

THE EFFECTS OF TWO TYPES OF TEXT MODIFICATION ON ENGLISH
LANGUAGE LEARNERS' READING COMPREHENSION: SIMPLIFICATION
VERSUS ELABORATION

by

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TABLE OF CONTENTS

Chapter 1: Introduction.....	1
Comprehensible Input.....	4
Simplification vs. Elaboration	4
Background of the Researcher.....	5
Research Questions.....	6
Summary	7
Chapter Overview	8
Chapter 2: Literature Review.....	9
Comprehensible Input.....	10
Approaches to Input Modification.....	11
A Synthesis of Previous Studies on the Effects of Input Modification	17
Gap in the Research.....	20
Research Questions.....	21
Summary	22
Chapter 3: Methodology.....	23
Overview of the Chapter.....	23
Quantitative Research Paradigm	24
Data Collection	26

Procedure.....	27
Data Analysis	34
Data Validity.....	35
Ethics.....	35
Conclusion.....	36
Chapter 4: Results.....	37
Analysis of Variance.....	37
Mean Scores for the Three Types of Comprehension Questions.....	40
Regression Analysis of Student Scores and their Exact Proficiency Levels	43
Discussion	45
Chapter 5: Conclusions.....	52
Review and Discussion of Research Questions	52
Implications.....	53
Limitations of this Study	54
Communicating and Using Results.....	55
Summary	56
Appendix A.....	58
Appendix B.....	66
References	68

LIST OF TABLES AND FIGURES

Tables

Table 4.1 <i>Analysis of Variance for Reading Proficiency and Form Read</i>	38
Table 4.2 <i>Mean Scores for the Six Participant Groups</i>	39

Figures

Figure 4.1. Mean Scores for Main Idea Comprehension Questions.....	40
Figure 4.2. Mean scores for Specific Comprehension Questions.....	41
Figure 4.3. Mean Scores for Inferential Comprehension Questions	42
Figure 4.4. Distribution of Students' Total Scores in Relation to their Proficiency Level.....	44

CHAPTER ONE: INTRODUCTION

Due to the fact that I was originally hired as an English as a second language (ESL) teacher based on my experiences abroad and my ability to speak two languages, I never received formal training until a couple of years after I had already been teaching in the field. Up to that point, all I had heard from the veteran ESL teachers when it came to text modification techniques was – simplify, simplify, and simplify! It was not until my Second Language Acquisition course through Hamline University that my eyes were opened to other modification techniques. One of our class assignments was to read a research article and report on it to our classmates. The study I read examined the effects of two types of input modification (simplification and elaboration) on the reading comprehension scores of a group of 180 Korean high school students who were studying English as a foreign language (Oh, 2001). I, of course, had the preconceived idea that simplification would enhance the students' reading comprehension much more than the elaboration techniques would. Much to my surprise, the results showed that the students were at least as successful, if not more successful in some cases, when elaboration techniques were employed instead of simplification techniques. However, this topic had not yet been extensively studied and many educators in my school still seemed skeptical when I suggested this as a text modification technique that should be used

in our school. Despite the lack of excitement from my co-workers, I filed this newfound knowledge away in my brain as a pivotal realization in my career as an ESL teacher. Then, a year later, when the time came for me to choose a topic for my capstone, I knew at once that text modification and its effects on student reading comprehension was exactly the topic that I wanted to investigate.

Through the years research has found that for English language learners (ELLs) to successfully learn a language, it is imperative that they are exposed to language input that they can understand. Since recent studies (Collier & Thomas, 2002; Cummins, 1981; Krashen, 2003) in the field of second language acquisition have shown that it takes students one to two years to acquire basic interpersonal communication skills (commonly known as BICS or “playground English”), and five to nine years to obtain cognitive academic language proficiency (commonly known as CALP or academic English), it is now apparent that students need to learn English through, not prior to, age-appropriate content curriculum. With the No Child Left Behind (NCLB) requirements (2001), ESL students must test proficient on content curriculum standardized tests just as their native English-speaking peers are required to. One teaching model that has been implemented to help ELLs simultaneously learn English and the content curriculum is that of the collaborative teaching model where the ESL teacher and the mainstream teacher co-teach the class. This model allows ELLs to receive additional services in the mainstream classroom as opposed to learning English in isolation. This is a model that I have used while co-teaching a fifth grade science class. I found that to effectively

accommodate the students' language needs in the mainstream classroom and to ensure that the curriculum was accessible to them, it was often necessary to make modifications to the curriculum materials. In this class the goal was not to simply have the ELL students glean a basic understanding of the concept being taught; the goal was that the ELL students would have a rich understanding of the terms and concepts so that they would be able to demonstrate their knowledge on the required standardized tests.

Therefore, the manner in which reading passages should be modified to enhance an ELL's reading comprehension is of great interest to me. There has been significant research done on simplification of reading passages and the impact it has on second language learners' reading comprehension (Blau, 1982; Chaudron, 1983; Leow, 1997; Li, Xu & Wang, 2005; Oh, 2001; and Yano, Long & Ross, 1994). While the idea of simplification seems to be a logical approach to modifying text for students who have a low proficiency level of English, I do not think that it mirrors how teachers modify oral language input for their students. When I think about the speech patterns that I use while presenting concepts through lecture, it seems as though instead of using pure simplification techniques, I naturally use a form of elaboration or alternative explanations. For example, when presenting a concept, I often restate or paraphrase the ideas in more than one way, thus ensuring that all students understood what I said. In addition to this, I provide various synonyms and antonyms for key concepts that are being taught. This leads me to believe that

simplification is possibly not the only modification technique that will enhance student reading comprehension.

Comprehensible Input

Language input or exposure to a language is considered to be a necessary factor in learning a second language. Even more important than simply being exposed to language input is the key factor of being exposed to 'comprehensible input.' This term was coined by Krashen (1980) and refers to input that a language learner encounters which is slightly more advanced than the learners' existing level of understanding and from which they can infer meaning. Researchers have found that comprehensible input is a necessary component for students to be able to progress towards successful language acquisition (Krashen, 1980, 1991). However, there has been considerable debate regarding how educators can best manipulate or modify input to ensure that learners can comprehend it; two differing types of modification that are often discussed are those of simplification and elaboration (Oh, 2001; Yano et al. 1994).

Simplification vs. Elaboration

Simplification of a text is usually characterized by a lack of complexity in vocabulary and syntax (Oh, 2001). The text is comprised of shorter phrases compared to a regular written text and it tends to avoid the use of marked vocabulary words. Marked vocabulary words refer to words that are used less frequently and are considered to be a more technical term for a given object or idea. The text also uses typical or standard word order in sentence constructions. In

comparison, elaboration uses redundancy and explicitness to compensate for possibly unfamiliar items in a text. It includes the use of paraphrasing, synonyms and restatements. Relative and complement clauses are also used in elaboration as an approach to clarify meaning (Oh, 2001; Parker & Chaudron, 1987 as cited by Li, 2005). Up to this point, there has been very little research done on the effects of simplification and elaboration on elementary school English language learners' reading comprehension of expository texts. The majority of studies have been done with university students; the youngest participants were eighth graders. In this study, I hope to extend insight into which methods of modification, simplification or elaboration, best enhance fourth grade student comprehension.

Background of the Researcher

As someone who has been teaching ESL for four years at the elementary school level, I have encountered various curriculum materials that have been modified for ELLs. I have found that many of the texts have been overly simplified to the point that the passage became choppy, unnatural and the content within the passage became somewhat vague. In these texts, the marked vocabulary words or words that referred to specific concepts related to the topic were completely removed and replaced by a less marked vocabulary word. The use of these more general terms provided the students with a very basic understanding of the concepts in the text. While this type of modification may have benefited the students with lower English proficiency levels, it seemed to be a disservice for the intermediate and advanced students who could handle more linguistically

challenging texts. Indeed, the students were able to glean some knowledge of the topic from the text, but for intermediate to advanced learners the amount of knowledge taken from the text seemed to be insufficient for them to be able to fully comprehend the concepts at a deeper level. Therefore, it is my personal belief and bias that while simplification may increase students' level of comprehension, it may not fully prepare students for eventually being able to read an unmodified text, which is our goal for all of our ELLs.

It is through this study that I hope to obtain insight into how an expository text can best be modified in order to make the text comprehensible for the students so that the amount of student learning, of both the English language and the content material, can be maximized. It is my belief that with reading materials that are appropriately modified so that they become 'comprehensible input' for the students, they will not only make progress in acquiring the English language, but they will also have a deeper understanding of the content knowledge that they are required to know for the state and national tests. The information that I obtain from this study will not only help me as I modify materials for my students, but it will also contribute to the literature on simplification and elaboration of text.

Research Questions

This study is designed to provide insights into how expository texts can best be modified (using either simplification or elaboration techniques) to increase ELL reading comprehension. My study is guided by the following questions:

1. Will fourth grade ESL students who read a modified (simplified or elaborated) version of a text comprehend it better than those students who read an unmodified version of the text, as shown by student scores on a multiple choice comprehension test?

2. Will students who read an elaborated version of a text score higher on the reading comprehension test for the text than the students who received the simplified version of the text?

3. Will the data show that there is a relationship between the students' scores on the reading comprehension test and their reading scores on their annual state English proficiency test?

Summary

This study will look at the effects of two types of modification (simplification and elaboration) on ELL students' reading comprehension scores of an expository text. With current mandates that No Child Left Behind (2001) has required regarding student achievement, it has become very apparent that students simply cannot wait to learn content curriculum until they have mastered the English language, as it takes many years to become academically proficient in a second language. Therefore, grade level curriculum needs to be accessible to students despite their English proficiency level. This is possible if teachers appropriately modify the materials that are being used in the mainstream classroom. My study will hopefully guide teachers in their modification techniques used for ELLs.

Chapter Overview

In this chapter I introduced my study by laying the foundation for my research topic. I explained the purpose, significance and need for my study. The context of the study was briefly introduced, as were the role, assumptions and biases of the researcher. The background of the researcher was provided. In Chapter Two I provide a review of the literature relevant to my topic. I explain the findings of prior research that has been done on text modification and specifically on the use of simplification and elaboration as forms of text modification. Chapter Three describes the research design and methodologies employed in this study. Chapter Four presents the findings of this study. In Chapter Five I reflect on the data collected. I also address the limitations of the study, implications for further research and recommendations for modifying expository texts for English language learners.

CHAPTER TWO: LITERATURE REVIEW

The purpose of this study is to explore the effectiveness of two types of text modification, simplification and elaboration, on fourth grade ESL students' reading comprehension. The following research questions will guide my study:

1) Will fourth grade ELLs who read a modified (simplified or elaborated) version of a text comprehend it better than those students who read an unmodified version of the text, as shown by student scores on a multiple choice comprehension test?

2) Will students who read an elaborated version of a text score higher on the reading comprehension test for the text than the fourth grade ESL students who received the simplified version of the text?

3) Will there be a relationship between the students' scores on the reading comprehension test and their reading scores on their annual state English proficiency test?

In this chapter I begin by explaining why there is a need for ELLs to be exposed to comprehensible input. One way in which written input is often made comprehensible for ESL students is through some means of text modification. I describe the characteristics of both types of modification used in the study followed by the limitations of those modification techniques. Next, I summarize the major

insights that have been found from previous research regarding text modification. These insights are drawn from three studies which explored the impact of text modification on English as a Foreign Language (EFL) students in Korea, Japan, and the Philippines. These findings include the interactions that were observed between type of text modification and the student language proficiency, as tested in comprehension multiple choice tests, as well as type of text modification and type of comprehension question. Finally, I conclude by identifying the gap that I explore in this study and the research questions that will guide my inquiry into text modification.

Comprehensible Input

Research in the field of second language acquisition indicates that exposure to language input is a necessary component for successful second/foreign language learning (Chaudron, 1983; Krashen, 1980; Larsen-Freeman, 1983; Leow, 1993). The role of input has been extensively researched in these studies and it has been investigated not only in authentic learning environments, but also in more formal educational institutions. While most research in the field has been focused on input comprehension and its necessity for learning a language, more recent researchers (Yano et al., 1994; Oh, 2001) have started to explore the specific ways in which a text can be modified in order to make it more comprehensible. These researchers have looked at precise characteristics and grammatical features of a text that make it more or less comprehensible for a language learner.

Approaches to Input Modification

Researchers have attempted to identify various approaches to input modification that will successfully help English language learners better understand the content of the input. Currently, there are two forms of modification that are employed by researchers: simplification and elaboration (Oh, 2001; Yano et al., 1994; Li, 2005). The majority of research, up until Yano et al. (1994) and Oh (2001), had been centered on the effects of simplifying the vocabulary and syntax of aural language and written text (Jeong, 1987; Lee, 1986; Strother & Ulijn, 1987 all as cited in Oh, 2001). Studies done on the effects of simplification versus elaboration on aural input comprehension and retention have shown that elaboration techniques tend to enhance comprehension more than linguistically simplified input (Chaudron, 1983). These findings have spurred on many researchers such as Yano et al., (1994) and Oh (2001) to extend these findings from aural input to written input. Most written materials in a classroom are created with native English-speakers in mind, and therefore English language learners tend to find these texts semantically and syntactically difficult (Short, 1989). Since written input cannot be negotiated instantaneously like oral input can, it is essential that the negotiation of meaning of the material take place beforehand through the means of modification (Brewer, 2008). In the next section I will introduce the positive and negative characteristics of both simplification and elaboration techniques as means of modifying a text.

Simplification

Written texts that have been linguistically simplified typically are comprised of the following features: (1) shorter sentences than those found in an unmodified text (regarding the number of words used per sentence); (2) simpler syntax (fewer dependent clauses are used); (3) simpler lexis (the use of marked vocabulary is avoided); (4) a tendency to employ standard word order in which the topic is fronted in the sentence (subject – verb – object format); (5) fewer pronouns of all kinds are used (retention of nouns and noun phrases) and (6) pronouns and references are unambiguous (full noun phrases are used instead of pronouns and determiners) (Brewer, 2008; Keshavarz, Atai & Ahmadi, 2007; Li, 2005; Oh, 2001; Short, 1989; Yano, et al., 1994). A simplified text often contain fewer idiomatic expressions and show a tendency to use specific noun phrases in place of pronouns and descriptive verbs over nondescript verbs such as the verb *do* (Brewer, 2008; Yano, 1994). While some researchers employ all of the previously listed aspects of simplification in modifying texts, other researchers seek to pinpoint which features of simplification aid comprehension more (Brewer, 2008; Keshavarz et. al., 2007). Brewer (2008) discusses some of those features and references the analysis of various aspects that determine the readability of a text by Beck et al. (1984) and Hatch, (1983). The use of vocabulary and syntax were identified as areas that determine how difficult a text's readability will be. Later, I will provide specific examples of both the simplified and modified texts that I used in this study so that the two forms of modification can be compared against one another.

Limitations of simplification. While simplification of ESL reading curriculum has been the most widely accepted form of text modification by commercial publishers of reading materials (Long, 1980 as cited in Yano et al 1994) and educators alike, it has not gone without criticism by some researchers (Blau, 1982; Chaudron, 1983; Oh, 2001; Yano, et al., 1994). Blau (1982) believes that once a text has been simplified, it often results in a non-cohesive “choppy, unnatural” (p. 525) text which does not, in fact, resemble authentic reading materials. The subsequent elimination of linguistic features is thought to hinder English language learners because it denies them exposure to vocabulary words and syntax that they will eventually need in order to read textbooks, reference materials, and new articles (Short, 1989; Yano, et al., 1994). Honeyfield (1977, as cited in Oh, 2001) also proposes that simplification may interfere with a reader’s ability to complete certain tasks, such as drawing inferences from a text, because the process of simplifying a text often lends itself to the deletion of essential information which helps a reader to understand the relationships between pieces of information within a text.

Elaboration

The techniques employed to elaborate a text have emerged from research done on aural language input and its effects on listening comprehension of non-native English speakers (Chaudron, 1983; Brewer, 2008). Studies have found that listening comprehension was enhanced when elaborative modifications were present (Chiang & Dunkel, 1992; Cervantes, 1983; Long, 1985; Kelch, 1985; Mannon, 1986; Pica, Doughty, & Young, 1986; Fujimotot, Lubin, Sasaki, & Long, 1986;

Chaudron & Richards, 1986; and Blau, 1990 all as cited in Yano, et al., 1994). Texts that use elaboration tend to retain features typical of an unmodified text created for native speakers; however, they provide some type of additional linguistic support for ELLs by adding redundancy and clarification of meaning through techniques such as the insertion of parenthetical definitions, repetition, paraphrasing, use of synonyms, and the retention of full noun phrases instead of pronouns (Brewer, 2008; Yano, 1994). Thus, elaborative techniques “serve neither to ‘simplify’ nor to ‘complexify’ ” (Parker and Chaudron, 1987, p.110 as cited in Oh, 2001, p.70) a text; instead, these techniques function as a way to clarify meaning. In the end, an elaborated text may end up containing longer phrases and more linguistically complex features, such as relative clauses, than both the simplified and the unmodified texts. In other words, texts that implement elaboration techniques tend to retain more features that one would find in a native English speaker’s writing. Thus, it is believed that exposure to this form of input should speed up an English language learner’s progress towards fluent reading of unmodified texts, which is the goal of second and foreign language reading comprehension (Oh, 2001, p. 69).

Specific examples from elaborated texts used in this study will be presented later.

Limitations of elaboration. Even though Parker and Chaudron (1987) claim that elaboration techniques neither simplify a text nor add to the complexity of it, it seems as though the characteristics of an elaborated text would prove otherwise. In Yano et al.’s (1994) breakdown of the three forms of text that were used in their study, the readability scores of the elaborated version, based on the Flesch-Kincaid

grade level, proved to be higher than the unmodified version. The readability of the elaborated version scored a grade level of 14.0 while the unmodified version scored a 12.8. In addition to that, the number of words per sentence of the elaborated text was greater than the unmodified text. The sentences in the elaborated text on average contained 27.6 words whereas the unmodified text had 23.7 words. Thus, once averaged out, the elaborated texts were much longer than the unmodified texts. A similar phenomenon also occurred when the length of the passages in Oh's (2001) elaborated texts were compared with those of the unmodified texts. These scores demonstrate that elaboration techniques produce texts that are more complex, longer and approximately 1.2 grade levels above an unmodified passage (Yano et al., 1994.) These findings may lead some to believe that an elaborated text would therefore be more difficult for a reader to comprehend.

Examples of Modification

Below is an example taken from Yano et al. (1994), which demonstrates how he took unmodified text and then adapted it into either a simplified or elaborated text.

1. NS baseline version (unmodified text):
Because he had to work at night to support his family, Paco often fell asleep in class.
2. Simplified version:
Paco had to make money for his family. Paco worked at night. He often went to sleep in class.
3. Elaborated version:
Paco had to work at night to earn money to support his family, so he often fell asleep in class the next day during his teacher's lesson (p.193).

To create the simplified version (Example 2) from the baseline text (Example 1), the words *support* and *fell asleep* were eliminated from the input lexicon and were replaced with the slightly less marked terms, *make money* and *went to sleep*. Also, the text did not present any additional items that were not in the original baseline version.

To produce Example 3, the following modifications have been made to Example 1: The first clause in the original has been promoted from subordinate to main clause; *Paco* has been fronted in order to facilitate early identification of the topic; *to earn money* has been added to help indicate the meaning of *support*; *next day* has been added to help confirm the temporal/causal relationship between the night work and Paco's tiredness; and *during his teacher's lesson* has been added to clarify *in class...* The elaborated version also retains the original lexical items and their collocations, *support* (his family) and *fell asleep*, from the NS version, and provides an additional native-like model, *earn money*, in the course of paraphrasing *support* (p.193).

Yano's example of elaboration and simplification represents a clear model of the thought process that some researchers and educators go through as they create the two modified versions (simplified and elaborated) of a text. In both the simplified and elaborated versions of the baseline text above, the topic of the sentence was fronted so that it could clearly be identified by the reader. This movement of the topic is commonly used when modifications are being made so that the reader can easily identify who or what is being discussed. In the elaborated version, prepositional phrases and clauses were added as additional support to help the reader decipher the meanings of possible unknown marked terms. However, some researchers have chosen other methods for elaborating a text. Brewer (2008) inserted parenthetical definitions immediately after a marked term. One way has not been shown to be more effective than the other; it is simply a different way of

elaborating the original text. In the simplified version of the text, the more marked terms were replaced by either a less marked one-word synonym or a short phrase which conveyed a meaning similar to the original term. Again, this is a widely accepted model for simplification and was implemented in Yano's example of a modified text.

A Synthesis of Previous Studies on the Effects of Input Modification

Yano, et al., (1994) provides a brief overview of the studies that had previously explored the effects of simplified and elaborated input on non-native speakers' comprehension. He identified a total of eleven studies that focused on listening comprehension and five studies that focused on reading comprehension. With the exception of one study, which was done with second graders, all of the listening comprehension research has been conducted on university level language learners. A similar trend can also be seen in the reading comprehension studies, with the majority of them focusing on university level participants and a mere two studies looking at eighth grade and high school language learners. Since Yano et al.'s study, there have been two other studies (Oh, 2001; Li, 2005) which have continued to explore the impact of text modification on non-native speakers' reading comprehension. Again, both of these studies used high school students who were learning English as a foreign language as their participants.

Yano, et al., (1994) and Oh (2001) agree that drawing generalizations about input modification from these studies has been hard to do, due to the fact that the studies were looking at different modalities (listening and reading), lacked clear

definitions regarding the linguistic features employed to create either a simplified or elaborated text, assessed the participants' comprehension using a wide range of methods, and assessed comprehension at varying times in relation to when the treatment occurred (during the treatment or immediately following the treatment). However, despite the lack of consistency, Yano, et al. (1994) believe that some broad generalizations can be deduced from the findings of these studies. In general, some form of modification tends to increase overall reading comprehension and increase participants' perceived level of reading comprehension. In regards to aural comprehension, elaborative techniques consistently enhance non-native English speakers' listening comprehension.

More specifically, the three studies from which I am drawing my major hypothesis (Li, 2005; Oh, 2001; Yano, et al., 1994) found that students who read simplified passages performed as least as well as, if not better, than some of those who read elaborated passages. Pertaining to inferential comprehension questions, students who had read the elaborated passages surpassed those who read the unmodified text and the students who read the simplified passages scored the lowest. These findings led researchers to believe that modifications in the form of simplification may be sufficient when participants are asked to identify the main idea of a text or extract specific details from a text; however, when students were asked to draw inferences from what they read, elaborated texts enhanced their comprehension (Oh, 2001; Yano, et al., 1994).

In these three studies, done with high school and university students, the participants were given one of three versions of a text to read: unmodified, simplified or elaborated. The participants then answered three comprehension questions (general, specific, and inferential) for each text that they read. It should be noted that the comprehension questions were the same regardless of the type of passage that was read. The researchers believe that the elaborated texts provided the participants with the necessary semantic information to make connections and draw inferences. Since today's educational institutions require more from students than simply being able to identify factual information from a text, asking students to critically analyze ideas and concepts that they have read, these results may indicate that elaboration is superior to simplification in producing higher student test scores. However, nobody has researched the effects of text modification with fourth graders; it would be useful to know if text elaboration is the right way to go with younger learners before implementing recommendations for something that has only been studied with eighth graders and older.

More recent research done by Brewer (2008), took an in-depth look at sentence-level vocabulary modification and its effect on a reader's perceived comprehension. In her study she selected fifty individual sentences from a university level history textbook and modified the verb in the original sentence using one of two modification techniques: simplification or elaboration. Simplification entailed simply replacing the low frequency verb with a high frequency word or short phrase with a synonymous meaning. Elaboration was

implemented through the insertion of a parenthetical definition after each low frequency verb. The participants then evaluated their perceived comprehension of each of the three versions of the sentences: unmodified, simplified, and elaborated, by circling a number on a six point Likert scale which they felt corresponded to the amount of each sentence that they understood. The results of this study do not demonstrate that there is a significant difference in the effects of the treatments employed and thus leaves us in need of more research to define what modifications do, indeed, aid reading comprehension for ELLs.

Gap in the Research

Upon reviewing the previous studies, it has become very apparent that the majority of research has been done with participants in an EFL setting or with ESL students at a university level. Only two (Brown, 1987 and Tsang, 1987 as cited in Yano, et al., 1994) looked at the effects of simplification and elaboration on eighth grade and high school ESL students. One study on the effects of complex versus simple syntax on students' listening comprehension did include second grade participants but the findings were inconclusive and did not produce any significant results. Most studies exploring the effects of simplification and elaboration have not been done with elementary ESL students. This is a noteworthy issue as the results from studies done with university ESL students may not be applicable to elementary ESL students. Students who are enrolled in a university already have a basic foundation of academic knowledge from which they can draw, whereas many elementary ESL students may have had an interrupted educational experience thus

far in their lives and may have lacked exposure to academic language and academic experiences in both English and in their first language.

As current mandates that NCLB requires regarding student proficiency settle in as a reality, our district is gradually making the move from a pull-out model, where students are taught English in isolation from mainstream students, to a collaborative model, where students learn English in the mainstream classroom through the content curriculum; I, as an ESL educator, must be able to adapt and make materials comprehensible for my ESL students. With this in mind, I have decided to explore the effects of simplification and elaboration on fourth grade ESL students' reading comprehension of expository texts.

Research Questions

In this study, I explore the following research questions:

- Will fourth grade ESL students who read a modified (simplified or elaborated) version of a text comprehend it better than the fourth grade ESL students who read an unmodified version of the text, as shown by student scores on a multiple choice comprehension test?
- Will fourth grade ESL students who read an elaborated version of a text score higher on a reading comprehension test than the fourth grade ESL students who received the simplified version of the text?
- Will there be a relationship between the students' scores on the reading comprehension test and their English reading proficiency level as measured by their scores on the annual ACCESS test (Assessing Comprehension and Communication in English State-to-State for English language learners)?

Summary

In this chapter I have described why there is a need for ESL students to be exposed to comprehensible input and two approaches that are most commonly implemented in an attempt to make a text more comprehensible. I then gave further details regarding the specific characteristics of a simplified and elaborated text. I also highlighted some of the limitations of both a simplified text and an elaborated text. Next, I summarized the findings of previous research that has explored the effects of simplification and elaboration on non-native speakers' comprehension of both aural input and written input. Then, I highlighted the results of the three studies which most resemble the design of my own study and from which I am drawing most of my insights. Finally, I identified the gap in research that I am trying to explore and I stated the research questions which are guiding this study. In the next chapter I will present the methods that I will use to systematically explore and answer my research questions.

CHAPTER THREE: METHODOLOGY

This study was designed to explore the effects of two types of text modification (simplification and elaboration) on fourth grade ESL students' reading comprehension of an expository text. In this study I wanted to know:

- Will fourth grade ESL students who read a modified (simplified or elaborated) version of a text comprehend it better than the fourth grade ESL students who read an unmodified version of the text, as shown by student scores on a multiple choice comprehension test?
- Will fourth grade ESL students who read an elaborated version of a text score higher on a reading comprehension test than the fourth grade ESL students who received the simplified version of the text?
- Will there be a relationship between the students' scores on the reading comprehension test and their English reading proficiency level as measured by their scores on the annual ACCESS test (Assessing Comprehension and Communication in English State-to-State for English language learners)?

Overview of the Chapter

This chapter describes the methodologies used in this study. First, the rationale and description of the research design is presented along with an explanation of the quantitative research paradigm that this study is implementing. Second, the data collection protocols are presented and explained in detail. Third, the method used to analyze the data is described and the verification of data

reliability and validity is explained. Finally, the ethical considerations for this study will be discussed.

Quantitative Research Paradigm

The research questions outlined in this study tested the relationship between two types of text modification and student comprehension scores. In an attempt to generate the numerical data required to analyze and compare the students' comprehension scores, the design of my study was grounded in basic quantitative research methods. A quantitative research method is characterized by the fact that it quantifies and statistically analyzes the data that is collected during the study (Anderson, 1990; Best & Kahn, 1989; Mackey & Gass, 2005). The quasi-experimental model originally emerged from classical experimental methods. The general guidelines for a study grounded in experimental research methods are that the researcher manipulates one variable and controls the other variables to observe the effects of the changes that were made. The variable that has been changed or manipulated is often called the treatment and it is considered to be the cause of the change that occurred. In a quasi-experimental study the researcher is unable to exhibit full control over all of the variables in the study (Anderson, 1990; Best & Kahn, 1989; Mackey & Gass, 2005). This inability to control all of the variables is often the case when research is taking place in an educational setting. The uncertainty regarding the exact degree of similarity between control and experimental groups is often considered this method's weakness; the groups may be influenced by variables other than the treatment they are receiving. For example,

some students may have more background knowledge on a topic than other students based on their prior educational instruction and, therefore, the effects that occur based on the treatment are regarded as less credible (LoBiondo-Wood, & Haber, 1994).

The fundamental characteristics of my study that qualified it as quasi-experimental instead of truly experimental are that: 1) my participants were not randomly assigned to groups and 2) I could not control all variables influencing my participants (e.g., the background knowledge on the subject of the text may vary significantly for the participants depending on their educational backgrounds.) In my study the participants were divided into three groups: one control group and two experimental groups. The control group received an unmodified text to read while the two experimental groups each received different types of treatment. The first experimental group read a text that had been simplified, whereas the second experimental group read a text that had been elaborated. All of the students answered the same multiple-choice questions at the end of each passage to measure the effects of the treatment on their reading comprehension scores. The data was then analyzed statistically to account for some experimental variance (Best & Kahn, 1989).

In this study, the randomized assignment of participants to various groups was not implemented; instead, the participants were categorized based on their reading scores on the annual English language proficiency test called the ACCESS (Assessing Comprehension and Communication in English State-to-State for English

language learners) for ELLs test (World Class Instructional Design and Assessment, 2007). This is the test that my state uses to evaluate the progress of English language learners' proficiency in the four domains of language learning: listening, speaking, reading and writing. The four scores are then put into a weighted formula to determine the students' overall composite score. The students' reading scores were used to assign the participants into two groups: high proficiency and low proficiency.

Data Collection

Participants

The participants in this study were considered to be a sample of convenience. They were chosen based on their grade level and qualification for ESL services within the district where the study is taking place. The group of participants was comprised of seventy fourth grade English language learners, who came from a wide range of both cultural and linguistic backgrounds. In addition, the participants had varying degrees of proficiency in English, ranging from beginner to advanced levels. The number of years that the students had lived in the United States and the amount of the time that they had studied English varied as well. Some of the students had only just arrived in the United States, while others had been born here.

Location/Setting

This study took place in a semi-rural midwestern city in the United States. It was carried out at multiple building sites within the district. At the time of the study, the district had twenty-three elementary schools with a cumulative

enrollment of 10,354 students. From that number, 896 of those students qualified for ESL services. The district also had a newcomer program, where students who had just arrived in the country and who were classified as Non-English Speakers (NES) were able to enroll in the program and receive up to two years of intensive English instruction before being put into a mainstream school. Thus, all participants in my study were at least at a beginner proficiency level. I think that it is also worth noting that I was currently employed by this district while gathering my research and that for a small group of these students, I was not only functioning as the researcher but I was also known to them as their teacher.

Data Collection Technique

To collect my data, I administered a nine-item multiple choice test to assess the participants' reading comprehension of three expository texts. Each of the texts had a total of three comprehension questions corresponding to its content. The test items consisted of three types of comprehension questions, one each of general, specific and inferential. The students received approximately forty minutes to read the passages and respond to the test questions. The tests were administered during the regular class hours and took place in a quiet location separate from others who were not participating in the study.

Procedure

The participants' ACCESS reading scores were used to categorize them into high and low proficiency groups. In the school district where this study took place, the cut scores that a student must have in order to test out of the ELL program were

as follows: a minimum of a 4.0 in reading, 4.0 in writing and an overall composite of a 4.8. Since the district where this study took place has set the cut score requirement for a reading score at 4.0, I decided to use this score as the breaking point in determining who was considered a high reader and who was considered a low to average reader. Within each of those two groups there was one control group, which received an unmodified text to read, and two experimental groups, which received either the simplified text or the elaborated text to read. Therefore, there were six groups in all: a high proficiency group who read an unmodified text (HP-U), a high proficiency group who read a simplified text (HP-S), a high proficiency group who read an elaborated text (HP-E): a low proficiency group who read an unmodified text (LP-U), a low proficiency group who read a simplified text (LP-S), and a low proficiency group who read an elaborated text (LP-E).

Pilot Study

A pilot study was conducted in May during the 2009-2010 school year using a small group of fourth grade students from the school district where the study took place. The purpose of the pilot study was to ensure that the comprehension questions after each passage were neither too difficult nor too easy. If all of the students answered one of the items correctly, I knew that it was too easy and modified it accordingly. Likewise, if all of the students answered one of the questions incorrectly, I knew that it was potentially too difficult a question for them. At the end of the test, I also asked the students to respond to a survey question regarding their background knowledge on the topic of the reading passage to get a

general idea as to how much knowledge a typical fourth grade ELL might have had prior to reading the text. It should be noted that the students who participated in the pilot study were at the end of their fourth grade year, whereas the students who participated in the actual study were at the beginning of their fourth grade year. Therefore, the students who participated in the pilot study most likely had more background knowledge and reading stamina than the actual participants. The scores of the students who participated in the pilot study were not analyzed and included in my data. The purpose of the pilot study was to help me adjust and ensure that the texts being read and the comprehension test questions being asked were at an appropriate level of difficulty for fourth grade ELLs.

Materials

The texts used in the study were taken from “Daily Warm-up: Reading Grade 4” (Clark, 2008). This is a teacher resource that consists of over 150 non-fiction and fiction texts that the fourth grade teachers at my school use as a test preparation tool as part of their reading curriculum. From this book, I choose three expository texts that were approximately equal in length and linguistic difficulty. Those passages were used as my unmodified texts. From there I modified each of those three texts so that there was a simplified and elaborated version for each of them. Therefore, I had a total of nine texts. The test booklets were labeled Form A, Form B and Form C. Form A contained all of the unmodified forms of the texts. Form B consisted of the simplified forms of the texts and Form C was comprised of the elaborated form of the texts. When comparing the total length of the passages and

the average number of words used per sentence in the passages, the elaborated texts tended to contain more total words and had more words per sentence. The elaborated text was followed by the original text in total words and words per sentence. The simplified text contained the fewest words per passage and also had the least words used per sentence. All of the three test forms had the same comprehension questions following the texts. (See appendix A to view all forms of the texts and comprehension questions).

Unmodified Form. The unmodified forms of the expository texts were taken from the teacher-created resource “Daily Warm-up: Reading Grade 4.” The materials in this book were written for native speakers of English reading at a fourth grade level. These texts usually contained longer sentences, used low-frequency multi-syllabic words and incorporated more complex syntax structures than either of the simplified or elaborated texts (Li, Xu, & Wang, 2005).

Simplified Form. The simplified versions of the texts used shorter sentences and more high frequency words. It also aimed to eliminate complex syntax structures such as embedded clauses (Oh, 2001; Yano, et al., 1994). In addition to that, passive verbs were changed into active ones, pronouns were replaced with their referents, the topic of the sentence was fronted for clarity and complex sentences were shortened or broken down into simple sentences. It should be noted that each of the three texts received roughly equal amounts of each type of simplification technique. Here are some examples from the text:

1) I replaced more marked lexis with less marked, one word or short phrase equivalents of that word. In Text A fifteen words were replaced, and in Texts B and C eleven words were replaced.

Original Sentence: It was one of the most trying times in the history of the nation.

Modified Sentence: It was one of the most difficult times in the history of the United States.

2) When possible I changed passive verb tenses into active ones. However, this was only applied once in all of the three texts as the original texts did not contain other passive verb tenses.

Original Sentence: People of color were discriminated against and treated very poorly.

Modified Sentence: White people treated black people very poorly.

3) Unnecessary phrases (prepositional or adverbial) were deleted to ensure sentence simplicity and to avoid wordiness. In Text A I deleted three unnecessary phrases, while in Text B I deleted eight and in Text C I deleted five.

Original Sentence: Often times, Killer whales hunt in groups.

Modified Sentence: Killer whales hunt in groups.

4) Pronouns were replaced with their referents. Text A contained one replacement, Text B contained two and Text C contained two.

Original Sentence: Dr. Martin Luther King, Jr. was, and still is, an inspiration to many.

Modified Sentence: Dr. Martin Luther King, Jr. was, and still is, an inspiration to people.

5) Complex sentences were shortened or broken into two simpler sentences. This occurred three times in Text A and Text C.

Original Sentence: Killer whales are typically 19-22 feet long and can weigh anywhere from 8,000 to 12,000 pounds.

Modified Sentence: Killer whales are normally 19-22 feet long. Whales can weigh 8,000 to 12,000 pounds.

6) Also, when appropriate the topic of the sentence was fronted to provide a clear indication of what was being talked about. This only occurred once in Text A.

Original Sentence: During this time period, the Supreme Court ruled on the case *Brown v. Board of Education*.

Modified Sentence: The Supreme Court made a decision on the Brown v. Board of Education case in the 1950s.

Elaborated Form. Modeling after the studies done by Oh (2001) and Yano, et al., (1994) I created the elaborated forms of the texts by adding in definitions and synonyms for the low frequency words used in the unmodified text, I increased the amount of redundancy to explicitly signal the main themes within the text, and I paraphrased and repeated the information to ensure clarity. Each elaborated text received modifications in nearly equal amounts. Here are some examples from the text:

1) I inserted definitions or synonyms for marked lexical terms using either parenthetical insertions or setting them off by commas. Text A had nineteen insertions while Texts B and C each had twelve insertions.

Original Sentence: A killer whale is striking in its coloring of black and white.

Modified Text: A killer whale is striking, or easily noticed, with its coloring of black and white.

2) Again, like the simplified text, the topic of the sentence was fronted to provide a clear indication of what was being talked about. Text A only contained one occurrence where the topic was fronted.

Original Sentence: During this time period, the Supreme Court ruled on the case *Brown v. Board of Education*.

Modified Sentence: The Supreme Court made a decision on the Brown v. Board of Education case in the 1950s.

Types of comprehension questions

The students' reading comprehension was measured by the results of a reading comprehension test. The test consisted of three multiple-choice comprehension questions after each of the three expository texts. The three questions after each passage focused on three types of comprehension questions: general comprehension, specific comprehension, and inferential comprehension. For the general comprehension questions the students were expected to be able to recall information from the entire text and then choose the most accurate summary statement of the main idea. Specific comprehension questions tested the students on explicitly stated factual information in the text. This type of question required the students to look at an individual sentence in a passage and work out the appropriate meaning of a word or clause. That particular word or clause may or may not have been directly related to the main idea of the text. Inferential comprehension questions asked the students to go beyond the actual words on the page and recognize predictions or inferences about what was really happening. It required the readers to use higher level reading process skills (Oh, 2001; Li et al. 2005; Yano, et al., 1994).

Test Administration

Prior to administering the reading tests, I labeled each test book with the student names to ensure that each received the appropriate version of the test. To determine who would read each version of the test, the students were divided into two groups: high proficiency and low proficiency. Then the students were randomly

assigned to one of the three versions of the reading passages, ensuring that the distribution of high proficient and low proficient students was done in equal proportions for each passage.

Once the tests were labeled, they were sent via inter-school mail to the ESL teacher designated as the test administrator for each school that had students participating in the study. That teacher chose a small group setting that was conducive for test taking at a time that best fit into the students' schedule during the regular school day. The testing period lasted approximately 30 minutes. When the testing period ended, the teacher placed the tests in inter-school mail and sent them back to me.

Data Analysis

The test booklets, which consisted of the reading passages and comprehension questions, were collected immediately after the participants completed the test. The booklets were then divided into groups according to the participant's level of English proficiency and form of the test that they read.

The data obtained were analyzed using the software R, which is free, open source academic software. The data were analyzed using a 2-by-3 analysis of variance (ANOVA). The significance level was set at $p < .05$. The participants' overall comprehension scores were analyzed to obtain the mean scores for each group. The scores were then compared across groups according to the type of form that the students read. The data was also analyzed for possible interactions between the type of passage that was read and the total scores for each of the three types of

comprehension questions, to see if there was a relationship between them. A regression analysis was also run to see if there was a relationship between the students' scores on the comprehension test for the text and their ACCESS reading scores. The regression analysis was used to see if there was a relationship between the students' scores on each particular comprehension test item and their exact reading proficiency scores.

Data Validity

In this study I made an effort to achieve internal validity by having my peer reader and two of my professors from Hamline University examine my materials before I piloted them with students. During that examination of the materials they checked to ensure that I consistently used the same techniques of simplification and elaboration when I modified all three of the expository texts used in the study. At that time, they also checked to make sure that my comprehension questions did indeed, match the three types that I outlined earlier in the chapter: general, specific, and inferential.

Ethics

This study included some safeguards to ensure that the participants' rights were in no way being violated. I explained the intent of the study to the participants and obtained written consent from the participants' parents or legal guardians. In addition to this, my human subjects research proposal form was accepted and I received permission to carry out my study from both Hamline University and from

the local school district where the study took place. The participants' and school district's identities were protected and remain anonymous.

To ensure that I am open and honest with the readers of this study, it is important that mention my own personal biases towards text modification. It is my belief that simplification techniques at times fail to meet the needs of intermediate and advanced ELLs when it comes to preparing them for reading materials that contain unmodified grade level content.

Conclusion

In this chapter I described the methods that were used in my study to determine the effects of two types of text modification on student comprehension scores. In the next chapter I will present the results of this study and in chapter five I will discuss the implications of these findings.

CHAPTER FOUR: RESULTS

In this chapter I will outline the results of each analysis as they correspond to the research questions that I set out to answer in this study. The research questions guiding this study are as follows:

1) Will fourth grade ELL students who read a modified (simplified or elaborated) version of a text comprehend it better than those students who read an unmodified version of the text, as shown by student scores on a multiple choice comprehension test?

2) Will students who read an elaborated version of a text score higher on the reading comprehension test than the fourth grade ESL students who received the simplified version of the text?

3) Will there be a relationship between the students' scores on the reading comprehension test and their reading scores on their annual English proficiency test?

Analysis of Variance

I begin by addressing the question of whether or not there was a relationship between the students' scores on the reading comprehension test and their reading scores on their annual English proficiency test. Then, based on their mean scores from the multiple choice comprehension test, I compare the reading comprehension

of fourth grade ELL students who had read a modified (simplified or elaborated) version of a text with students who read an unmodified version of the text. I will discuss whether students who had read an elaborated version of a text scored higher on the reading comprehension test than the fourth grade ESL students who read the simplified version of the text. Finally, I present the scores for each type of comprehension question (main idea, specific and inferential) based on proficiency level and form of the text that was read.

The analysis of variance done on this study showed that there was not a statistical difference between the mean scores of the students' reading comprehension tests based on the form that they read, nor based on their reading proficiency levels (see Table 4.1).

Table 4.1

Analysis of Variance for Reading Proficiency and Form Read

Variable	<i>df</i> (Degrees of freedom)	<i>F</i> -value	<i>p</i> -value
Reading Proficiency	1	0.3757	0.54233
Form Read	2	1.6031	0.21021

The results of the analysis of variance for students' reading proficiency levels showed that there was no statistical difference regarding the relationship between student scores and reading proficiency levels. In this ANOVA, the *df* was 1, with a *F* value of 0.37 and a *p* value of 0.54; since the *p*-value was higher than 0.05, there was not a significant difference. In the analysis of variance for the form read, the *df* was 2, the *F* value was 1.6 and the *p* value was 0.21, thus showing that, again, there was

not a significant difference amongst the students' scores based on the form that they read.

In Table 4.2 below, we are comparing students' scores from each proficiency group. The thirteen high proficiency students who read the unmodified texts in Form A scored the highest and had an average mean score of 4.3 out of 9 possible points. The fourteen high proficiency students who read Form B, the simplified texts, followed them with a mean score of 4.2 and then the fourteen high proficiency students who read the elaborated texts in Form C scored the lowest with a mean average of 4.0. Overall, there was no statistical significance found from the data that was analyzed.

Table 4.2

Mean Scores for the Six Participant Groups

High Proficiency	N	Mean	Standard Deviation
Form A – Unmodified	13	4.3	2.62
Form B – Simplified	14	4.2	1.77
Form C – Elaborated	14	4.0	1.38
Low Proficiency	N	Mean	Standard Deviation
Form A – Unmodified	8	3.5	1.19
Form B – Simplified	10	4.1	1.85
Form C – Elaborated	10	3.4	1.71

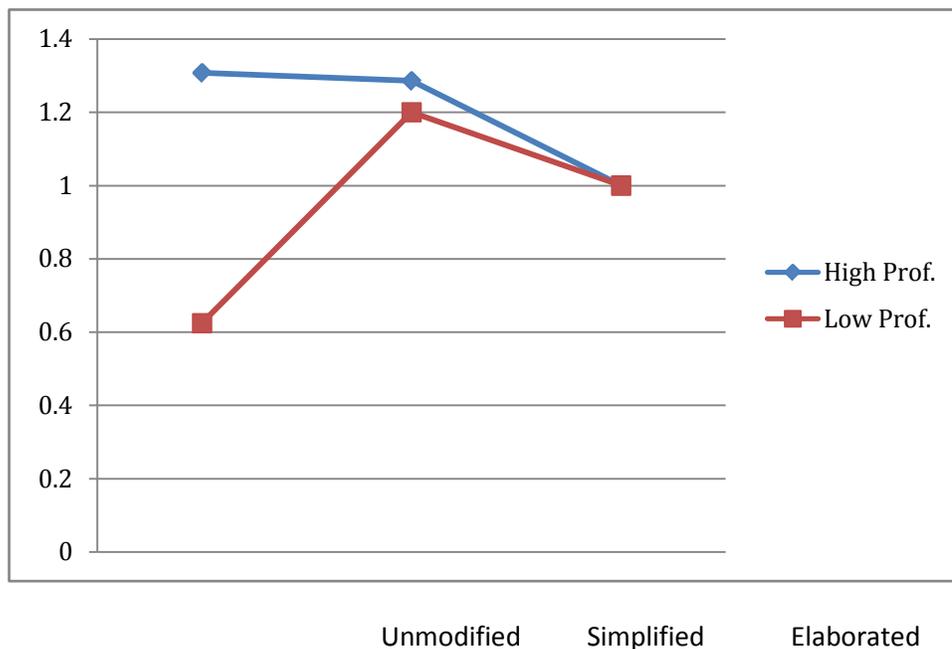
The eight students with a low reading proficiency level who had read Form B, the simplified version of the text, scored the highest with an average mean score of 4.1 out of 9 possible points. The ten low proficiency participants that read the unmodified text in Form A had a mean score of 3.5. Lastly, the ten students who

comprised the low proficiency group that read Form C scored slightly lower than those that read Form A with a mean score of 3.4.

As seen in Table 4.2, participants in the high proficiency and low proficiency groups scored the highest if they had read either the unmodified or simplified version of the text, respectively. It also shows that participants from both proficiency groups scored the lowest when they had read the elaborated version.

Mean Scores for the Three Types of Comprehension Questions

Figure 4.1. Mean Scores for Main Idea Comprehension Questions



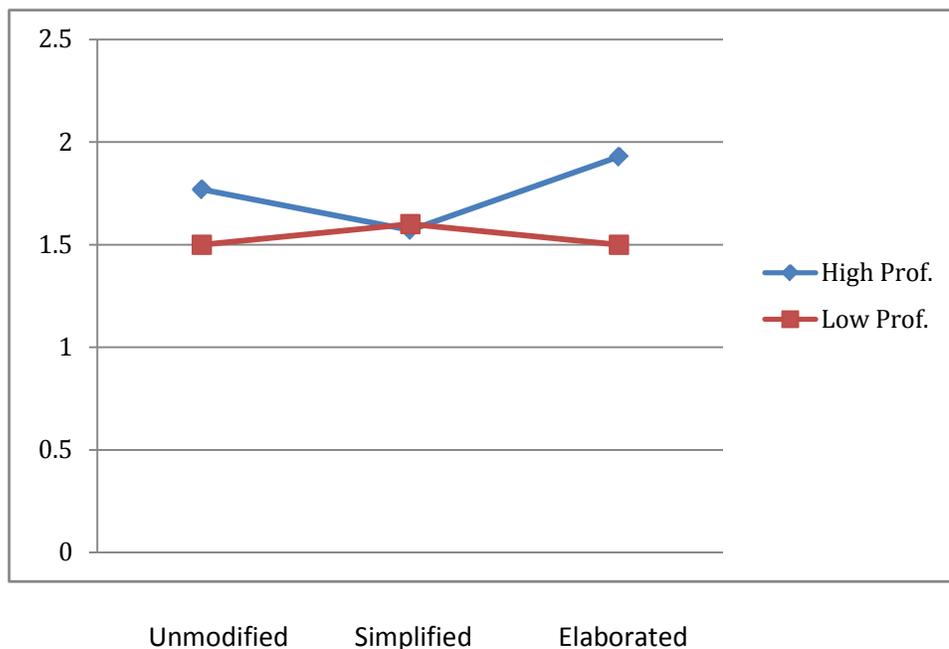
In addition to running an analysis of variance on the overall total comprehension scores for the participant groups, an analysis of variance was also run on each of the three types of comprehension items (main idea, specific, and inferential). In Figure 4.1 you will find the results of the analysis of variance for the main idea comprehension questions. It shows that for high proficiency groups,

those who read the unmodified texts scored the highest on the main idea comprehension questions with a mean score of 1.3 out of 3 possible points.

Following them was the group who read the simplified texts with a mean score of 1.2. Then, those who read the elaborated texts scored the lowest with a mean score of 1.0. Low proficiency students who read the simplified text scored the highest on the main idea comprehension questions with a mean score of 1.2 out of 3. That group was followed by students who read the elaborated version with a mean score of 1.0 and the group who had the lowest mean score of 0.6 was those who had read the unmodified text.

On Figure 4.2 you will find that the results of the analysis of variance for the specific comprehension questions showed that out of the high proficiency groups,

Figure 4.2. *Mean scores for Specific Comprehension Questions*



the students who read the elaborated text of Form C scored the highest with a mean score of 1.92 out of 3 possible points. They were followed by the group who read the unmodified Form A with a 1.76 mean score and then by those who had read Form B with a mean score of 1.57. Low proficiency students who read the simplified texts of Form B had the highest mean score for the specific comprehension questions with a score of 1.6. The low proficiency groups that read the unmodified texts of Forms A and the elaborated texts of Form C both had a mean score of 1.5.

Figure 4.3. *Mean Scores for Inferential Comprehension Questions*

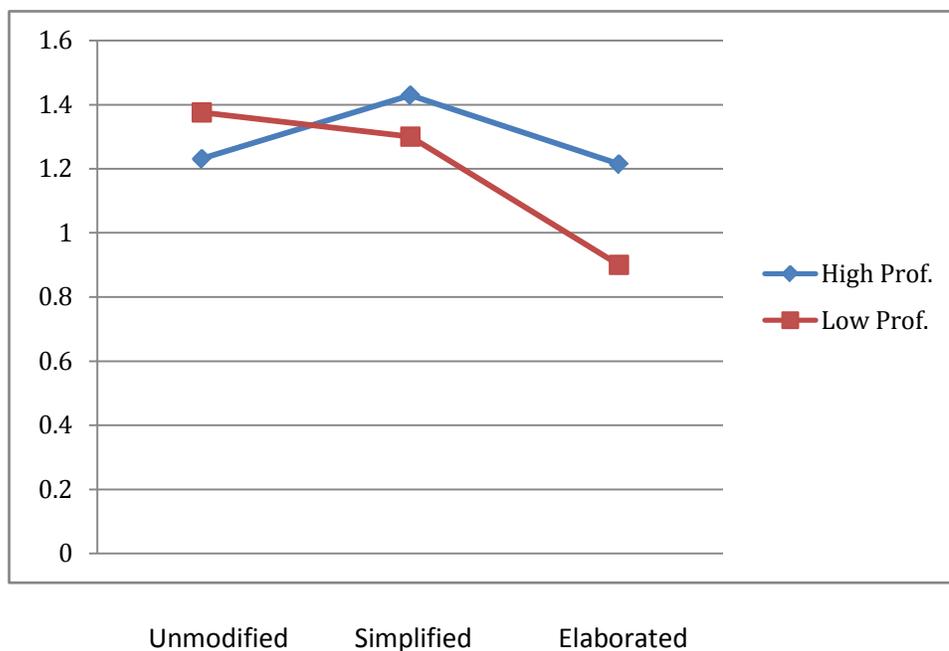


Figure 4.3 shows the mean scores according to proficiency level and form read for inferential comprehension questions. The high proficiency group who read the simplified version scored the highest with a mean score of 1.42 out of 3 possible points, followed by those who had read the unmodified version with a mean score of

1.23 and then scoring the lowest were those who had read the elaborated form with a mean score of 1.21. The low proficiency students who read the unmodified version scored the highest on the inferential questions with a mean score of 1.37. Next, was the group who read the simplified version with a mean score of 1.3 and following them was the group who read the elaborated version with a mean score of a 0.9.

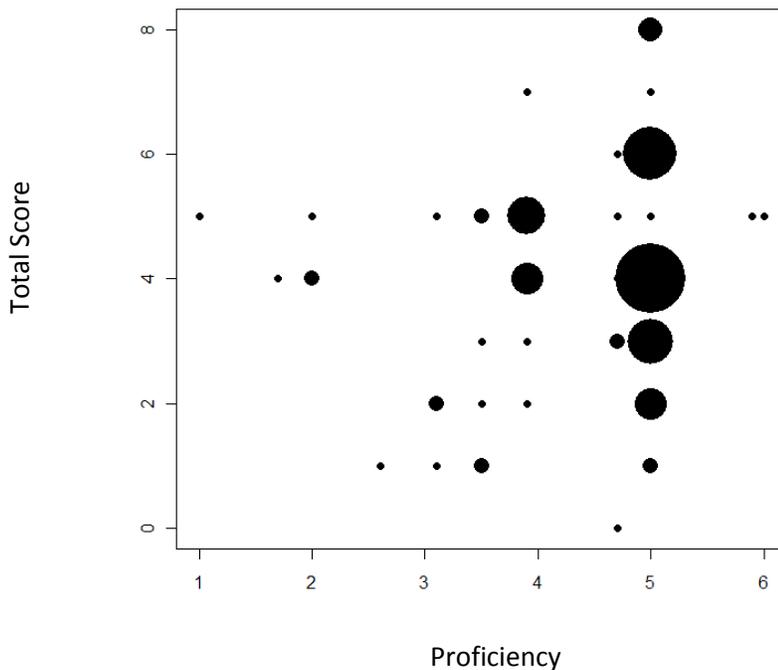
In general, the previous figures show that for the simplified texts, the high proficiency and low proficiency students scored nearly the same for each type of comprehension question. But the low proficiency students scored lower on the main idea questions if they read the unmodified text and lower on the inference questions if they read the elaborated text.

Regression Analysis of Student Scores and their Exact Proficiency Levels

Since the analysis of variance demonstrated that there was not a statistical difference among the mean scores of the students' reading comprehension tests based on the form that they read, nor on their classification into high and low reading proficiencies, we decided to expand our analysis even further. Due to the fact that the cut scores for determining a student's classification into the high or low proficiency groups were so close, 0.1 of a point difference (3.9 being classified as low proficiency and 4.0 as high proficiency), we decided to run a regression analysis to see if there was a relationship between student comprehension scores and their individual proficiency levels. The scatter plot in Figure 4.4 represents not only the distribution of the scores in relationship to their proficiency level but it also shows

the relative size of the number of students who had the same scores and proficiency level. Overall, the regression analysis demonstrates that there was not a significant relationship between the individual scores and their total comprehension score with the t value being 1.27 and the p value at a 0.2. However, in looking at the vertical line above proficiency level 5, it is noticeable that despite the fact that these students all have the same proficiency level in English there is wide range of comprehension scores produced by these students with the majority of students scoring around a 4 out of 9 possible points. This leads me to question whether their

Figure 4.4. *Distribution of Students' Total Scores in Relation to their Proficiency Level*



**Size of each dot is relative to the number of students who had this combination of proficiency level and score.*

English proficiency level is a key factor in predicting their ability to read and comprehend an expository text. Other factors, such as background knowledge related to the topic may be a more influential determinant of their ability to comprehend an expository text.

Discussion

Overall Comprehension Scores

In this study, the overall mean scores for the 9 item multiple choice comprehension test showed that high proficiency students performed best when they read the unmodified version of a text, followed closely behind by those that read a simplified version of the text and lastly the students who had read the elaborated version of the text scored the lowest. For the three groups of low proficiency students, the ones that read the simplified versions of the texts scored higher than those who had read the unmodified and elaborated texts, but not to a degree of significance. Students who had read the unmodified version of the texts scored slightly higher than those who had read the elaborated version of the texts. These results were surprising in that the high proficiency students performed best on the comprehension test when they had read the original unmodified text over both the simplified and elaborated versions, which had undergone linguistic modifications. It was not surprising to see that the low proficiency students performed better when they had read a simplified text.

Comparison of overall scores with similar studies

As mentioned earlier, the conclusions from my study contradict the findings of similar text modification studies (Li, et al., 2005; Oh 2001; Yano, et al., 1994) done with university and junior college students in Japan, and high school students in Korea and in the Philippines. The three studies found that English learners, who had read a modified text, whether simplified or elaborated, scored higher on the multiple choice comprehension tests than learners who had read an unmodified text. Yano's study in 1994 found that Japanese students that had read a simplified version of a text outperformed those that had read both the elaborated and unmodified versions; however, there was not a significant difference between the reading scores of the students who had read the elaborated and unmodified versions of the texts. Oh (2001) found that high proficiency students scored higher on the comprehension test when they had read the simplified text but were followed closely by those who had read the elaborated version. Those reading the unmodified text scored the lowest. Li's study (2005) showed that both high proficiency students and low proficiency students scored highest when they had read a simplified text. However, the elaborated version and unmodified version did not seem to make a big difference for high proficiency students, but did made a slight difference for the low proficiency students. The low proficiency students in Oh's study scored highest if they had read the elaborated version of the text. Right behind them was the group who had read the simplified version and a bit father behind were the students who had read the unmodified version.

Discussion of the overall comprehension results

Despite the fact that the idea of an unmodified text being more comprehensible than a simplified and elaborated version of that same text seems unlikely, I believe that there are some possible reasons for why the results came out the way they did. The fourth grade English language learner participants in my study have a very different academic and cultural background than those in previously mentioned studies. To the best of my knowledge, participants in the studies done by Li et al. (2005), Oh (2001) and Yano et al. (1994) were high school and university level students who had an uninterrupted educational background and who were learning English as a foreign language in their home country. In contrast to that, a large majority of participants in this study are refugees and immigrants learning English in the United States. Many of the participants in this study came to the United States under difficult and strenuous circumstances, fleeing their war-torn country or crossing the border with their undocumented parents in hopes of seeking a better life. And yet, once they arrive in the United States, they often are still found to be living in a state of poverty. These students who arrive as refugees and immigrants usually have experienced a highly interrupted educational background and thus, may have large gaps in their academic schemata. Therefore, the age and cognitive development of the participants in my study were drastically different in comparison to participants in similar studies.

While linguistic modification of an expository text seems like it should benefit the reader, there have been researchers who argue that elaboration actually results in texts that are longer, more complex and approximately 1.2 grade levels

above an unmodified text (Yano et al., 1994.) Thus, those texts would most likely overload the reader with too much information and result in confusing them instead of clarifying the meaning of the text. This leads some researchers to believe that an elaborated text would therefore be more difficult for a reader to comprehend (Chaudron, 1983).

It has been found that the level of background knowledge that a student has on a given topic can significantly impact his or her ability to comprehend concepts related to that topic (Echevarria, et al. 2010; Marzano, 2004). For input to be made comprehensible for elementary school English language learners, linguistically modified texts may be necessary but not sufficient when implemented in isolation from other techniques used to increase comprehension. Echevarria, et al., (2010) believes that content is made comprehensible through a variety of techniques including but not limited to the use of visual aids, graphic organizers, vocabulary previews and adapted texts. Sweet and Snow (2003) go on to state that a variety of influences may impact a learners' reading comprehension, these factors include: the student's reading ability, prior knowledge and experience, and motivation for reading a text. They also note that reading comprehension can only occur when the reader knows how to implement appropriate reading strategies, which will help them to make the content comprehensible. Therefore, it seems apparent that English language learners at the high school and university level who have not had an interrupted education, like those in the studies done by Li et al. (2005), Oh (2001) and Yano, et al. (1994), may not need all of the additional supports to make

the written input they receive comprehensible. For those students, the use of linguistically modified texts may be sufficient when implemented in isolation; however, it was not sufficient for the fourth grade participants in this study.

Results for the main idea comprehension items

The findings from this study showed that high proficiency students who read an unmodified text scored slightly higher on main idea comprehension items than those who had read the simplified version. Students who read the elaborated version scored the lowest on main idea questions. Low proficiency students scored highest on the main idea questions if they had read the simplified version followed by the elaborated version and then lastly they performed the worst on if they had read the unmodified version. These findings for the low proficiency students mirror the findings from the study conducted by Li et al. in 2005. For the high proficiency students in Li's study it didn't seem to matter which type of text they read, as they scored about the same regardless of text that was read. In Oh's study (2001) the opposite occurred; the type of text did not seem to impact the low proficiency students' scores on the main idea questions but it did impact the high proficiency students. Those having read the simplified version scored the best followed by those who had read the elaborated version and then those who had read the unmodified version scored the lowest.

Results for the specific comprehension items

High proficiency students who read the elaborated versions of the text scored higher on the specific comprehension questions than students who had read

the unmodified and simplified versions. Low proficiency students scored highest if they had read the simplified passages and they scored equally the same regardless if they had read the elaborated or unmodified version. Studies done by both Li (2005) and Oh (2001) showed that with the exception of the low proficiency group in Oh's study, all students tended to score highest if they had read a simplified version of the text. In Oh's study the low proficiency group scored slightly higher if they had read the elaborated version.

Results for the inferential comprehension items

Results on inferential comprehension items demonstrated that high proficiency students did best when they read a simplified version of the text and performed similarly if they had read either the unmodified or elaborated versions. Low proficiency students scored almost the same regardless if they had read a simplified version or the unmodified version. Those who had read the elaborated version scored the lowest. Interestingly enough, Oh's study (2001) showed that both highly proficient and low proficient students scored best on inferential items if they had read an elaborated version followed by those who had read a simplified version. Li's study (2005) demonstrated opposite results as the students of both proficiency levels scored highest on the inferential comprehension item if they had read the simplified version of the text. This leads me to speculate on Honeyfield's (1977, as cited in Oh, 2001) hypothesis that simplification of a text would interfere with a reader's ability to complete certain tasks, such as drawing inferences from a text. He believes that this occurs because the process of simplifying a text lends itself to

the deletion of essential information, which helps a reader to understand the relationships between pieces of information within a text. Therefore, either Honeyfield was incorrect in his hypothesis, or Li and I did not remove the information which helped the students to make the inferences from our simplified texts.

In Chapter Five I discuss the outcomes of the study as they relate to each of the research questions that this study initially set out to answer. I discuss what I learned through the process of researching and writing my capstone and address the implications of this study.

CHAPTER FIVE: CONCLUSIONS

In this chapter, I will discuss the findings of this study and reflect upon how modifying mainstream expository texts for English language learners can affect their reading comprehension scores. I will discuss what I learned through the data collection process and I will address possible implications for educators who teach English language learners.

The results of this study, as presented in chapter four, do not provide a clear indication of any significant effect that text modification can have on fourth grade English language learners' reading comprehension. Therefore, these findings suggest that caution should be used when generalizing the findings and claims from other text modification studies done with high school and university level students to elementary level students.

Review and Discussion of the Research Questions

1. Will fourth grade ESL students who read a modified (simplified or elaborated) version of a text comprehend it better than the fourth grade ESL students who read an unmodified version of the text, as shown by student scores on a multiple choice comprehension test?

The results of the study showed that low proficiency students scored higher if they had read a simplified version of the text but those who had read an

elaborated version did not score higher than those who had read an unmodified version. The high proficiency learners did not score higher if they read a simplified or elaborated version; they scored the highest on the unmodified version of the text. However, it is important to note that none of these differences in scores reached a level of statistical significance.

2. Will fourth grade ESL students who read an elaborated version of a text score higher on a reading comprehension test than the fourth grade ESL students who received the simplified version of the text?

In comparing scores of those who had read a simplified text with those who had read an elaborated text, those who had read the simplified text outperformed those who had read the elaborated text on all three types of comprehension items, but not to a level of statistical significance.

3. Will there be a relationship between the students' scores on the reading comprehension test and their annual English proficiency level?

Results showed that there was not a statistically significant relationship between the students' scores and their level of English; however, the high proficiency students did score higher than the low proficiency students regardless of the version of text that they read.

Implications

The results of this study provide ESL educators with a word of caution when it comes to using linguistically modified texts. The results of this study suggested that linguistic modification alone was not adequate support for English language

learners at the fourth grade level. I suspect that the comprehension results for these texts may have been different if additional supports such as visual aids, graphic organizers and pre-teaching of key vocabulary items had been implemented. Nevertheless, more research in this area needs to occur to validate those predictions.

Limitations of this Study

Like most studies, this study also had its limitations. The first limitation concerns the sample size of this study. There were only 69 participants in this study, which was significantly smaller in size when compared with similar studies that researched the effects of text modification on English learners' reading comprehension. Yano's study (1994) had 483 participants and Oh's study (2001) had 180 participants.

The second limitation regards the number of passages read and comprehension questions answered. This study consisted only of three passages and nine comprehension questions. Other studies had anywhere from six passages up to thirteen passages with many more comprehension questions. Due to the small sample size and limited number of passages read and comprehension questions answered, it is difficult to make generalizations about the results found in this study.

Third, the pilot study was done with fourth grade participants during the fourth quarter of the year; this means that their maturity level and stamina for reading was more developed than the fourth grade participants in the actual study, who were given the reading test during the first quarter of their fourth grade year.

Based on the pilot study results I estimated that the students would need approximately twenty minutes to complete the reading test; however, during the actual study, the participants needed around 40 minutes and seemed to be quite tired after completing the test. In hindsight, I should have predicted that first quarter fourth graders compared with fourth quarter fourth graders would have less stamina for test taking.

The fourth limitation regards the assessment tool that was used to measure student comprehension. Multiple-choice questions can at times give researchers a misrepresentation of what students actually know because there is the possibility that students simply are making good guesses (Bernhardt, 1991). A retell assessment in addition to the multiple-choice test could have added new insights into the students' level of comprehension. It is suggested that future researchers on this topic take these limitations into consideration when planning their studies.

Communicating and Using Results

I intend to share the results of the study with other ESL and mainstream teachers within my school district. I will develop a short summary of the findings and send them out to all of the ESL teachers who helped administer the tests at various testing sites throughout the district. Also, I will communicate the results of the study to our district's ESL instructional coach. She not only serves as a mentor for new ESL teachers but she is also in charge of planning our monthly district-wide ESL collaboration meetings. It is my hope that the findings from my research will

help guide educators as they look to incorporate text modification into their teaching techniques.

Summary

I have learned a great deal through the process of researching and writing my capstone on the effects that text modifications have on English language learners' reading comprehension. Not only did my findings lead me to better understand how I should modify expository texts for my students but I also learned a lot about the process of research. In modifying texts for my students in the future, I will not limit my accommodations to linguistic manipulation alone. Instead, I will pair the linguistic modifications with other techniques to increase comprehensibility of the text. Those techniques include but are not limited to the use of visual aids, graphic organizers and explicit vocabulary instruction.

As I mention earlier, the process of writing my capstone has not only increased my understanding of effective modification strategies to use with ELLs but it also helped me to gain a broader perspective on of the importance of research in the field of education. In the future when I read research articles I will have a stronger knowledge base of statistics from which I can draw upon to help me better understand the findings of that research. The knowledge that I have gained about the research process will also allow me to better determine the credibility of a research study and be able to look more critically at how valid and reliable the study is.

The process of writing this capstone has also helped me to become a better teacher for English language learners. I now know that linguistic modifications for an expository text are not sufficient accommodations when it comes to making a text more comprehensible for our elementary level English language learners. Thus, in the future I will not only make linguistic accommodations to the content material but I will also ensure that explicit instruction of key vocabulary words are taught prior to the lesson and that numerous visuals are added to the text and lesson.

In researching and writing this capstone, I have added my drop to the pool of knowledge. Over time, drop by drop, the overall knowledge gained will accumulate and lead to more understanding of what is helpful for students. It is my hope that the findings from this study will help guide researchers into new directions so that they may go on to discover profound insights about text modification for elementary school English language learners.

Appendix A:
Fourth Grade Reading Passages and Comprehension Questions

I have a dream (Unmodified)

Dr. Martin Luther King, Jr. was a Baptist minister. He lived in the 1950s and noticed that equality among people did not exist. People of color were discriminated against and treated very poorly. During this time period, the Supreme Court ruled on the case *Brown v. Board of Education*. This case was about ending segregation in public schools.

King fought for civil rights for all people. He made many speeches and marched in protests. He was trying to get the government to allow freedom to all people. King was eventually arrested and thrown in jail.

When he got out, he organized a march in Washington, D.C. On the steps of the Lincoln Memorial, he delivered his most famous speech. This speech talked about his dream that one day all children could sit and work together regardless of the color of their skin. His speech also talked about all Americans deserving the same rights.

Thousands of people heard this speech. This speech helped lead to laws like the Civil Rights Act of 1964. Dr. Martin Luther King, Jr. was, and still is, an inspiration to many.

I have a dream (Simplified)

Dr. Martin Luther King, Jr. worked for a church. He lived in the 1950s. He saw that equality between people did not exist. White people treated black people very poorly. The Supreme Court made a decision on the *Brown v. Board of Education* case in the 1950s. The case was about black children and white children going to public school together.

King fought for freedom for all people. He gave speeches. He marched in protests. He wanted the government to give freedom to all people. King was arrested. He was put in jail.

When he got out, he planned a march in Washington, D.C. He gave a famous speech. The speech talked about his dream. He wanted all children to be able to sit and work together. His speech also talked about all Americans having the same rights.

Lots of people listened to this speech. This speech helped make new laws. Dr. Martin Luther King, Jr. was, and still is, an inspiration to people.

I have a dream (Elaborated)

Dr. Martin Luther King, Jr. was a Baptist minister. A minister is someone who is a leader of a church. He lived in the 1950s and noticed that equality among people did not exist, which means that all people were not treated the same. People of color (black people) were discriminated against and treated very poorly. During this 1950s time period, the Supreme Court, a group of people in the United States who make decisions about laws, ruled, or decided, on the *Brown v. Board of Education* case. This case was about ending segregation in public schools. Segregation made black children and white children go to different public schools.

King fought for civil rights (freedom) for all people. He made many speeches, or gave many talks to people, and marched in protests to show that he did not like the laws. He was trying to get the government to allow or give freedom to all people. King was eventually arrested by the police and thrown, or put, in jail.

When he got out of jail, he organized, or planned, a march in Washington, D.C. Washington, D.C. is the capital of the United States and it is where laws are made. On the steps of the Lincoln Memorial, a well-known monument of the 16th President of the United States, King delivered, or gave, his most famous speech. This speech talked about his dream that one day all children, black and white, could sit and work together regardless of the color of their skin. His speech also talked about all Americans deserving, or being able to have, the same rights.

Thousands of people heard this speech. This speech helped lead to making laws like the Civil Rights Act of 1964, which said that people cannot be treated differently because of the color of their skin. Dr. Martin Luther King, Jr. was, and still is, an inspiration to many people.

Questions:

1. What motivated Dr. Martin Luther King Jr.? (Inferential)
 - a. the treatment of slaves
 - b. the lack of equal rights for all American citizens
 - c. the lack of representation for all Americans
 - d. the misunderstanding of the government

2. Which paragraph tells you why Dr. Martin Luther King wanted to fight for freedom for all people? (General)
 - a. second paragraph
 - b. first paragraph
 - c. fourth paragraph
 - d. third paragraph

3. Which of the following statements is not true about Dr. Martin Luther King, Jr.?
(Specific)
- a. He was an inspiration to many.
 - b. He fought for civil rights.
 - c. He was an excellent physician.
 - d. He was arrested and put in jail.

The Dust Bowl (Unmodified)

The Dust Bowl is a term used to describe a region that suffered from drought and dust storms during the Great Depression. The Dust Bowl of the 1930s lasted for about a decade. It was one of the most trying times in the history of the nation. Families struggled to survive during this time. The Dust Bowl actually caused the Depression to last longer.

The Dust Bowl was located along the southern Plains. Oklahoma, Kansas, and parts of Texas, New Mexico, and Colorado made up the Dust Bowl. Drought took away the rains and the water. The land was left dry and parched. The wind came and blew the dust around.

The blowing dust made it difficult to do even simple things. It was hard to breathe, eat and sleep with all the dust. People got sick from all the dust. Farmers were not able to grow crops. Food and water were scarce.

Sometimes the dust storms were so bad they were more like dust blizzards. One day was called "Black Sunday." On this day, the worst dust blizzard happened. It caused a lot of damage. The rains did not come until 1939.

The Dust Bowl (Simplified)

The Dust Bowl is the name for an area that had no rain and lots of dust storms during the Great Depression. The Dust Bowl of the 1930s lasted for about ten years. It was one of the most difficult times in the history of the United States. Families did not have enough food to live. The Dust Bowl made the difficult times last longer.

Oklahoma, Kansas, and parts of Texas, New Mexico, and Colorado were called the Dust Bowl area. There was no rain and water. The land was very dry. The wind blew the dust around.

The blowing dust made it difficult to do simple things. It was hard to breathe, eat and sleep. People got sick. Farmers were not able to grow food. Food and water were difficult to find.

Sometimes the dust storms were very bad. One very bad day was named “Black Sunday.” On Black Sunday, the worst dust storm happened. It caused a lot of problems. The rains did not come until 1939.

The Dust Bowl (Elaborated)

The Dust Bowl is a term used to describe a region, or area, that suffered from drought, or no rain, and dust storms, or blowing dry dirt, during the Great Depression. The Dust Bowl of the 1930s lasted for about a decade, or ten years. It was one of the most trying, or difficult, times in the history of the nation. Families struggled to survive during this time and some families did not have enough food to live. The Dust Bowl actually caused the Depression, or that difficult time period, to last longer.

The Dust Bowl was located along the southern Plains. Oklahoma, Kansas, and parts of Texas, New Mexico, and Colorado made up the Dust Bowl. Drought took away the rains and the water. The land was left without any water; it was dry and parched. The wind came and blew the dust around.

The blowing dust made it difficult to do even simple things. It was hard to breathe, eat and sleep with all the dust in the air. People got sick from all the dust. Farmers were not able to grow crops, or food. Food and water were scarce, or there was very little to eat and drink.

Sometimes the dust storms were so bad they were more like dust blizzards, or very bad storms. One day was called “Black Sunday.” On this day, the worst dust blizzard happened. It caused a lot of damage, or problems. The rains did not come until 1939.

Questions:

1. How did the Dust Bowl get its name? (Inferential)
 - a. The dust in the bowl kept spilling over.
 - b. The land was filled with dust.
 - c. The name was given when the country was struggling during the depression.
 - d. Dust and bowls were the two most common occurrences during that time.

2. What is the purpose of the third paragraph? (General)
 - a. to explain how the Dust Bowl was formed.
 - b. to explain how the Dust Bowl affected daily life.
 - c. to explain how Dust Bowls can be prevented.
 - d. to explain how people survived the Depression.

3. Based on the information in the passage, which one of these statements is true about the effects that the Dust Bowl had on people's lives? (Specific)
- The dust storms made people sick.
 - People had lots of money to spend.
 - Farmers had good crops during those years.
 - More people had babies during the Dust Bowl.

Killer Whales (Unmodified)

Have you ever heard of the killer whale? Did you know that killer whales live in oceans all over the world? They are found mostly in the Arctic and Antarctic oceans, where the water is cold. Killer whales can also be spotted on both shores of the United States. Killer whales have been spotted in warmer waters such as the Bahamas and the Gulf of Mexico. This just goes to show how adaptable the killer whale can be.

How do killer whales differ from other whales? One way is in their coloring. A killer whale is striking in its coloring of black and white. This makes it easy to spot. Killer whales have a sleek body form. They are smaller when compared to most whales. Killer whales are typically 19-22 feet long and can weigh anywhere from 8,000 to 12,000 pounds.

Killer whales get their name for a reason. They are the top predators in the ocean. Killer whales will eat almost any kind of sea animal including sea lions, fish, squid, seals, walruses, birds, sea turtles, penguins, and otters. It's been recorded that even a moose has been found in the stomach of a killer whale. Killer whales are very agile and can move quickly through the water. In fact, they are the fastest swimming marine mammals. This speed and agility makes it easy for the killer whale to hunt. Often times, killer whales will hunt in groups. This improves their chances of catching prey.

Killer Whales (Simplified)

Have you ever heard of the killer whale? Did you know that killer whales live in oceans all over the world? They are found mostly in the Arctic and Antarctic oceans. The water is cold in those oceans. Killer whales can also be seen on both shores of the United States. Killer whales have been seen in warmer waters such as the Bahamas and the Gulf of Mexico. This shows that the killer whale can easily change to fit into the environment where it is living.

How do killer whales differ from other whales? One way is in their coloring. A killer whale is easily noticed with its coloring of black and white. This makes it easy to see. Killer whales have a smooth body form. They are smaller than most

whales. Killer whales are normally 19-22 feet long. Whales can weigh 8,000 to 12,000 pounds.

Killer whales get their name for a reason. They are the top killers in the ocean. Killer whales will eat almost any kind of sea animal. For example, they eat sea lions, fish, squid, seals, walruses, birds, sea turtles, penguins, and otters. Even a moose was once found in the stomach of a killer whale. Killer whales can move quickly through the water. They are the fastest swimming sea mammals. This speed makes it easy for the killer whale to hunt. Killer whales hunt in groups. This helps them kill animals.

Killer Whales (Elaborated)

Have you ever heard of the killer whale? Did you know that killer whales live in oceans all over the world? They are found mostly in the Arctic and Antarctic oceans, where the water is cold. Killer whales can also be spotted, or seen, on both shores of the United States. Killer whales have been spotted, or seen, in warmer waters such as the Bahamas and the Gulf of Mexico. This just goes to show how adaptable the killer whale can be, or how it easily changes to fit into the environment where it is living.

How do killer whales differ from other whales? One way is in their coloring. A killer whale is striking, or easily noticed, with its coloring of black and white. This makes it easy to spot, or see. Killer whales have a sleek, or smooth, body form. They are smaller in size when compared to most whales. Killer whales are typically, or normally, 19-22 feet long and they can weigh anywhere from 8,000 to 12,000 pounds.

Killer whales get their name for a reason. They are the top predators, or killers, in the ocean. Killer whales will eat almost any kind of sea animal including sea lions, fish, squid, seals, walruses, birds, sea turtles, penguins, and otters. It has been recorded, or written down, that even a moose was once found in the stomach of a killer whale. Killer whales are very agile and can move quickly through the water. In fact, they are the fastest swimming marine, or sea, mammals. This speed and agility makes it easy for the killer whale to hunt. Often times, killer whales will hunt in groups. This improves, or helps, their chances of catching prey, or killing animals to eat.

Questions:

1. What is this passage mainly about? (General)
 - a. how the killer whale eats
 - b. predators or animals that hunt the killer whale
 - c. the different types of whales
 - d. general facts about the killer whale

2. To improve their chances of catching animals, killer whales often... (Specific)
 - a. hunt animals that can't swim
 - b. hunt tiny animals.
 - c. hunt in groups.
 - d. attack at sunset.

3. Why do you think Killer Whales are the top predator or killer in the ocean? (Inferential)
 - a. The Killer Whale has a body that is black and white.
 - b. Killer Whales can move quickly through the water.
 - c. Killer Whales are smaller than most whales.
 - d. Killer Whales are very adaptable.

Appendix B:
A Breakdown of the Modifications Implemented in Each Text

Text: I Have A Dream

Modification	Unmodified	Simplified	Elaborated
Low frequency word replaced with high frequency word	-	15	-
Definition of synonym added	-	-	19
Verb tense changed (passive to active)	-	1	-
Deletion of unnecessary information	-	3	-
Pronoun replaced by name of noun	-	1	-
Compound sentence broken into two simple sentences	-	3	-
Topic is fronted	-	1	1
Additional Information			
Number of sentences	15	20	19
Total number of words in the passage	185	164	317
Average number of words per sentence	12.3	8.2	16.7

Text: The Dust Bowl

Modification	Unmodified	Simplified	Elaborated
Low frequency word replaced with high frequency word	-	11	-
Definition of synonym added	-	-	12
Verb tense changed (passive to active)	-	-	-
Deletion of unnecessary information	-	8	-
Pronoun replaced by name of noun	-	2	-
Compound sentence broken into two simple sentences	-	-	-
Topic is fronted	-	-	-
Additional Information			
Number of sentences	20	19	20
Total number of words in the passage	193	169	247
Average number of words per sentence	9.7	8.9	12.3

Text: Killer Whales

Modification	Unmodified	Simplified	Elaborated
Low frequency word replaced w/ high frequency word	-	11	-
Definition of synonym added	-	-	12
Verb tense changed (passive to active)	-	-	-
Deletion of unnecessary info	-	5	-
Pronoun replaced by name of noun	-	2	-
Compound sentence broken into two simple sentences	-	3	-
Topic is fronted	-	-	-
Additional Information			
Number of sentences	22	25	22
Total number of words in the passage	246	237	291
Average number of words per sentence	11.2	9.5	13.2

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