _____

Name of programme:

How long did you study at this institution? _____ week(s)

Have you had any previous experience working in ANY English-speaking country (including Canada)?

Yes _____ No _____

If yes, which country? _____

How long did you work in that country? _____ week(s).

Have you taken ANY standardized English language test such as the TOEFL, SAT, GRE or the Cambridge First Certificate in English?

Yes _____ No _____

If yes, what was your score? _____

Which test(s) have you taken? _____

Appendix B: Scoring Guide for Toulmin's Criteria for Argumentation²

Claims

- 6 -- Clear, complete generalizations or points of view related to the proposition are stated and remain consistent throughout the essay. Exactly what will be argued is clearly and completely stated. It must also be directly related to what is required in the writing prompt.
- 4 -- The reader must infer the writer's intent or meaning from information given by the writer, but enough information is given so that generalizations are related to the proposition or topic. No clearly stated claim is offered, but it can be inferred.
- 2 -- The writer's assertions are unclear and lack specificity, although the generalizations are related to the proposition or topic. In addition, the writer makes several different claims, but readers have trouble identifying which one is the main claim.
- 0 -- There is no claim related to the proposition or topic.

Data

- 6 -- All the supporting data the writer gives are complete, accurate, and related to the claim(s) being made.
- 4 -- The writer gives supporting data that are related to the claim(s), but they are not complete. The reader must infer much from the data.

2 -- The writer offers weak, inaccurate, or incomplete data.

0 -- The writer either offers no data or offers data having no relevance to the claim.

Warrants

6 -- The data are explained in such a way that it is clear how they support the claim.

4 -- The explanation linking the data to the claim is not specific or complete. A reader must make an inference that would completely tie the data to the claim.

2 -- The writer fails to make the connection between data and claim even though there is some elaboration about the data. The data can also appear as a listing of examples with none of their significance(s) explicitly offered. Most of the data appear only as others' quotations with no tie to the arguer's claim. The reader may find him- or herself saying, "so what?"

0 -- The writer does not give a warrant. No interpretation of the data offered so that it can be reasonably linked to the claim.

Opposition / Rebuttal(s)

6 -- There is a systematic identification of the rebuttals and the opposing arguments.

4 -- There is an identification of opposing arguments, but those arguments are not specific nor are they clear. Moreover, readers may be unsure of which opposing argument goes with what claim.

2 -- There is some offering of opposition, but it is not specific nor is it complete.

0 -- There is no recognition of opposition offered.

Response to Opposition / Counterargument(s)

6 -- There is systematic identification of the opposition and the opposing arguments. Counterarguments are made on all major or most major rebuttals given in the argument. The counterarguments, in effect, give further support to the writer's position.

4 -- Counterarguments are present, but the reader must provide the link between the counterarguments and the specific rebuttal.

2 -- There is a vague reference to implied opposition or a weak denial of opposition claims. Writer's counterarguments can also be only emotional reactions.

0 -- There are no counterarguments made.

Proposition

6 -- The writer clearly links the proposition to the issues. The proposition(s) are the background for the writer's claim.

4 -- The writer offers a proposition that is relevant to the issues, but it is not complete or clear

2 -- The proposition does not directly address the issues, and no specific policy or action is proposed.

0 -- The writer does not offer a relevant proposition.

[taken from: R.E. Knudson (1992a). Analysis of argumentative writing at two grade levels. Journal of Educational Research, 85(3), p. 177.]

Appendix C: Writing Prompt Sheets for Essay #1 and Essay #2

Writing Prompt for Essay #1

A company has announced that it wishes to build a large factory near your community. Discuss the advantages and disadvantages of this new influence on your community. Do you support or oppose the factory? Explain your position.

The essay will be judged on what you have to say [i.e., the issue(s) you want to discuss], and how well you support it (them) [i.e., your evidence and/or examples and how they are related to the issues you are discussing]. Your essay will also be judged on how well you organize and present your viewpoint, and how clearly you express yourself.

PLEASE MAKE SURE YOU WRITE YOUR FULL NAME ON YOUR ESSAY IN ORDER FOR ME TO MATCH YOUR QUESTIONNAIRE AND ESSAY TOGETHER.

If possible, please write down your feelings and reactions to writing this essay. For example, how well do you think you write argumentative papers? What, for you, is important when you write arguments. What strategies or decisions do you use or make when attempting to answer a question such as the one above? **Tell me anything you want to say in regards to writing this paper, specifically or about writing arguments, in general.**

All of the information you can give me will help me to understand how you write in English, and how you feel about it. **This is very important information**, and I would deeply appreciate anything you can tell me.

Thank you

Writing Prompt for Essay #2

Every field of study has controversial issues. Debate over these issues often occurs among professionals in the field and leads them to conduct research in order to look for evidence to support one position on the issue over another or others. Choose a current controversial issue (about which you know much) in *your* field of study. Discuss the controversy and explain your position on the issue, being sure to provide examples to support your position.

The essay will be judged on what you have to say [i.e., the issues(s) you want to discuss], and how well you support it (them) [i.e., your evidence and/or examples and how they are related to the issues you are discussing]. Your essay will also be judged on how well you organize and present your viewpoint, and how clearly you express yourself.

PLEASE MAKE SURE YOU WRITE YOUR FULL NAME ON YOUR ESSAY IN ORDER FOR ME TO MATCH YOUR QUESTIONNAIRE AND ESSAY TOGETHER.

If possible, please write down your feelings and reactions to writing this essay. For example, how well do you think you write argumentative papers? What, for you, is important when you write arguments. What strategies or decisions do you use or make when attempting to answer a question such as the one above? **Tell me anything you want to say in regards to writing this paper, specifically or about writing arguments, in general.**

All of the information you can give me will help me to understand how you write in English, and how you feel about it. **This is very important information**, and I would deeply appreciate anything you can tell me.

Thank you

Appendix D: Two Sets of Argumentative Writing Written by Five ESL
University Students³

Writer A

Essay #1

Many large factories have given good influence upon the Japanese economy for a long time. Therefore the Japanese have been able to live wealthily. On the other hand, they polluted their environment and they have been annoyed by their own failures.

In the 1960's, there was a problem of polluted water in Minamata, Kumamoto. The pollution was caused by dirty water from a fertilizer factory. Minamata was a small fisherman's village so people lived on fishes. One day, many cats became mad and then they died. After that event, the same symptom happened to human beings. The cause originated from the factory's dirty water. A number of people have been dead or have been suffering from the serious disease. At the same time those who have such patients in their families started to accuse the factory and the Japanese government. The trial has continued for over thirty years, however, they have not gotten the compromise about an reparation between the people and the factory and the government.

It is obviously true that it is not easy to solve a problem like pollution which is caused by a factory. Nobody can assert that a factory will never cause pollution this time and in the future. As a result, many people oppose the factory.

Writer A

Essay #2

Many fields in Japanese history have been researched so far. It is natural for professors to research a certain subject that they are interested in. However, there is only one field that they never research in Japan.

From the past to the present, professors and scholars haven't been able to not only search for the historical materials about the origin of the Japanese loyal family but also research it. A several years ago, one scholar found the small historical ruins in the enormous emperor's grave. It could have proved where the Japanese loyal family originated from. Nevertheless, the Japanese government did not allow the scholar to research for it. In addition, the government took it away from him. The incident indicated that the government restraint the freedom in studies. It is not obviously fair. Even if the government does not have right to limit the study fields. Furthermore, it is not impossible that to prove the origin of the loyal family will cause the chaos in Japan. To prove it is important only for right-wing and left-wing. Many university students and professors including me want to research for the origin. Basically, it is wrong that the Japanese government tries to keep the Japanese loyal family majestic, divine and splendor. The government should not keep the loyal family's origin away from study fields.

Writer B

Essay #1

If a big factory is built in our community, we will be influenced by it a lot in our lives. Of course, it might give use some advantages, however, it also will give many disadvantages to the community. After a large factory is built, the industry of the area will develop than before. The community will need more convenient traffic system. The function of subway, bus and highway will be developed a lot. because of increasing the population.

However, on the other side, the environment in the community obviously will be destroyed. For instance, exhaust gas from the factory will pollute air, and drainage will pollute water and soil. Moreover, polluted air causes some kinds of disease of the bronch or lungs. These conditions are very harmful not only for the environment but also for our health.

Next, the atmosphere of city will be changed. It will take long time for people in the community to be accustomed to living in such a situation, their mind want to need more convenient life. It is very difficult to keep traditional events or traditional buildings in an industrial community. People might begin to forget "old good days" in their mind.

It is very hard to say that to build a large factory in our community is good because that new building might change many things in a community. To keep the environment and culture is more important than to make the community industrial.

Writer B

Essay #2

On August 6th, 1945, American Army dropped one atomic bomb into Hiroshima in Japan. After three days, they dropped another atomic bomb into Nagasaki. Many people died only for several minutes and many people still suffer from the aftereffects of atomic bomb now. This problem is quite difficult to solve because the American side and the Japanese side have different point of view about it. It had passed 50 years from the tragedy, but there is still big conflict between America and Japan.

American government have continued to emphasize that dropping the atomic bombs were the best way to stop World War II, and that America is not a wrongdoer. If they had not chosen the way, more people would have died because of the war. Many Americans don't like to discuss about the responsibility of the fact that the American Army dropped atomic bombs into Japan.

On the other hand, Japanese government have pointed out that a lot of innocent Japanese people died because of just one terrible bomb. Not only the people who were in Hiroshima or Nagasaki at that moment but also their children and grandchildren suffer from the radioactivity in the bombs. In

Japanese history, the atomic bombs of Hiroshima and Nagasaki is the tragicest memory.

Both countries have tried to look at the past. Of course, it is very important to discuss who should have responsibility about this fact. However, the most important thing for the future is not repeating the fault of the past. America, Japan and other all countries in the world should think about our future and we have the same obligation to keep peace. As long as people don't forget about the terrible fact of wars, the peace will have been kept.

Writer C

Essay #1

Building a large factory does not cause disadvantageous effects on the community as much as people may think.

Many people may think factories associating with pollution. This is because we had a bad history in which many cities suffered from serious pollution that was caused by industry. For example, Japan encountered serious air and water pollution when its industry was developing rapidly. These pollution became serious because most factory did not care about their emission which harmed natural environment. This experience might make people associate factory with pollution. However, pollution problems in Japan has become less serious because most industries began taking into account of cleaning up their emission.

However, even though the possibility of pollution can be increased, there is a great advantage to have a factory near the community. Building new factory might create wide job opportunity for the citizens. For example, the famous industrial city, TOYOTA in Japan, is the one successful example which a community and a factory can work together well. The automobile company, TOYOTA, is providing great job opportunity in the community. Most people in the city are working with factories of TOYOTA. The

community has developed successfully, and it could not achieve without the factories. This example indicates that the presence of a large factory might have great economic influence on the community. It is essential that we have enough job opportunity in the community, otherwise people might be going to leave the city, and the city will be weakened. Even though the natural environment is well-protected, the community cannot exist without citizens.

On conclusion, we can get economical advantage from the factory, and the pollution can be prevented if we keep communication with the company to let them clean up their emission. Therefore, the factory will be welcome to the community.

Writer C

Essay #2

There is a controversial issue which has been argued for a long time, about the security function of the United Nations. Many experts have argued whether the U.N. should have its own permanent army or not. This argument was caused because the U.N., whose first purpose is to maintain international peace and security, does not have any executive force such as the permanent army that can deal with international conflicts immediately. In the United Nations Charter, the permanent army is originally considered as a main measure to solve international disputes. In order to set up the permanent force, the U.N. has to make an arrangement beforehand with each member of countries. Once the agreement is made, the countries which have already signed up have legal obligation to obey the order of the U.N., and they have to supply their army. However, the U.N. has not succeeded in making such agreement, and as a result, the peacekeeping operations have been created practically in order to cover that deficit.

There are some opinions which advocate for the necessity of the permanent army because the peacekeeping operations cannot cope with conflicts quickly. The reason which prevents peacekeeping operations from

quick response is that to organize the peacekeeping operations the U.N. has to make an *ad hoc* arrangement for each case with some countries which can offer the participation, and this procedure takes time a lot. For example, in Rwanda, thousands of lives were being killed while the U.N. was seeking some countries which can offer their army for the peacekeeping missions. Therefore, some experts point out the necessity of the permanent army to deal with conflicts quickly.

On the other hand, there are some criticism against the establishment of the permanent army. The first criticism is that if the U.N. uses the permanent force as a measure of solving International conflicts, it will be against its principle which prohibits using military force as a way of conflicts' solution. This principle is provided in the Charter. In the opinion, the U.N. should avoid using enormous military power respecting its principle because if the permanent army which is strong enough to cope with international conflicts is used, the war might be as big as the previous World Wars.

The second opinion is that the permanent army is supposed to be formed by big countries which have enough capability to supply their army, and it might cause antipathy of small countries. The fact that big countries such as the U.S. or other Western Countries consist of the U.N. Army may cause serious conflicts between these countries and developing countries and polarization of the world. Therefore, some experts are anxious about the possibility of crisis which may be caused by the permanent U.N. army.

Considering that possibility of crisis which was pointed out by some experts, it is possible to conclude that the peacekeeping operation is more practical and flexible to deal with many different types of conflicts, and the U.N. should not have the permanent forces as a measure of solving international conflicts.

Writer D

Essay #1

these days when many people is rather concerned by the proposal of building a large factory in our community, I would say that I support the idea of the factory.

It is very important to consider some ideas related with the building of the factory. As well, there are advantages and disadvantages as happen in every new project to accomplish. An analysis of some of them will help us in taking a right decision.

A large factory will bring a good economical development to our community by offering people the opportunity to work in a stable place which is not too far from their homes. therefore, many people will be looking for training in order to find a good job in this new factory. All this process will start we people of our community. A new factory in our community also means better services such as roads, transportation, new schools and shopping centers. Every improvement made to our community represents high benefits to our living standard

there are, also, some disadvantages about the risks of a new and large factory in our community such as: pollution and a more expensive cost of products. But those risks can be easily controlled. For example, pollution can be regulate to a minimal degree applying the CSA standards.

Balancing both advantages and disadvantages we can come to a conclusion that everybody should favor the idea of building a large plant in our community.

Writer D

Essay #2

An engineering offer needs to be done with precise information in order to avoid many future problems. Any proposal generally has some information that describes the company itself, the personal, the history of

projects done and what resources it has. All this information is like standard for every offer but what really makes an offer particular and have a great importance is information like: who is going to do the new project, how long it'll take, how many hours per person (man-hours) it'll need and finally how much money it is going to be paid for it. these two last factors, man-hours and money, are indicated with reference figures that would vary depending on the real amount of work that finally the project will require.

It is very common to have complains from the client after two or three months of having started the project. It is after some period of time that it can be seen the project is requiring additional labor not considered in the initial proposal. All this new labor will also needs an extra money, but the client doesn't admit it, for he said all those things are part of the project.

thanks to the record the every project has, it is possible to explain where from and when each change or addition took place. this is very important, for we have found that many extra works come from mere inclination or caprice of the client, other are things he didn't think could happen, other are new information or things that he has kept as a secret, and many times he says the drawings are updated and it isn't true. As a result, he has to vary his budget for not having took into account those things.

Writer E

Essay #1

It is a very important and serious issue to decide approval or rejection of building a new factory in a community. To build a factory in a community is not only related to contemporary people and place, but also to people who will live later and their situation. So, before we decide to agree or disagree, we should have enough time to consider many advantages and disadvantages of building a large factory in our community.

There are a lot of advantages if we have a large factory in our community. First, a new large factory may prompt development of our road

system. If the factory needs a lot of transportation, it will widen the road. So transportation system for people may get many chances to make it much more convenient and easier. Secondly, we can have much more job opportunities because of the new factory. It means we can have more chances to work and earn money than before. Finally, because many people who look for jobs can be gathered near the factory, many markets or new convenient systems can appear in proportion of the number of people, and these make people much more convenient than before.

Then, what are disadvantages of having a large factory in our community? The most prominent thing is environmental pollution. We can consider it in three ways. They are pollution of air, pollution of water, and pollution of soil. Air pollution is the most direct and immediate we can easily feel changes in air which we breathe everyday, and we may complain of pains in our throats or difficulties in breath and sometimes even coughs. In the case of water pollution, it is sometimes hard to find the origins. Many factories can pollute water secretly. It cause more serious problems in potential. Once water is polluted, it is so hard to purify it. And then, there is soil pollution. Soil is easily polluted by much chemical garbage, excrement of animals, and agricultural medicines. This pollution is almost permanent. There is no way to cleanup the polluted soil. As time goes by, our descendants will suffer from polluted, barren soil, forever. Besides of pollution, a new factory can make a lot of noise, and it irritate people very much.

Now, we have to choose one between a preferable but not necessary condition and a essential indispensable condition. We can live inconveniently without a large factory, but we cannot live conveniently with a large factory which injures our health. Therefore, I opposite building of the factory in our community.

On the Mill on The Floss

There are many different criticisms on a English novel, The Mill on the Floss of George Eliot. Even though it was written in 18th century, it has a lot of advanced, previous view on society. Especially the author created the main character, Maggie, as a strong-minded and self-confident woman. But she was also affected by her brother and lover very strongly. This character caused so many different opinions on author's thought. Some people say that George Eliot was a feminist and she made Maggie as a ideal woman. Others say that she just wanted to reveal the limitation of a woman. It is a very controversial issue among English Literature Professors.

In my opinion, George Eliot was a radicalist in feminism, and she made Maggie a woman who represent her own ideal. Let me go over some examples in Maggie's life that show us her thought.

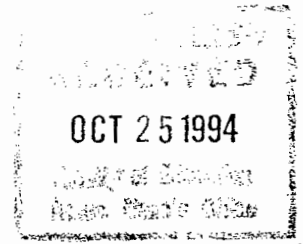
Even when Maggie was very young, we can find out her self-confidence and pride. For examples, when her aunt told her about her dark, tough hair, comparing with cared and beautiful hair of her cousin, she ran into her attic and cut her hair right away. And when her brother's tutor visited her place to talk about his education, she asked him to teach her saying that she can do much better than her brother. She always eagered to show her intelligence to everyone. She also wanted to be the leader of a group. Actually, she visited Gypsies' place to show them her intelligence and leadership. So, to be supported as the chief of Gypsies.

In her school days, she showed us her much more powerful self-confidence. For instance, she met a boy, named Philip, the son of her father's foe. Though her father and brother did not want her talk to Philip, she thought he was very intelligent and she could learn many things from him.

When she became an adult, she met a man named Stephen who was lover of her cousin. Though they loved each other and had a chance to flee together, she came back in spite of Stephen's longing and her own shamefulness. Because she did not want to do harm to anybody else, especially her lovely cousin. Finally she died in a big flood saving her brother.

Many people say that, Maggie should not have admired her brother too much, should not have given up Stephen, and should not have died in the end. These aspects prove that she was not better than any other common woman character who struggled and failed. But her sacrifice is much different from subjective submission. She thought others more than herself she was not only sacrificing, but also brave. A really brave woman does not submit, but sacrifice.

MCGILL UNIVERSITY
FACULTY OF EDUCATION



CERTIFICATE OF ETHICAL ACCEPTABILITY FOR RESEARCH
INVOLVING HUMAN SUBJECTS

A review committee consisting of three of the following members:

- | | |
|------------------------|-----------------------|
| 1. Prof. J. Derevensky | 1. Prof. M. Maguire |
| 2. Prof. M. Downey | 2. Prof. N. Jackson |
| 3. Prof. S. Nemiroff | 3. Prof. H. Perreault |

has examined the application for certification of the ethical acceptability of the project titled:

The Influence of Topic Knowledge on Argumentative Writing from ESL Students in University

Settings

as proposed by:

Applicant's Name Robin-Eliece Mercury Supervisor's Name Dr. Janet Donin

Applicant's Signature [Signature] Supervisor's Signature [Signature]

Degree Program Master of Education Granting Agency _____

The review committee considers the research procedures, as explained by the applicant in this application, to be acceptable on ethical grounds.

(Signed)

- | | | |
|----------------------------|--------------------|-----------------|
| a) <u>MARY M. MAGUIRE</u> | <u>[Signature]</u> | <u>26/10/94</u> |
| b) <u>Nancy S. Jackson</u> | <u>[Signature]</u> | <u>31/10/94</u> |
| c) <u>HELENE PERREAU</u> | <u>[Signature]</u> | <u>03/11/94</u> |

Date: [Signature]

[Signature]
Associate Dean (Academic)