This thesis titled

The Role of Background Knowledge in ESL Basic Reading: A Closer Look at Emergent ESL Readers and their Performance within Culture-Specific Reading Material

by

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ABSTRACT

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The Role of Background Knowledge in ESL Basic Reading: A Closer Look at Emergent ESL Readers and their Performance within Culture-Specific Reading Material (100 pp.)

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Statistics show that English as a Second Language (ESL) children within the US education system continue to perform below their native speaking peers when it comes to local and national test scores of academic progress. Reading, as an important factor of such progress, is the main focus of this project. ESL children bring a lot to the reading table, i.e. varying experience with print, varying phonetic systems and the awareness thereof, and a variety of background knowledge.

This study investigates the impact of cultural background knowledge on reading performance as well as content comprehension for low reading level students from Somalia currently enrolled in a sheltered ESL program of a Middle School in Columbus, Ohio. For the study, the ESL children as well as a control group of native speaking first graders read two text passages. Each passage represents specific cultural elements of one of the relevant cultures. The children were asked to read both texts aloud at different times and retell the content immediately afterwards, in order to follow the procedures of Goodman and Burke’s Reading Miscue Inventory. Various statistical tests were run and frequency analyses investigating comprehension, speed and accuracy were performed. The findings of the study may be consistent with previous research, suggesting an
increase in comprehension when reading material corresponds with the reader’s cultural background knowledge.

These results may have implications regarding the selection of reading materials for ESL assessment purposes as well as ESL students’ progress in their reading development.

Approved: 

Scott H. Jarvis

Associate Professor of Linguistics
This thesis

is dedicated to

Gisela, Helga and Jesse;

the two generations that give me all my strength
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# TABLE OF CONTENTS

<table>
<thead>
<tr>
<th>Section</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>ABSTRACT</td>
<td>3</td>
</tr>
<tr>
<td>ACKNOWLEDGMENTS</td>
<td>6</td>
</tr>
<tr>
<td>LIST OF TABLES</td>
<td>11</td>
</tr>
<tr>
<td>LIST OF FIGURES</td>
<td>12</td>
</tr>
<tr>
<td>CHAPTER ONE: INTRODUCTION</td>
<td>13</td>
</tr>
<tr>
<td>General Background</td>
<td>13</td>
</tr>
<tr>
<td>Statement of the Problem</td>
<td>15</td>
</tr>
<tr>
<td>Purpose of the Study</td>
<td>16</td>
</tr>
<tr>
<td>Research Questions</td>
<td>18</td>
</tr>
<tr>
<td>Hypotheses</td>
<td>18</td>
</tr>
<tr>
<td>Definitions of Terms</td>
<td>19</td>
</tr>
<tr>
<td>Significance of the Study</td>
<td>21</td>
</tr>
<tr>
<td>Limitations of the Study</td>
<td>21</td>
</tr>
<tr>
<td>Summary</td>
<td>22</td>
</tr>
<tr>
<td>Organization of the Study</td>
<td>23</td>
</tr>
<tr>
<td>CHAPTER TWO: LITERATURE REVIEW</td>
<td>24</td>
</tr>
<tr>
<td>Introduction</td>
<td>24</td>
</tr>
<tr>
<td>Cultural Background Knowledge</td>
<td>25</td>
</tr>
<tr>
<td>Reading Processes</td>
<td>31</td>
</tr>
<tr>
<td>Literacy Experience</td>
<td>35</td>
</tr>
</tbody>
</table>
Miscue Analysis............................................................................................................ 36

CHAPTER THREE: METHOD ....................................................................................... 41
Introduction ................................................................................................................... 41
Participants .................................................................................................................... 41
Materials ....................................................................................................................... 43
Procedure ...................................................................................................................... 46
Data Analysis ................................................................................................................ 47

CHAPTER FOUR: RESULTS AND DISCUSSION ....................................................... 53
Results ........................................................................................................................... 53
Numbers of Miscues that caused a Complete Loss of Comprehension (Ncom) ....... 57
Retelling Scores ............................................................................................................ 58
Accuracy ....................................................................................................................... 60
Speed ............................................................................................................................. 61
Discussion ..................................................................................................................... 62

CHAPTER FIVE: CONCLUSION................................................................................... 67
Objectives ..................................................................................................................... 67
Pedagogical Implications .............................................................................................. 69
Recommendations for Further Research ....................................................................... 71
Conclusion .................................................................................................................... 72

REFERENCES ................................................................................................................. 74

APPENDIX A: The Sleepover.......................................................................................... 78

APPENDIX B: THE HYENA AND THE FOX................................................................. 80
LIST OF TABLES

<table>
<thead>
<tr>
<th>Table</th>
<th>Description</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>Table 1: Reading Processes</td>
<td></td>
<td>34</td>
</tr>
<tr>
<td>Table 2: Reading Speed</td>
<td></td>
<td>50</td>
</tr>
<tr>
<td>Table 3: Reading Accuracy</td>
<td></td>
<td>50</td>
</tr>
<tr>
<td>Table 4: Reading Comprehension</td>
<td></td>
<td>51</td>
</tr>
<tr>
<td>Table 5: Recall Ability</td>
<td></td>
<td>59</td>
</tr>
</tbody>
</table>
LIST OF FIGURES

<table>
<thead>
<tr>
<th>Figure</th>
<th>Description</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>Figure 1</td>
<td>Interaction between Comprehension and Story Type</td>
<td>55</td>
</tr>
<tr>
<td>Figure 2</td>
<td>Interaction between Recall Ability and Story Type</td>
<td>56</td>
</tr>
<tr>
<td>Figure 3</td>
<td>Ncom NNS and NS</td>
<td>58</td>
</tr>
<tr>
<td>Figure 4</td>
<td>Retelling NNS and NS</td>
<td>60</td>
</tr>
<tr>
<td>Figure 5</td>
<td>Accuracy NNS and NS</td>
<td>61</td>
</tr>
<tr>
<td>Figure 6</td>
<td>Speed NNS and NS</td>
<td>62</td>
</tr>
</tbody>
</table>
CHAPTER ONE: INTRODUCTION

General Background

In today’s world of globalization and opportunities, second language acquisition becomes a daily issue for immigrants, teachers, administrators, researchers, politicians and their children. According to the Department of Homeland Security’s Yearbook of Immigration 2007, the number of “persons obtaining legal permanent resident status” in the United States in the fiscal year of 2007 is 1,052,415 (http://www.dhs.gov/ximgtn/statistics/publications/LPR07.shtm). The number of school-age children within this number is roughly 250,000. These numbers do not include families waiting on permanent residency or any other legal status. The majority of families immigrating to the United States speak a language other than English. Consequently, the children have to acquire the target language in order to join their native speaking peers in school and reach their academic goals. Over the past thirty years, researchers, teachers and administrators have worked diligently to understand efficient second language acquisition and to implement ground breaking pedagogical methods; however, low test scores and academic performance of English as Second Language (ESL) children demonstrate a further need of continuation thereof. Particularly the reading performance has had the attention of researchers and educators, as reading has been identified as a determining factor of academic success for any child in a school
system. Reading performance has also been the sole focus of this project, particularly the reading performance of ESL children.

My interest in this topic was first piqued by Labov’s (2006) research on the reading achievement gap of African American children in Pennsylvania and California. Although not entirely compatible, the acquisition of lower level reading processes of native speaking children has similarities to the of non-native speaking children. Labov found that African American Vernacular (AAVE) speaking children encounter difficulties predicting and inferencing and consequently identifying sounds, words and meaning due to distinct lexical and structural differences between AAVE and Standard American English (SAE) as well as culturally unfamiliar context. The findings of Labov’s study led me to begin reflecting on the reading achievement gap found in ESL children in public school in the U.S. Presumably ESL children’s reading performance could be influenced by contextual comprehension strategies such as prediction and inference within culturally specific reading material as well. Furthermore, as seen in Labov’s research, ESL children may also encounter difficulties identifying sounds, words and meaning due to a lack of ability to predict and infer the upcoming events. In other words, errors may occur due to culturally unfamiliar story elements and concepts.

Investigating text-difficulty through miscue analysis (Goodman, 1969) suggested the term miscue in substitution of the term error, for unexpected responses during a child’s reading aloud task such as omission, substitution or insertion of phonemes, words or phrases), Altwerger and Goodman (1981) conclude: “Miscues will occur when certain
lexical items, syntactic structures, concepts or events introduced in the story are unexpected, unfamiliar or in some other way difficult for the reader to predict.” (p. 9).

Statement of the Problem

ESL learning children have many obstacles to overcome when entering the educational system. Oral language proficiency in the English language, phonemic and syntactic awareness often quite different from the first language (L1), and cultural adaptation are just a few of the language-related skills the ESL child has to develop while learning the grade level curriculum of mathematics, science and other subjects. Many studies have been conducted to address these factors focusing on a variety of learning styles, enhancement as well as environmental aspects, such as phonetic intervention, computer assisted language learning (CALL), motivation, administrative aspects, and more. In many cases, findings of these studies have offered valuable suggestions to the facilitation of language acquisition for the ESL child. However, the ESL child is still far behind the national average, according to standardized tests for public schools. Statistics, as found in The 2005-2006 Annual Report on Educational Progress in Ohio, demonstrate the achievement gap. The overall percentages of all students passing all five subjects (reading, writing, mathematics, science and social studies) tested by the Ohio Graduation Test (OGT), a replacement for the ninth-grade proficiency test, are:

- White 83%
- Multiracial 71.3%
- Hispanic 59.3%
- Black 47.9%
• Limited English Proficient 42.8% (Ohio Department of Education, 2005-06)

The reading test scores of the prior year, according to the National Center for Education Statistics, showed that 73% of fourth grade test-takers categorized as ESL students performed below grade level. Reading has been identified as the determining tool to academic success (Peregoy and Boyle, 2000). It is the basis for the mastery of mathematics, science and many other subjects and therefore suggests that the aforementioned test results illustrate a need for improved reading instruction that will allow the ESL child to function academically outside of the sheltered ESL instructional environment. Furthermore, they indicate a need for further second language (L2) research specifically focusing on ESL children’s reading development to increase these children’s chances of academic success.

Purpose of the Study

Teachers and linguists agree that children’s motivation to read partially depends on how well they can relate to the context of a book. This unsurprising phenomenon has been observed in first language (L1) as well as (L2) acquisition studies, for adults as well as for children (Alpektin, 2006; Anderson, 2004; Carrell, 1987; Grabe and Stoller, 2004; Johnson, 1981; Reynolds et al, 1982; Steffensen et al, 1979). However, these studies have generally been conducted with participants who have already acquired a level of literacy prior to the research, rather than with participants who are in the very basic reading stages.

Labov (2006) determined that, in the beginning stages, African American Vernacular English (AAVE) speaking children learning to read will encounter difficulties
with unfamiliar words and structures, as they do not exist in AAVE, as well as with unfamiliar content that culturally does not relate to the children’s life situations and experiences. Taking a closer look at second language acquisition and the ESL child arriving in the target language country (The United States, in this case), a similar situation can be observed, as the ESL child will be confronted with an environment that consists of all of the above. Many studies have investigated the effects of factors such as phonetic and syntactic awareness, vocabulary acquisition, context and motivation, and the results have suggested that these factors have a facilitative effect on children’s L2 acquisition.

It is my intention to investigate the effects of cultural background knowledge on children’s L2 reading performance and in particular the reading performance of middle school children from Somalia at a very basic reading level. As this study does not intend to test the hypotheses of schema theory nor anticipates making any claims related to schema theory, the terms *Schema* or *Schemata* will only be utilized when reviewing literature that referred to knowledge structures as such.

All of the participating L2 children have recently immigrated to the US and are lacking L1 reading proficiency, according to Squires, Assistant Principal at the ESL Welcome Center of Mifflin Middle School, Columbus OH, at the time of this study (personal interview, 2008). With this project, I will aim to raise awareness of possible interference in the reading process through culturally unfamiliar contexts in books used for the ESL child’s reading development. Furthermore, I will investigate whether an
interaction of story content, reading performance and ESL students’ reading comprehension exists.

Research Questions

1. Does the cultural background knowledge of ESL children from Somalia who have recently immigrated to the US impact their content comprehension and word recognition within their English reading performance?

2. Are reading fluency, speed, and accuracy affected by cultural background knowledge within culture-specific reading material?

Hypotheses

Hypothesis 1 is based on schema research studies such as Carrell (1987), Malik (1990), Johnson (1981) and Steffensen et al (1979). Among others, these researchers have demonstrated an increase in the effective use of reading strategies as well as an increase in comprehension when background knowledge corresponds with the context.

1. Content comprehension will increase when cultural background knowledge corresponds with the context that ESL children from Somalia are reading.

Hypotheses 2 and 3 assume a decline in the reading performance of the children investigated in this study when reading the culturally unfamiliar text. These assumptions are based on Labov’s (2006) findings that the children’s ability to recognize and/or decode reading passages when structure, form or content are unfamiliar was compromised.
2. The number of miscues (the term suggested by Goodman (1969) in opposition of the term error) will increase when ESL children from Somalia are confronted with culturally unfamiliar content in their reading.

3. Reading speed will increase when ESL children from Somalia are confronted with a text passage containing culturally familiar elements.

Definitions of Terms

*Afrikan American Vernacular English (AAVE)*: is a dialectal variation of standard American English spoken primarily by African Americans. AAVE is also referred to as Ebonics.

*Af-Maay*: (also known as Mai-Mai) is a dialect of the Somali language spoken by the Somalia Bantu.

*Automated Word Recognition Phase*: is a developmental L1 reading level in which the “child recognizes common words automatically (without effort) as well as accurately”(Spear-Swerling, 2004,p. 524). According to Spear-Swerling (2004), in this level the child:

- does not usually rely on context to aid or speed word recognition
- makes use of larger letter pattern units in word recognition, integrates automatic word recognition with comprehension processes for fluent text reading
- has age appropriate oral language comprehension” (p. 524).

*Background Knowledge (BK)*: refers to knowledge structures. These structures are shaped through experiences the reader has of concepts, ideas, events, conventions and
more, interrelated with culture, race, age, etc. For the purpose of this study, cultural knowledge structures are relevant and the term cultural background knowledge will be use throughout the document. The terms Schema or Schemata will only be used when reviewing literature that referred to knowledge structures as such. This has been established as no claims related to schema theory are anticipated.

*Controlled Word Recognition Phase:* is a developmental L1 reading level in which the “child makes full use of phonetic cues in word recognition and is generally accurate, but not automatic, in reading common words” (Spear-Swerling, 2004, p.523).

According to Spear-Swerling (2004), in this level the “child

- has more advanced level of phonemic awareness
- may rely on context to speed word recognition
- has age appropriate oral language comprehension but lower reading comprehension primarily because of limitation in word recognition.” (p. 523)

*Miscue:* the term “miscue” was introduced by Goodman (1969) to describe the idea of unexpected responses that occur during a read aloud task. He suggested the use of *miscue* as opposed to the term *error*, as miscues, according to Goodman (1969), allow for insightful interpretations of the actual reading process rather than the categorization of random mistakes and thus are “windows of the reading process” (p. 123). Miscues include the omission, substitution or insertion of phonemes, words or phrases.

*Miscue Analysis:* refers to the systematic classification of every miscue occurring in one complete text as graphophonemic, syntactic or semantic in nature. According to
the Miscue Analysis Procedures presented by Goodman and Burke (1972), an unguided retelling follows the reading. This process permits the researcher to detect any contextual comprehension that has taken place during the reading. Furthermore, when correlated with the classified miscue information, the reader’s use of comprehension strategies can be distinguished.

Significance of the Study

In the past, literature has provided valuable insights into the ESL reading process in light of background knowledge; however, researchers have focused on learners who had literacy training of some kind in their first language prior to the second language acquisition process. The present study intends to look at the emerging reader who has to acquire the target language as well as basic reading skills simultaneously on a novice level.

Limitations of the Study

Children’s academic achievements depend on many factors, including social and economic environment, motivation, cognitive abilities, opportunity and others. I am aware of the limited time and resources I have available and will lack personal background information about the subjects as well as a sufficient number of subjects for a widely generalizable result. In addition, the children within the chosen reading level vary extensively in language proficiency. Furthermore, the children are in an ESL setting and therefore have had various exposures to the target language culture. The subjects in this study are from a culture with a story tradition that is an oral tradition and therefore will most likely have not been exposed to any written story material in their first language.
Furthermore, the parents of the participants are illiterate according to Squires, assistant principal of the ESL Welcome center at the time of this study, and do not have the ability to read to or with their children in either language. Therefore, presumably the only written language the children have been exposed to in the target culture and language context and may consequently result in a stronger background knowledge of US culture-specific story elements and concepts rather than of their own. Finally, the presence of the researcher possibly changed performance and focus ability as well as attitude of the children.

Summary

In this project, I investigated ESL children’s reading development within two different culture-specific contexts. I aimed to compare miscue comprehension categories and frequency within two level appropriate adjusted texts, one from an American children’s book that includes elements culturally specific to the US and one translated African folktale, taken from the Lyndale school S.P.I.R.A.L. Project including elements culturally specific to East Africa. Hypothesizing that prior cultural experience and knowledge are activated during the reading process to enable comprehension, I predicted that a breakdown in comprehension alongside an increase of the numbers of miscues could occur when cultural BK does not correspond with the information presented in the text. As prior research has focused on already established reading skills and the improvement of such, I targeted a population that is in the beginning stages of reading development, hoping to find an indication of the impact cultural BK may have on comprehension and word recognition at the earlier stages of reading development. I
anticipated finding culturally familiar material to function as an aid for ESL children in the difficult task of learning to read. By undertaking this study, I hope to be able to contribute to the enhancement of ESL children’s reading development and ultimately their academic success. Furthermore, I hope to raise awareness as to how important it is to carefully select reading material for the beginning ESL reader, going beyond simple level analysis. This study may also have implication for the selection of reading material used for reading performance assessment.

Organization of the Study

The present study is divided into five chapters. Chapter One is an introduction to the problem, the purpose as well as the research questions with hypotheses, the definition of terms and the organization of the study. Chapter Two provides a theoretical overview of the literature including aspects of background knowledge within ESL reading, reading processes in general and miscue analysis used to investigate reading skills and strategies. Chapter Three describes the methodology, including participants, materials and procedures of data collection and analysis. Chapter Four reports the statistical results and additionally provides a descriptive analysis with a discussion. Chapter Five is a summary of the study and a discussion of pedagogical implications and recommendations for further research in light of the findings.
CHAPTER TWO: LITERATURE REVIEW

Introduction

Reading comprehension, one focus of this project, is related to Schemata, also referred to as Background Knowledge. Although researchers do not agree on how background knowledge is activated, there is a general consensus that there exists a strong connection between background knowledge and reading comprehension (Alptekin, 2006; Anderson, 2004; Anderson and Pearson, 1988; Bransford, 2004; Carrell and Eisterhold, 1988; Carrell, 1987; Coady, 1979; Grabe, 2004; Johnson, 1981; Nassaji, 2007; Pritchard, 1990; Reynolds et al, 1982; Steffensen et al, 1979). Nassaji, (2007) clarifies:

There is no doubt that successful comprehension depends on inferencing at all levels of text comprehension, ranging from connecting text to background knowledge, different parts to one another, and known elements to unknowns (p.85).

Fluency, another focus of this study, has not been positively linked to background knowledge; however, Klauda and Guthrie (2008) state, “empirical studies of the relationships among reading skills have often reported on moderate to high positive correlations between measures of fluency and comprehension” (p.310). Therefore an investigation of the role of background knowledge within these reading skills seems obvious.

This literature review is intended to give a brief overview of schema theory and the effect of cultural schemata or background knowledge on reading. In addition, this
review aims to provide concise insights into the reading processes, and give relevant examples of miscue analysis used to determine reading proficiency.

Cultural Background Knowledge

Background knowledge is often referred to as Schema or Schemata in literature. The author of this study does not anticipate to make any claims related to Schema theory nor test Schemata hypotheses, therefore will only use the terms Schema or Schemata when the reviewed literature refers to either one.

Schema theory in the literature focuses on two types of classifications: the first is formal schemata, referring to the knowledge the reader has of rhetorical structure of the text. The second is content schemata or background knowledge, referring to the reader’s conceptual content knowledge (Alptekin, 2006). Relevant to this study is the latter (content schemata/background knowledge) as I intend to investigate cultural background knowledge and its influence on the developmental processes of beginning readers.

As Pritchard (1990) states, schema theorists believe knowledge to be stored in “schematic structures (schemata) which are organized representations of one’s BK” (p. 275). He furthermore explains that “early theorists suggest that a foreigner who reads a story that presupposes a perspective of a culture will comprehend it quite differently and probably less effectively than a native of that culture” (Pritchard, 1990, p.275).

According to Anderson (2004), schema theory emphasizes that a text is not restricted to one interpretation and that “the schema brought to the text will depend upon the reader’s culture” (p.597). He provides a list of six functions schema has:

- “provides ideational scaffolding for assimilating text information
facilitates selective allocation of attention
enables inferential elaboration
allows orderly searches for memory
facilitates editing and summarizing
permits inferential reconstruction” (Anderson, 2004, pp.598-599)

Bransford (2004) suggests that Anderson’s views of schemata imply that the activation of schemata plays a fundamental role in the process of comprehension as well as memory. He furthermore concludes that instead of poor comprehension, the child may just lack appropriate schemata. Thus, if there are variances between the teacher and the child’s contextual interpretations, he concludes, an assessment might not reflect the child’s actual comprehension ability (Bransford, 2004). Referring back to the list of six functions, Bransford (2004) states, “it may be possible to add to Professor Anderson’s list of ‘schema functions’, but the six functions he cited are sufficient to illustrate why the knowledge possessed by the learner has pervasive effects on performance” (p.608).

In Pritchard’s (1990) study of 60 high school students of the US and Micronesia (Palauan speakers), the author proposes that these functions are most accessible when a reader is presented with culturally familiar content in a text. He investigated the reading processing strategies of 11th grade students reading aloud and recalling two texts written in the form of a letter. Each letter reported on a funeral that took place in each of the speech communities. He organized reading processing strategies into five major
categories with several sub categories,

1. “developing awareness
2. accepting ambiguity
3. establishing intrasentential ties
4. establishing intersentential ties
5. using background knowledge” (Pritchard, 1990, p.280).

Pritchard found the fourth category, establishing intersententialties, and the fifth category, using background knowledge, to be predominantly accessed when the material was culturally familiar. These categories include widely acknowledged comprehension strategies such as prediction and inference, and are driven by prior knowledge.

A look at earlier research confirms such findings. Steffensen, Joag-Dev and Anderson (1979) examined the reading speed and the ability to recall as well as modifications made by the reader. As in Pritchard’s study, the participants had two distinctly different cultural backgrounds. 19 Indian ESL students and 20 US students were each asked to read two letters containing information on wedding procedures, representative of the two respective cultures. The findings demonstrated a significant correlation between nationality and the cultural content; in other words, the US students were able to read the text describing American wedding procedures significantly faster than the text containing information about Indian wedding traditions, while the Indian students showed the opposite pattern with reversed texts. The researchers also found that the US students were significantly more successful than the Indian students in recalling “idea units” from the US text (Steffensen et al, 1979, p.18). Steffensen et al (1979)
discussed their results as strong evidence of the influence of BK on comprehension. Thus, they concluded, “children’s (ESL) difficulties may be connected to the cultural viewpoints dominant to reading material” (Steffensen et al, 1979, p.28).

Johnson’s (1981) study strengthened these arguments. She investigated the effects of language complexity on comprehension in comparison to cultural BK by adding simplified adaptations of two culturally different texts. Her participants, 46 Iranians and 19 American students, were randomly assigned to read either the two simplified folklore passages or the two original, linguistically complex, folklore texts from both cultures. Her results indicate that simplified texts as well as original texts with culturally familiar content are comprehended more effectively (Johnson, 1981).

A year later, Reynolds, Taylor, Steffensen, Shirey and Anderson (1982) investigated the effects of cultural schemata and reading comprehension among English native speaking children from different cultural backgrounds. 105 8th grade African-American (black) and European American (white) children were asked to read and construe “a letter about a school incident that could be interpreted as a fight or as an instance of ‘sounding’. Sounding is a form of ritual insult predominantly found in the black community” (Reynolds et al, 1982, p. 357). The findings of this study reported that “recognition probes, theme analysis, and disambiguations and intrusions” illustrated a culturally based interpretation by the participants (Reynolds et al, 1982, p.361-362). More specifically, the African-American children had a tendency to infer that sounding rituals involved friends, whereas the European Americans leaned toward interpreting them as fights (Reynolds et al, 1982).
The results of this study give strong evidence that cultural schemata affect the comprehension processes as they are knowledge of structures, concepts and ideas involving one’s culture and furthermore may differ within speech communities as well (Reynolds et al, 1982). In other words, members of one speech community are likely to interpret concepts and/or ideas within a text similarly.

Referring back to ESL learners, Carrell (1987) looked further into the functions and roles of cultural schemata within reading comprehension. Carrell targeted both content and formal schemata as she investigated two groups of ESL speakers with two different religious backgrounds, Catholicism and Islam. The participants read and interpreted little known fictionalized historical accounts of religious figures of both religious groups and Carrell observed that content schemata played a predominant role (Carrell, 1987, p.476). Carrell's study concluded that the degree of involvement depended upon the participants’ background knowledge of the religion in the texts (1987).

Furthermore, Carrell (1987) found the degree of perceived difficulty of text organization significantly correlated to the prior knowledge of rhetorical form. Both types of schemata (formal and content) investigated in her study play a significant role in comprehension, Carrell concludes (p.476).

In a more recent study, Keshavarz, Attai and Ahmadi (2007), revisited the question of the effect that the simplification of a text has versus content schemata on ESL or EFL (English as a foreign language) readers’ comprehension. The participants were 240 Iranian EFL students from two different religious backgrounds, Christianity and Islam. As in Carrell’s (1987) study, Keshavaraz et al (2007) divided the participants into
groups and asked them to read text containing information about a religious figure, both of great importance and familiar to the Muslim participants. Furthermore, the participants were asked to read an additional text consisting of information about a religious figure determined by the researchers to be much less familiar to the subjects. Both texts were also presented in lexically simplified versions before the participants were asked to undertake eight reading comprehension tests. Keshavarz et al (2007) found no significant effect of lexical simplification on reading comprehension; however, the content familiarity was found to be significant for reading comprehension and recall (p.26). Their findings not only indicate that content schemata, as found in Carrell (1987), had a greater effect on comprehension than the lexical simplification of a text, but furthermore provided evidence for an interaction between cultural schemata and reading comprehension. Keshavarz et al (2007) stated:

“The lexical simplification had a significantly facilitative effect on reading comprehension of the content-unfamiliar texts, but it had an impeding effect on the participants’ comprehension of the content-familiar text, although the effect was not significant. This may indicate that when the content is familiar readers can guess the meanings of unknown words, and linguistic simplification does not improve the readers’ comprehension. However, when the content is unfamiliar, readers cannot guess the meanings of new words” (p.13).
Reading Processes

Generally, three models are discussed when reading processes are defined. The Bottom-Up Model characterizes reading as a mechanical process. Each step follows another from the bottom up, beginning with letter recognition. All reading skills presumably work individually upward. This model suggests “little interference from background knowledge” (Grabe and Stoller, 2004, p.32).

The Top-Down Model proposes a reading process driven by the reader’s anticipations. Sampling of information is utilized to “confirm or reject” expectations about text information (Grabe and Stoller, 2004, p.32). According to Grabe and Stoller (2004), inferencing as well as background knowledge are major components of this model. Reading skills are governed by the reader’s objectives and addressed top-down.

The third model, the Interactive Model, is the most established among researchers and educators today. This model assumes truth in both aforementioned models and suggests an interaction of all reading skills and processes. The present study follows the position of the interactive reading model and interprets accordingly.

According to Coady’s (1979) psycholinguistic model, reading is an interaction between the strategies used within the processes of reading, conceptual abilities and context appropriate background knowledge. In other words, comprehension will occur when the reader’s background knowledge is able to interact with a given text (Carrell&Eisterhold, 1988). This interaction includes many elements. The proficient reader will identify the information through word and word group recognition whereas the beginner will have to start with an initial sound recognition. Upon joining sounds, the
novice reader will attempt to identify the literal meaning, activating background knowledge to assist in inferring and predicting (established reading comprehension strategies) upcoming information for contextual comprehension. Inferring in this process may very well be by default. Predicting the word “horse”, as it is a possible default value in stories of western cultures, to be the theme following the information that someone is riding up a hill, may misguide the reader if instead the phoneme /d/ or /c/ is encountered, as in other cultures the donkey or camel are the commonly ridden animal. In this case, content schemata can possibly misguide the reader and cause a temporary halt and/or misidentification and thus a misinterpretation of the particular message (Nassaji, 2007).

Nelson and Schmid (1989) explored the learning opportunity afforded by reading culturally familiar content, which corresponds with the reader’s activated background knowledge as well as other aspects of comprehension improvement. Specifically, Nelson and Schmid contrasted reading instruction with and without culturally familiar context. The participants were 47 Egyptian EFL students divided into two experimental classes and three control groups. The experimental classes were taught reading with the use of material containing Egyptian and Arabic culturally relevant information, e.g. Arabic short stories and Middle Eastern newspaper articles, while the control groups were presented with reading materials on American culture taken from an ESL text book. The teaching method was consistent for all participants. The results showed the advantage of instruction using culturally familiar content, as the participants of the experimental classes improved their reading skills significantly as opposed to their counterparts, the
control group, who received instruction using culturally unfamiliar content and did not improve as greatly.

These findings are particularly interesting for the present study, as time is essential for ESL children entering American public school systems, and efficient reading instructions and methodology are crucial. Presenting these children with culturally familiar reading material possibly increases their comprehension and concomitantly their overall reading development.

Taking matters a step further, Geva and Zadeh (2006) investigated cognitive-linguistic and reading measures by contrasting ESL and English native language (ENL) children’s reading on a word recognition level as well as text reading efficiency. The study measured letter and word naming in isolation as well as in context, among other aspects. The participating ESL children demonstrated an advantage in speed over the ENL children when the words to be recognized had been in isolation and a disadvantage, although less pronounced, with text reading efficiency, or words in context. Relating their findings to oral language proficiency, Geva and Zadeh did not take background knowledge into consideration. However, the ESL children’s reading performance when the words to be recognized were in isolation suggests that the children in this study acquired some level of reading abilities, but were not able to apply those abilities consistently within the different tasks. Therefore, one interpretation could be that the ESL children’s lower reading performance score when reading words in context may be contributed to a lack of the appropriate background knowledge; while another may advocate that the ENL children’s background knowledge accounts for the change in
efficiency contrast. In either circumstance, background knowledge may be functioning as a performance factor, which is the focus of the present study.

Here, the question of an interaction of lower level and higher reading level processes presents itself. Whereas Nelson and Schmid (1989) investigated higher reading level processes, Geva and Zadeh (2006) examined lower level processes.

Nassaji (2003) states, “It is a multivariate skill involving a complex combination and integration of a variety of cognitive, linguistic, and nonlinguistic skills ranging from the very basic low level skills…to high-level skills” (p. 261). Grabe and Stoller (2004) divide the skills into two major process categories (p.20):

Table 1

*Reading Processes*

<table>
<thead>
<tr>
<th><strong>Lower-level processes</strong></th>
<th><strong>Higher-level processes</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td>Lexical access</td>
<td>Text model of comprehension</td>
</tr>
<tr>
<td>Syntactic parsing</td>
<td>Situation model of reader interpretation</td>
</tr>
<tr>
<td>Semantic proposition formation</td>
<td>Background knowledge use and inferencing</td>
</tr>
<tr>
<td>Working memory activation</td>
<td>Executive control processes</td>
</tr>
</tbody>
</table>

Source: Grabe and Stoller (2004).

As defined through the various reading models, reading is an activity that requires the employment of several processes. Reading processes are generally seen as a variety of word recognition and cognitive skills. The present study aims to focus on such interaction
as aspects of both levels are combined and investigated in correlation to cultural background knowledge concurrently.

Literacy Experience

In addition to the interaction of reading processes, literacy experience and social context may also play a role in the development of reading skills and the acquisition of the reading processes. According to McKay and Wong (1996), the L2 learner’s social complexity and its impact on L2 skill acquisition have just recently been established in literature. The acquisition of processes may vary according to external factors uncontrollable by researchers or educators. Panferov (2002) named several influential factors, relevant to this study are the following:

- environment
- family literacy
- gender
- socioeconomic status
- parental influence
- culture
- acculturation

The acquisition of reading skills may vary according to aforementioned factors. Although ESL children are already living in the target language country, the exposure may be limited due to a lack of interaction with native speakers outside of a school setting. Immigrant population often form close-knit communities, providing valuable security and support; however, also limit the target culture experience. Furthermore, the
literacy traditions in learner populations as found in this study are frequently oral traditions and the lack of literacy in the learners’ families does not allow for exposure to written material for processing experiences. Purcell-Gates et al (1995) point out that: “In addition to this processing benefit, which will effect the development of a large store of automaticity recognized words, increased knowledge of literate vocabulary will almost certainly provide greater access for the readers to the many concepts and ways of saying found in written discourse” (p. 681). This knowledge may also be drawn from pre-reading experiences, as traditionally custom for children in the US, such as good night stories, cards, magazines, the ESL children may not encounter.

Gender and socioeconomic status of the learners are additional aspects to consider when discussing the literacy experience of ESL children. In communities, such as the Somali community in Columbus, OH, the female student’s family does not see priority with education but rather with life’s duties such as motherhood and or financial support which, according to Custodio, often results into dropping out of school (personal interview 2008). Factors such as acculturation and parental influence are also among those affecting the decisions about the children’s education. Panferov (2002) summarizes: “The L2 social environments and interaction which domestic ESL learners find themselves in may significantly influence their potential L2 literacy development” (p. 50).

Miscue Analysis

The intention of this study is to investigate L2 reading development in interaction with cultural background knowledge. One effective way to measure reading proficiency
and observe the reading and comprehension processes is Kenneth Goodman’s Miscue analysis. Goodman (1965) first introduced the idea of a miscue rather than an error, an unexpected response of the developing reader during a read aloud task, with the intent to avoid value implication. Goodman (1969) defines miscues as “windows on the reading process”, referring to the insights miscues provide into the reader’s ability and strategy use (p.123). He assumes that miscues are neither accidental nor random, but rather guided by language and background knowledge (Goodman, 1973).

In the early research stages of miscues, Goodman (1976) described the analysis of miscues to be a process of a “simple cause-effect relationship”, distinguishing between graphic, phonic, syntactic and semantic cues rather than the awareness of their interaction, he suggested that every miscue has a cause (p.125,126). This recognition led to Goodman’s miscue analysis taxonomy, which examines each miscue through a series of questions to determine “a pattern of how the cuing systems are used in ongoing reading” (Goodman, 1976, p.126). In other words, text cues such as graphophonemic patterns, syntactic structure and meaning, which allow for decoding mechanisms and interpretations, may be used inappropriately by the reader and cause a miscue.

Aside from its popularity within L1 research and among reading teachers, as miscue analysis allows teachers to observe, understand and assist their students’ reading development, miscue analysis has been used by many researchers to establish an understanding of aspects of L2 reading processes.

Altwerger and Goodman (1981) investigated text difficulty using miscue analysis to determine the causes of a high frequency of miscues within particular sentences of
three texts used in a larger study. They found that although often assumed, linguistic complexity or sentence length were not the determining factors for a high number of miscues. Their results revealed that among seven predictability factors, a lack of contextual background knowledge ranked number one (Altwerger and Goodman, 1981, p.25).

Another study using miscue analysis, Malik (1990), examined the effects of cultural schemata using culturally familiar and unfamiliar expository texts. Similar to previously discussed research, he asked 15 proficient Iranian EFL readers to read two texts each representing a different belief-system. The culturally familiar belief system was represented in a text of “Islamic myths”, whereas the assumed culturally unfamiliar material was about “Japanese myths”. Using a modified version of Goodman’s miscue analysis, Malik (1990) found the comprehension score to be significantly higher when the context was culturally familiar. Malik (1990) states:

In the familiar text, the reader detects the most segment of information, recognizes the theme, and reconstructs the text and the intended meaning based on his or her (reader’s) schemata. This process is hampered due to the reader’s lack of relevant schemata for the non-familiar text; hence the difference in the reading, comprehension and integration scores for the familiar and non-familiar expository text (p. 220).

Combining two studies, Clarke (1980) explored the psycholinguistic perspective of reading as well as possible L1 to L2 transfer of reading proficiency. In his first study, he analyzed cloze test results of 21 Spanish speakers in their native language as well as English for “semantic and syntactic acceptability” (p.204). His results showed the good reader relied more on semantic cues in Spanish, whereas the poor reader predominantly relied on syntactic cues. Within the English language results, he found syntactic cues to
be used equally between the good and the poor readers. Thus “the difficulties of reading in a second language seem to have reduced the distinction between good and poor readers” (Clarke 1980, p.205). With only two participants, a good and a poor reader of L1, Clarke’s second study (1980) compared reading performance using miscue analysis. The results were similar to the first study, demonstrating the good reader’s advantage within the native language and a reduced advantage of the good reader within the English text (Clarke, 1980). Although he did not focus on the context and the reader’s prior knowledge of his material, miscue analysis was used to determine reading performance and semantic understanding.

Researchers have established that reader background knowledge interacts with a given text through a process of decoding, employing reading strategies and interpreting the message. Goodman’s (1970) definition of reading as “a complex process by which a reader reconstructs, to some degree, a message encoded by a writer in graphic language” is further elaborated on by his assumption that the purpose for reading is the reconstruction of a message (p.61). In other words, the ultimate goal of reading any genre is comprehension.

Labov’s (2006) findings, where a breakdown in comprehension follows a decoding error that is caused by an inability to identify a word and its literal meaning, indicate that background knowledge is also employed at the very basic reading processes and not merely at an intermediate to higher reading level, as previous research has focused on. When adding cultural components to the prior knowledge, the probability of children, who are learning to read in an L2, encountering concepts and ideas in addition
to unknown vocabulary rises higher. It is my goal to follow up on previous findings on culturally shaped background knowledge and its significance to L2 reading. In this study, nationality and cultural content will be treated as independent variables and will be tested for how strongly they predict content comprehension, accuracy and speed, within L2 reading context. I intend to investigate the effect background knowledge has on reading comprehension within culturally familiar and unfamiliar text. Furthermore, I aim to observe reading strategy use as well as fluency within culturally familiar and unfamiliar reading material.
CHAPTER THREE: METHOD

Introduction

It is the purpose of this study to investigate ESL children’s reading performance within two different culturally specific contexts. I used Goodman’s miscue categories to assist the process of determining effects of cultural background knowledge. These aims were pursued through following research questions:

1. Does the cultural background knowledge of ESL children from Somalia who have recently immigrated to the US impact their content comprehension and word recognition within their English reading performance?

2. Are reading fluency, speed, and accuracy affected by culture-specific reading material?

This chapter is organized into three parts as follows: Part one describes the two different groups of children who have participated. This part is followed by a detailed description of the material used within the study. The final part describes the data collection and analysis procedures.

Participants

The first group of children investigated in this study was 12 ESL refugees from Somalia, both male and female, currently residing within the Columbus, Ohio public school district; however, the number of students and their reading performances included in the final analyses was substantially smaller. Six students were excluded due to several factors, such as language proficiency, difficulty with the text, and length of stay in the target language country. The exclusion of students was decided by the researcher to
eliminate additional factors of limitations to the results. Another factor was the absence of participants on one of the recording days. Further discussion of this process can be found in the section below. All of the children were students in the sheltered ESL program of the Welcome Center at Mifflin Middle School in Columbus, Ohio, at the time of the data collection. The children ranged in age from twelve to fourteen and had according to Squires no literacy skills in their first language (L1), Mai-Mai; however, the majority was within a reading level in the target language English, similar to the range of typical first grade reading levels in public school (personal interview, 2008). This level has been identified for the purpose of this study as between the controlled as well as the automatic word recognition phase (developmental reading phases of L1 emerging readers defined by Spear-Swerling (2004), see definition of terms in chapter one). The students who were below this reading level have been excluded from the analysis. The sheltered ESL program of the Welcome Center at Mifflin Middle School has categorized and labeled the reading levels as letter names, which are compatible with the city’s standard curriculum guides, according to the school’s administrator (personal communication, Squires, March 2008). All of the children in this study were from the school’s category C1. All of the children were Bantu, and spent a significant part of their lives in refugee camps prior to their arrival in the United States.

The second group, a control group, consisted of five native speakers of English (ENS). All ENS children were in the first grade of West Elementary School in Athens Ohio, at the time of this study. Although it was impossible to find a completely compatible ENS group to the ESL group, as the age and proficiency difference is rather
large, reading performance was possible to be evaluated as each child’s reading was only contrasted within its’ own performance before being added to an overall analysis. In other words, as each child completed two reading tasks and the performance scores of such were compared within the two readings. Furthermore, the scores were added to frequency analyses accounting for speed, accuracy and miscues that caused a complete loss of comprehension. Additionally, group-membership and texts were tested for possible interaction.

Materials

For the purpose of this study, text passages, each representing distinct features of the relevant cultures for this project, were chosen. Initially, Henry and Mudge was the US culture specific text the passage chosen from; The sleepover (see Appendix A). This story tells of a boy and his dog having a sleepover with friends, monster movies and lots of popcorn. The Fox and the Hyena, an African folktale taken from the Lyndale school S.P.I.R.A.L. Project, served as the Somalia culture specific story (see Appendix B). This story tells of a fox outsmarting a greedy hyena for survival purposes. In the first round of data collection, these two texts were used and although adjusted for compatibility with each other according to the difficulty level, they were quickly determined to be above the children’s reading ability. The children were unable to recognize enough words to attempt comprehension and therefore an effective analysis of the reading performance was determined to be impossible.
A second set of text passages was chosen from Henry and Mudge, *A rainy day* (see Appendix C), as well as another folktale taken from the Lyndale school Project, *The Hare and the Lion* (see Appendix D).

According to Sharriff Osman, a university level Somali instructor from Somalia, Francis Wangendo and Jessica Mushi, graduate students from Kenya and Tanzania matriculated at Ohio University, the animals used in an African folktale are local to the storyteller and listener (personal communication, April, 2008). Furthermore, the dog, as it functions as a friend and equal to the boy in the US culture specific passage, is culturally taboo for Somalis. It is considered unclean and unwanted for religious purposes in Islam. The US culture in contrary, allows for the dog to have a family member status that reaches from friendship and companionship to claims of food, comfort and luxury items. Although, the ESL children have all been living in the US at the time of this study and had the opportunity of exposure to target culture specific customs, it is unlikely that the individual families of the participants have allowed culturally taboo elements, such as a family pet dog, to interfere with the religious upbringing of the children.

Another aspect of cultural differences of the two stories is the purpose of the material. Unlike the US specific material, which was written for reading rather than social development, the folktale has a life-lesson to be learned through the misbehavior of one of the animals, in this case the lion’s arrogance and foolish pride (Osman, personal communication, April 2008). As both stories are presumed to be culture specific, it is important to mention possible exposure and its potential impact at this point. The subjects in this study have most likely not been exposed to Somali culture- and language-specific
reading material, as the story tradition of the Somalis is predominantly an oral tradition, according to Osman (personal interview 2008). Furthermore, according to Squires the parents of all subjects are illiterate and therefore unable to read to or with their children (personal interview 2008). The experience with and exposure to stories, culture and language in print is assumed to be in English. This may allow for stronger background knowledge of written story concepts and elements corresponding with the US culture, the target culture of the ESL children.

Both text passages had an illustrated title picture of the two main characters; however, neither story had any other visual illustrations. Furthermore, these text passages were carefully adjusted by the researcher from their original versions to a compatible reading level. This level was determined in comparison with an original text from participants’ classrooms provided by their reading teacher. Adjustments included the consideration of the length of text; both texts contain approximately 160 words. The first set of texts was approximately 270 words long. Additionally, the passages were adjusted to include simple present, simple past and future only and have compatible numbers of simple, compound and complex sentences. Lastly, a vocabulary frequency analysis was conducted to insure text difficulty compatibility (see Appendix E and Appendix F). These adjustments were accomplished through the use of a concordancer, as well as the judgment of the researcher.

Additionally, the stories were outlined following suggestions of Goodman and Burke’s (1972) Reading Inventory Manual (see Appendix G and Appendix H) and
scoring sheets for the retelling were created (see Appendix I and Appendix J) to determine the participants’ recall abilities.

Procedure

On the first day of the data collection, the researcher, accompanied by two assistants (fellow linguistics graduate students assigned to assist with the recordings only in order to manage time constraints) traveled to Mifflin Middle School in Columbus, OH. Following the established procedures and obtaining consent, three ESL children at a time were audio-recorded reading one of the passages originally selected followed by an immediate retelling of the story by each child. The children were asked to retell as much of the story as they were able to without specific questions in order to avoid the artificial prompting of the participants’ memories of story elements. These procedures were followed during school time in a vacant classroom of the Mifflin Middle School. The reading of the other passage was intended to be on a different day to eliminate possible interactive interference. Twelve students were recorded the first day; however, only two were able to decode a minimum amount of the text needed to ensure some comprehension. All of the recordings from this first day were excluded from the final analysis.

On the second day of data collection, the researcher as well as the assistants used the shorter passages that were determined to be more level appropriate: The boy and his dog taken from the children’s book Henry and Mudge’s Rainy Day and The Hare and the Lion taken from the Lyndale School Project. A total of 13 students were recorded on this day, reading one of the stories and retelling it immediately afterwards.
The plan for the third day of data collection was to record the same thirteen children reading the second passage; however, due to uncontrollable factors five of the previously included children were absent. A total of eight reading and retelling performances were audio recorded on this day. After comparing reading ability, language proficiency and length of stay, two additional recordings were excluded to ensure compatibility, as the gap between these students and remaining students was too large. This procedure reduced the number of ESL children’s recordings to be included in the final analysis to six, as large differences in abilities and skills would result in additional factors of limitations and would interfere with the aspired generalizability of the study’s results.

The fourth day of data collection was intended for the control group and was conducted at West Elementary School in Athens, Ohio. Five ENS children were audio recorded following the above-mentioned procedures. As one of the children was below the reading level necessary for the effectiveness of this study, the final number of ENS recordings to be analyzed was four.

Data Analysis

Following Goodman’s Miscue analysis, all readings were transcribed and the miscues transferred onto the reading miscue inventory-coding sheet 1 taken from the Reading Miscue Inventory Set (Burke & Goodman 1972)(see Appendix K). The Reading Miscue Inventory (RMI) is intended investigate and analyze young readers strength and weaknesses. According to Burke and Goodman (1972), reading is a combination of syntactic, grammatical, graphic/phonemic sound symbol and interpretive interaction. As
suggested by Goodman (1965, 1973, 1976) and Burke and Goodman (1972), the researcher categorized miscues as omission, substitution, correction, insertion, repetition and reversal. These categories allow an understanding of the miscues origin and may shine light on the readers’ strength and weaknesses. Following the categorization procedure, the miscues were classified by the researcher and an assistant as Yes-, Partial- or No- compliance and are in accordance to the following categories:

- Graphic similarity
- Sound similarity
- Grammatical function

Furthermore, miscues were also tabulated in accordance with the following categories:

- Correction
- Grammatical acceptability
- Semantic acceptability
- Meaning change.

Comprehension was classified as no loss, partial loss and loss of comprehension caused by the miscue, while grammatical relationship was analyzed as strength, partial strength, weakness of the grammatical relationship of the miscue and the original phoneme or word as well as overcorrection. The results of this extensive analysis were translated into the frequency line of the reading miscue inventory coding sheet 2 (see Appendix L). Furthermore, the results were included in various frequency analyses and compared within each participant’s two data sets, the reading performance and retelling
scores. The frequency analyses included the reading speed through a calculation of words per minute for each text passage. Additionally, accuracy of the readings was calculated as the number of miscues divided by the number of words in the text. Lastly, the number of miscues that caused no, partial or a complete loss of comprehension was examined.

Following these procedures, the transcribed retellings were scored for comprehension according to a point system following the methodology of Burke and Goodman (1972) and correlated with the miscues frequency analyses as well as the frequency line percentages of the RMI coding sheet 1 (see Appendix K). These data were displayed in bar graphs separately looking at speed, accuracy and number of miscues with complete loss of comprehension. Each participant’s readings were compared within his or her own performance, to determine whether the participants’ reading performance was affected by story or nationality.

Furthermore, to answer the research questions, three tests were used to analyze the data with the Statistical Package for the Social Sciences (SPSS) 15.0 for Windows software package. The conventional level of .05 was used as the statistical level of significance for all analyses. The tests used two independent variables: the culturally specific story and the nationality of the participants. The dependent variables were the participants’ reading speed (table 2), accuracy (table 3), the number of miscues with a complete loss of comprehension (table 5) and the retelling scores (table 6).
### Table 2

**Reading Speed**

<table>
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<tr>
<th></th>
<th>boy/dog WPM</th>
<th>Hare/Lion WPM</th>
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</thead>
<tbody>
<tr>
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<tr>
<td>NNS 2</td>
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<td>NNS 3</td>
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</tr>
<tr>
<td>NNS 4</td>
<td>55</td>
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</tr>
<tr>
<td>NNS 5</td>
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<td>NNS 6</td>
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<tr>
<td>Mean score</td>
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<td>62.01</td>
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<table>
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<tr>
<th></th>
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<tbody>
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### Table 3

**Reading Accuracy**

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Table 4

*Reading Comprehension*

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The first test used was the Wilcoxon signed-rank test, a non-parametric statistical hypothesis test for repeated measures. It determined whether the participants’ individual reading performance of speed, accuracy and number of miscues that caused a complete loss of comprehension in the two stories was significantly different. The second test was the Mann-Whitney test, a nonparametric test used to determine whether the reading performance of speed, accuracy and number of miscues that caused a complete loss of comprehension of the two groups, the ESL and ENS children, was significantly different. The third test used to analyze the data was the General Linear Model Test (GLM). The GLM is a statistical linear model used as a multivariate hypothesis test. This test was used to determine whether there might be an interaction between story type and group
membership in the participants’ reading performance of speed, accuracy, number of miscues that caused a complete loss of comprehension and retelling scores.
CHAPTER FOUR: RESULTS AND DISCUSSION

As discussed in previous chapters, the purpose of this study is to investigate if cultural background knowledge affects the reading speed, accuracy and comprehension of the emergent L2 reader. To determine such effects, ESL children had been asked to read and retell two text passages in English, each containing culture-specific story lines and concepts. Following Goodman and Burke’s Miscue analysis, each participant’s miscues were recorded, categorized, compared and later statistically analyzed.

This chapter is divided into two parts: the first part reports on the results of the statistical analyses. The second part illustrates individual as well as group performances through bar graphs and the discussion thereof.

Results

For the purposes of this study, two research questions were proposed to investigate the possible impact that cultural background knowledge may have on reading performances of the emerging reader. The culture-specific text passages as well as the participants’ nationality were the independent variables used in the analyses, while reading speed, accuracy and the number of miscues with a complete loss of comprehension represented the dependent variables.

The first question addresses a potential impact of cultural specific content on comprehension and word recognition across both text passages. To test for a possible effect, the Wilcoxon Signed Rank test was run using story type as the independent variable with the three dependent variables (speed, accuracy and number of miscues causing complete loss of comprehension \{comp\}). The test results indicated that there
were no significant statistical differences in speed (z=-1.02, n=11, p=0.625), accuracy (z=-1.07, n=11, p=0.563) and comp (z=-1.78, n=11, p=0.109) between the two story types.

To test for the second question, which addresses the impact of cultural background knowledge on the reading performance, the Mann-Whitney test was run. For this test, the independent variable was the nationality of the participants with speed, accuracy and comp as the three dependent variables. The results indicated no statistically significant difference between the Somali and the American children in the speed with which they read, in English, the African folktale (story HL) (z=-1.06, n=10, p=0.286) or the US culture-specific story (story b2) (z=-1.279, n=10, p=0.201). The results indicated no statistically significant difference in the accuracy which they achieved, the African folktale (story HL) (z=-0.753, n=10, p=0.451) or the US culture-specific story (story b2) (z=-0.432, n=10, p=0.666). Addressing comprehension, the results did not indicate a statistically significant difference in the African folktale (story HL) (z=-0.429, n=10, p=0.668); however, a statistically significant difference was found with the US culture-specific story (story b2) (z=-2.345, n=10, p=0.19).

The General Linear Model test was also run to further investigate the interaction between the group membership of the participants and their performance. This procedure was used to answer question one and two, evaluating overall performance scores of the stories and the status thereof. The results found by the General Linear Model test indicate statistically significant interaction of group membership and performance [F=17.053, df=(1,8), p=0.003]. Additionally, the General Linear Model test results [F=7.227, df=(1,8), p=0.28], investigating the interaction of story type and nationality in the students’
comprehension scores, also indicate significant statistical differences (See Figure 1). Test results examining the interaction of story type and nationality in the students’ retelling scores did not indicate a statistically significant interaction (see Figure 2).

Figure 1: Interaction between Comprehension and Story Type.
To further illustrate aforementioned results for research question one and two, bar-graph interpretations of the data were utilized. The participants were asked to read two different text passages, each containing culture-specific content typical to one of the cultures represented in this study. Both passages had been adjusted to a compatible level concerning length and difficulty; therefore, discrepancies in performance may be attributed to other factors such as background knowledge, content familiarity as well as language proficiency for the non-native speakers (NNS). The categories analyzed include the number of miscues that caused a complete loss of comprehension (Ncom), retelling scores, accuracy results and words per minute calculations (speed). Each category will be discussed individually.
Numbers of Miscues that caused a Complete Loss of Comprehension (Ncom)

Miscues in this category do not include errors that allowed the reader to maintain or partially maintain comprehension. For example:

1. The subject reads *the* while the text says *a* – this is a substitution miscue that allows for grammatical similarity as both words are articles. It does not allow for sound or graphical similarity; however, it does not compromise the meaning and therefore the miscue is not included in the Ncom category.

2. The subject reads *paper* while the text says *painted* – this is a substitution miscue that allows for partial sound and graphical similarity; however, there is no grammatical similarity, as they are different parts of speech and the meaning is compromised. Therefore the miscue is included in the Ncom category.

The ESL participants’ numbers did not show a clear result, as three of six NNS participants had less Ncom in the African folktale (*the Hare and the Lion*) while the remaining three had more Ncom within this passage (see Students 1-6 Figure3).

However, the ENS participants’ scores may suggest an impact of cultural content familiarity and an effect of background knowledge, as four of four NS had considerably less Ncom in the US culture specific passage (*the Boy and the Dog*) than in the African folktale (see Figure3, students 7-11).
Combining NNS and NS participants, 70% (7 out of 10) have read the passage culturally corresponding with their country of origin with fewer miscues that caused a complete loss of comprehension. (See Figure 3) These results may indicate a possible effect Background knowledge has on the reading performance of the emergent reader.

Figure 3: Ncom NNS and NS.

Retelling Scores

Immediately after the reading task, the participants had been asked to retell the passage in their own words and without any prompts by the researcher. The scores had been added according to a point system following Burke and Goodman (1972) (see Appendix I and J). Table 5.
Table 5

Recall Ability

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<th></th>
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Figure 4 may suggest that NNS as well as NS participants have a tendency to retell the story corresponding with the cultural aspects of their country of origin more efficiently. Four of six NNS children were able to achieve a higher score retelling the African folktale (story HL) (students 1-6, Figure 4), while three of four NS children achieved a higher score retelling *the Boy and the Dog* (story b2), the story corresponding with their cultural origin (students 7-11, Figure 4).

Combining NNS and NS participants, again 70% (7 out of 10) were able to attain a higher score retelling the passage containing concepts culturally corresponding with their country of origin. These particular findings are consistent with the assumption that
cultural Background Knowledge has an impact on the emergent reader’s ability to comprehend and recall reading material.

Figure 4: Retelling NNS and NS.

Accuracy

Accuracy scores were calculated for each participant’s reading of each story by dividing the total number of miscues by the total number of words within the passage (Figure 5). In this task, only two of six NNS participants reached a higher accuracy score within the African folktale (students 1-6, Figure 5). However, the NS participants were all able to achieve a greater accuracy result, four of four (students 7-11, Figure 5).
Combined, the accuracy columns showed 60%, six of ten participants, were able to achieve a higher score within the culturally familiar content. This observed tendency may indicate that Background Knowledge and comprehension interact with decoding processes for the emerging reader.

Figure 5: Accuracy NNS and NS.

Speed

The reading speed in the present study was calculated by words per minute the participants read and the actual length for each text. Although the NNS did not have an apparent advantage within the African folktale at a first glance, a closer look revealed a gain as three of six NNS read the Hare and the Lion more rapidly than the Boy and the Dog, while one of six NNS read both passages at the same speed and two of six NNS
read the African folktale at a lower rate than the boy and the dog (see students 1-6, Figure 6). Furthermore, three of four NS observed an increase of speed while reading story b2 versus story HL (see students 7-11, Figure 6).

Combined, the speed column showed 60%, six of ten participants, achieved a higher speed when asked to read the culturally familiar text passage. As observed with the accuracy scores, these findings may support the assumption that cultural background knowledge and comprehension interact.

Figure 6: Speed NNS and NS.

Discussion

Previous research on background knowledge and reading comprehension has mainly focused on learner populations with existing reading skills. The findings thereof
have suggested that background knowledge impacts the ability to comprehend (Alptekin, 2006; Anderson, 2004; Anderson and Pearson, 1988; Carrell and Eisterhold, 1988; Carrell, 1987; Johnson, 1981; Nassaji, 2007; Pritchard, 1990; Reynolds et al, 1982; Steffensen et al, 1979). Specifically, cultural background knowledge has been observed to enhance the higher level processes, cognitive and strategic comprehension processes, during the reading task for the advanced learner (e.g. Carrell, 1987; Johnson, 1981; Keshavaraz, 2007; Steffensen et al, 1979), while lower-level processes, such as decoding and word recognition, have not been considered. These processes have been investigated in isolation, such as graphophonemic awareness without consideration of comprehension (e.g. Geva and Zadeh, 2006; Lipka and Siegel, 2007), with children at early or pre stages of reading. Nassaji(2003) claims: “Furthermore, previous research has taken mostly a single-level approach focusing on either higher-level or lower-level subcomponent processes. Little work has been done that explores the contribution to reading comprehension of the two levels at the same time” (p.261).

The present study was designed to take aspects of both levels into account, comprehension as well as fluency, speed and accuracy, and explore the concurrent acquisition of basic reading skills, proposing a relationship between background knowledge and early reading progress. To examine such a relationship, this study addressed the question if cultural background knowledge of recently immigrated ESL children from Somalia impacts content comprehension during an English reading task. Furthermore, this study aimed to look at cultural background knowledge in relation to fluency, speed and accuracy within the English reading task of the ESL children.
The participants were, at the time of this study, in basic reading skill stages and therefore presumably occupied with comprehension processes as well as decoding and word recognition processes. To take this assumption a step further into this study, a closer look into the individual comprehension (Ncom) and retelling scores as well as statistical measurements investigating nationality and story as independent variables may indicate a possible impact of each, as culture familiarity and background knowledge seemed to facilitate comprehension and possibly allow for compensation. These results may support the hypothesis that proposes an increase of content comprehension when cultural background knowledge corresponds with the context. Furthermore, these findings may suggest consistency with previous research (Carrell, 1987; Johnson, 1981; Keshavarz et al, 2007; Steffensen et al, 1979) as each study observed higher-level comprehension when the participants had been presented with context corresponding with cultural aspects of their country of origin.

Additionally these findings may strengthen the assumption that the overall reading process is an interaction of comprehension with word recognition and fluency. This would concur with Stanovich’s (1980, 1986) interactive compensatory model, as according to Grabe and Stoller (2002), “For example, using context clues to understand a text better or to decide what a word means is a compensatory strategy when normally expected abilities break down, or have not yet been developed” (p.35). The subjects in the present study seemed to be able to utilize context clues more efficiently in one text, the assumed culturally familiar passage, than in the other, the assumed culturally unfamiliar passage.
The nonparametric statistical tests used in the present study did not find a significant effect for culturally familiar reading content on the participants’ reading performance; however, an interaction of group membership and overall reading performance and comprehension was indicated. The ENS children seemed to perform and comprehend more effectively when reading the presumed culturally familiar story, the boy and, the dog in this case (see Figure 1 and 2). Interestingly, the ESL children also seemed to perform more effectively in the story of the boy and the dog, the culturally unfamiliar story in this case (see Figure 1 and 2). This may be explained by the exposure of written material the ESL children have had. As previously discussed, the subjects have not had any prior literacy education before entering the US, according to Squires, and consequently the only literacy experience of these children may be with US culture-specific reading material (personal interview, 2008). Therefore, word recognition and fluency as well as the recall ability may be enhanced. This study lacks further investigation into the literacy experience of the subjects and is therefore unable to reach any advanced conclusions on this matter.

However, a look into the individual scores of speed and accuracy of each child and text seemingly point to a possible advantage of culture familiarity (Figure 3 and 4). These results may be consistent with Geva and Zadeh’s (2006) findings, where the ESL participants demonstrated higher speed and accuracy results when the words to be recognized had been in isolation rather than in context. This may be interpreted similarly to the present study, as both sets of participants demonstrated word recognition and decoding ability that was compromised through context. The results of the present study
may support the assumption that cultural background knowledge also facilitates accuracy (Figure 5), as the number of miscues in the present study, in particular the miscues that caused a complete loss of comprehension (Figure 3), increased when the participants were confronted with culturally unfamiliar context. Furthermore, the individual scores of reading speed (Figure 6) also showed an advantage that may be consistent with the hypothesis proposing an increase of reading speed when the participants were confronted with culture-familiar context.

The overall results of the present study convincingly point to an interaction of background knowledge and reading processes for the emerging reader and seemingly show positive effects when the reading material contained culturally familiar concepts.
CHAPTER FIVE: CONCLUSION

The primary focus of the present study was the role that background knowledge plays during the reading process of the ESL emerging reader. Accuracy and speed as well as comprehension and retelling ability were investigated in light of the task interference of culture specific components in early readers.

As past research has focused on ESL adult reading abilities and the influence of background knowledge thereof, the present study aimed to consider additional processes the emerging reader has to incorporate into the reading task, such as decoding, word recognition, and fluency. ESL adults are often literate in their first language and therefore seldom forced to acquire initial decoding and fluency as well as language skills simultaneously. Therefore, it was my intention to follow up on previous research and explore possible “slowing down” effects, culture specific reading material presents to the emerging ESL reader.

This chapter is organized into three parts. The first part gives an overview of this study’s objectives. The second part summarizes preceding chapters and the third section discusses pedagogical implications as well as recommendations for further research.

Objectives

Fluency has been frequently defined as speed and accuracy facilitating or interacting with comprehension. The emerging reader presumably has to surpass an initial stage of decoding processes to reach a level of automatic word recognition for early fluency. To explore possible interference of background knowledge in these early stages, the present study examined the role cultural background knowledge has within the L2
reading processes. Specifically an interaction of cultural background knowledge and reading performance, including comprehension, speed and accuracy, was examined. To determine possible effects of cultural background knowledge, six ESL children from Somalia were recorded reading two text passages, each containing culture-specific components of one of the two relevant cultures, US and East Africa. Although illiterate in their first language, the children have recently immigrated to the US and are emergent English readers. Additionally, four American children were recorded reading the same text passages. The recordings were transcribed and analyzed following Goodman and Burke’s (1972) miscue analysis. Nonparametric statistical test were run and addressing speed, accuracy and comprehension no statistically significant differences were found between the Somali and American children. However, when a possible interaction of group membership and the overall reading performance was tested, the nonparametric statistical results did indicate a statistically significant difference.

Furthermore, the present study looked at individual reading performance of each participant within the two text passages. These individual score analyses may suggest possible differences, although not generalizable, as comprehension, accuracy and speed scores seemingly indicated an effect background knowledge has on aforementioned reading skills. These results may be interpreted as consistent with this study’s assumption that cultural background knowledge facilitates content comprehension and reading performance concurrently for the emergent reader.
Pedagogical Implications

In light of the results of this study, several implications present themselves here in two sections. First, the focus will be on the teaching of reading at basic levels and the second on aspects of assessment tool construction.

The results of the present study were interpreted as possible positive effects of culturally familiar content, and they motivate the following suggestions concerning the careful selection of reading material. Pre-teaching upcoming content, concepts and ideas have been assumed to be effective when presenting young readers with new reading material; such tasks seem to underlinethe findings of this study and therefore are recommended by the author. Furthermore, the author suggests the selection of material that does not solely contain target culture-specific content as equally critical. Although a degree of assimilation to the target culture may be expected of the immigrant child, the educator cannot initially assume knowledge and comprehension of target culture concepts and elements. ESL children at the early reading level, asked to infer and predict upcoming events and interactively comprehend and decode accurately and rapidly, when confronted with culturally unfamiliar concepts, may be set up for a struggle. For example, the idea of a dog as a boy’s best friend, sharing time, food and laughter is not a familiar concept to a child born and raised in Somalia and/or refugee camps before sufficient exposure to US culture. Therefore, the Somali ESL child may experience difficulty predicting sequential events of a story line and may encounter setbacks in word recognition and overall reading performance. On the contrary, cultural background knowledge may have a positive, facilitating effect, as the results of this particular study may imply that using reading
material such as an African folktale using characters and story elements presumably known to a child from Somalia may enhance reading speed, accuracy and comprehension. In light of these suggestions, the notion to include cultural studies in the curriculum in addition to the pre-teaching of concepts and/or careful selection of reading material may be considered. Although desirable, school, family and community situations of ESL children may not be able to provide cultural information sufficiently enough to create, enhance and/or establish appropriate cultural background knowledge for target language reading tasks.

Another aspect, suggested to be considered, is time. For the ESL children in the present study time is of essence. The children are of middle school age; however, have not been able to attend educational institutions regularly or receive consistent educational instructions of any kind due to their situation prior to coming to the US. They are in need of efficient reading instruction to ensure rapid academic progress, as they are already approximately six to seven years behind their American peers.

Reading is also one of the controlling factors for academic assessment. Therefore, similar aspects need to be considered when constructing assessment tools. As standardized tests have become a nationwide requirement, ESL children have to participate and are evaluated as their peers. As there are no opportunities for pre-teaching unfamiliar concepts and ideas to ESL children during testing, the reading comprehension sections in such should deliberately use target-culture-specific material. Additionally, each test task includes introductory reading instructions. Comprehension of such is crucial to perform any following assignments. It is therefore recommended to revisit the
reading material, test tasks and the evaluation thereof to warrant reliable achievement score distribution and the assessment of the ESL child’s actual abilities.

Recommendations for Further Research

Recommendations for further research are based upon the prior discussion of the limitations of this study. The findings of the present study with early readers are strikingly similar to the findings of previous research with more proficient readers. However, the number of participants was low and the resources limited and consequently did not allow for generalizable results. Therefore, further research should be conducted with a higher number of subjects, possibly with a variety of countries of origin as well as stories in order to explore possible effects of background knowledge with greater or lesser cultural differences. Furthermore, a slightly higher fluency level should be aimed for, as greater contrast within stories was observed with subjects with higher accuracy and WPM scores.

Pre-testing the subjects’ decoding ability as well as language proficiency for the retelling tasks and more precise score distribution thereof are also advisable. Time and resources permitting, a detailed demographic survey would possibly allow for more conclusive results. This additional demographic information may provide insight as to why one child’s performance may be unequal to another, despite scholastic or academic equalities. It could identify other influential factors, such as family literacy habits, media use and additional language acquisition opportunities outside of the school environment.
Additionally, an examination of reading strategy use is suggested. The data collected for this study was not sufficient to examine the use of reading strategies of emergent L2 readers within cultural specific material, as time and resource constraints did not allow for an adequate compilation of strategy indicator use. Although the increase of content comprehension within the culturally familiar material may point to an enhanced comprehension strategy use, e.g. inferencing and predicting, the data collected did not allow for any observation.

As second language reading research moves closer to a multi-level process approach, exploring higher and lower level processes simultaneously in correlation to comprehension, studies similar to the present work may contribute greatly to the understanding of the development of literacy skills in the second language and are therefore recommended.

Conclusion

Second language learning entails many skill areas, listening and speaking, writing and reading. It poses a variety of challenges to many different kinds of learners; young and old learners, monolingual and bilingual learners, learners in a foreign language or a target language setting, literate and illiterate learners and more. It is the young, not-yet-literate learner this study has focused on, as this population has to acquire all skill areas simultaneously “from scratch“ and face the challenges of novice readers; e.g. graphophonemic awareness, semantic, syntactic and interpretive analysis abilities. These skills are divided into lower level and higher level reading processes. It was the aim of this study to investigate the role that background knowledge plays within the interaction of
both levels. Previous research with proficient readers has demonstrated a positive effect of background knowledge on comprehension when culturally familiar concepts are embedded in context. Research with non-or lower proficiency readers in the past has focused on lower level reading processes without considering the role of background knowledge.

The data collected for this study was analyzed for aspects of fluency, speed and accuracy, as well as cognitive processes, comprehension and recall, in light of background knowledge as two culture-specific text passages were used for each participant.

Overall, the findings of the present study illustrated the positive impact that culturally familiar context may have on the reading process of the emerging reader in an ESL context. In other words, familiar concepts and ideas of the world, story events and characters, traditions, conventions and more - background knowledge the reader brings to the reading table—may facilitate comprehension, accuracy and speed and the ability to recall the material even in early stages of reading. Therefore, this study concludes that Background Knowledge and its possible role within major reading processes for all level readers deserves researchers’, teachers’, and administrators’ attention in and outside of the classroom.
REFERENCES


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A boy and his dog (1)

A boy and a boy’s big dog played outside one day. The boy got a phone call. It was the boy’s friend. “I will have a sleepover night,” said the friend. “Can you and your dog come?”

The boy’s mother said yes. “We will be there!” said the boy. His friend told him:” bring a pillow, a sleeping bag, and a flashlight.” “Cool!” said the boy.“And don’t forget your dog,” said the friend.“We will have a sleepover” said the boy to his dog. The dog wagged his tail. “We will stay up late,” said the boy. The dog wagged his tail again. “And watch monster movies,” the boy said. The dog danced a little.“And eat lots of popcorn,” said the boy. The dog jumped up and down.

Popcorn was the dog’s favorite food. He liked to catch it in the air. “It will rain popcorn!” said the boy to his dog.

Flashlights, monster movies, and popcorn. The boy could hardly wait for Saturday.
On Saturday the boy and his dog went to Patrick’s house. Patrick had lots of games. There were board games and video games. There were little baskets and little balls. There was even a small bowling game.

When it got dark, the friend’s mother brought pizza and the monster movies began. The boys and dogs ate the pizza and watched giant lizards eat entire towns.

“Your dog would be a good monster,” said the boy’s friend. The boy shook his head. “No, he just kisses everybody.” the dog kissed the boy and ate the boy’s pizza.
A fox was a problem for a village. The fox killed and ate their goats and sheep. One day the people planned to kill the fox. They set a trap.

The fox fell into the trap. After awhile the people came and tied her to a tree.

The people wanted to throw the fox into a fire.

They dug a hole near the tree. Then they looked for wood. They lit the fire and said, “Let’s come back when the fire is ready. Then we will throw this bad fox into the hole.”
Soon a very hungry hyena came by. “What happened?” he asked. The fox said, “My uncle tied me here. He tied me to this tree because I am so thin. He went out to kill a goat. He wants to cook it in this fire so I can eat and get fat again. But I am not hungry now. I already ate a lot of meat. Every time I eat now, I will get a stomach ache.”

The hyena opened his mouth. Meat was his favorite food. The fox said:”
Untie me from this tree. I will tie you up in my place. Then you can eat the meat.” The hyena said yes. He untied the fox. Then the fox tied the hyena to the tree.

The people returned and found the hyena. They were surprised and said, "Hyena, where is the fox?” The hyena said, “ I untied her. I will eat the meat you have for her.”
Then the people threw the hyena into the fire. The greedy and foolish hyena died.
The boy and his dog

A boy and his dog woke up. They looked out the window. It was raining.
The boy asked the dog, “What can we do?” The dog went to sleep.
The boy asked his father, “I am bored. What can I do?” “I don’t know”, said the father.
The boy asked his mother, “What can I do? I am so bored.” “I don’t know”, said the mother.

Then she had an idea. She said, “We can make a castle. I have a big box.”
The boy woke up his dog. The boy and his dog built a very big castle. The boy’s father and mother helped him.

They cut and painted all morning. They made a big door. The boy painted it red. They made many windows. The mother painted them blue. They made big towers. The father painted them yellow. The dog put his nose in all the paint.

They played with it all afternoon.

At night, they watched a movie. They ate pizza and popcorn.
APPENDIX D: THE HARE AND THE LION

The hare and the lion

One day a lion walked around his land. He saw a hare. The hare had a basket. A very large basket.

The lion said, "Where are you going?" The hare answered: "to find some food." The lion smiled and said, “Your basket is so big. How will you carry it?"

The hare thought about it. "I am very strong", he said, "I can even carry you in the basket." The lion was very surprised. He did not believe the hare and said, “You are not strong. I am strong."

The hare waved the lion over and said," Please lion, climb into my basket. I will show you. I can carry you."

The lion laughed and climbed into the basket. "Are you OK in there?" asked the hare. "Oh yes", answered the lion. "I need to tie you up", the hare said. "So you do not fall out of my basket." The hare tied the lion up. He hit him with a stick until the lion died.
# Appendix E: Vocabulary Frequency Analysis (B2)

**WEB VP OUTPUT FOR FILE: the boy and his dog**

Words reclassified by user as 1k items (proper nouns etc): None (total 0 tokens)

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<td>Anglo-Sax Index:</td>
<td>89.57%</td>
</tr>
<tr>
<td>Greco-Lat/ Fr Cognate Index:</td>
<td>10.43%</td>
</tr>
</tbody>
</table>

*For easy editing as MS Word Table* - [Edit/print-friendly table](http://www.exutor.ca/vp/eng/output.pl)

**Note:** In the output text, punctuation is eliminated; all figures (1, 20, etc) are replaced by the word number; contractions are replaced by constituent words (won't = will not); type-token ratio is calculated using said constituents; and in the 1k sub-analysis content + function words may sum to less than total (depending on user treatment of proper nouns and program decision to class numbers as 1k although not contained in 1k list); single letters are eliminated except for 'a' and 't'.

**Integral text:** a boy and his dog woke up they looked out the window it was raining the boy asked the dog what can we do the dog went to sleep the boy asked his father i am bored what can i do i do not know said the father the boy asked his mother what can i do i am so bored i do not know said the mother then she had an idea she said we can
make a castle I have a big box the boy woke up his dog the boy and his dog built a very big castle the boy father and mother helped him they cut and painted all morning they made a big door the boy painted it red they made many windows the mother painted them blue they made big towers the father painted them yellow the dog put his nose in all the paint they played with it all afternoon at night they watched a movie they ate pizza and popcorn

AWL [:]

OFF LIST [?:4:5] bored bored movie pizza popcorn

Type List
type [number of tokens] [1]


AWL types: [:]


Family List
family [number of tokens] [1]

1k families: [families 55 : types 63 : tokens 156 ]


window [2]

2k families: [6.6.7]
yellow [1]]

2k Fr non-cognate families: [families 4 : tokens 5 ]

AWL families: [:]

AWL Fr non-cognate families: [families : tokens ]

Processing time: 0.15 CPU seconds
### Detailed SMOG Analysis

**SMOG Grade:** 4.55

**the boy and his dog**

<table>
<thead>
<tr>
<th>Basic Data</th>
<th>Derived Data</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sentences: 25</td>
<td>Words/Sentence: 6.76</td>
</tr>
<tr>
<td>Total Words: 169</td>
<td>Syllables/Word: 1.17</td>
</tr>
<tr>
<td>Letters: 604</td>
<td>Syllables/Sentence: 7.92</td>
</tr>
<tr>
<td>Digits: 0</td>
<td>Letters/Syllable: 3.05</td>
</tr>
<tr>
<td>Characters: 835</td>
<td>Letters/Word: 3.57</td>
</tr>
<tr>
<td>Lines: 1</td>
<td>Letters/Sentence: 24.16</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>SMOG Grade</th>
<th>Educational Level</th>
<th>Example</th>
</tr>
</thead>
<tbody>
<tr>
<td>0 - 6</td>
<td>low-literate</td>
<td>Soap Opera Weekly</td>
</tr>
<tr>
<td>7</td>
<td>junior high school</td>
<td>True Confessions</td>
</tr>
<tr>
<td>8</td>
<td>junior high school</td>
<td>Ladies Home Journal</td>
</tr>
<tr>
<td>9</td>
<td>some high school</td>
<td>Reader's Digest</td>
</tr>
<tr>
<td>.10</td>
<td>some high school</td>
<td>Newsweek</td>
</tr>
<tr>
<td>.15</td>
<td>some high school</td>
<td>Sports Illustrated</td>
</tr>
<tr>
<td>.12</td>
<td>high school graduate</td>
<td>Time Magazine</td>
</tr>
<tr>
<td>.13 - .15</td>
<td>some college</td>
<td>New York Times</td>
</tr>
<tr>
<td>.16</td>
<td>university degree</td>
<td>Atlantic Monthly</td>
</tr>
<tr>
<td>.17 - .18</td>
<td>post-graduate studies</td>
<td>Harvard Business Review</td>
</tr>
<tr>
<td>.9+</td>
<td>post-graduate degree</td>
<td>IRS Code</td>
</tr>
</tbody>
</table>

---

**SMOG Calculator - by Words Count**

Adapted from SMOG by **G. Harry McLaughlin** (1966), SMOG grading: A new readability formula. *Journal of Reading, 10*(6) 639-646.

This gives the SMOG Grade, which is the reading grade that a person must have reached if he or she is to understand fully the text assessed.

---

Terms of Service
APPENDIX F: VOCABULARY FREQUENCY ANALYSIS (HL)

WEB VP OUTPUT FOR FILE: the hare and the lion

Words recategorized by user as 1k items (proper nouns etc): NONE (total 0 tokens)

<table>
<thead>
<tr>
<th>Families</th>
<th>Types</th>
<th>Tokens</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>K1 Words (1-1000):</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Function:</td>
<td>...</td>
<td>(90)</td>
<td>(54.22%)</td>
</tr>
<tr>
<td>Content:</td>
<td>...</td>
<td>(43)</td>
<td>(25.90%)</td>
</tr>
<tr>
<td>&gt; Anglo-Sax:</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>~Not Greco-Lat/Fr/Cog:</td>
<td></td>
<td>(38)</td>
<td>(22.89%)</td>
</tr>
<tr>
<td>K2 Words (1001-2000):</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>&gt; Anglo-Sax:</td>
<td>...</td>
<td>(13)</td>
<td>(7.83%)</td>
</tr>
<tr>
<td>1k+2k</td>
<td>...</td>
<td>(87.95%)</td>
<td></td>
</tr>
<tr>
<td>&gt; Anglo-Sax:</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Off-List Words:</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>64+?</td>
<td>77</td>
<td>166</td>
<td>100%</td>
</tr>
</tbody>
</table>

Words in text (tokens): 166
Different words (types): 77
Type-token ratio: 0.46
Tokens per type: 2.16
Lex density (content words/total): 0.46

Pertaining to onlist only
Tokens: 146
Types: 74
Families: 64
Tokens per family: 2.28
Types per family: 1.16
Anglo-Sax Index: 96.58%
(Greco-Lat/Br-Cognate Index: 3.42% (inverse of above))

For easy editing as MS Word table - Edit/print-friendly table

Note: In the output text, punctuation is eliminated; all figures (1, 20, etc) are replaced by the word number; contractions are replaced by constituent words (won't => will not); type-token ration is calculated using said constituents; and in the 1k sub-analysis content x function words may sum to less than 100% (depending on user treatment of proper nouns and program decision to class numbers as 1k although not contained in 1k list); single letters are eliminated except for 'a' and 'i.'

Integral text: one day a lion walked around his land he saw a hare the hare had a basket a very large basket the lion said where are you going the hare answered to find some food the lion smiled and said your basket is so big how will you carry it the hare thought about it i am very strong he said i can even carry you in the basket the lion was very
surprised he did not believe the hare and said you are not strong i am strong the hare waved the lion over and said please lion climb into my basket i will show you i can carry you the lion laughed and climbed into the basket are you ok in there asked the hare oh yes answered the lion i need to tie you up the hare said so you do not fall out of my basket the hare tied the lion up he hit him with a stick until the lion died

Edit/print-friendly lists

Token List

0-1000 [families 59 : types 67 : tokens 133] a a a a about am am and and and and answered answered are are are around asked believe big can can carry carry carry day did died do even fall find food going had he he he he him his how i i i i in into into is it it land large laughed my my need not not not of oh one cut over please said said said said said saw show smiled so so some strong strong strong surprised the the the the the the the the the the there thought to to until up up very very very walked was waved where will will with yes you you you you you you you your your

First 500 function (90): a a a a about am am and and and and are are are can can did do had he he he he him his how i i i i i i i in into into is it it my my not not not of out over so so some the the the the the the the the the the the the the the the the the the the there to to until up up was where will will with you you you you you you you you you your

First 500 content (31): around asked believe big carry carry carry day died do even fall find food going large need one said said said said said saw show thought very very very walked yes

Second 500 content (12): answered answered land laughed oh please smiled strong strong strong surprised waved

AWL [:]

OFF LIST [?:3:20] hare hare hare hare hare hare hare hare hare hare
lion lion lion lion lion lion lion lion lion

Type List
type [number of tokens] [ 1 ]


tie [ 1 ] tied [ 1 ]

AWL types: [:]


Family List
family [number of tokens] [ 1 ]

1k families: [families 59 : types 67 : tokens 133 ]

1k Fr non-cognate families (content only): [families 26 :
wave [1] yes [1]

2k families: [5:7:13]


2k Fr non-cognate families: [families 5 : tokens 13 ]


AWL families [:1]

wear: AWL

AWL Fr non-cognate families: [families : tokens ]

Processing time: 0.11 CPU seconds.
YOUR SERVICE NAME

Detailed SMOG Analysis Thu May 29 16:22:03 2008

SMOG Grade 3.0

<table>
<thead>
<tr>
<th>The Hare and the Lion</th>
</tr>
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<tbody>
<tr>
<td><strong>BASIC DATA</strong></td>
</tr>
<tr>
<td>Words: 166</td>
</tr>
<tr>
<td>Numbers/off: 0</td>
</tr>
<tr>
<td>Total Tokens: 166</td>
</tr>
<tr>
<td>Syllables: 202</td>
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<tr>
<td>Sentences: 24</td>
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</tbody>
</table>

| **Derived Data**      |
| Words/Sentence: 6.92  |
| Syllables/Word: 1.22  |
| Syllables/Sentence: 8.42|
| Letters/Syllable: 2.96|
| Letters/Word: 3.6     |
| Letters/Sentence: 24.92|

<table>
<thead>
<tr>
<th><strong>SMOG Grade</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td>0 - 6 low-literate</td>
</tr>
<tr>
<td>7 junior high school</td>
</tr>
<tr>
<td>8 some high school</td>
</tr>
<tr>
<td>10 high school graduate</td>
</tr>
<tr>
<td>11 some college</td>
</tr>
<tr>
<td>12 university degree</td>
</tr>
<tr>
<td>13 - 15</td>
</tr>
<tr>
<td>16 post-graduate studies</td>
</tr>
<tr>
<td>17 - 18</td>
</tr>
<tr>
<td>19+ post-graduate degree</td>
</tr>
</tbody>
</table>

| **Example**           |
| Soap Opera Weekly    |
| True Confessions     |
| Ladies Home Journal  |
| Reader's Digest      |
| Newsweek             |
| Sports Illustrated    |
| Time Magazine        |
| New York Times       |
| Atlantic Monthly     |
| Harvard Business Review|
| IRS Code             |
APPENDIX G: STORY OUTLINE (B2)

Boy and Dog (rainy day)

Characters

**Recall**: Boy, dog, father, mother,

**Development**: lazy dog; bored boy; loving, happy father and mother; imaginative mother.

Events: boy & dog wake up; rainy day; boy is bored; boy asks dad what boy can do; asks mom what he can do; mom doesn't know, then says they can make a castle; boy, dog & parents make box castle and play with it all afternoon; at night they all watched a movie and ate pizza and popcorn.

**Plot**: A boy wants something to do on a rainy day.

**Theme**: IT'S BETTER TO BE CREATIVE THAN LAZY, OR THERE'S ALWAYS SOMETHING TO DO.
The Hare and the Lion

Characters

**Recall:** Lion; Hare

**Development:** hungry and smart hare; arrogant lion

**Events:** Lion walks around his land; lion sees a hare with a big basket; lion asks hare what hare's doing; hare says getting food; lion says hare's not strong enough; lion says *lion* is strong; hare says he hare *is*; hare asks lion to get in basket and hare will carry him; lion gets in basket, hare says he must tie lion in basket so lion doesn't fall out; hare beats lion with a stick until lion is dead.

**Plot:** A hare is going to get food, but gets confronted by a lion and must (decides to?) kill the lion

**Theme:** Don't be arrogant
APPENDIX I: SCORING SHEET (B2)

The **boy and his dog**

**Recall:** 3.75 each
- Boy
- Dog
- Father
- Mother

**Development:** 5 each
- lazy dog
- bored boy
- caring/friendly/involved parents

**Events:** 3.75 each
- Boy and dog wake up
- Rainy day
- Boy asks father
- Boy asks mother
- Mother has idea and box
- Family builds and paints castle
- Played with it
- At night movie and pizza/popcorn

**Plot:** a bored boy wants something to do 20

**Theme:** family, togetherness, creativeness 20
APPENDIX J: SCORING SHEET (HL)

The hare and the lion

Recall: 7.5 each
- Lion
- Hare

Development: 7.5 each
- Hungry and smart hare/rabbit
- Arrogant, large lion

Events: 3.75 each
- Lion walks on his land
- Meets hare with basket
- Conversation about purpose/food
- Lion challenges hare (strength/no strength)
- Hare tricks lion into basket
- Hare ties lion
- Hare beats lion to death

Plot: 20
- Hare is going to get food, confrontation with lion, defends itself/outsmarts lion by killing lion

Theme: 20
- Confrontation, arrogance, survival
## Reading Miscue Inventory Coding Sheet

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<table>
<thead>
<tr>
<th>Reader</th>
<th>Date</th>
<th>Selection</th>
</tr>
</thead>
<tbody>
<tr>
<td>Teacher</td>
<td>Class</td>
<td>School</td>
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<table>
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<th>Text</th>
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<tr>
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<td>Intonation 2</td>
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<tr>
<td>Graphic Similarity 3</td>
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<tr>
<td>Sound Similarity 4</td>
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<tr>
<td>Grammatical Function 5</td>
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<td>Correction 6</td>
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<td>Grammatical Acceptability 7</td>
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<td>Semantic Acceptability 8</td>
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<td>Meaning Change 9</td>
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<td>Partial Loss</td>
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<tr>
<td>Loss</td>
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<td>Strength</td>
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<td>Partial Strength</td>
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<td>Weakness</td>
<td></td>
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<tr>
<td>Overcorrection</td>
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<tr>
<td>Grammatical Relationships</td>
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<td></td>
</tr>
</tbody>
</table>
# Appendix L: RMI Coding Sheet 2

## Reading Miscue Inventory Reader Profile

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<table>
<thead>
<tr>
<th>Reader</th>
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<th>Selection</th>
</tr>
</thead>
<tbody>
<tr>
<td>Teacher</td>
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</tbody>
</table>

### Sound Graphic Relationships

<table>
<thead>
<tr>
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<th>Some</th>
<th>High</th>
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<tbody>
<tr>
<td></td>
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<td></td>
</tr>
</tbody>
</table>

### Comprehension Pattern

- Comprehension Line
- chunking and integrating
- maintaining attention
- General understanding

### Grammar and Relationships

- Function
- Identical
- Different
- Relationship
- Strength
- Weakness
- Overcorrection

### Frequency Line

- Percentage Line
- 0
- 10
- 20
- 30
- 40
- 50
- 60
- 70
- 80
- 90
- 100
The following research study has been approved by the Institutional Review Board at Ohio University for the period listed below. This review was conducted through an expedited review procedure as defined in the federal regulations as Category (VI):

Project Title: The Role of Content Schema in Second Language Basic Reading Development: A Closer Look at ESL Children from Somalia and Their Decoding and Comprehension Ability within Culture Specific Reading Material

Researcher(s): Barbara Schwenk

Faculty Advisor (if applicable): Scott Jarvis

Department: Linguistics

Rebecca G. Cole, Assoc. Director Research Compliance Institutional Review Board

Revised 1/2/05

07X190

This approval is valid until expiration date listed above. If you wish to continue beyond expiration date, you must submit a periodic review application and obtain approval prior to continuation. Adverse events must be reported to the IRB promptly, within 5 working days of the occurrence.

The approval remains in effect provided the study is conducted exactly as described in your application for review. Any additions or modifications to the project must be approved by the IRB (as an amendment) prior to implementation.