

Evans, E. Onset and Rime Instruction in a Low Level ABE ESOL Reading Classroom (2008).

This study's research question is, how does direct, contextualized phonics instruction that emphasizes recognition of onset and rime patterns, taught in a whole-parts-whole framework, affect low level ABE ESOL students' ability to recognize known and unknown words in print? This study grew out of the instructor/researcher's observations of students in her classroom struggling to recognize words in print that were already in their aural vocabulary. This research was primarily qualitative, implementing action research principles. The students and the instructor were the participants, and weekly activities were flexible. This 7-week study built onset and rime instruction into the regularly scheduled reading time. Pre-and post-study data was collected through a brief reading test, a student questionnaire, and a teaching journal kept by the instructor. Results suggest that onset and rime instruction can improve students' word recognition. Students' feedback also suggests that this strategy was helpful to them.

Copyright by
ERIN G. EVANS
2008
All Rights Reserved

ONSET AND RIME INSTRUCTION IN A LOW LEVEL ABE ESOL READING
CLASSROOM

by

Erin G. Evans

A Capstone submitted in partial fulfillment of the requirements
for the degree of Master of Arts in English as a Second Language

Hamline University

Saint Paul, Minnesota

March 2008

Committee:

Andrea Poulos, Primary Advisor
Julia Reimer, Committee Chair
Ruth Bauman, Peer Reviewer

To my students

ACKNOWLEDGEMENTS

I would like to thank my capstone committee members, Andrea Poulos, Julia Reimer, and Ruth Bauman, for investing their time and energy in this project. They asked important questions, gave thoughtful feedback, and offered enthusiastic encouragement. Working with them gave me an invaluable opportunity for personal and professional growth.

Thanks also to Bella Hanson, Marn Frank, and the entire Practitioner Research group of 2006-07. This community of educators provided a network of support and a framework for action research which was crucial to the success of this project. Special thanks to my father and mother, who have been my tireless cheering section since day one, and to friends whose assistance came at critical moments. Finally, and most importantly, I would like to give thanks to the One who has ordered my steps both in this capstone process and in life. His guiding hand has been evident at every turn.

TABLE OF CONTENTS

Chapter One: Introduction	1
Chapter Two: Literature Review	6
Reading and Alphabetics	7
Reading Instruction Philosophies	9
Whole-Parts-Whole Reading Instruction	13
Onset and Rime.....	15
Literacy and Adult Immigrants in the United States	20
Chapter Three: Methodology.....	25
Setting	25
Subjects.....	26
Research Paradigm.....	27
Informed Consent and Confidentiality.....	30
Pre-Intervention Data Collection	30
Intervention.....	32
Intervention Activities	36
Post-Intervention Data Collection.....	39
Data Analysis	39
Chapter Four: Discussion.....	41
Pre- and Post-Tests	42
Pre- and Post-Study Participant Questionnaires	47
Teaching Journal.....	50
Student Feedback.....	54

General Findings.....	55
Demographic Relationships.....	55
Other Factors.....	57
Summary.....	58
Chapter Five: Conclusion.....	61
Study Summary.....	61
Limitations.....	64
Suggestions for Further Research.....	65
Final Comments.....	66
Appendices.....	68
Appendix A: Combined Onset and Rime Recognition Test (T.C.).....	68
Appendix B: Combined Onset and Rime Recognition Test (S.C.).....	70
Appendix C: Onset Focus Test.....	72
Appendix D: Pre-Study Questionnaire.....	74
Appendix E: Post-Study Questionnaire.....	76
References.....	78

LIST OF GRAPHS

Graph 4.1	Word List 1a	43
Graph 4.2	Word List 1b	43
Graph 4.3	Word List 2	43

LIST OF TABLES

Table 3.1	Student Demographics	27
Table 4.1	Paired Samples Statistics	46
Table 4.2	Paired Samples Correlations	46
Table 4.3	Paired Samples Test	46
Table 4.4	Questionnaire—Reading Attitudes	49
Table 4.5	Teaching Journal Synthesis.....	51

CHAPTER 1 – INTRODUCTION

Reading, in 21st century American society, is an essential skill not only for success, but often for survival. Few tasks do not require some level of reading ability to fully understand a communication transaction. Immigrants who move to the United States feel the intense pressure of making a successful transition from one culture to another amidst the stress of confronting changes in every part of their lives. If English is not their native language (L1), which is often the case, they are faced with an instant communication gap between their L1 and English. Learning to communicate verbally in English is only the first hurdle. Most successful communication in the United States also requires a well-developed ability to read and write in English.

Reading in the 20th and 21st centuries has been the focus of numerous studies. In general, these studies center mainly on children in K-12 or adult native speakers of English (NSE). For adult non-native speakers of English (NNSE), a much smaller number of reading studies have been conducted (Burt & Peyton, 2003). While much of the available research has yielded valid results about effective teaching practice and principles, there is not yet a great deal of research which substantiates their effectiveness among adult English language learners (ELLs). Many teachers of adult ELLs are informed by these principles when designing lessons and curriculum but reports of success with these strategies remain largely anecdotal rather than research-based.

One element of reading pedagogy that has historically generated controversy is

the role of phonics instruction in early reading (Chall, 1967; Adams, 1990). My interest in phonics instruction was heightened when I taught English to kids in Southeast Asia. At the school where I taught, each lesson began with a featured letter-sound correspondence and students were given several random words as examples of where this sound occurred. The lesson also included a story that was read on an on-going basis throughout the twelve-week term which presumably allowed for, among other things, practice in reproducing the featured letter-sound correspondences. It was difficult to gauge the long-term effectiveness of this model, but I did note that pronouncing any part of the word beyond the initial letter, vowels especially, continued to be a struggle even with students at the higher levels. There were, I am certain, many factors that could have accounted for this, but a key part of the confusion was the unpredictable nature of letter-sound correspondence in English, particularly with vowels.

When I began teaching a class of low level adult ELLs at an Adult Basic Education (ABE) program in the Midwest, I observed the struggles my students had in reading and noticed that their difficulty in pronouncing initial sounds and, particularly, the remaining letters within the word, obscured the meanings of words that they might otherwise recognize in conversation or listening activities. Once again, it seemed that one of the biggest challenges for the students was determining how to decipher the second half of the word.

Shortly thereafter, I attended a workshop specifically focused on the issue of using phonics instruction to teach reading to low literacy adult ELLs. At this workshop, a panel of local experts shared phonics instruction strategies they had been using in their adult ESOL (English for Speakers of Other Languages) classrooms. One panelist shared

about the action research she was conducting within her own class, using direct instruction in phonics, including onset and rime, with a whole-parts-whole strategy (Trupke & Poulos, 2007). The prevailing message throughout the workshop was the need for more research regarding phonemic awareness and the incorporation of phonics into reading lessons within this population of English learners. This information came in the midst of my own search for a relevant capstone topic and question. My personal criterion, as I searched, was to find a topic that would provide helpful information to ESOL practitioners and to the field of ESOL instruction in general. The relevance of phonics to my students and me, and the call for additional research, were the decisive factors in my choice to pursue this as a capstone project. Two strategies mentioned at the workshop converged to provide the core structure for and main focus of this research: *whole-parts-whole* phonics instruction with a specific focus on *onset and rime* (defined below) recognition for the development of strong reading skills.

Dombey and Moustafa (1998) argue compellingly that the use of a whole-parts-whole reading instruction strategy, a method that starts with a whole reading sample and progresses to analysis of the smaller parts of words and then returns to the full text again, is far more effective with young NSE readers than the synthetic (context-free) model. A premise of whole-parts-whole is that new readers more easily acquire phonics principles when they apply them within texts they already understand and are familiar with (Fowler, 1998). When the obstacle of comprehension is reduced, students are better prepared to notice and recognize the parts and patterns that make up the *whole* that they have been reading.

With a whole-parts-whole strategy in mind, there remains the question of how to

teach the *parts* of words. This is where, for the purposes of this study, the focus turns to the terms *onset* (the initial consonant, if any, in a syllable) and *rime* (the remaining vowel and consonant, if included). Cunningham (2005), in her years of teaching and research has drawn some convincing conclusions about the way that children organize information, particularly in decoding unfamiliar words. She talks about the key role that onset and rime recognition play in the development of good reading skills. Given the seemingly unpredictable nature of letter-sound correspondence in English, the notion that an awareness of onset and, particularly, rime patterns in words can facilitate greater ease in learning to decode is intriguing. Dombey & Moustafa (1998) assert convincingly that the development of this awareness is a key part of reading acquisition for youngsters. To what degree are these principles applicable to adult ESOL reading instruction for developing and improving ELLs' reading skills?

This study, conducted in a Midwestern ABE ESOL classroom, is primarily qualitative in nature and focuses on observing the effects of explicit analogy phonics instruction, which is the use of known onset and rime patterns to decode and identify unknown words within reading lessons (Ehri, 2003). The aim of this study is to explore whether the use of direct analogy phonics instruction in an low level adult ESOL reading classroom, using whole-parts-whole, contextualized instruction, can increase students' decoding and word recognition ability.

Given that an English learner's personal livelihood and survival depend on the development of good reading skills, any insight into strategies that may accelerate that process has great potential benefit to educators and students alike. In a society where reading skills are essential for navigating even basic tasks, equipping new immigrants

with these skills is challenging and exciting. There are many questions that remain unanswered about the cognitive processes at work when adult ELLs learn to read English. But the success of direct instructional strategies at the elementary reading level, combined with the growing consensus that explicit decoding instruction is also necessary in the low level adult NNSE population (Symposium, 2002), makes the possibility of generalizations compelling.

The following chapter, the review of literature, examines reading and its subcomponents, reading instruction philosophies, the whole-parts-whole strategy, onset and rime awareness and recognition, and the current reading research that exists for adult immigrants. Chapter 3 outlines the methodology of the research conducted, including the setting, participants, data elicitation and analysis methods, and the implementation of the method. Then, in Chapter 4, there is a presentation of the data and a discussion of the results. Both qualitative and quantitative data is analyzed and interpreted. Finally, Chapter 5 includes a summary of the research with conclusions that might be drawn in light of the specific components of this study and areas for further research.

CHAPTER 2 – LITERATURE REVIEW

The search for best practice in reading instruction continues to generate a great deal of research. As mentioned in the introduction, much of this research has been conducted largely on a younger population of students: NSEs within primary and secondary education. Reading instructors at this level have a wide breadth of research-based strategies to draw on in developing curriculum and designing lessons. However, the National Panel for Reading (2000) reported that the body of research for teaching adult NSEs and, by extension, adult non-native English speaking (NNSE) low level students, is far smaller, proportionally, than that for children. One field of study which has been the subject of debate in research studies and classrooms for decades is phonics instruction (Adams, 1990). There are numerous views on the best place for phonics instruction in a class of beginning readers.

The aim of this study is to discover and confirm effective teaching methods for a low level adult ESOL reading classroom, using specific teaching strategies for reading that have seen success within the context of younger student populations. The particular reading component in focus is alphabets, specifically, phonics instruction that explicitly raises onset and rime recognition. The method employs a whole-parts-whole approach, embracing the critical role that context plays in meaningful reading acquisition. It is hoped that the discoveries and observations made in this study will help to shed light on the degree to which a heightened ability to recognize onset and rime, taught within a

meaningful context, increases students' ability to decode and understand English words and texts.

This review of the research literature begins with a formal definition of reading and its four components, followed by a look at alphabetics, the component of reading that pertains most specifically to this study. From there, philosophies of reading instruction are examined, as is a specific instructional strategy called whole-parts-whole. Also included is a look at onset and rime, the types of word families represented, and what some research on children has revealed about the role of onset and rime in early reading acquisition. Finally, certain facets of literacy as a whole within the United States are examined, particularly as they reveal the current state of instruction and literacy level within the NNSE adult immigrant population.

Reading and Alphabetics

Forty years ago, in response to the reading instruction debate of that day, Chall (1967) conducted a three-year long study aimed at compiling a comprehensive body of evidence about reading instruction and strategies. As part of that process she asked authors of reading programs to define reading. She highlights two of the definitions: “1) Reading is understanding printed language and reacting to it—reacting in the broad sense of understanding, both literal and interpretive; 2) Reading is the meaningful interpretation of symbols—a process through which we understand. It is a process of communication between readers and writers, and a means to an end. It is not an end in itself” (p. 53).

More recently, McShane (2005) defines reading in the following terms:

A complex system of deriving meaning from print that requires all of the following:

- the skills and knowledge to understand how phonemes, or speech sounds, are connected to print;
- the ability to decode unfamiliar words;
- the ability to read fluently;
- sufficient background information and vocabulary to foster reading comprehension;
- the development of appropriate active strategies to construct meaning from print;
- the development and maintenance of a motivation to read. (p. 7)

McShane's definition is notably more comprehensive in its scope, explicitly articulating that reading includes things like phonemic awareness, fluency, reading strategies and motivation. However, both of these definitions mention the importance of not only recognizing words in print but also drawing meaning from them.

Research and instruction within Adult Basic Education (ABE) segments the discipline of reading into four components: alphabets, fluency, comprehension, and vocabulary (Kruidenier, 2002; Curtis & Kruidenier, 2005). The Learning Disabilities Association, Inc. (LDA) of Minnesota, which works with children, youth and adults, defines these elements in the following terms: "*Alphabets* is the process of understanding and using the letters in a written language to represent meaningful spoken words. *Fluency* refers to reading text accurately, quickly, smoothly, and with good expression. *Comprehension* is the understanding of what is read or the active process of

constructing meaning from text. *Vocabulary* refers to knowing and understanding the meaning(s) of individual words” (2005, pp. 3, 49, 87, 67, respectively). An important note here is that these components are interdependent and must be developed in concert, to some degree, for sustainable growth in reading (McShane, 2005). However, for the purposes of this study, the focus is specifically on teaching strategies within alphabetics.

According to Kruidenier (2002), “alphabetics includes both *phonemic awareness*, or knowledge of the sounds of spoken language, and *word analysis*, or knowledge of the connection between written letters and sounds (letter-sound correspondence)” (p. 35). More specifically, a *phoneme* refers to the smallest sound in a language which, when altered, alters the meaning of a word (Celce-Murcia et al, 2002). The other piece of alphabetics, word analysis, involves the decoding of *graphemes*, which is another term for the written representations of the sounds in a language (Hull & Fox, 1998). Word analysis shifts the focus of this review to a discussion of phonics instruction.

Reading Instruction Philosophies

We turn now to a more specific discussion of phonics instruction. Ehri (2003) gives a helpful description of the current forms that phonics instruction can take. According to Ehri, instructional methods include *synthetic and analytic phonics*, *phonics through spelling*, *phonics in context* and *analogy phonics*. *Synthetic phonics* involves a part-to-whole approach, converting graphemes to phonemes. *Analytic phonics* goes the opposite direction, from whole to parts, not pronouncing sounds in isolation. *Phonics through spelling* has students segment and write phonemes into words, while *phonics in context* combines letter-sound correspondence with context cues to decode new words. Finally, *analogy phonics* uses known onset and rime patterns to aid in the identification

of new words. The lines between these methods are not clearly defined and, as Ehri explains, reading programs for young learners vary in the emphasis they put on specific elements within these strategies.

Historically in this country, phonics for children was instructed explicitly, using a parts-to-whole model (Dombey & Moustafa, 1998). This traditional approach was synthetic in that it focused on learning letter names and individual sounds first, independently of a text, and then introduced larger texts for reading (Adams, 1990). But, due to the irregularities between letter-sound correspondence in English orthography and the myriad rules for decoding a vowel, depending on its place within a word, phonics instruction has been in a continual state of reassessment (Balmuth, 1982).

In the 1930's, reading instruction moved towards a meaning-based, *whole word* approach (Chall, 1967). The whole word approach, also called the *look-say* method, was based on the premise that children could eventually recognize words in print if they were exposed to them numerous times; it intentionally did not involve analysis of the smaller units of which words are comprised (Beck & Juel, 1995). This approach, however, was not without detractors, and in 1955, Chall records, Rudolf Flesch's book Why Johnny Can't Read put reading instruction methods in the headlines. It was written as a critique of the whole word theories and brought the debate about phonics instruction in 20th century United States to the forefront of the public's attention.

Framed another way, the reading instruction debate centered on bottom-up versus top-down theories. According to Treiman (2001), bottom-up theories postulate that students read by systematically analyzing the letters and words on the printed page. Top-down theories, on the other hand, assert that readers use the words and context to guess or

predict what the following words will be and analyze only enough of the word to confirm those predictions (Treiman, 2001).

In recent years, Krashen (2002) has termed the debate the “Reading Wars.” Krashen explains that these so-called “Wars” draw educators of children in one of two directions: the Skill-Building hypothesis (bottom-up) and the Comprehension hypothesis (top-down). Krashen argues in favor of the Comprehension hypothesis, also referred to as *whole language*, which emphasizes the importance of reading texts that are comprehensible, and reading strategies that focus on drawing meaning from the text and developing good critical thinking skills while minimizing the amount of explicit instruction in letter-sound correspondences, or phonics instruction.

While this approach makes an excellent case for the crucial role that context plays in understanding a text, it deemphasizes the need for explicit instruction in word analysis and decoding skills for beginning readers. Tunmer and Hoover (1993), whose study concluded in favor of direct phonological recoding instruction for NSE children, explain that the whole language view presumes that this awareness is acquired as a natural outgrowth of reading a familiar text, with no direct phonics instruction required. However, Jones (1996) argues that, especially for adult ELLs, direct phonics instruction is indeed critical for “breaking the code” and developing the ability to make sense of new and unfamiliar texts.

In her study of young inner-city ELLs, Stuart (1999) comments that a meaning-based approach to reading assumes that the new readers have a strong foundation in English vocabulary knowledge, while, in fact, this is often the weakest skill of an ELL, since, as language learners, they are still building basic vocabulary even as the reading

acquisition process begins. Furthermore, for ELLs who are learning English as an additional language that may or may not share similarities to their native language, English's orthography can be very daunting. Ehri (2003) suggests that a clearly defined (systematic) approach to phonics instruction with ELLs is essential because the variations in English letter-sound correspondence make it hard to figure out these patterns independently.

Synthetic phonics takes phonics instruction to the opposite side of this continuum since it involves practice in phonics that is separate from a reading context or story (Chall, 1967). In this method, the "code" is emphasized first, and the application to a larger text comes later (Cunningham, 2005). There are difficulties with this strategy as well, particularly for ELLs. Dombey and Moustafa (1998) caution that a significant drawback of the parts-to-whole method is the numerous irregularities in letter-sound correspondence in English. Burt, Peyton, & Adams (2003) further assert that a correct understanding of how to pronounce the "parts" of words is not sufficient for adult ELLs who are attempting to understand a text; students must also have the corresponding background knowledge about the text in question in order to understand it.

Wrigley and Guth's (1992) two-year study on current practice in the field of ESOL produced a handbook of recommendations for reading instruction to adults. They found that, despite the variety of approaches to literacy education, instructors agreed that reading instruction was most beneficial when taught in context, with opportunity for immediate application to real-life situations. Interestingly, Wrigley and Guth note that "literacy educators agree that real-life literacy, or reading and writing for a purpose other than classroom practice, always involves both *top-down* and *bottom-up* processes" (p. 23).

Indeed, a close look at Krashen's argument for the whole language approach does not exclude phonics instruction completely, rather it significantly minimizes its role in early reading instruction (2002). It seems clear that there is room for both approaches to work within one reading program.

Though both sides have their strengths and weaknesses, one thing ESOL educators do agree on is that phonics must be taught systematically and early in the reading process (Stuart, 1999; Ehri, 2003; National Reading Panel, 2000; National Symposium on Adult ESL Research and Practice, 2001). This brings an emerging approach into sharper focus: whole-parts-whole reading instruction.

Whole-Parts-Whole Reading Instruction

Like top-down strategies, the whole-parts-whole method operates under the assumption that students are better able to observe and retain knowledge about a reading text that is familiar to them (Dombey & Moustafa, 1998). A key difference between whole language and whole-parts-whole is the direct instruction of the 'parts' element. Students are not presumed to acquire and implement knowledge about word analysis simply by understanding an entire text and awakening their own personal phonemic awareness (Burt, Peyton & Adams, 2003). Instead, individual parts that comprise words are highlighted, examined and compared with similar patterns found across the language.

Fowler (1998) uses her class of NSE 6-year-olds as an illustration of one way that a whole-parts-whole reading instruction strategy helps her students identify the smaller "pieces" in words and texts. A typical day in her classroom begins with students leisurely reading books they have chosen, both independently and with a partner. These books are at their reading level (not too difficult or too easy). The next step is for the

entire class to gather for some explicit phonics instruction using an overview of the day's agenda, which is written on the board—the first *whole*. The phonics focus is drawn from this text and might be, for example, o-u as in *out* or o-w as in *how*—the *parts*. These two words are isolated on the board and then students are asked to suggest other words they already know that look or sound the same (e.g. *now, pow, wow, cow*, etc.). Then, not only do the students identify the o-u and o-w sounds in the class agenda (the original *whole*), but they are also instructed to look for o-u and o-w words in everything that they read that day—additional *wholes*. Based on the students' eagerness in discovering new words, and their spontaneous discovery of other words even on the following days, Fowler concludes that the whole-parts-whole method is an effective tool (1998).

Dombey and Moustafa (1998) illustrate why a whole-parts-whole approach makes sense by describing the stages of reading which have been observed in children: First, they begin to notice that written words carry a message (*logographic stage*); from there, they move to the *analytic stage* where they begin to see beyond large texts to the smaller units of words and their phonemes; finally, they arrive at the *orthographic stage*, where they are “learning to orchestrate the different cueing systems (semantic or meaning, syntactic or grammar, and graphophonic or sound/symbol) in texts and to read the print with growing confidence and accuracy, monitoring their own reading and self-correcting more confidently” (p. 30). Whole-parts-whole takes the beginning reader through all three of these stages.

Strickland (1998) explains that whole-parts-whole is a well-rounded approach within the reading instruction debate because it brings skills instruction into the context of learning to read and write. Dombey & Moustafa (1998) further illustrate the

effectiveness of contextualized versus decontextualized word recognition this way: “early readers may see the print word *horse* in a list of words and say *house* but see the same word in a story about cowboys and say *horse*” (p. 18). A whole-parts-whole approach intentionally includes texts which are familiar and understood by the students. In this way, less time is required to develop a familiarity with the story and vocabulary, and the students’ focus can be more effectively directed to recognizing the smaller segments of the language (Dombey & Moustafa, 1998).

The next section discusses *parts* in greater detail by looking at a specific phonics instruction strategy: onset and rime awareness and recognition.

Onset and Rime

Embracing the theory that a whole-parts-whole, systematic, direct and contextual approach to phonics instruction is crucial for early readers, the focus in this section shifts slightly, to a specific instructional strategy. As discussed above, English graphemes (letters) do not consistently correspond to the phonemes (sounds) they represent (Booth & Perfetti, 2002). The challenge this presents for new readers of English is clear. While the pronunciation rules for initial letters in a word are more transparent, decoding the remaining letters can be difficult when taken letter-by-letter. Variations in vowel sounds account for a great deal of the difficulty here. However, when taken as a vowel-consonant unit, the pronunciation parameters become less unpredictable (Treiman et al, 1995). This is where a discussion about focused instruction in onset and rime patterns becomes very interesting.

An onset can be defined as “the single consonant, consonant blend, or consonant digraph that begins a syllable” (Hull, 1998, p. 155). A single consonant refers to one

initial letter, like *k*. A consonant blend involves separate letters that are blended, but retain their unique sounds in that blending. For example, *spl*. Finally, a digraph is a combination of letters that results in a new sound. An example of this is the *sh* combination, where the *s* and *h* letters combine to form an entirely different sound. Not every syllable in English has an onset. Onsets must contain consonants: where there is no consonant, there is no onset (Hull, 1998).

Rimes, on the other hand, exist in every English syllable. *Rime* is the linguistic term for the word *rhyme* and is also called a *word family* and *phonogram* by reading instructors (Cunningham, 2005). A rime in English consists of one vowel phoneme, or sound, and may or may not include syllable-final consonant phonemes (Hull, 1998). Orthographically (written) identical rimes often rhyme in English, as with *shr-ed* and *b-ed*, but they sometimes have completely different pronunciations, as with *c-ough* and *th-ough* (Hull, p. 160). Wylie and Durrell (1970) compiled a list of 37 high-frequency rimes whose “vowel sounds were dependable...in ten or more primary grade words” (p. 787).

Stanback, in her 1992 analysis of syllable and rime patterns in 17,602 words, confirms a high degree of predictability between orthographic rimes and their pronunciation patterns. Stanback concedes that, while exceptions and variations do occur, they are the exception rather than the rule. “The large amount of overlap of regularity and consistency found in the analysis [of the rime unit] suggests that both are tapping fundamental structural characteristics of orthography as it relates to sound” (p. 21). This seems to give much greater credibility to the argument that onset and especially rime, are important components of reading instruction in English.

Treiman's 1992 analysis of research looks at intrasyllabic units (the letters or groups of letters that make up the syllable) and the development of phonological awareness, and reading and spelling skills in children learning their L1 (English). Treiman demonstrates that children more readily recognize and divide syllables into their onset and rime units in phonological, as well as reading and spelling tasks, rather than isolating individual letter-sound correspondences. Treiman points out that the numerous exceptions between English orthography and phonology decrease measurably when considered in terms of onsets and rimes, rather than individual graphemes and phonemes, and students use these "higher-level units" to analyze words (p. 102).

Treiman et al's (1995) study examines the use of CVC words in spoken English and how their spelling and sound correspondences are used in learning. CVC refers to words "that have a single initial consonant, a medial vowel, and a single final consonant" (p. 109). The initial stage of the study involved an analysis of consistency in pronunciation between the initial consonant (C_1), the medial vowel (V) and the final consonant (C_2). For the purposes of the study, these sounds were subdivided into the "orthographic units," C_1V and VC_2 , where the former is the combination of the initial consonant plus vowel, and the latter is the vowel plus the final consonant. Treiman et al conclude, in this analysis stage, that vowel pronunciation is far more likely to be governed by the final consonant (VC_2) than the initial consonant (C_1V), so that " VC_2 units are better guides to pronunciation than are C_1Vs " (1995, p. 111).

This analysis was then tested on fluent adult NSE university students and young elementary-age NSE readers. Both groups were asked to read the same list of words, though the testing format differed. Errors in pronunciation were recorded. The results

for all groups tested seemed to suggest that both adults and children use their knowledge of groups of graphemes (units) rather than individual graphemes to pronounce words, and that they pronounce the VC₂ unit correctly more consistently. This lends credibility to the theory that when readers consider the vowel together with the consonant that follows it (i.e. the rime), they have a greater chance of pronouncing it correctly (Treiman et al, 1995). Taking this theory an additional step, an argument can be made that giving learners the tools to pronounce a word correctly could then help them recognize a word that they have in their aural vocabulary but were not previously able to identify in print.

Cunningham (2005) also argues persuasively that the human brain decodes more naturally by recognizing patterns rather than piecing individual letters together until a guess can be made about the sound a group of letters makes. In her research and observations of young NSE readers, Cunningham compiles interesting information about the habits of good readers. When students were able to see past individual letters themselves and start to observe how letters are grouped together in predictable patterns, their reading competency greatly improved.

It has been widely-observed that children who are pre-readers have a keen inclination to detect onset and rime patterns even prior to developing formal reading skills (Goswami, 2002; Goswami & Bryant, 1990; Kirtley et al, 1989; Walton et al, 2001). Goswami (2002) asserts that awareness of onset and rime patterns in English is a strong predictor of reading ability, making a compelling case for the importance of onset and rime instruction in the beginning reading classroom. Interestingly, Stahl and Murray (1994) suggest that an awareness of onset and rime in words is the precursor to understanding the smallest units of sound (phonemes), not the other way around.

If onset and rime awareness plays such a significant role in young NSE readers' acquisition of L1 reading skills, to what extent can it strengthen low level adult ELLs' emerging English reading skills? Certainly educational background in the L1 plays a part, as we will discuss in the next section, but does the brain utilize similar decoding strategies, regardless of age of acquisition or exposure? Davidson and Strucker's (2002) research compares the reading strategies of both NSE and NNSE low-intermediate readers in ABE classrooms. Among their findings is the suggestion that, unlike adult NSEs with reading challenges, adult NNSEs tend to use similar reading strategies as children who are learning to read English for the first time. If this is the case, reading instruction which emphasizes onset and rime is a relevant issue for low level adult ELLs in reading programs.

Literacy and Adult Immigrants in the United States

The arrival of new immigrants and refugees to the United States is a daily reality, and one place that this large volume of people is evidenced is in federally-funded adult basic education (ABE) programs (Burt & Peyton, 2003). This growing population of students has, by necessity, widened the scope of English instruction. Kirsch (1993) states that "we live in a nation...where both the volume and variety of written information are growing and where increasing numbers of citizens are expected to be able to read, understand, and use these materials" (p. xix). Reading and writing proficiency in English are critical and immediate necessities for immigrants. A renewed interest in the unique needs of adult immigrants who are learning English has generated an ongoing discussion about not only the best sequence of reading instruction, but also the most effective methods of instruction (Hinkel, 2006).

The National Adult Literacy Survey, conducted in the early 1990's, indicates that illiteracy is growing in the United States, with 40 to 44 million adults falling into the lowest level on the literacy scale. Twenty-five percent of that number are immigrants, perhaps in the early stages of learning English (Kirsch, 1993). With the larger numbers of students comes a greater scope of needs. The wide variety of educational experiences that each immigrant has received in their home country is an essential piece of information for practitioners to bear in mind as they instruct their students. Drawing from current studies, Burt and Peyton (2003) divide ELLs' literacy backgrounds into the following two categories: 1) *Limited Literate Learners* which includes designations like *preliterate*, *nonliterate* and *semiliterate* learners; 2) *Literate Learners* is subdivided into *non-alphabet literate*, *non-Roman alphabet literate*, and *Roman alphabet literate* learners.

Huntley's (1992) synthesis of teaching principles for adult ELLs defines four of the six designations above: *preliterate* learners come from societies where "literacy is rare or non-existent" (p. 10); *nonliterate* students, sometimes called *illiterate*, come from a tradition of literacy in their first language, but have never learned to read that language; learners who have had only a limited amount of education in their L1 or have spent an inconsistent amount of time in formal schooling are called *semiliterate*; *non-Roman alphabetic* is the term used to refer to learners who are literate in their L1, but the writing system in that language does not use a Roman alphabet similar to English. *Non-alphabet literate* learners differ from *non-Roman alphabet literate* learners in that the latter uses a phonetically based alphabet in the same way that English does and the former uses a logographically based (picture) writing system that is completely different from English (Burt & Peyton, 2003). Finally, *Roman alphabet literate* learners are those who are fully

literate in their first language, a language which, like English, uses the Roman alphabet, but these learners still encounter some level of difficulty with English, mainly due to the differences in letter-sound correspondences between their L1 and English (Burt & Peyton, 2003).

These factors are part of the equation that determines how quickly a language learner improves, and interestingly, regardless of a student's literacy level in a non-alphabetic, non-Roman alphabetic, or Roman alphabetic language, practitioners tend to agree that direct instruction in phonological rules is essential for all adult ELLs (Burt, Peyton & Adams, 2003). Burt, Peyton, and Van Duzer (2005) add that adult ELLs benefit more from phonics instruction that does not involve decoding nonsense words, but regular words within the English lexicon. This gives additional credibility to the practice of designing phonics lessons that are contextual and meaning-based.

Additionally, when designing a reading lesson for adult immigrants and refugees, it is important to consider some basic principles for ELL reading instruction. Huntley (1992) explains that these include relevance to daily lives, instruction that builds confidence and inspires more learning, lessons that take into account the four skill areas (reading, listening, speaking, and writing) and, for students who have no orientation to print in their L1, instruction in the awareness that written language conveys meaning.

There are still a large number of questions about reading instruction with this population of learners that remain unanswered. According to Kruidenier's analysis, the relevant base of reading research currently available to Adult Basic Education practitioners and programs is relatively small (2002). Of those studies, Burt, Peyton, & Van Duzer point out that only 5 address ELLs in particular (2005). In a related study,

Burt, Peyton, & Adams (2003) identify a number of areas for further research in adult ESOL instruction. Included in their list are two areas that are relevant to this study: 1) the extent and ways that “reading programs and strategies developed for children (e.g., explicit, systematic phonics instruction) [can] be used effectively with adults” (p. 41); and 2) the extent and ways in which “reading programs developed for native English speakers (phonetically based programs) [can] be used effectively with adults learning English” (p. 41).

This study’s aim to examine the effectiveness of direct instruction in onset and rime recognition, using a contextualized whole-parts-whole strategy with low level adult ELLs, grew out of experiences in a classroom of students who struggled to master the skills of decoding and comprehending English texts. It was conducted in an ABE ESOL classroom with the hope that the results and observations would add helpful information not only for the teacher’s personal instructional strategies, but also for the larger body of research available to practitioners who provide reading instruction to ELLs in ABE classrooms.

Chapter 2 has examined the research literature pertaining to reading and alphabets, reading instruction strategies, whole-parts-whole, and onset and rime awareness and recognition. It has also taken a brief look at literacy in the United States, as it relates to recent arrivals of immigrants and refugees. This literature shows that an explicit phonics approach to reading instruction, taught in a meaningful context, is preferable for ELLs. It also affirms that an awareness and recognition of onset and rime patterns in English words occurs in the earliest stages of NSE children’s reading development. New and experienced NSE readers more naturally divide words between

onsets and rimes, and a vowel pronounced in the context of a rime is much more predictable. All of these points add significant weight to the suggestion that phonics instruction which emphasizes onset and rime has great potential to be helpful for low level adult ELLs who are learning to read English.

Chapter 3 discusses the way in which this study adapted and tested specific instructional practices within an low level adult ESOL classroom. The details of the study, including the research paradigm, the participants, the setting, the intervention elicitation strategies, the intervention activities, the length of the study, and the data analysis procedures are outlined.

CHAPTER 3 – METHODOLOGY

Chapter 3 delineates the key elements of this primary research study. These include the participants, the setting, the research paradigm, methods, data elicitation and analysis procedures, and the implementation of the method. This study is designed to demonstrate whether explicit onset and rime phonics instruction, using a whole-parts-whole strategy, could measurably improve students' decoding ability within a reading class for low level adult ELLs, in order to contribute helpful information to the discussion of best practice in reading instruction for this population of students.

Setting

The setting for this study was an Adult Basic Education ESOL Program located in the upper Midwest. This institution offers daily core English classes to adult refugees and immigrants. These core classes are offered from 9:00am -12:00pm, Monday through Friday and 1:00-4:00pm or 5:30-8:30pm, Monday through Thursday. Class sizes range from 10 to 40 students, with an average of 15-20 students per class in attendance on any given day. Enrollment in classes is open, but students maintain their place in the class through regular attendance. For some students, the government assistance they receive is contingent on their regular attendance of English classes. The classes themselves are free of charge to the students and are funded by state and federal government dollars and special grants.

In compliance with federal funding mandates under the National Reporting System, students are administered a standardized test called the Comprehensive Adult Student Assessment System (CASAS) every 40 – 60 instructional hours (NRS homepage, 2007). The CASAS assesses NSE and NNSE adults’ “basic reading, math, listening, writing, and speaking skills in a functional context” (CASAS homepage, 2007). The particular skill test that is most often used for reporting purposes at this school is the reading test.

In addition to the core classes described above, there are often additional special classes available for one-hour segments between the regularly scheduled class times (for example, from 12:00 to 1:00pm or from 4:15 to 5:15pm). These classes include offerings such as reading, math, typing, writing, computer and citizenship test preparation.

This study took place within a morning work-readiness English class which fell into the category of high beginning level (CASAS scores ranging from 192 to 203). The class met for 3 hours each morning, from Monday to Friday. Each week’s lesson was built around a reading text. The intervention involved an emphasis on specific onset and rime recognition activities within the regular reading instructional time throughout the week. The intervention began during the third week of the new term and continued for a period of 7 weeks. Since the activities were blended into the existing curriculum, between 1 and 2 hours per week of instruction had an onset and rime recognition focus, for a total of 14 hours of direct instruction.

Subjects

The subjects in this study were adult immigrants and refugees, who had been

living in the United States anywhere from 1 month to 10 years. They came from different world regions, including East Africa, Central America, and Southeast Asia. The L1's represented included languages whose written forms use both Roman alphabets and non-Roman alphabets. Relative literacy in the L1 varied somewhat, student to student, from nonliterate to non-Roman alphabet literate to Roman alphabet literate. (See Table 3.1)

The selection process was limited to the students enrolled in the work-readiness English class mentioned in the Setting section above. Students' participation in the study was completely voluntary and, while they could opt-out at any time, they could opt-in only until the Friday before the official starting date of the study. Students who enrolled in the class beyond that date were given the same instruction, but were not considered to be study participants. The original participant number was 7 students. Only 5 students completed the study by taking the post-test and filling out the post-study questionnaire: one student stopped attending for unknown reasons, and the other had to discontinue due to personal issues at home.

Student Demographics						
Student	L1	Literacy	Time in U.S. *	Formal Education (in home country)*	CASAS	
					Pre	Post
ID #1	Amharic	Non-Roman alphabet	1 month	10 years	204	222
ID #3	Somali	Roman alphabet	6 months	12 years	206	210
ID #4	Hmong	Nonliterate	2 ½ years	None	202	207
ID #5	Oromo	Non-Roman alphabet	1 ½ years	12 years	201	206
ID #6	Spanish	Roman alphabet	1 year	12 years	201	201

Table 3.1

*approximate

Research Paradigm

Though this research included a quantitative component, a greater emphasis was placed on qualitative data collection, specifically, action research. Merriam's (1998)

discussion of qualitative research clarifies important characteristics of this type of research, many of which are relevant to the chosen direction of this study. For instance, one type of qualitative research is *Grounded Theory* which “is designed to inductively build a substantive theory regarding some aspect of practice” (p. 12). As mentioned in Chapter 2, there is a need for more research in the area of Adult Basic Education ESOL to explore, understand, and test sound reading instruction practice.

Merriam also describes the design of a qualitative research study as being characterized by flexibility. It is also general and evolving. Another key feature of qualitative research is that it includes the researcher as a participant (Merriam, 1998).

Finally, the small number of participants available for this study made a qualitative approach more sensible. Mackey and Gass (2005) explain that qualitative studies involve a small number of participants even though this can reduce the overall generalizability of the study.

One model within qualitative research is *action research*. Carr and Kemmis (1986) provide a clear definition:

Action research is...a form of self-reflective enquiry undertaken by participants in social situations in order to improve the rationality and justice of their own practices, their understanding of these practices and the situations in which these practices are carried out (p. 162).

McNiff (2002) explains that action research is a method chosen by teachers who wish to reflect on their own teaching practices for the purpose of improving the quality of education for both the instructor and the students. The teacher focuses on a problem that he or she has identified within the classroom and explores possible solutions. These

solutions may only find application within a single classroom, but, often times, they can prove to be relevant in similar classroom situations.

Action research, then, appeared to make the most sense as the primary method for this particular research study. First, the instructor had identified a problem that students were experiencing: difficulty decoding new English words due, in part, to the unpredictability of letter-sound correspondence in English. In attempting to provide solutions to this problem, the instructor was a participant along with the students. Secondly, the somewhat tenuous nature of student attendance combined with the wide disparity of individual student's English and educational levels within the classroom required a great deal of flexibility.

Additionally, the number of participants actually involved was quite small, making the possibility of generalization much more limited. At the same time, though, this study closely reflected the typical classroom environment where research of this kind is needed. This research was conducted in a setting and in a manner that could be easily and authentically duplicated at this institution and others like it, if so desired.

Finally, this study was intended to build, in part, on recent action research conducted by Trupke (Trupke & Poulos, 2007). Within the weekly class curriculum, Trupke used a whole-parts-whole phonics instruction method, including, among other strategies, instruction in onset and rime. Adjusting this model, the current study focused exclusively on onsets and rimes and the degree to which a heightened awareness of them in print improves students' ability to decode and recognize words, particularly words that students already have in their aural vocabulary. This strategy necessitated the flexibility

to adjust and adapt curriculum and activities according to individual and classroom needs. It made sense to build on an action research study with additional action research.

Informed Consent and Confidentiality

Prior to the first class, students were informed of the study and its purpose in a level of English that, as closely as possible, matched their level of proficiency. Participation was fully voluntary and students were made aware of the option to opt out of the study at any time, for any reason, with no negative repercussions. All data collected prior to, throughout, and following the treatment was kept completely confidential. Names were not recorded in any of the results. Furthermore, students' participation in this study in no way affected their standing at the institution, negatively or positively. These stipulations were reiterated to the students on a number of occasions before they were actually asked to participate in or opt out of the study.

Pre-Intervention Data Collection

In order to bring balance and a well-rounded perspective of what actually took place in the study, data collection incorporated a triangulation of tools. These tools included the following: 1) a small series of quantitative pre- and post-tests (see Appendices A-C); 2) a pre- and post-study questionnaire that included questions about students' language, educational and English background, as well as questions about their attitudes towards reading in their first language and in English (see Appendices D and E); and 3) a journal kept by the instructor, with entries made for each day when there was explicit onset and rime instruction. The entries covered *positives* observed within the lesson and *cautions*, which explained difficulties that other practitioners might encounter, should they utilize an instructional model similar to this one.

On the Friday prior to the intervention, participants were asked to take the pre-test and to fill out the questionnaire. The pre-test consisted of 2 parts: Word List 1 was modeled after Greene's *Informal Word Analysis Inventory* (2006), which consisted of a list of 14 actual English words that contained the onsets and rimes that the instructor planned to explicitly teach throughout the course of the intervention. None of these words, however, were the actual words that were highlighted by the instructor in the lessons. In other words, the onsets and rimes were mixed and matched to form other English words that were not typical sight words. The assessment then was geared to measure students' recognition of both onset and rime.

Word List 2 was drawn from Bader's *Reading and Language Inventory* (1983), which sought to assess students' onset recognition only. The words on the list contained only the onsets that would be covered in the intervention itself.

For the actual pre-test, students met with the instructor individually and were asked to read each word list audibly. Both the student and the instructor had a copy of the word list. The instructions were explained carefully and the student was given a practice round to become familiar with the procedure. Once the test formally began, the instructor allowed students to restate each word voluntarily, but did not prompt for repetition, as the students seemed to automatically assume that this meant the first reading had been incorrect in some way.

For Word List 1, the instructor listened for accuracy in reading both the onset and rime of each word. As the students read a word on the list, the instructor put an x next to an onset or rime which was read inaccurately and a \checkmark next to those which were read accurately. These notations were made on the instructor's copy of the test, out of sight of

the student (see Appendix A). Word List 2 was intended to measure only students' onset recognition. The format was virtually identical, except that students were asked to read the first sound in each word. The instructor then noted the accuracy of each reading on a separate copy of the same word list, also out of sight of the student. Following the pre-tests, students returned their copy of the tests to the instructor.

In addition to the assessments above, the students were asked to fill out a brief questionnaire with questions about their first language, the length of time they had lived in the United States, the amount of formal education they had completed in their country of origin, their reading habits outside the classroom, and their attitudes toward reading in English and in their first language (see Appendix D). This questionnaire was written in simplified English and students were guided through each question to ensure, as much as possible, that they understood what was being asked. Students were also allowed and encouraged to clarify meaning for their fellow participants, especially if they spoke a common language.

Finally, each student participant's attendance hours during the instructional times were recorded. Again, this was not for the purpose of identifying the student or compromising anonymity, but for its possible relevance to the data analysis process.

Intervention

The intervention did not include a control group of any kind, so all students received the same instruction. If there were any variations in students' exposure to instruction, these were due solely to student attendance, and not the actual intervention plan. Initially, the intervention began with 7 enrolled participants. Other students who joined the class in subsequent weeks were given the same instruction, but they were not

considered part of the study because they had not taken the pre-tests or filled out the pre-study questionnaire. Their comments and actions were, in some cases, included in the journal entries that the instructor made after each instructional time.

The first instructional time related to the intervention each week involved the introduction of a reading text, the first *whole* in whole-parts-whole. Each text was carefully selected for its relevance to the topic of the week (jobs, banking and money, health, housing, etc.) All of these stories had been previously published in reading textbooks. They were, however, adapted by the instructor to more closely match the class's level of English and to incorporate the relevant onsets and rimes into each reading. Though all the texts were initially unfamiliar to the students, they were introduced within a context that was relevant to the students' daily lives, with the hope that this strategy would help students understand the more difficult words in the text.

The students first read the text silently. This gave students the opportunity to identify sight words and also make an attempt at decoding words that were not immediately familiar to them. Next, the students listened as the teacher read the text to them. They were asked to follow silently, word-by-word, so that they could hear accurate pronunciation of each word, confirm whether they had identified the words correctly in the first reading, and recognize words that they already knew aurally but did not immediately recognize in written form.

Then, the class read in unison, repeating after the teacher. Students not only heard accurate pronunciation, but now had the opportunity to say each word. It was during this phase that students were encouraged to bring up any vocabulary or concepts that were unfamiliar to them. The teacher carefully addressed each unknown word within

its sentence and guided students to discuss possible meanings before they were given actual examples of its meaning. The final step in this reading activity was the students reading the story orally in pairs. This gave students the opportunity to clarify whether they now understood the words that were previously unclear and gave them practice in pronouncing them. Students were also able to give each other feedback and assistance in word identification. During this step, students often read the story through several times.

Following the reading exercise, the instructor guided students through simple activities to build and confirm overall comprehension of the text. Because of students' diverse backgrounds, it was extremely difficult to find an English text that was equally familiar to everyone. Therefore, it seemed reasonable to pick a text that, though it was new, could be understood within a familiar context and then spend whatever time was needed to ensure that students did indeed have a grasp of what the text was about and what the words meant. An important goal of these reading activities was to eliminate the potential barrier that confusing, unknown words could present in the next step of the intervention: noticing the *parts* which comprised the words.

The *parts* that students were introduced to each week included two new rimes and an unlimited number of onsets. Students were given a one-time introductory lesson, on the first day of the intervention, where they reviewed selected consonants in the alphabet and differentiated between the names of the letters and the sounds that they have.

As mentioned above, the rimes in focus throughout the intervention were predetermined by the instructor prior to the beginning of the term. Each rime occurred four times within the reading text, each time connected to a different onset. In that way, the onsets initially in focus were the ones related to the rimes introduced. However, over

the course of each weekly lesson, onsets were introduced and interchanged freely, so that there were many more onsets being discussed on any given week than there were rimes.

During the first week, for example, the key rimes were –ate and –ock. The instructor wrote the word *late* on the whiteboard and asked students to find all the words in the story that had –ate in them. There were three others: *state*, *rate*, and *gate*. Students were asked what the key difference was in each word and, in this way, the onset was identified. The teacher then explained that English words (one syllable) have two parts: the beginning (onset) and the end (rime). Students were encouraged to describe the word ending as a *word family*. As a class, students attempted to pronounce all four words, referring back to *late* whenever there was a question about how to pronounce the next word. Then –ock was introduced, using the word *clock*. The same instructional pattern was followed (*dock*, *sock*, and *block* were the remaining words in the story).

In the remaining days of each week, the students participated in a selected number of *parts* activities designed to enhance their ability to recognize the onset and rime patterns in print. These activities are discussed in greater detail below. To round out the whole-parts-whole instructional model, students would again work with the original reading text for the week and also read examples of the onsets and rimes in other sentences and print material.

This same pattern was repeated each week with a new reading text, two new rimes in focus, and all the onsets connected to the rimes in the words that had been studied and discovered up to that point. Due to an unforeseen shortening of the school's spring term schedule, the last two weeks of instruction included three new rimes each week, rather than two.

The third method of data collection, which occurred during the intervention time, was a journal kept by the instructor, which reflected on each lesson that involved explicit instruction in onset and rime. The journal entries fell into two main categories: *positives* and *cautions*. The *positives* section included a recap of the lesson's activities and the discoveries and comments that both the students and the instructor made in that process. The *cautions* section focused on issues that arose during a specific activity or trends that the instructor observed that might require redesigning or eliminating certain parts of the instruction. The journal also recorded the fluid nature of the instructional time, as the students and the instructor navigated the questions and ideas and issues that arose throughout the intervention.

Intervention Activities

The majority of the intervention activities were designed with the goal of improving students' ability to recognize and decode words in print, by seeing the onset and rime *parts* in each word.

The first activity each week, as explained above, was the introduction of a new reading text which had four examples each of two new rimes. Included in the introduction of ensuing reading texts was a review of all the onsets and rimes that had been studied up to that point. When looking at the new text, students were encouraged to look for previously used onsets and rimes, as well as rimes that had not been covered at all.

Another activity that was used throughout the intervention was variations on BINGO. All of the words introduced by the instructor and also those suggested by students were included in this activity. Variations included randomly placing a different

rime in each square which students would then cover when they heard a word called out by the instructor (e.g. the student covered the square for *-ill* when the instructor called out the word *skill*). To practice onset recognition, this activity was also done with onsets in each square.

An additional version involved students again writing different rimes in each square, but their “chips” were actually different onsets which had been studied. When the instructor called out a word like *clock*, the students would use their *cl-* chip to cover the *-ock* square. All of these games began with the instructor doing a demo round and then handing it off to groups of three students so that they had practice reading and recognizing the words that were part of the vocabulary pool up to that point.

Another activity involved students working in pairs with flashcards of onsets and rimes. Students were asked to combine the onset and rime flashcards to form words that they recognized from class reading texts and also words that they had seen in print outside of class. The general format was for one student to put two flashcards together and their partner would then read the word that was formed.

Beginning about three weeks into the study, students were given folders and instructions to divide the pages into sections. Each section had a different rime at the top as a heading. Students were asked to keep a log of all the word families they were learning and record them in their folders, under the appropriate categories, each time they found a new one. For example, *sock*, *clock*, and *lock* could all go under the heading ‘*-ock*.’

Sentence dictation was an activity which was done one of two ways: either the instructor dictated a sentence and the students copied it or the students took turns

dictating sentences to a partner. All of the sentences included multiple words that had onsets and rimes that had already been used within the study.

Another activity that was used only once but seemed to have a great deal of positive potential was onset sound discrimination with a partner. First, the instructor asked students to find all the words in the story that began with the letters *b* and *v*, for example. Each student wrote the words they found under columns that were labeled either ‘b’ or ‘v’. Then, in pairs, they took turns reading the words in the column. Their partner would then point to the letter sound they actually heard their partner say at the beginning of the word.

As mentioned above, the final *whole* in whole-parts-whole was addressed when students reread the story for the week, using the new rimes and onsets they had learned as decoding and word analysis tools. As the weeks went on, students were encouraged to look for all of the *parts* they had previously learned in new weekly stories. Broadening to an additional *whole* layer, students were also encouraged to look for these *parts* in every new text that was introduced, including, for example, job applications.

Post-Intervention Data Collection

Following the last week of the intervention, students were asked to take a post-test. The post-test was identical in structure to the pre-test, except that the onset recognition test included different words with the same onsets. Students also filled out a smaller post-study questionnaire which asked identical questions about their reading attitudes and habits and had one additional question about the students’ opinion about the effectiveness of using *word families* to read English words (see Appendix E).

Data Analysis

In analyzing the data, the results of the pre-tests and post-tests were compared, and their statistical significance discussed. This information was drawn from the difference in the number of correct responses between the pre-and post-tests. Possible factors that might have been involved in the test results are considered and discussed more fully in Chapter 4. Along with the quantitative data, the participants' responses to the questionnaire, particularly their attitudes towards reading, are compared for changes that may have occurred in their answers following the study. Finally, the instructor's teaching journal is distilled, as mentioned above, to highlight the *positives* and *cautions* recorded by the instructor over the course of the treatment phase. Students' comments were also recorded in this journal and are included in the qualitative analysis as an important perspective on the effectiveness of the study.

In summary, this chapter has taken a closer look at the details of the research study. An in depth view of who was involved, where the research took place, the ways in which data was elicited, collected and analyzed, the intervention activities, and the method of research chosen has been presented. The following chapter offers an analysis of the data collected, including comparisons of the pre-and post-tests as well as pre-and post-study questionnaires, a synthesis of the teaching journal information, including participants' feedback, and general findings.

CHAPTER 4 – DISCUSSION

This study was designed to probe the following question: does the use of direct analogy phonics instruction, focusing on onset and rime, in an low level adult ESOL reading classroom, using whole-parts-whole, contextualized instruction, increase students' decoding and word recognition ability? The previous chapter described the methodology of research for this study, including a description of and rationale for choosing an action research model. The participants, setting, data elicitation, analysis procedures and implementation of the method were discussed.

Chapter 4 moves to an analysis of the data collected and the degree to which explicit analogy phonics instruction (onset and rime) may have positively affected students' word recognition. All of the data is analyzed, beginning with the pre- and post-test results, the pre- and post-study participant questionnaire responses, the teaching journal entries, demographic relationships, and other factors that may have contributed to the changes observed in the quantitative data collected. Also included are specific notes from the teaching journal which describe the participants' reactions and comments at different points during and following the study. These are included as a qualitative source of data which sheds light on relevance of this study to the student-participants' reading strategies.

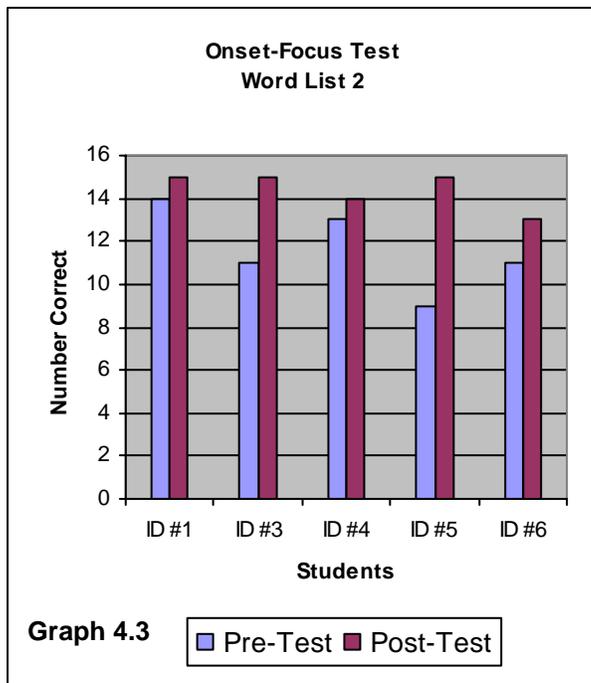
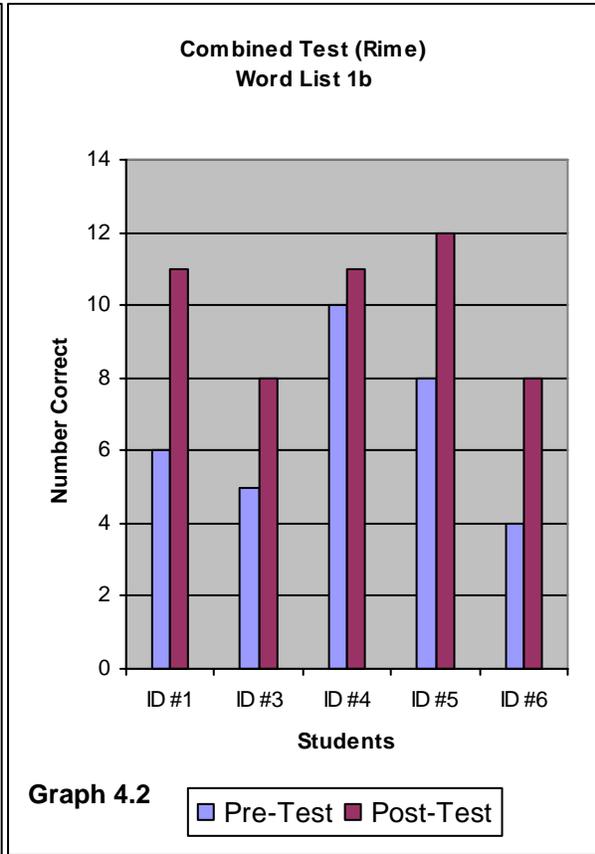
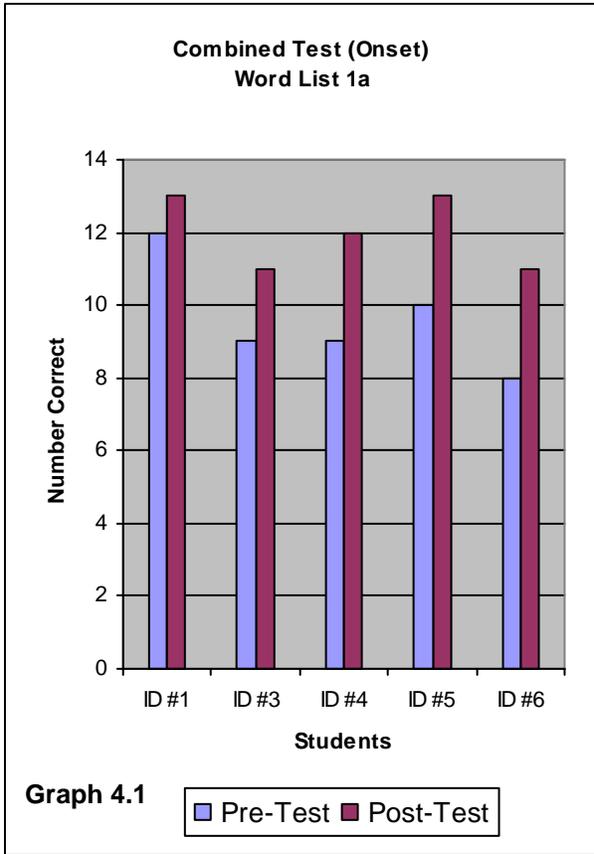
Pre- and Post- Tests

The pre- and post-study tests consisted of two word lists that the participants were asked to read. Word List 1 was comprised of words that contained all of the onsets and rimes that would be explicitly taught within the treatment phase. However, none of those words were the actual vocabulary words pre-selected by the instructor as focus vocabulary for the weekly lessons (i.e. the onsets and rimes were mixed and matched to form different English words). Word List 2 was intended to focus on onsets specifically. The words on this list included all of the onsets that would be taught throughout the study, but none of the rimes. All of the pre-tests and post-tests were identical, with the exception of a change in actual the words used for Word List 2's post-test.

The analysis of this data includes a comparison of the number of both onsets and rimes (Word List 1: a & b) and onsets only (Word List 2) pronounced correctly by each participant in the pre-test versus the post-test. Based on the data collected, the results appear to indicate that the student-participants responded positively to the intervention. Graphs 4.1 - 4.3 show the increases in correct responses visually.

These noticeable increases seem to indicate that the students' overall rime and onset recognition improved as a result of the treatment. None of the words used in the pre- and post-tests were explicitly taught (though some did come out in class discussions, due to students' input), so this is arguably an indication that the improvements in the post-test scores were a result of students' using their newly acquired knowledge of onsets and rimes to decode new words.

Tables 4.1 through 4.3 illustrate the statistical significance of this data. Table 4.1



displays the correlations between each of the three pre-tests and post-tests. Table 4.2 details the mean of each test, including the pre-tests for word lists 1a, 1b, and 2 as well as the post-tests. It also shows the calculated standard deviation and standard error mean. Table 4.3 is discussed in greater detail here, as it shows the results of the hypothesis test that was used to analyze the statistical significance of this data.

The hypothesis test used in this analysis was the *t-test*. In this *t-test*, there were two hypotheses at play: the *null hypothesis* stated that there would be no difference between the means (μ) of the three pre-test and post-test scores (Word Lists 1a & b and Word List 2), and thus the treatment phase was not significant ($H_0 : \mu_{\text{pre-test}} = \mu_{\text{post-test}}$). According to Howell (2002), the mean is “what people generally have in mind when they use the word *average*”(p. 37). The average here is the total of all the scores, divided by the number of scores.

Second was the *alternative hypothesis*, which stated that there would be a difference between the means of the pre-and post-test scores, and the post-test means would be higher. This would indicate that the treatment was significant ($H_a : \mu_{\text{pre-test}} < \mu_{\text{post-test}}$). To determine if the means of the post-tests were, in fact, higher than the pre-tests, as the *alternative hypothesis* suggested, the following formula was used: $t = (\mu_{\text{post}} - \mu_{\text{pre}}) / \text{pooled standard error}$. (See Table 4.3). This can be called the *observed t*, or what actually happened with the means between the pre- and post-tests (see Table 4.3, column 7).

What then becomes important in determining significance is the *critical t* value. The *observed t* must be higher than the *critical t* in order to show that these tests were statistically significant. The *critical t* value for these tests was determined this way: a

significance level of 0.05, which is standard, was assigned and the degree of freedom (*df*) was determined to be 4, calculated as the number of participants minus one ($n - 1$). After locating the significance level and the *df* on the *t* distribution chart, the *critical t* was then determined to be 2.132 (Howell, 2002). Referring back to Table 4.3, then, it is clear that the *observed t* (column 7) is larger than the *critical t* (2.132) in every test.

These results confirm some level of statistical significance for the quantitative data collected (pre-tests and post-tests). However, as displayed in Table 4.2, this study's sample size was very small, making it difficult to generalize any of these statistics to a wider population. In addition, the absence of a control group makes the assumption that the explicit instruction in onset and rime was solely responsible for the changes in test scores precarious. Still, the observable changes lend credibility to the conclusion that this type of instruction can be beneficial in other classrooms of low level adult ELLs.

An additional interesting note about this data is that a majority of the students made their greatest gains in the rime portion of the tests. Increases in onset recognition were similar in both the combined test onset portion (Word List 1a) and the onset-focus test (Word List 2) and they were smaller overall than the rime portions of each test. A closer examination reveals that the students' pre-test scores for the onset portion registered a higher number correct than the rime pre-test scores. One possible explanation is a greater overall familiarity with onsets in general on the part of the students, prior to the study.

As an example, at the beginning of the treatment phase, when the concepts of

Paired Samples Correlations

	N	Correlation	Sig.
Pair 1 pre1 & post1	5	.777	.122
Pair 2 pre2 & post2	5	.824	.086
Pair 3 pre3 & post3	5	-.029	.963

Table 4.1

Paired Samples Statistics

	Mean	N	Std. Deviation	Std. Error Mean
Pair 1 pre1 post1	6.6000	5	2.40832	1.07703
Pair 2 pre2 post2	10.0000	5	1.87083	.83666
Pair 3 pre3 post3	9.6000	5	1.51658	.67823
	12.0000	5	1.00000	.44721
	11.6000	5	1.94936	.87178
	14.4000	5	.89443	.40000

Table 4.2

Paired Samples Test

	Paired Differences		95% Confidence Interval of the Difference		t	df	Sig. (2-tailed)
	Mean	Std. Deviation	Upper	Lower			
Pair 1 post1-pre1	3.40000	1.51658	5.28308	1.51692	5.013	4	.007
Pair 2 post2-pre2	2.40000	.89443	3.51058	1.28942	6.000	4	.004
Pair 3 post3-pre3	2.80000	2.16795	5.49186	.10814	2.888	4	.045

Table 4.3

onset and rime were being introduced, Student ID #1 commented that the onsets were not as big of an issue for this participant. Rather, it was the vowels (i.e., rimes) that were the greatest challenge. This parallels what Treiman et al (1995) explains about the numerous vowel irregularities imbedded within the larger chunks called rimes being the greatest source of difficulty in pronunciation of English words. This was borne out in the test results, and the student who made this comment showed some of the highest gains in the rime portion of the post-test for the entire group.

Student ID #4's results stood out from the others because they showed equal or larger gains in the onset portions rather than the rime portion of the tests. This student enthusiastically implemented the onset and rime tools throughout the seven week study; however, this student's number correct between the pre-test and post-test for the rime portion increased by only one point. The number correct in the rime pre-test, though, was at least two points higher than the other students in the study. One factor to consider is that this student had been in the United States longer than the other students in the study and had attended ESOL classes at other schools (a fact that came out in class discussions). Perhaps this student had already begun to develop the reading habits that Cunningham (2005) describes: recognizing patterns across words. Quite possibly, many of the rimes covered in this study were not new to this student, giving one possible explanation for the noticeably smaller gains.

Pre- and Post-Study Participant Questionnaires

The pre- and post-study participant questionnaires yielded information about the students' backgrounds, such as first language, length of time in the U.S., educational background, and age. The portion of the questionnaire that was administered both before

and after the study included questions about students' attitudes towards reading not only in their first language, but also in English.

As Table 4.4 shows, students' responses varied only slightly from the pre-test to the post-test and were sometimes vague. Since this tool was designed for low-level English speakers to fill out somewhat independently, the questions were written in a multiple-choice format. Open-ended questions were left off the form, in an attempt to eliminate confusion. Unfortunately, it is unclear what the students' responses actually mean, in light of the study and its impact. For example, students' responses to the questions about the amount of reading done outside of class either in their first language or in English were unpredictable and not really clear in their reflection of how this study might have changed their attitudes about reading. The question asking about students' attitudes towards reading in their own language remained virtually unchanged.

The one question that did yield some interesting answers was "How do you feel reading in English?" All of the students' responses, except for one, changed in a positive direction with one response remaining the same. This could imply that reading in English did become less daunting for students as they participated in the study and worked with new tools for reading new English words.

Added to the post-study questionnaire was a question asking the students' opinion of word families, the term we used throughout the treatment phase to describe onsets and rimes. The question was posed as a fill-in-the-blank, asking students to insert an adverb of frequency, a task they were very familiar with. All but one of the students chose

QUESTIONNAIRE -- Reading Attitudes		
Student	Pre-Study	Post-Study

How do you feel reading in your first language?		
ID #1	e) It is easy.	e) It is easy.
ID #3	a) I like to read.	a) I like to read.
ID #4	a) I like to read. c) It is difficult.	a) I like to read. c) It is difficult.
ID #5	a) I like to read. (Amharic)	e) It is easy.
ID #6	a) I like to read. d) It is OK.	a) It is OK.
How do you feel reading in English?		
ID #1	c) It is difficult.	d) It is OK.
ID #3	a) I like to read. d) It is difficult.	a) I like to read.
ID #4	a) I like to read. c) It is difficult.	a) I like to read. c) It is difficult.
ID #5	c) It is difficult.	a) I like to read.
ID #6	a) I like to read. c) It is difficult.	d) It is OK.
How often do you read in your first language at home?		
ID #1	more than 1 hour every day	a few minutes every day
ID #3	one or two times a week	one or two times every week
ID #4	more than 1 hour every day	more than 1 hour every day
ID #5	a few minutes every day	never
ID #6	a few minutes every day	more than 1 hour every day
How often do you read in English at home?		
ID #1	more than 1 hour every day	a few minutes every day
ID #3	a few minutes every day	one or two times every week
ID #4	more than 1 hour every day	more than 1 hour every day
ID #5	one or two times every week	a few minutes every day
ID #6	more than 1 hour every day	more than 1 hour every day
Word families _____ help me to read English words. (Fill in the blank)		
ID #1		usually
ID #3		usually
ID #4		usually
ID #5		usually
ID #6		sometimes

Table 4.4

usually for their blank, with one student opting for *sometimes*.

In retrospect, the “reading attitudes” section of this questionnaire could have been designed differently in order to yield a clearer picture of the students’ opinions.

Ironically, though the multiple choice format was chosen as an attempt at greater clarity

for the students, it may actually have been too complicated for this level, and it might have been more effective to have, for example, a finish-the-sentence or fill-in-the-blank format. Another possible option, which is admittedly more time-consuming and costly, would be to translate these questions into the L1 of each student and/or have a translator available to help clarify confusion. It seems more advisable, however, to re-design the questionnaire itself.

Teaching Journal

As mentioned in Chapter 3, a teaching journal was kept by the instructor as a daily record of what happened in each onset-rime focus lesson. Included in the journal was a re-cap of the day's lesson, interwoven with the instructor's reflections, followed by some cautions that might be helpful to other practitioners who are interested in implementing a similar reading instruction tool. Table 4.5 distills some of the key *positives* and *cautions* that emerged from the daily journal.

Because the options for specific lesson activities were fairly open and flexible, the teaching journal proved extremely helpful as a daily log to which the instructor could refer back when planning upcoming lessons. Things that went well were used again and those that didn't seem to go well were redesigned or discarded. The cautions provided good reminders of difficulties to anticipate and, if possible, avoid. All told, some

Teaching Journal Synthesis	
General overall increase in onset and rime recognition	Maintaining a balance between direct instruction and free practice and application (teacher centered vs. student centered)
Some recognition of aural vocabulary in print as rime patterns were introduced and applied	Keeping the activities contextual and readily applicable to daily life
Acquisition of new vocabulary	Tendency to focus on onset and rime awareness (aural) more than recognition

	(decoding)
Students' enthusiasm in discovering new rime patterns and words	Handling exceptions to onset and rime pronunciation parameters
Student to student collaboration in pronunciation of onsets and rimes	The need to draw from more print sources to make onset/rime recognition more relevant

Table 4.5
 activities seemed to achieve their purpose better than others, and most of the activities could be improved.

The journal entries strongly support the intervention activities described in Chapter 3. The introduction of a new story each week included the introduction of two new rimes. In that process, the instructor encouraged students to think of all the word families that had been discussed previously and to find words in the new story that they thought might also be word families. This process invariably generated new vocabulary and many “ah-ha” moments when the students drew the connection between a word they had seen in print outside of class and the new onset/rime they had just learned.

The flashcard activity, which involved students matching onsets and rimes and then asking their partner to read the word for them, always produced excellent questions from students. Not only that, new words were discovered and meanings of words that students had seen in print from various sources were clarified. One drawback was that this had the tendency to be an information over-load for some students and it was difficult for them to absorb and retain all of the words that were being introduced. By the end of the study, it was only the words that had been introduced in a context that students easily remembered and identified. Still, this exercise really seemed to broaden the students' vocabulary significantly.

One activity that proved most difficult for students was pair sentence dictation. There were occasions when the instructor dictated the sentences with vocabulary that

included previously taught onsets and rimes. However, since this method was a more aural exercise for the students, the task was passed to them so that they could take turns dictating and/or copying sentences they heard. This presented challenges on many different levels for the students. First, students who were reading the sentences had to recognize the words (onset/rime) and pronounce them so that their partner could understand them. The student who was copying the sentence had to listen carefully, identify the words they heard, and then spell them as correctly as possible. Reflections in the journal revealed mixed feelings as to the value of this activity. It was repeated only once, due in some degree to the challenge it presented to the students. An activity that causes students to wrestle with skills they are acquiring is not necessarily counterproductive, but this activity seemed to be more than a small stretch.

The initial-sound (onset) discrimination activity was used only once, due to time constraints and other curriculum plans that required priority, but it received very positive feedback from the students. This took a bit of repetition to ensure that students understood the purpose of the activity, but many students commented on how helpful it was for them. As mentioned in Chapter 3, this activity tasked students with providing feedback on the initial sound they were hearing their partner read. The reader of the pair was the one tasked with onset recognition and many students commented on the way this exercise helped them pay closer attention to the sounds they were producing.

The word family folders proved very helpful to most of the students. They referred to them frequently, regularly added new words, and sometimes added new columns with word families that had not been explicitly taught in the reading lessons. There was sometimes confusion with putting words that had the same spelling but

different pronunciation under the same word family category: for example, machine and nine under the same ‘-ine’ category. This did not happen a lot during the study, most likely due to its relatively short length.

In a longer study or for reading instruction that explicitly incorporates onset and rime identification into the reading curriculum, Stanback’s (1992) classifications of *rime families* seem to present a good foundational strategy for helping students distinguish between rimes that are spelled the same but pronounced differently. Stanback, as mentioned in Chapter 2, classified high-frequency words according to their rimes and the types of syllables they occurred in (1992). This could be adapted to a reading lesson where, using the -ine example, the variations in reading this rime would simply be identified as distinct word families, not necessarily as exceptions to the rule.

Overall, the teaching journal provided an excellent reflection and self-assessment tool. While many of the activities were taken on enthusiastically by the students, there was a lot of room for expansion and adjustments.

Student Feedback

As mentioned in Chapter 3, Carr and Kemmis (1986) explain that, among the unique characteristics of the action research model, there is the opportunity for self-reflection on the part of the participants. Though no journals were kept by the student-participants, the instructor was careful to make note of their comments and responses to the explicit onset and rime instruction both during and following the study. Below are selections:

- Following a lesson that included the rime ‘-ock,’ a student asked how to spell *rock*. Quoting from the journal: “I asked her what the first sound was (she replied correctly) and then I asked her how to spell *clock* without the ‘cl-’
‘...she showed me her paper where she had spelled ‘rock.’”
- From the flashcard activity: “New words that came to light were *tank*, *rake*, and *blank*. It was a great opportunity to discover new words. One student’s comment about *rake* was, ‘I didn’t know that was the name for it!’”
- After doing a short activity about job applications, one of the students opened her word family folder and added a new word to the ‘-ate’ list: *operate*.
- During a student to student word family spelling quiz, one student was overheard giving spelling clues to her partner this way: “word family is – ake.”
- Following the study, I began teaching the next level English class at the same school. Several of the student-participants moved up to that level and stayed in my class. At the beginning of the fall term, while going over the syllabus, one of the students in the study asked if *word families* would be included in the course of study. She said word families really helped her with spelling.
- Again, following the study and during fall term, the class was having a weekly spelling quiz. One of the words was *state* and a different student who had also been in the study spelled the word correctly, looked up with a smile and said, “word family.”
- Student attendance can be unpredictable due to the many demands on students’ schedules outside of class. However, students who agreed to

participate in this study seemed to take a certain amount of ownership in this learning experience and their attendance was very consistent, with total absences being too low to factor significantly into the results of this study.

General Findings

Demographic Relationships

Reflecting on Table 3.1 (Chapter 3), it is interesting to consider the possible relationships between the participants' demographic characteristics and the results of this study. Admittedly, the small size of this data sample makes definitive conclusions inadvisable. It is difficult to move beyond conjecture, but some suggestions about possible links seem to be valuable to current practice and future research.

All but one of the participants reported receiving 10 or more years of formal education in their home country. ID #4 reported no formal education at all. This is the same participant whose rime portion post-test showed only a one-point increase in number correct. At first glance, it might be tempting to conclude that a lack of formal education limited this student's use of effective learning strategies and could account for the comparatively smaller gains in the post-test. However, this does not explain the student's higher pre-test scores. Apparently, either some knowledge of onsets and rimes had already been acquired or the words on the pre-test were all familiar to the student already; something that seems unlikely, given the list of words. Formal education, then, may not be a reliable predictor of this teaching method's effectiveness or helpfulness.

Another intriguing correlation to explore is that between students' literacy, their CASAS scores and this study. As mentioned in Chapter 3, the CASAS test administered at this school is the reading test. All of the participants' CASAS scores improved over

the course of this study, with one exception, and that student's scores remained the same. The student with the highest jump in CASAS score was ID #1, whose literacy was in a non-Roman alphabet language. The student whose CASAS score remained the same was literate in a Roman alphabet language. The remaining students' CASAS score improvements were four and five points and their literacy backgrounds included Roman alphabet, Nonliterate, and non-Roman alphabet.

In some cases, literacy in a Roman alphabet language (other than English) can be an asset to learning to read in English. But the remarkable jump in the pre- and post-CASAS scores of ID #1 cannot be attributed to similar alphabets in this student's L1 and English. Assuming that this study played some part in the CASAS score differences, which is extremely difficult to prove, perhaps the analysis of English words using onsets and rimes was more helpful for Student ID#1 precisely because of the difference in alphabets between the L1 and English. The potential for interference from the L1 might have been reduced. On the other hand, it is possible that L1 literacy in a different Roman-alphabet language actually impeded ID #6's word recognition and reading comprehension in English because the tendency to revert back to the L1 pronunciation and decoding rules was greater.

ID #5 was literate in the same non-Roman alphabet language as ID #1, but showed a smaller improvement between CASAS scores. ID #5's actual L1, however, was different from the language in which both students were literate. It might be useful to study the advantages and disadvantages that learning to read for the first time in an L2 rather than the L1 brings to reading in successive languages.

Other Factors

Due to the notable gains made by most of the participants, regardless of their background, it is difficult to point to specific factors, outside the study, that could overwhelmingly account for these positive changes. Still, learning never happens in vacuum, so it is important to bear in mind other influences that occurred simultaneous to the study. For instance, two of the students in the study were involved in an additional English class each day. It is possible that the combined instruction in both settings might have widened their overall reading vocabulary and aided them in recognizing new words. Additionally, one of the participants was working full-time and was no doubt exposed to English to some degree at work. Perhaps printed material available on the job also helped to build this student's word recognition skills. Also, all students in the study indicated on the questionnaire that they spent some amount of time reading in English outside of class. This process of negotiating written language could have produced individual decoding strategies that improved their English word recognition ability.

Finally, the process of living in and adjusting to a new culture and acquiring a new language is continuous and the English which students were called upon to recognize outside of class at, for instance, the grocery store or on the bus or on signage, could have contributed to their growing ability to recognize new words. However, as noted below in the participant feedback, it is also very likely that these outside influences were working in concert with the new tools students were acquiring and working with throughout the study, enhancing their overall ability to recognize new words inside and outside of class.

Summary

With the above findings in view, it would seem that the question this study set out to explore can be answered in the affirmative. Explicitly teaching phonics with a focus on onsets and rimes to low level adult ELLs, using a whole-parts-whole strategy, does improve students' ability to recognize and decode words in print. With respect to the instruction of onset and rime specifically, comparisons of the pre- and post-tests reveal improvement in recognition over the course of the seven week study. The notable gains in the post-tests suggest that students were using the onset/rime recognition tools they were given in class. The student-participants' positive responses to the question about word families (onsets and rimes) in the post-study questionnaire further show that the students found this strategy helpful and worth using. Finally, the numerous "ah-ha" moments, combined with students' own eagerness to apply this strategy throughout the course of the study and beyond points to personal ownership of and investment in a word recognition strategy that was of value to them.

Beyond the explicit onset and rime instruction, the value of contextualized phonics instruction was also underscored in this study. Recalling Burt, Peyton, & Adams' (2003) study, merely learning to pronounce the "parts" of words without a meaningful context and sufficient background knowledge is not as effective for ELLs. Additionally, Wrigley and Guth's (1992) study recommends that reading instruction for adult ELLs be taught in context, for immediate application, with a combination of top-down and bottom-up strategies (whole-parts-whole). The assertions from these 2 studies proved to be true in this study as well. Students remembered how to pronounce the individual rimes and onsets fairly well, but they remembered the meanings of the new words more consistently when they had originally learned them in the weekly story. For

example, as mentioned above, the flashcard activity was a class favorite and always yielded new vocabulary words for students. However, it was a stretch for the students because they tended to struggle with recalling meaning when the words had only been discovered and discussed in isolation. This also calls to mind Dombey & Moustafa's (1998) example of the word *horse* being confused with *house*, by NSE children, until it was introduced in a story about cowboys. Clearly, then, the whole-parts-whole played a crucial role not only in students' recognition of words, but also in the retention of their meanings.

This chapter has discussed the findings of the study. These findings include results from the pre-and post-tests, pre- and post-study participant questionnaire responses, a synthesis of the instructor's teaching journal, participants' feedback, and general findings, which include demographic relationships, and other factors. Chapter 5 concludes with a summary of the study, limitations, suggestions for further research, and some final comments which include a discussion of the ways in which this study might influence the instructor's future instructional strategies.

CHAPTER 5 – CONCLUSION

Chapter 4 discussed the findings of this study, both qualitative and quantitative. All of the data collection results were analyzed and discussed. This chapter brings the study to a close by summarizing what took place, pointing out the limitations, offering suggestions for further research, and making some final comments.

Study Summary

This study was conducted in a low level ABE ESOL classroom in the Midwest. The aim of this study was to explore whether the use of direct analogy phonics instruction (onset and rime) in an low level adult ESOL reading classroom, using whole-parts-whole, contextualized instruction, could increase students' overall decoding and word recognition ability. This study was largely qualitative in nature, using an action research method. Results were not based solely on quantitative data, but were also determined by students' responses to questionnaires and the instructor's daily teaching journal, which recorded students' feedback and reactions to different activities. The action research model produced a study that was flexible and fluid so that activities and foci shifted where needed, as the weeks progressed.

Seven students participated in the pre-tests and pre-study questionnaires, with 5 of those students completing the study by post-testing and filling out the post-study questionnaire. Though small in number, these participants were a microcosm, if

you will, of typical ABE ESOL classroom demographics. They came from 3 major world regions, representing 5 different languages. Their educational backgrounds varied, as did their length of time in an English-speaking environment and knowledge of English. The study itself extended over a period of 7 weeks. Following the treatment phase, the qualitative and quantitative data elicited during the study was analyzed.

The chosen course of action for this study builds on existing reading research done among NSE and NNSE students, both children and adults. A majority of this research has been conducted with NSE children. Burt, Peyton, & Adams (2003) stress the need for studies that explore ways to effectively use reading programs and strategies designed for children with adults, particularly adult ELLs. One particular gap mentioned by Burt, Peyton, & Adams is research regarding explicit phonics instruction among adult ELLs. Phonics instruction was selected as the focus of this study, due to the observed difficulties low level adult ELLs have in recognizing and decoding English words in print.

Reading instruction, especially for children, has been in a constant state of reassessment, with particularly strong debate centering on the use of explicit phonics instruction (Balmuth, 1982). In what Krashen (2002) dubs the “Reading Wars,” researchers and reading instructors often find themselves debating top-down versus bottom-up, skill-building versus comprehension, and whole language versus word analysis. In recent years, a growing number of educators have been espousing a blend of these two strategies, called whole-parts-whole (Dombey & Moustafa, 1998). Though most of this discussion has centered on NSE children, it is also relevant to reading instruction for adult NNSEs. Experts agree that reading instruction for adult ELLs must include explicit phonics instruction, and they also assert that phonics instruction should

be taught in a meaningful context (Stuart, 1999; Ehri, 2003; National Reading Panel, 2000; National Symposium on Adult ESL Research and Practice, 2001; Wrigley & Guth, 1992).

Since teaching phonics explicitly in a meaningful context is a strongly supported approach, the question then turns to which instructional method to use (Ehri, 2003). There are many effective methods, but the method chosen for this study was *analogy phonics*, or onset and rime. A significant number of studies demonstrate the importance of onset and rime recognition in early NSE childhood reading as well as with NSE adults (Treiman, 1992; Stanback, 1992; Treiman, 1995; Cunningham, 2005). Vowel pronunciation in a syllable is governed by the final consonant rather than the initial consonant (Treiman, 1995). It is vowel pronunciation that frequently inhibits word identification for adult ELLs of all levels. It follows, then, that identifying vowels based on the rimes in which they occur could provide adult ELLs with helpful tools for reading and word identification. This study set out to test that theory.

The method of research for this study was *action research*. The study grew out of the instructor's desire to test a specific reading instruction strategy in the classroom with the flexibility and evolution-of-strategies that this model affords (Merriam, 1998). Other factors that played a role in the selection of this research method included the variations in students' levels, attendance, educational backgrounds, and literacy levels. Though it is difficult to generalize a study like this too broadly, its setting and subjects make it relevant to other ABE ESOL classrooms with similar demographics.

Data collected throughout this study indicates that an onset and rime focus within explicit phonics instruction can make a positive difference in students' word recognition

and decoding. It is essential, however, to view the gains made by students in light of the whole-parts-whole reading lesson. The context that this strategy provided took students beyond decoding, to retention, as the word families in focus were imbedded in a story that they read, analyzed and understood. Overall, this study gives great insight into its original research question.

Limitations

Some limitations to this study include the number of participants, time, the absence of a control group, and the effectiveness of the pre-/post-tests in measuring actual gains. Though attendance on the part of participants was very consistent, only 7 students pre-tested prior to the study and 5 post-tested following the study. Students came from Mexico, Ethiopia, Thailand, and Somalia, with 5 first languages represented, so the sampling seems to reflect many typical ABE ESOL classrooms, but the low numbers of participants from each group make generalizations beyond this classroom more uncertain.

The study was conducted throughout the course of almost an entire term (7 weeks total), for a total of 14 hours of explicit instruction. This was a good start, but in order to determine the helpfulness of this strategy and to increase automaticity in using a decoding tool like this, extended time would be better. Decoding using onset and rime as a tool shows promise, but students were not always automatically reaching for that tool when they came across unfamiliar words. This did happen, but often after prompting and suggestion. Some of that might change if this were reinforced over a longer period of time.

One thing that seemed logistically difficult, but would definitely lend itself to more reliable results is the presence of a control group. Students did appear to make noticeable gains in word recognition following the treatment phase, but with no comparison group, it's difficult to say that those gains were primarily a result of the direct phonics instruction using onset and rime.

Finally, the pre-/post-tests may not have been the best measure of students' use of onset and rime to decode words. The assessments consisted of two word lists that the students were asked to read. While they did appear to measure skills related to decoding with onset and rime knowledge, the absence of other assessment angles to provide a wider perspective made the tests' validity ambiguous.

Suggestions for Further Research

This study answered many questions on the part of the instructor/researcher; however, there are still many areas that remain unexplored. A few are suggested below and all are written with low level adult ELLs in mind.

- The use of a control group in an identical or similar study for greater comparison.
- A study into the effects that onset and rime recognition has on students' spelling ability.
- An exploration of the connection between onset and rime awareness and onset and rime recognition in print.
- Strategies for increasing automaticity in onset and rime recognition within unfamiliar texts.

Final Comments

Based on the analysis of the data collected, both quantitative and qualitative, throughout this study, it seems that including onset and rime principles in an low level ABE ESOL classroom, as one of the tools to decode unknown words, has significant potential for raising decoding and word recognition ability, particularly in the earlier stages of reading acquisition. Though this study had limitations, it was conducted within a classroom that shares similar characteristics of many ABE ESOL classrooms: multi-levels among students, ethnic, cultural and educational diversity, and fluctuating attendance. The findings discussed above suggest that the use of onset and rime awareness for word recognition and decoding can be a worthwhile strategy to incorporate into reading instruction. To the extent that this decoding strategy is utilized by students on an ongoing basis, it could help them to develop the habit of looking for and noticing patterns in words and aid them in more rapid and accurate decoding and word recognition.

As a teacher and reading instructor, I plan to continue to explore the use of onset and rime as a tool for students who are in the earlier stages of learning to read. The results of this study have convinced me that this is worthwhile. I hope to expand more into multi-syllable words and also to weave this type of instruction into more authentic print material that students encounter in the community on a daily basis (bus schedules, application forms, etc.). It would also be interesting to see what sorts of applications can be made in higher level ESOL classes. Conducting this research has given me a stronger curiosity for further research in the field of reading, as new questions and hypotheses emerge from the teaching process.

Learning to read is a crucial endeavor, especially in an age where literacy opens doors to employment, further education, and greater potential to effect change in

communities and in society. Exploring new ways to empower new readers with effective tools is a challenging and invaluable pursuit.

APPENDIX A

Combined Onset and Rime Recognition Test (Teacher Copy)

COMBINED ONSET and RIME RECOGNITION
(TEACHER COPY)

Instruct the student to read each word. Do not prompt the student or give him/her the correct pronunciation. Put a \checkmark next to each onset and rime that the student decodes correctly. Put an \times next to each onset and rime that the student decodes incorrectly. Allow 2 attempts, if necessary, to read each word.

PRE-TEST / POST-TEST (Circle one)

Practice

- a. nice
- b. cool

Student ID#:

- | | | | |
|-----|-------|--------------------|-------------------|
| 1. | SKATE | <i>onset</i> _____ | <i>rime</i> _____ |
| 2. | BAIL | <i>onset</i> _____ | <i>rime</i> _____ |
| 3. | TRACK | <i>onset</i> _____ | <i>rime</i> _____ |
| 4. | LIME | <i>onset</i> _____ | <i>rime</i> _____ |
| 5. | TANK | <i>onset</i> _____ | <i>rime</i> _____ |
| 6. | MIRE | <i>onset</i> _____ | <i>rime</i> _____ |
| 7. | LINK | <i>onset</i> _____ | <i>rime</i> _____ |
| 8. | HIND | <i>onset</i> _____ | <i>rime</i> _____ |
| 9. | PEST | <i>onset</i> _____ | <i>rime</i> _____ |
| 10. | THICK | <i>onset</i> _____ | <i>rime</i> _____ |
| 11. | SILL | <i>onset</i> _____ | <i>rime</i> _____ |
| 12. | SHOCK | <i>onset</i> _____ | <i>rime</i> _____ |
| 13. | CHORE | <i>onset</i> _____ | <i>rime</i> _____ |
| 14. | STUCK | <i>onset</i> _____ | <i>rime</i> _____ |

Adapted from: Sylvia Greene's *Informal Word Analysis Inventory*

APPENDIX B

Combined Onset and Rime Recognition Test (Student Copy)

COMBINED ONSET and RIME RECOGNITION
(STUDENT COPY)

Read each word below.

Practice

- a. *Nice*
- b. *Cool*

1. Skate
2. Bail
3. Track
4. Lime
5. Tank
6. Mire
7. Link
8. Hind
9. Pest
10. Thick
11. Sill
12. Shock
13. Chore
14. Stuck

Adapted from: *Sylvia Greene's Informal Word Analysis Inventory*

APPENDIX C

Onset Focus Test

APPENDIX D

Pre-Study Questionnaire

Pre-Study Questionnaire

Country / Origin

Age

1. What is your first language? _____
2. What other languages do you speak? _____
3. Do you read in your first language? YES NO
4. When did you come to the United States?

month / date / year
5. Did you go to school in your home country? Circle YES or NO.
YES From _____ To _____
Year Year
NO
6. How many years have you studied English? Circle the number of years.
Never | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10
7. How do you feel reading in your first language? Circle ALL the TRUE answers.
a) I like to read. c) It is difficult.
b) I don't like to read. d) It is OK.
e) It is easy.
8. How do you feel reading in English? Circle ALL the TRUE answers.
a) I like to read. c) It is difficult.
b) I don't like to read. d) It is OK.
e) It is easy.
9. Read the sentences. Circle only ONE sentence that is TRUE for you.
a) I *never* read in my first language at home.
b) I read in my first language at home *one or two times every week*.
c) I read in my first language *a few minutes every day*.
d) I read in my first language *more than 1 hour every day*.
10. Read the sentences. Circle only ONE sentence that is TRUE for you.
a) I *never* read in English at home.
b) I read in English at home *one or two times every week*.
c) I read in English *a few minutes every day*.
d) I read in English *more than 1 hour every day*.

APPENDIX E

Post-Study Questionnaire

Post-Study Questionnaire

1. Fill in the blank. Use *always, usually, sometimes, rarely, or never*.
Word families _____ help me to read English words.
2. How do you feel reading in your first language? Circle ALL the TRUE answers.
 - a) I like to read.
 - b) I don't like to read.
 - c) It is difficult.
 - d) It is OK.
 - e) It is easy.
3. How do you feel reading in English? Circle ALL the TRUE answers.
 - a) I like to read.
 - b) I don't like to read.
 - c) It is difficult.
 - d) It is OK.
 - e) It is easy.
4. *How often* do you read in your first language at home? Circle only ONE sentence that is TRUE for you.
 - a) I *never* read in my first language at home.
 - b) I read in my first language at home *one or two times every week*.
 - c) I read in my first language *a few minutes every day*.
 - d) I read in my first language *more than 1 hour every day*.
5. *How often* do you read in English at home? Circle only ONE sentence that is TRUE for you.
 - a) I *never* read in English at home.
 - b) I read in English at home *one or two times every week*.
 - c) I read in English *a few minutes every day*.
 - d) I read in English *more than 1 hour every day*.

REFERENCES

- Adams, M. (1990). *Beginning to read: Thinking and learning about print*. MA: Massachusetts Institute of Technology.
- Bader, L. (1983). *Bader reading and language inventory*. New York: Macmillan.
- Balmuth, M. (1982). *The roots of phonics*. New York: Teachers College Press.
- Beck, I. & Juel, C. (1995). The role of decoding in learning to read. *American Educator*, 19(2), 8, 21-25, 39-42.
- Booth, J. & Perfetti, C. (2002). Onset and rime structure influences naming but not early word identification in children and adults. *Scientific Studies of Reading*, 6(1), 1-23.
- Burt, M., & Peyton, J. (2003). *Reading and adult English language learners: The role of the first language* (Report No. ED-99-CO-0008). Washington, D.C.: National Center for ESL Literacy Education. (ERIC Document Reproduction Service No. ED482486).
- Burt, M., Peyton, J., & Adams, R. (2003). *Reading and adult English language learners: A review of research*. Washington, D.C.: Center for Applied Linguistics.
- Burt, M., Peyton, J., & Van Duzer, C. (2005). *How should adult ESL reading instruction differ from ABE reading instruction?* Washington, D.C.: Center for Applied Linguistics.
- Carr, W. & Kemmis, S. (1986) *Becoming critical: Education, knowledge and action research*. Philadelphia, PA: Deakin University Press.
- CASAS. (2007). *About CASAS*. Retrieved March 2, 2007, from <https://www.casas.org/home/index.cfm?fuseaction=home.showContent&MapID=197>
- Celce-Murcia, M., Brinton, D., & Goodwin, J. (2002). *Teaching pronunciation*. United Kingdom: Cambridge University Press.
- Chall, J. (1967). *Learning to read: The great debate*. NY: McGraw Hill, Inc.

- Cunningham, P. (2005). *Phonics they use*. Boston, MA: Pearson Education, Inc.
- Curtis, M. & Kruidenier, J. (2005). *Teaching adults to read: A summary of scientifically based research principles* (Contract No. ED-CO-0026). Jessup, Maryland: National Institute for Literacy at ED Pubs.
- Davidson, R. & Strucker, J. (2002). Patterns of word-recognition errors among adult basic education native and nonnative speakers of English. *Scientific Studies of Reading*, 6(3), 299-316.
- Dombey, H., Moustafa, M., et al. (1998). *Whole to part phonics: How children learn to read and spell*. Portsmouth, NH: Heinemann.
- Ehri, L. (2003). *Systematic phonics instruction: Findings of the National Reading Panel*. London: Invitational Seminar organized by the Standards and Effectiveness Unit, Department for Education and Skills, British Government. (ERIC Document Reproduction Service No. ED479646).
- Flesch, R. (1955). *Why Johnny can't read*. New York: Harper & Row.
- Fowler, D. (1998). Balanced reading instruction in practice: Through whole-part-whole instruction, young learners discover the joy of reading. *Educational Leadership*, 55(6), 11-12.
- Goswami, U., & Bryant, P. (1990). *Phonological skills and learning to read*. United Kingdom: Lawrence Erlbaum Associates Ltd.
- Goswami, U. (2002). In the beginning was the rhyme? A reflection on Hulme, Hatcher, Nation, Brown, Adams, and Stuart. *Journal of Experimental Child Psychology*, 82, 47-57.
- Greene, S. (2006). *Informal word analysis inventory*. Retrieved April 12, 2007, from http://www.nifl.gov/readingprofiles/SG_Word_Analysis.htm
- Hinkel, E. (2006). Current perspectives on teaching the four skills. *TESOL Quarterly*, 40(1), 109-127.
- Howell, D. (2002). *Statistical methods for Psychology*. Pacific Grove, CA: Duxbury Press.
- Hull, M. & Fox, B. (1998). *Phonics for the teacher of reading*. New Jersey: Prentice-Hall, Inc.
- Huntley, H. (1992). *The new illiteracy: A study of the pedagogic principles of teaching English as a second language to non-literate adults*. Washington, D.C.: Office of Educational Research and Improvement. (ERIC Document Reproduction Service No. ED356685).

- Jones, M. (1996). *Phonics in ESL literacy instruction: Functional or not?* Philadelphia: World Conference on Literacy. (ERIC Document Reproduction Service No. ED436104).
- Kirsch, I., Jungeblut, A., Jenkins, L., & Kolstad, A. (1993). *Adult literacy in America: A first look at the results of the national adult literacy survey* (Report No. ISBN-0-16-041929-8). Washington, D.C.: National Center for Education Statistics. (ERIC Document Reproduction Service No. ED358375).
- Kirtley, C., Bryant, P., MacLean, M., & Bradley, L. (1989). Rhyme, rime, and the onset of reading. *Journal of Experimental Child Psychology*, 48, 224-245.
- Krashen, S. (2002). Defending whole language: The limits of phonics instruction and the efficacy of whole language instruction. *Reading Improvement*, 39(1), 32-42.
- Kruidenier, J. (2002). *Research-based principles for Adult Basic Education reading instruction*. Washington, D.C.: National Institute for Literacy & the Partnership for Reading.
- Learning Disabilities Association, Inc. of Minnesota (2005). *The adult reading toolkit: A research-based resource for adult literacy*. Minneapolis, MN: LDA of Minnesota.
- Mackey, A. & Gass, S. (2005). *Second language research: Methodology and design*. New Jersey: Lawrence Erlbaum Associates, Inc.
- McNiff, J. (2002). *Action research: Principles and practice*. (online version). London; New York: Routledge.
- McShane, S. (2005). *Applying research in reading instruction for adults: First steps for teachers*. Washington, D.C.: The Partnership for Reading at the National Institute for Literacy.
- Merriam, S. B. (1998). *Qualitative research and case study applications in education*. San Francisco: Jossey-Bass, Inc., Publishers.
- National Reading Panel (2000). *Teaching children to read: An evidence-based assessment of the scientific research literature on reading and its implications for reading instruction*. Bethesda, MD: National Institute of Child Health and Human Development.
- National Reporting System. (2007). *NRS implementation guidelines*. Retrieved November 14, 2007, from http://www.nrsweb.org/foundations/implementation_guidelines.aspx

- Proceedings of the National Symposium on Adult ESL Research and Practice (2001). Washington, D.C.: National Center for ESL Literacy Education. (ERIC Document Reproduction Service No. ED472784).
- Stahl, S., & Murray, B. (1994). Defining phonological awareness and its relationship to early reading. *Journal of Educational Psychology*, 86(2), 221-234.
- Stanback, M. (1992). Syllable and rime patterns for teaching reading: Analysis of a frequency-based vocabulary of 17, 602 words. *Annals of Dyslexia*, 42, 196-221.
- Strickland, D. (1998). What's basic in beginning reading? Finding common ground. *Educational Leadership*, 55(6), 6-10.
- Stuart, M. (1999). Getting ready for reading: Early phoneme awareness and phonics teaching improves reading and spelling in inner-city second language learners. *British Journal of Educational Psychology*, 69, 587-605.
- Treiman, R. (1992). The role of intrasyllabic units in learning to read and spell. In P. Gough, L. Ehri, & R. Treiman (Eds.), *Reading Acquisition* (pp.65- 106). Hillsdale, NJ: L. Erlbaum Associates.
- Treiman, R., Mullennix, J., Bijeljac-Babic, R., & Richmond-Welty, E. (1995). The special role of rimes in the description, use, and acquisition of English orthography. *Journal of Experimental Psychology*, 124(2), 107-136.
- Trupke, J., & Poulos, A. (2007). Improving literacy of L1-non-literate and L1-literate adult English as a second language learners. *MinneWITESOL Journal*, 24, Retrieved November 20, 2007, from <http://www.minnewitesoljournal.org/>.
- Tunmer, W., & Hoover, W. (1993). Phonological recoding skill and beginning reading. *Reading and Writing: An Interdisciplinary Journal*, 5, 161-179.
- Walton, P., Walton, L., & Felton, K. (2001). Teaching rime analogy or letter recoding reading strategies to prereaders: Effects on prereading skills and word reading. *Journal of Educational Psychology*, 93(1), 160-180.
- Wrigley, H., & Guth, G. (1992). *Bringing literacy to life. Issues and options in adult ESL literacy*. Washington, DC: Office of Vocational and Adult Education.
- Wylie, R., & Durrell, D. (1970). Teaching vowels through phonograms. *Elementary English*, 47(6), 787-791.

Copyright by
ERIN EVANS, 2007
All rights reserved