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Adult ESL Oral Reading Fluency and Silent Reading Comprehension

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ADULT ESL ORAL READING FLUENCY
AND SILENT READING COMPREHENSION

Kristin Lems
Reading and Language Doctoral Program

Submitted in partial fulfillment
of the requirements of
Doctor of Education
in the Foster G. McGaw Graduate School
National-Louis University
August, 2003

Note: transfer of the files resulted in some repagination which could not be fully corrected in the table of contents
Abstract

A descriptive study of second language adults studying ESL at the beginning, intermediate, and advanced levels in a post-secondary academic program revealed that their oral reading fluency had a significant, low-to-moderate correlation with scores on a measure of silent reading comprehension. The correlation was slightly stronger for measures of accuracy than speed, and strongest for miscue ratio. The correlation increased as proficiency level increased. Among different first language groups, the correlation was highest for Hispanic learners, and lowest for Chinese. Furthermore, all fluency measures correlated better with a listening measure than with the silent reading comprehension measure. When a system of using words correct per minute was contrasted with a fluency rubric using descriptive measures of expressive reading, the correlation with silent reading was found to be almost the same, but the system of words correct per minute had higher reliability. A miscue analysis of seven intermediate learners’ oral reading indicated that speed does not necessarily increase as silent reading proficiency increases, but accuracy does; Chinese students do not fit the profile of the other language groups, and the value of miscue analysis with this population is limited because of foreign accent. When regression analyses were run using the reading comprehension measure as the dependent variable, all the models identified the listening comprehension measure as a significant factor, and the fluency variables added little explanatory power, so long as a listening comprehension variable was available. It was also found that the fluency tools mirrored overall progress in proficiency level, and listening comprehension predicted silent reading comprehension better than any fluency measure or combination of measures, with little increase in predictive power by adding fluency measures.
ACKNOWLEDGMENTS

In this twisting and mysterious journey of the mind, I have gotten respite, nourishment, and energy from many sources.

At my own university, National-Louis University, I must begin by thanking the members of my committee: Dr. Jan Perney, who never failed to kindly cajole me along to the next level of analysis, and gave me enormous assistance in my understanding of quantitative research; Dr. Peter Fisher, who provided me early on with a set of articles that really launched my exploration; and most of all, my dissertation chair Dr. Camille Blachowicz, who deployed her brilliant intellectual and organizational talents to get me going and keep me on track. Camille always knew when to say, "Interesting, but that's not what you need to do right now!" or "Tighten that up!" Thank you for that, and everything else, Camille.

Other faculty at National-Louis were extremely helpful, including Dr. Ken Kantor, who helped me enlarge and then refine my topic; Dr. Ruth Ravid, who helped me use my data to its best effect; and especially Dr. Rebecca Barr, whose brilliant guidance in two doctoral classes showed me the paths to the curriculum-based fluency snapshot, and classroom-based research. Her untimely death in the summer of 2003 was a terrible blow to all of us who loved her and learned from her, and I dedicate this dissertation to her.

I also want to honor my classmates in the reading doctoral program: Linda Kateeb, Judy Fiene, Charlene Cobb, and Griselle Gemmati, who were always there (mainly by the medium of email) to keep me laughing and feeling I was not alone. A special thank you goes to Cheryl Wolfel, without whose assistance a portion of the research could not have been done.
In my academic department, Po Fan Ng, Administrative Director of the Language Institute at National-Louis University, deserves special thanks for helping with data and statistics on the ESOL program, as well as my colleagues in the Department of Applied Language, and in particular, my department chair, Gale Stam, whose support for and interest in my research were much appreciated for the past several years, in addition to the faculty who gathered the ORF samples, and colleague Cynthia Comstock, who helped me obtain supplementary data on Level 3 students.

I extend thanks and gratitude to Leah D. Miller, who wholeheartedly embarked on this research journey with me in its early stages, out of her sheer love of learning. Leah was always there to discuss things with, and our joint presentation on parts of this research at the 2002 American Association of Applied Linguistics (AAAL) and Teachers of English to Speakers of Other Languages (TESOL) Conference helped convince me it was a worthy dissertation topic. I am fortunate that Leah could continue the journey with me as the committee's Dean's Representative, and look forward to our future collaboration.

I am thankful to the many esteemed experts with whom I was able to have e-mail conversations on this topic, including (in alphabetical order) Neil Anderson, Jared Bernstein, David Chard, Stanley Deno, Chad Hamilton, Don Leu, Tim Rasinski, J. Samuels, Mark Shinn and Etsuo Taguchi. All of them offered opinions, encouragement, and helpful leads in tracking down research. Thank you for lighting the way!

I also enjoyed correspondence with recent doctoral student Mary Kay Moskal, whose related work on identification of "speed readers" was enlightening, and Cara Cahalan-Laitusis, who has done important work on difficulty level of oral reading passages.
On the home front, deep gratitude goes to my beloved children, Karima and Kennan, who endured many long evenings and weekends with their mom buried alive in the disorderly computer room instead of being with them, and the ceaseless accumulation of papers, cassette tapes, books, and totes around the house, which never seemed to get all cleaned up. Over time, they helped out in small ways, and then, began to ask provocative questions. Kennan, 11, after hearing hundreds of taped samples, asked, "Mommy, is it better when they read fast with lots of mistakes, or slow without any?" These kinds of wonderful insights refreshed me.

My greatest thanks go to my mother-scholar, writer, musician, and friend Carol Lems-Dworkin. No task, no matter how improbably complex, how hastily demanded, how incoherently expressed, ever fazed her. She helped with the kids' meals, homework detail, orthodontist and doctors' appointments, shuttle service, and much more during the years of my coursework, comprehensive exam and dissertation. She also served as a sounding board as I picked my way through concepts and methods, and responded without sentimentality or bias to help me grow. In the halls of the heroes, she deserves the largest statue.

Finally, the librarians and clerks at the National-Louis University libraries deserve special thanks for their professionalism and courtesy, and the many mini-training sessions they conducted to help me get at my data. I'm looking forward to contributing a bound volume with these very words to their collection of doctoral dissertations......
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CHAPTER ONE

Purpose and Rationale

"Fluency" is a concept which is currently of great interest to reading theorists and practitioners. It can be called a "multi-dimensional reading construct" (Rasinski, 1990, p. 43). The term "fluent reading" is generally used to refer to reading in which a high degree of automaticity has been reached, when decoding is no longer effortful, and attentional resources can be focused on construction of meaning.

The place in which fluency becomes very important is in its demonstrated robust correlation with silent reading comprehension and other measures of reading performance. Again and again, across different variables and populations, scores on oral reading fluency (ORF) assessments, the means by which fluency is measured, have strongly correlated with student scores on the reading sections of standardized tests, informal reading inventories, teacher observation, performance on cloze passages, question answering, retelling, word list reading, writing, and other established measures of reading comprehension and literacy (Kuhn & Stahl, 2002). In addition, it has been shown that reading comprehension predicts ORF as well (Fuchs, Fuchs, Hosp, & Jenkins, 2001). As a result of these studies, ORF is used in a number of school settings for placement, norming, referral for special services, and as a gauge of individual and class reading progress.

ORF measures several discrete aspects at once. When used with curriculum-based materials, an ORF sample is sensitive to individual student progress over short periods of time; furthermore, it can be used to calculate benchmarks and norms for large groups of students, and at the same time, can be useful in making recommendations both about individual reading programs and curriculum (Deno, 1985).
After establishing the robust and reciprocal relationship between ORF and reading comprehension, special education educators, and then mainstream instructors, began to use oral reading practice as a technique to improve reading. They asked: if oral reading fluency parallels reading comprehension, can improving oral reading fluency actually improve, rather than just reflect, reading comprehension as well? It appears that it can. Now, fluency building activities which involve oral reading elements are becoming commonplace in the integrated language arts classroom. Innovative practices, from Reader’s Theatre to poetry performance, are showing encouraging positive effects on reading rate and comprehension.

In a neighboring but often non-intersecting field, teachers of English as a Second Language (ESL) work on developing second language (L2) proficiency in their students. It should be noted that the definition of "fluency" which is commonly used to describe the goal of learning a foreign language, the notion that a person has a proficiency and comfort level in all functions of the target language equal to that of their native language, is entirely different from the one used in ORF research. This paper adopts the definition of fluency used in the ORF research.

Nonetheless, what both of these widely-differing concepts of fluency share is the idea of effortlessness, ease, and smoothness, and this is as important in second language listening, speaking, reading and writing as it is in first language reading, whether the mode is silent or oral. In fact, "fluency" can be seen as a core universal literacy construct.

Reading fluency building techniques are beginning to appear in texts about adult second language reading (Anderson, 1999), and in articles and workshops for ESL and bilingual education professionals (Baker & Good, 1995; Taguchi & Gorsuch, 2002). These methods, used to boost both speed and comprehension, focus on silent repeated reading, perhaps because of the second language
teacher's legitimate concern about embarrassing the student with forced, public oral reading in an unfamiliar tongue. However, it is likely that some of the first language (L1) reading activities which blend audio and visual modes (Montali & Lewandowski, 1996) will find their way into ESL and foreign language learning, and research on oral reading fluency such as this study may bring people there a bit sooner.

What is missing, however, is any second language (L2) research that establishes a relationship between ORF and reading comprehension in adult L2 learners. The study proposes the hypothesis that, with some variations, ORF in L2 adults is likely to show a significant correlation with reading comprehension similar to that found in L1 children. If such a relationship can be established, the fields of ESL and bilingual education will have a powerful and efficient tool for placement, early intervention, the measuring of individual student progress, and establishing classroom and program norms, as well as in the area of program evaluation. If no such relationship is found, we may learn something new about the process by which adults learning a second language acquire L2 reading skills, and the ways in which that process parallels or varies from that found with L1 children.

The oral reading of L1 secondary school students has been shown to be a less powerful predictor of reading performance than other factors, such as general literacy level, higher order thinking, and vocabulary knowledge (Espin & Foegen, 1996). Fuchs et al. (2001) found that ORF proceeds in a "developmental trajectory" (p. 240). Thus, since literate adults studying a second language share with L1 literate adults the feature of being fully literate, it might mean that ORF does not correlate as closely with their reading skill.
On the other hand, since L2 adult students are not yet literate in L2, their ORF and silent reading comprehension development may be proceeding along a similar path. If the correlation between ORF and reading comprehension is low, it would support the idea that there is a great deal of transfer between L1 and L2 reading, and that "you only learn to read once," merely changing codes when starting to read in a new language. Then, the issue is not learning to read, but "plugging in" the surface features of the target language to an existing reading competence. If the correlation is high, on the other hand, it could support the idea that the transfer of L1 literacy to L2 literacy is not so tidy, and that other features, such as an oral and listening base and L1 academic background may be important factors in building L2 reading. This study may have some implications, therefore, for the whole debate on bilingual education.

The question could also be posed this way: is the "adult" part of L2 adult reading more decisive than the "L2" part? If the "adult" part is more influential, with low predictability from oral reading measures, results should show more similarity to L1 adult readers; if the "L2" part is more influential, with high predictability from oral reading, the results should show similarity to oral reading by L2 children.

To address some of these compelling questions, I have chosen adult L2/ESL oral reading fluency as the topic of inquiry for my dissertation, and hope to establish some first tentative conclusions about its relationship to L2/ESL reading comprehension.

I became interested in this topic in a very roundabout way. Like Alice tripping and then tumbling down the rabbit hole, beginning her introduction to a whole new world, it began with an innocent question. I asked my professor, Dr. Rebecca Barr, during a course in Diagnostic
Techniques for the Reading Specialist, if I could fulfill the assignment, to do oral reading fluency snapshots, with my adult L2/ESL students, since I didn't have access to a classroom with children.

She said it sounded interesting, and she didn't see any reason why not, although she couldn't remember ever seeing it done before. After taping and analyzing my own post-secondary ESL class, I became intrigued with the potential power of this simple measure to tell us more about a learner's competence, and soon the one-minute procedure had been added to the oral interviews for all Level 3 ESL classes, which I coordinated at the time. I formalized my research through the school's institutional review board, and, with colleague Leah Miller, began to assemble and analyze data, and make presentations on the topic -- an untapped one in the ESL and applied linguistics fields.

As I read and searched more about fluency measurement, I began to see that this topic had scarcely set foot in the field of L2/ESL research. I wondered whether using an ORF measure could really "work" with L2/ESL adults in the powerful way it does for first language children, and I am still getting the answers to that question. The rest of the story is this dissertation!

As a folksinger and lover of the arts, I have always been interested in oral tradition, oral reading, oral storytelling, griots, wandering minstrels and folk tradition. I have also become convinced through my study of music and of African cultures that rhythm is an underrated but key human competency, and pervades everything from walking to talking to working to making love. The use of rhythm in oral reading is a way of showing a knowledge of conventions of literacy and an understanding of text. This study is a small glimpse into the rich world in which all these strands intertwine, all situated within my educational practice as an adult L2/ESL teacher. As I delve more and more deeply into this study, my interest has not flagged for a single minute, and I have every confidence that I will continue to explore this area during all the years of my professional life.
Research Questions

In sum, my three research questions read as follow: 1.) Is there a correlation between second language adult ESL oral reading fluency and silent reading comprehension? 2.) Which measure of oral reading fluency correlates better with reading comprehension for L2/ESL adults, words correct per minute (WCPM), or the Zutell-Rasinski multidimensional fluency scale (MFS) rubric? 3.) How might the oral reading of strong, average, and weak L2/ESL students at the intermediate level be characterized, and what can miscue analysis of that reading add to the description?
CHAPTER TWO

Review of the Literature

Introduction

The topics of fluent reading, oral reading fluency, and second language acquisition touch upon a dazzling variety of important research studies that impact the fields of reading, assessment, curriculum and instruction, linguistics, child development, second language acquisition, special education, and other related areas. To examine these vibrant and exciting topics feels like walking through a crowded marketplace packed with stalls full of brightly colored wares that seem to shout out, "Buy me! Take me!" Having an opportunity not only to examine, but to add to the bright array with new research is a tantalizing prospect. This chapter will take the reader on a guided tour of some of the stalls in this "marketplace."

Because of the fact that this study draws heavily upon two separate fields, reading and second language learning, an attempt has been made to render the core concepts of each field accessible to readers who are not very familiar with one of the fields. Therefore, the literature review includes not only core concepts in each of the fields, but full descriptions of the issues within each field in which the topic of study is situated.

The Purpose of the Study

The purpose of this study is to see how the construct of oral reading proficiency as a measure and predictor of silent reading comprehension applies to adult second language learners of English. If a robust relationship between oral reading and silent reading comprehension can be shown in second language (L2) adult learners of English, it paves the way for new assessment, placement, and classroom activities in the field. If a robust relationship is not discovered, it gives researchers a
useful new tool to compare and contrast the reading processes of a child learning to read a first language, and a fluent adult reader learning to read in a new language. It also supports the view that adults literate in one language carry their silent reading comprehension skills with them as they learn the target language's code. Either way, something will be learned about the nature of reading in one's native language and in another language as well.

**Research Questions**

The research questions are three: 1.) Is there a correlation between second language adult ESL oral reading fluency and silent reading comprehension? 2.) Which measure of oral reading fluency correlates better with reading comprehension for L2/ESL adults, words correct per minute (WCPM), or the Zutell-Rasinski multidimensional fluency scale (MFS) rubric? 3.) How might the oral reading of strong, average, and weak L2/ESL students at the intermediate level be characterized, and what can miscue analysis of that reading add to the description?

**Review of Concepts and Terms**

Definitions of many of the important concepts used in this study can be found in Appendix A, which consists of a glossary of key terms and abbreviations from both the reading and second language acquisition fields.

**Reading Fluency and Oral Reading Fluency**

The chapter begins with a discussion of the definitions of fluent reading in differing theoretical models of reading, followed by a description of what various researchers consider oral reading fluency (ORF) to comprise. After that, the robust relationship which has been found between ORF and reading comprehension will be explored. That will be followed by a description of systems used to structure oral reading assessment, and a survey of ways in which the oral reading
is scored, including a detailed description of miscue systems in particular. That will be followed by a brief overview of oral reading activities which have been used to build both silent and oral reading fluency. This will be followed by a section of second language learning and acquisition which introduces core concepts that are of use in analyzing L2 learner progress.

The portion of the chapter about fluency and L2 post-secondary learners makes the assumption that students are English language learners, because that is where the majority of the research available to the researcher has come from; these students will be consistently referred to as L2/ESL learners. Because of the widely-differing structures of languages and cultural experiences, some of the assumptions of the study may not carry over to the reading practices of language learners studying other target languages, especially those which are not alphabetic.

Although sometimes used interchangeably in the literature, a discussion about fluency needs to begin by distinguishing fluent reading, which is often called "reading fluency," from oral reading fluency (ORF), both of which, unfortunately, are often misleadingly shortened to the single word "fluency." One might say that the former is a competency, and the latter is some kind of measurable performance of that competency. Reading fluently is, after all, understood to be a silent act, whereas oral reading fluency is audible. That paradox alone presents many challenges and problems, at both the theoretical and methodological level.

The influential automatic information processing model of reading comprehension (Laberge & Samuels, 1974) assigns a prime role to fluency. In effect, the model describes an allocation of cognitive processing resources to the reading task, which evolves as proficiency increases from a focus on word recognition to a level at which word recognition becomes unconscious. Reaching this rapid, automatic level of word recognition, therefore, frees up cognitive resources for comprehension
of text. Thus, one definition of fluency emanating from this model is "rapid decoding" or automatic word recognition.

Other definitions which would fit this model include descriptions like "fast, effortless, autonomous, unconscious" reading (Logan, 1997), or "freedom from word identification problems" (Harris & Hodges, 1995, in Samuels, 2002a, p.167). Torgesen (1986) says fluency is reading "rapidly, effortlessly, accurately" (in Lipson & Lang, 1991, p. 220). Samuels, one of the authors of the automatic processing reading model, and the creator, in 1979, of the repeated reading technique, adds that "one of the indicators of reading fluency, which is not usually presented in the research literature, is the ability to identify a common word as a holistic unit" (Samuels, 2002b, p. 170).

Stanovich's interactive compensatory model (1980) conceives fluent reading as a byproduct of, rather than contributor to, comprehension. In this model, a "smooth" path of comprehension - with words rapidly accessible to the reader, allows automatic processing and maximum availability of attention for comprehension, whereas a hitch in the automatic word processing requires the use of other strategic systems, including those based on knowledge of syntax, morphology, expository structures, punctuation, and other kinds of literacy knowledge. In this model, then, reading fluency has a comprehension component, and is reflected in a definition such as the following: "[a fluent reader is] able to perform two difficult tasks simultaneously...the ability to identify words and comprehend a text at the same time" (Samuels, 2002b, p. 168). If reading is defined as constructing meaning from text, then this model would require that reading comprehension figure into any adequate definition of reading fluency. Others would shorten the definition of fluency to simply "decoding plus comprehension."

Rumelhart's model (1980), called the parallel interactive model, conceives of
reading as a set of processing activities in which all sources of information can be processed at once, making use of several linguistic and cognitive systems. In this model, word recognition and its meta-activity, decoding, interact with other systems, so that reading fluency only manifests one possible point of origin for making meaning from print; therefore, ORF would not figure as a key measure.

Reading fluency takes on another role in reading models which posit reading as a transfer from oracy (oral language) to literacy (written language), with oral knowledge as the knowledge base for all later literacy (Sticht & James, 1984). According to this theory, learning to speak emerges from listening comprehension, and fluent reading enables a reader to comprehend a text through reading just as easily as the listener could understand it by listening. Thus, fluent reading should allow readers to read to the top limit of their language comprehension.

Gough and Tunmer's simple view of reading (Gough & Tunmer, 1986) gives a formula for reading comprehension as follows: \( RC = D + LC \), or, reading comprehension (RC) is the sum of decoding (D) and listening comprehension (LC) or general language competency (sometimes substituted by the term "literacy level").

The recent interactive models of reading (Stanovich & Beck, 2000) assign a greater role to prior knowledge (including knowledge of text features) in word recognition, and also posit that comprehension can "fire" from either "top down" or "bottom up," without necessarily requiring that word identification be resolved before meaning can be sampled (Fuchs et al., 2001, p. 242). Since this model allows for prior knowledge to be used in constructing meaning at the same stage that word identification is accessed, then features of syntax such as chunking, and features of pragmatics such as prosody, would necessarily be included in a definition of reading fluency.
Schreiber (1980) and others point out that there is a tradeoff between spoken and oral language. Punctuation is one small vestige of some of the expressive features found in oral language, but is incapable of recording most of them. Thus the oral reader must, to phrase it in a fresh way, in effect "rehydrate" the written text to embody the oral contours it would contain in spoken form. This is one of the skills of a fluent oral reader.

Since reading with expression can only be perceived through oral reading performance, and not through silent reading alone, a dilemma arises in that what some consider to be a feature of the assessment tool is seen by others as a characteristic of the competence itself.

The question as to whether a silently read word is acoustically "recoded" -- or heard in the head -- before it is spoken also has relevance to the issue of oral reading fluency. The question is a controversial one. In L1 readers, Hausfeld (1983) found the phenomenon of acoustic recoding during reading to be an optional process, and his research suggests that the common "voice in the head" people report hearing may come after, not before, decoding a word and accessing its meaning. Gough (1984) concludes that acoustic recoding cannot be obligatory because there is much proof of other routes to word recognition, but it plays a definite role in at least some silent reading, at some stages of development.

Studies of subvocalization and inner speech tend to come to the conclusion that recoding is a temporary tactic used as readers begin to make the link between oral language and written text (Rayner & Pollatsek, 1989). After the reading becomes more automatized, the acoustic representation of it falls away in favor of a stored visual representation; however, it can be revived at will when the reader encounters a confusing word or phrase and needs the tool. Other studies, however, come to the conclusion that some kind of inner speech is mandatory in the word
recognition process; in other words, the word is "heard" in the head at some point (Raynor & Pollatsek). Is there a relationship between words that are "heard," and words that are spoken in oral reading? And, can one enhance the other?

Lipson and Lang (1991) attempt to pin down the role of reading fluency in reading models: is it a prerequisite ingredient of reading comprehension, a strategy to achieve it, a goal of reading comprehension, or one of its byproducts (p. 219). Strecker, Roser, and Martinez (1998) also take note of the many definitions of reading fluency found in reading literature, especially the difference between those definitions which consider it to be an outcome of decoding and comprehension and those which consider it to contribute to reading comprehension (p. 295). These models have a bearing on research designs, as we shall see in an upcoming section.

In all, there is a considerable blurring of the definition of fluency in the research literature. Shinn et al. (1992), in a study of reading textbooks, found no distinction made between the constructs of fluency and decoding. Kame'enui and Simmons (2001) lament the "one size fits all" quality the term reading fluency has acquired.

There is a growing recognition in the literature that fluency is not an absolute, but an ability to interact with a variety of texts, for a variety of purposes. Rasinski encapsulates it best, calling fluency a "multi-dimensional reading construct" (Rasinski, 1990, p. 43). Or, alternately, phrased in the terms of a frustrated researcher, "the unsettling conclusion is that reading fluency involves every process and subskill involved in reading" (Wolf & Katzir-Cohen, 2001, p. 219).

A Brief History of Oral Reading in the U.S.
Since this study concerns itself with an oral reading measure and cites assessment and fluency building practice activities which employ oral reading, it is useful to situate it within the history of oral reading in the U.S. school system, and its role in reading programs.

Like many practices in education, oral reading has hit both the heights and the depths of popularity over the past 150 years. Writing in 1908, Huey recognized that reading aloud would manifest a set of core competencies which included knowledge of the grammar of a language. He describes this phenomenon in the following way:

How comes it about that a man reading something aloud for the first time is able immediately to emphasize all his words aright, unless from the very first he have a sense of at least the form of the sentence yet to come, which sense is fused with his consciousness of the present word, and modifies its emphasis in his mind so as to make him give it the proper accent as he utters it? Emphasis of this kind is almost altogether a matter of grammatical construction. (p.130)

At the same time, Huey realized the limitations of reading aloud as a window to reading comprehension, saying "a reader incapable of understanding four ideas in the book he is reading aloud can nevertheless read it with the most delicately modulated expression of intelligence" (p.131).

This problem must have been noticed in the many schools in which oral reading was practiced; reading aloud poorly was a sure indicator of poor reading comprehension, but the converse, reading aloud well but with poor reading comprehension, was also possible.

In 1917, Thorndike spoke against oral reading, and predicted that pedagogy would move away from oral reading to silent reading, for the previously-mentioned reason:

In school practice it appears likely that exercises in silent reading to find the answers to given questions, or to give a summary of the matter read, or to list the questions which it answers, should in large part replace oral reading. The vice of the poor reader is to say the words to himself without actively making judgments concerning what they reveal. Reading aloud or
Judd and Buswell published a book in 1922 which investigated and classified the uses of silent reading as viable and valuable means of reading instruction. In many writings until that time, "reading" was simply assumed to mean "reading aloud." They use the example of foreign language study to illustrate that silent reading comprehension could occur just as in native language reading. Their statement, "a great variety of results can issue from the coming together of books, eyes, and brains" (p. 4-5), significantly omits the mention of "mouths." However, they also attack the learning of Latin in favor of studying spoken languages such as French, indicating their belief that the oral element should not be missing from language study.

Oral reading was a dominant activity in the classroom in the 1920's. In addition, reading proficiency was regularly assessed through oral testing. One such instrument was the widely-used Gray Standardized Oral Reading Check Test. The test consisted of paragraphs graded in difficulty which were to be read aloud and scored for correct comprehension questions asked after reading. The Gray test was used in much research. One such example is an experiment by Morphett and Washburne (1931), on the topic of when children should begin to learn to read. "A child was considered to have made satisfactory progress if he knew the entire sight word list (139 words) and read the Gray test in fifty seconds or less with three errors or less" (p. 501).

Somewhere in this time period, oral reading lost its vaunted position; Dunn and Harris (1969) describe it this way in an annotated bibliographic reference: "[the book discusses] the influences leading to the fall of oral reading and the rise of silent reading and...the outlook for a wider use of oral reading in classroom" (p. 58).
Chall (1967) noted that from about 1930 on, there was considerable consensus that, in early reading, "silent reading should be stressed from the beginning" (p. 14). Other reading researchers from this time strongly opposed oral reading as an inferior form of reading. Buswell (1937) called it "a primitive mode of reaction, which with more practice is supplanted by the more efficient process of silent reading" (p. 117). A sign of maturity in reading, he believed, was the absence of any vocalization during silent reading.

Vocalization, which is symptomatic of an immature reading process and which interferes with rapid comprehension of printed materials, is particularly likely to trouble adults who have been educated during the period when oral-reading methods predominated. The need for overcoming vocalization in silent reading is probably much greater in the adult population than among children now at school. (p. 129)

Buswell continued his silent reading crusade with research, published by University of Chicago press in 1945, to determine whether pupils taught by a "non-oral reading method" were able to read better than pupils taught with a combination of oral and silent reading (Buswell, 1945; Dunn & Harris, 1969, p. 54).

Gates disparaged the practice of oral reading even in a classroom of beginning readers. Others also decried using an oral reading test for diagnosis of reading difficulties at the college level, saying that once silent reading had outstripped oral reading, the latter could no longer be considered a valid measure of reading comprehension (Dunn & Harris, 1969, p. 48).

In the 1940's, on the other hand, the linguist Leonard Bloomfield promulgated a "linguistic" reading method based on the belief that beginning reading could most efficiently help "crack the code" of words already known to the child in oral form by selecting those with regular spelling patterns. The child would read them aloud and induce the rules before seeing irregular spelling patterns. Because the link to reading was the oral language already known by the child,
Bloomfield's program encouraged oral reading over silent reading at the beginning of instruction (Chall, 1967, p. 29), as a bridge to the oral language knowledge base. He favored this method over the use of pictures with the text, using the schema of the child's oral language as the frame of reference.

While oral reading in the classroom declined during the 1950's and 1960's in favor of silent reading and individually paced activities, it continued to have an important place in assessment, placement, and diagnosis of student reading, through miscue analysis. Biemiller (1970), for example, studied reading strategies based on research obtained through a classification of oral reading miscues.

It was during the 1950's through 1970's that basic research established what kinds of information an oral reading can, and cannot, give. This research laid the groundwork for fluency research which continues to the present time. For example, by the early 1950's research had found that better silent readers are more likely to read in logical phrases while reading aloud, that better silent readers also read better orally, and that readers who stressed significant words while reading aloud scored better on written comprehension tests (Dunn & Harris, 1969).

Although oral reading in the classroom was not included in prescriptions of good reading programs, and was in fact specifically criticized in at least one study of methods, it persisted into the 1970's. Durkin (1974) noted that classrooms with less successful teaching "lacked any element of fun" with "such habitual practices as having one child read aloud while others are expected to follow the same material silently" (p. 30).

*Oral Reading Tests*
The Gray Oral Reading Test (GORT), which is still in use today, established the use of a mix of silent and oral reading. Its current version, GORT-3, contains developmentally sequenced passages, each with five questions to be answered orally after reading aloud, and results in number ratings which compare student performance to national norms for that grade. Like the Peabody and the curriculum-based fluency snapshot, it establishes a basal and a ceiling, using a miscue system in a timed reading period. There is also a miscue analysis piece. The GORT is the test which first measured fluency as a concept, and laid the foundation for the NAEP fluency rubric (Pinnell, Pikulski, Wixson, Campbell, Gough, & Beatty, 2002), and others.

Oral reading tests are used by psychologists, speech and hearing specialists, reading specialists, and researchers. There is no question that oral reading is still a primary tool for looking into the reading process of children; it continues to be used to diagnosis individual problems, to assess level and progress over time, and for the linguistic information it can yield. With the addition of low-cost, high level video and audio instruments, reading aloud can yield increasing data about reading proficiency. However, even the idea of using oral reading for assessment has detractors (Raynor & Pollatsek, 1989) who believe oral production factors create too many obstacles to achieve an accurate portrait of the reading process.

Although oral "round robin reading" has been strongly criticized in the modern classroom as a poor use of time (Opitz & Rasinski, 1998), oral reading is still used in best practice classrooms, but more communicatively than before (Hoffman, 1981), as a part of literature units, in performance, and to share original student writing. Its use in fluency building activities will be discussed later in this chapter.

*Components of Oral Reading Fluency (ORF)*
Oral reading fluency (ORF) is usually defined by one or more of the following measures: speed, accuracy, parsing, prosody, and comprehension. These five attributes are both discrete and synergistic. Each of these components of ORF will be discussed in order.

**Speed.** Many researchers point out that when text is read below a certain level of speed, comprehension is unlikely to occur, students will not be able to perform their academic tasks, and poor attitudes toward reading and learning in general may result. Rasinski points out in an article entitled "Speed does matter in reading" (Rasinski, 2000) that students referred to his reading clinic scored only slightly below grade level in comprehension and word recognition, but their oral reading rate was significantly below that of their peers. The slow rate of reading prevented these students from keeping up with classwork. The sheer slowness of the reading task disadvantages students at all grade levels because they simply can't process the quantities of text that their peers can, creating a "marathon of frustration" (Anderson, 1999, p. 4), which discourages both academic and recreational reading.

Breznitz and Share (1992) have done several studies in which oral reading speed was systematically increased by the instructor, with resulting increases in both accuracy and comprehension. They speculate that the increase could be attributed, among other factors, to increased similarity between vocal output and pronunciation stored in long term memory.

Although researchers seem to agree that decoding struggles will prevent comprehension if the rate is too slow, they do not agree on what that minimum level is. For silent reading, Smith (1988) uses the figure of 200 words per minute (WPM) as the minimal rate for English native speakers to construct meaning from text, and suggests an optimal rate of 300 WPM for educated native speakers, which is also accepted by Anderson (1999) and others.
Oral reading, of course, will have a lower ceiling, once a threshold of fluent reading is reached, because the organ of speech is much slower than the mind. In terms of oral reading speed, Markell and Deno (1997) claim that, based on their research with comprehension and oral reading speed, the threshold of 90 words correct per minute (WCPM) allows most students to be able to correctly answer 70% of the questions on tests of literal reading comprehension. They found that the 90% correct criterion used in many reading comprehension scales was not reached by students even when reading very easy material, and propose a more modest level of accuracy on comprehension questions, particularly after oral reading.

Hasbrouck and Tindal (1992) established grade level norms for oral reading in the second through fifth grades using ORF data gathered on 7,000 to 9,000 students. They found that the oral reading rate of 100 words correct per minute (WCPM), with at least 70% accuracy, is reached by the strongest readers in second grade by winter, but not by the lowest quartile of fifth grade readers until the spring of fifth grade (p. 42). If one accepts an ORF measure of 100 WCPM as a threshold for reading comprehension at 70% accuracy, "true" reading comprehension may not have begun for students in the lowest quartiles until nearly the end of the fifth grade year. Samuels (personal communication, March, 2003) points out that it is hazardous to establish norms unless text type and reading purpose are established as well.

From the curricular standpoint, Fuchs and Deno (1992) consider any text in which students can read only 10-30 words correctly in a minute to be inappropriate for classroom use. Using repeated reading for multiple passages, Samuels (1979) advised against moving to a new passage until students reached a criterion level of speed for that passage.
Accuracy. Oral reading fluency (ORF) is assumed by all researchers to require some measure of accuracy. Hasbrouck and Tindal (1992) have defined ORF as "words correct per minute." There are many methods for scoring accuracy, but most of these take place on the individual word level, so they do not necessarily insure comprehension of connected text.

Goodman and Burke (1972) set up a complex miscue scoring inventory, described in detail further on in this chapter, which has formed the basis of most scoring ever since. Y. Goodman recognized as early as 1969 that, when oral reading is used for purposes of reading assessment, a great deal of information can be derived from studying the nature of the miscues. She stated, "It is the quality of the miscue which is important for diagnosis, rather than the type of miscue or the number of miscues per hundred words" (Goodman, Allen, Martellock, & Burke, 1969, p. 6).

Accuracy level is variously defined by different researchers, but is included in any discussion of decoding and reading comprehension. An oral reading study in which speed was removed as a factor and only accuracy was charted failed to have much diagnostic power (Parker, Hasbrouck, & Tindal, 1992). Something about the synergy between speed and accuracy together appears to create a strong assessment tool. White (1995) reported that in oral reading of children, "more fluent readers are substantially faster than less fluent readers, covering more text without sacrificing accuracy....it may be easier to detect poor comprehension from students' slower rate than from their degree of word accuracy" (para. 12).

In 2002, the National Association for Educational Progress (NAEP) undertook a special Oral Reading Study of fourth graders to further explore the relationship between "oral reading accuracy, rate (or speed), fluency, and reading comprehension" (Pinnell et al., 1995). Clearly, speed and accuracy continue to be prime constructs in a definition of oral reading fluency.
**Parsing.** Parsing, which can be considered synonymous with the common reading term "chunking," is the ability to separate text into meaningful phrase and clause units. Oral reading demonstrates a reader's ability to parse, which can be an important measure of the development of syntax knowledge, or the grammar of a language. Understanding the conventions of punctuation and the signals it provides for phrase and clause breaks is another subskill of prosody which can be demonstrated through oral reading. Punctuation is in many ways a shorthand which marks places at which an orally read text is suspended as a reader pauses for breath, or for emphasis.

**Prosody.** Dowhower (1991) noted that the Hasbrouck and Tindal definition of ORF does not account for prosody, which can be defined as reading with appropriate expression. Good prosody displays knowledge of not only sentence structure, but also discourse features. Dowhower calls prosody ORF's "neglected bedfellow." In several studies, she discovers a strong relationship between "expressive reading" and comprehension. She cites language acquisition research which shows that children go through a stage of pretend reading, called "book speech register" (p.169), using exaggerated intonation which mimics the oral story reading they have heard, and suggests that the development of this prosody may be a precondition for oral, and later, silent, reading; however, a cause-effect relationship has not been established (p. 170).

The National Reading Panel (National Institute of Child Health and Human Development, 2000) included a reference to prosody in its definition of fluent readers, including "speed, accuracy, and proper expression" in its description. Moreover, the IRRP, a rubric from the National Assessment of Educational Progress (NAEP) commonly used for fluency measurement, includes prosody, asking raters to assess "appropriate" or "awkward" phrasing (Pinnell et al., 1995).
Zutell and Rasinski (1991) define fluent oral reading to include effortless, nearly automatic word retrieval, correct chunking of text into phrases and clauses, and using appropriate pitch, stress, and intonation. However, they take pains to point out that their definition of ORF does not include word accuracy, able comprehension, extensive reading, or positive affect. Stahl and Kuhn (2002) also include prosody, not precisely in a definition of ORF, but as a possible "link between fluency and comprehension" (p. 4).

**Comprehension.** Some definitions of oral reading fluency include comprehension. Samuels (1979) describes proficient ORF as having the following characteristics: 1.) the oral rate approximates or is even faster than normal speaking; 2.) the text is read with expression; 3.) the reader should be able to "comprehend while reading aloud" (Samuels, 1979, p. 406). In one study, Rasinski also defines reading fluency as "those surface level or observable behaviors during oral reading that are associated with comprehension" (1990, p. 38).

Based on its strong correlation to reading comprehension as described in the next section, ORF definitions are increasingly likely to include an assumption of comprehension. Although a performance of oral reading is not necessarily the situation in which reading comprehension can best be demonstrated, the two appear to have a mutually dependent relationship.

**Critical View of Differing Definitions**

A researcher or practitioner in this topic area must look very carefully to see what assumptions are embedded in use of the terms fluency and oral reading fluency. As the terms become more widely dispersed, they tend to take on new, add-on meanings, which may cloud the findings if not attended to. For example, including comprehension as an assumption of fluent oral reading equates the outcome with silent reading comprehension, and, although strongly correlated,
as described below, the two are not exactly the same. Also, "reading with expression" is subject to many subjective interpretations, and many fluent adult readers read aloud in what some would consider a monotonous voice. This criterion may be useful only at a certain stage of reading development.
The Relationship between ORF and Reading Comprehension

Professionals in the fields of reading, psychology, special education, and linguistics are always interested in useful and rich psychometric measures that can be used with large numbers of students and have a strong degree of predictive or diagnostic ability. Therefore, quite a bit of research has been done within these various communities to validate ORF in its relationship to reading comprehension.

Criterion Validity of ORF

A number of studies have found high criterion validity for oral reading as a measure of reading comprehension (Hintze, Shapiro, & Conte, 1997). In three different studies, Deno, Mirkin, and Chiang (1982) found high correlations between oral reading tasks and standardized reading comprehension tests, levels higher than those with cloze measures or other direct measures. They found that a one minute oral reading was a valid measure of reading proficiency with students in third grade, sixth grade, in special education, and in regular education. ORF also correlated highly with both literal and inferential reading scores on standardized tests. They conclude, "when a global index of relative reading proficiency is the purpose of measurement, such an index can be easily obtained within 1 minute without using a standardized test" (p. 44).

ORF and reading comprehension show utility in making placement decisions. In one controlled study, curriculum-based measurement (CBM) oral reading samples were able to distinguish students with learning disabilities from students from impoverished socioeconomic backgrounds and students in general education (Deno, Marston, Shinn & Tindal, 1983). Similarly, Fuchs, Fuchs, and Maxwell (1988) found stronger correlations between oral reading scores and
standardized tests of reading comprehension than between standardized tests and question answering, oral recall, and written cloze.

Jenkins and Jewell (1993) found oral reading to correlate strongly with reading comprehension activities. Jenkins et al. (unpublished raw data, in Fuchs et al., 2001, p. 245) found that ORF was a stronger measure of reading comprehension than reading words in isolation. Amazingly, Fuchs et al. (2001) found that oral reading correlated more closely with reading comprehension than silent reading did, although developing a foolproof methodology on this experiment proved daunting. Clearly, ORF has validity as a measure of reading comprehension.

Hintze, Shapiro, and Conte (1997) found that oral reading was a better measure of reading comprehension than orally answering questions on a silently-read passage, regardless of whether the reading program was basal, literature-based, or whole language-based. They found that "regardless of the type of material used, the criterion validity of the oral reading metric was substantial" (p. 547). They believed that part of the reason for the robustness of the data was that the passages were carefully scored for readability first, and suggest others do the same. Fuchs and Deno (1992) found that oral reading was an equally robust measure of comprehension whether basals or literature-based curricula were used.

In a confirmatory study by Shinn et al. (1992), 250 third and fifth grade students were given an 8 part reading comprehension battery, including two curriculum-based ORF passages, to analyze the relationship of ORF to reading comprehension. They posed four reading theories and wanted to see in which of the four the ORF measure seemed to fit best: a unitary model, where the subskills of comprehension, decoding, and oral fluency are inseparable, one in which fluency served decoding...
only, one in which fluency served comprehension, and one in which fluency is a distinct skill apart from decoding and comprehension.

The third graders fit the unitary model best, which matches a theory of reading comprehension (Chall, 1996) in which comprehension per se doesn't take place until decoding becomes automatic, around third grade, whereas the fifth graders showed very close correlations of fluency and comprehension, although more indirectly than directly, which may validate the third model of reading comprehension, in which fluency contributes to comprehension. This study, in which ORF rate correlates highly with any and all measures of reading comprehension, concludes that "CBM oral reading fluency fits current theoretical models of reading well and can be validated as a measure of general reading achievement, including comprehension..." (Shinn et al., 1992, p. 476).

**ORF as a Measure of Student Reading Progress**

Markle and Deno (1997) wanted to know if oral reading of text could be used as a longitudinal measure of student reading progress. In their study, third grade students read text passages at below grade, grade, and above grade level, did a timed cloze, and then answered questions orally about them. The score was obtained by deducting miscues from words read. As a group measure, they found that in general, students read fewer words on more difficult material and more words on easier material. This held true for the questions and the cloze choices as well. They also found that ORF changes correlated at high and low levels of performance in individual students, but not as much for students reading at grade level.
Blachowicz et al. (2001) found that regularly charting words correct per minute for an entire class can flag students in need of extra assistance, as well as demonstrating individual and class progress at a glance.

ORF is used in many school districts now, as a more sensitive and less stressful barometer of student reading progress than standardized tests (Davidson & Myhre, 2000).

As accountability issues and quantitative measures of student progress gain more political clout on the American educational scene, the textbook market is seeing increasing numbers of fluency charting materials, and ORF appears to be positioned to grow in importance as a measure of student reading progress.

**ORF as a Measure of Different Stages of Reading**

Espin and Foegen (1996) wanted to see whether the ORF of secondary school students would be as good a measure of comprehension of content-based material as would measures of vocabulary or syntax established through measures on cloze passages. They found that, by secondary school, learner outcomes such as general literacy level and ability to engage in higher order thinking skills are more important. In their research, vocabulary strength was more highly correlated with comprehension of content-based material than oral reading.

Espin and Deno (1993) found that oral reading correlated only moderately with information-locating skills in more mature readers.

Similarly, Fuchs et al. (2001) mention a "developmental trajectory of oral reading fluency [which] involves greatest growth in the primary grades, with a negatively accelerating curve though the intermediate grades and perhaps into high school" (p. 240). Kuhn and Stahl (2002), in a meta-
analysis of fluency instruction studies, found that students who are already established readers do not seem to benefit much from fluency practice; the returns become smaller.

As readers approach fluent adult reading levels, the speed, self-corrections, or number of miscues in an oral reading no longer predict reading comprehension level. At this point, oral reading performance simply becomes an idiosyncrasy of the mature reader, or statistically "asymptote," stabilizing at an certain individual rate, in the same way speakers establish oral speaking styles.

It may be that there is something like a "critical period" both for measuring reading comprehension through ORF and for using oral reading practice as a reading improvement strategy.

**Instructional Uses for ORF**

In an attempt to apply more of the research findings to practical classroom applications, Kuhn and Stahl (2002) did a comprehensive review of fluency instruction studies. Not all of these involve oral reading, but they all get at the goal of increasing reading fluency. They found several interesting results. For one thing, correlations between ORF and reading comprehension did not appear to vary greatly according to difficulty of text. Also, the number of times a repeated reading is done does not have a major effect on results. They found that modeled or assisted readings were a great deal more useful in increasing reading rate and level than unregulated repeated readings, possibly because the instructor is not carefully tracking the students. Transfer of comprehension to new material through repeated reading is not strongly demonstrated, but occurs more when the new text shares many familiar words with the practiced one. They also found that reading while listening also seems to have a facilitative effect on development of prosody.
The specific instructional methods, called "fluency instruction," which have been tested and used in different program settings with the goal of increasing reading comprehension through oral reading practice (Kuhn & Stahl, 2002) will be described briefly further on in the chapter.

**ORF and Academic Performance**

Fewster and MacMillan (2002) conducted research based on the assumption that ORF among secondary learners would correlate with their academic performance, since secondary coursework is heavily based on reading comprehension proficiency. They found, doing multiple regression analysis, that the measure of timed oral reading accounted for a significant contribution to teacher-awarded grades, especially in English and social studies courses. This reinforced the validation of ORF by Hintze et al. (1997) which found that ORF correlates with teacher judgment of student progress.

"Word Callers" and "Speed Readers"

A number of researchers have speculated on reasons for the difficulties they have had in gaining acceptance for the face validity of ORF as a measure of reading comprehension. It appears that, despite its overwhelming validity as proven through many studies, many instructors feel it misses the kind of student they characterize as "word callers" - that is, good decoders who do not comprehend what they read. Before moving on, this question will be covered briefly, although it is not addressed directly in most of the research.

When Deno (1985) first proposed using curriculum based fluency assessments, he mentioned the possibility of misleadingly high scores, but found that such cases did not show up in the data. In Markell and Deno's research (1997) using ORF with special education students (1997), such cases
also did not occur. They found that the students not able to answer literal comprehension questions at grade level were also slow and inaccurate oral readers.

On the opposite end, they also found that some students were able to answer questions about difficult material even when they read at a slower rate of words correct per minute (WCPM). Generally, there is a consensus among reading researchers that oral reading does not result in misleadingly high scores that do not match comprehension (Hamilton & Shinn, 2000). It is more likely that an oral reading score could produce a misleadingly low score compared to silent reading comprehension. This, however, appears not to occur either.

Dymock (1993) did a study to see if middle schoolers with good decoding but poor comprehension skills would show poor listening comprehension skills as well. She wanted to test whether these students, identified as good decoders but poor comprehenders, were so preoccupied with decoding that it detracted from their ability to construct meaning from text, in which case their listening comprehension scores would be higher than their reading comprehension scores, or if, on the other hand, their listening comprehension scores were at a similar level to their reading scores.

She found that poor comprehenders also had poor scores on listening comprehension. She concludes: "This study provided support for the Stanovich and Gough/Tunmer positions that once a child has become a good decoder, differences in reading ability will reflect differences in listening ability" (p. 90). The relationship between listening ability and oral reading will become especially important in the discussion of L2/ESL learners' oral reading in a later chapter.

Hamilton and Shinn (2000) explored the question of word callers and oral reading fluency, asking teachers to identify third graders they considered word callers and to make predictions about their reading comprehension rates, both oral and silent. The study showed that children identified by
teachers as word callers read more slowly, and had lower silent comprehension scores, than teachers had predicted. ORF correlated equally well for the students considered word callers as the other students; thus, the authors argue that the designation "word caller" may be a subjective phenomenon, based on ranking within a class but not on overall reading proficiency.

Special education literature refers to a reading problem called "hyperlexia," or fluent decoding without constructing of meaning (Gough & Tunmer, 1986; Sparks & Artzner, 2000). The children classified as hyperlexic might test high in an oral reading task, but tend to test low in listening and silent reading tasks, and often have impaired oral production (Sparks & Artzer, 2000). Reading disability researchers postulate that, since this group of learners often acquires the decoding skill long before coming to school, and yet often tests into the mild to moderately retarded range in associated reading and oral communication skills, the competency of making letter-sound correspondences may be a modular process that exists "independently of general linguistic and cognitive skills" (Sparks & Artzer, 2000, p. 190).

Since it does not appear that the "expressive reading" of these students has been tested in any of these studies, it is possible that the prosodic features which are increasingly viewed as part of oral reading fluency might be revealing. If such a category of reader exists at all, it may be that when prosody is included as a measure of ORF, it becomes possible to detect such readers because they demonstrate that they do not use meaningful or appropriate expression which would signal knowledge of syntax.

Moskal (2002), in a study of second graders, identified another kind of "disfluent" reader who reads too fast, sacrificing the natural pauses and emphases within a text in a way which
negatively impacts comprehension. These "speed readers" are not entirely describable in existing fluency scales, Moskal notes, and she devised a scale to help account for them.

The prosody measure used in ORF rubrics potentially addresses the topic of "word callers" and "speed readers" more fully than a system of words correct per minute.

However, the inclusion of readers such as those described above in validation studies of ORF does not negatively impact the robustness of the validity of ORF as a measure of reading comprehension.

Role of Fluency in Reading Models

Table 2.1 summarizes the role of fluency in the aforementioned reading models.

Table 2.1

The Role of Fluency in Different Reading Models

<table>
<thead>
<tr>
<th>Author</th>
<th>Theory</th>
<th>Role of fluency</th>
</tr>
</thead>
<tbody>
<tr>
<td>Laberge &amp; Samuels (1974)</td>
<td>automatic information processing</td>
<td>automatic word recognition is precondition for reading, frees up resources for comprehension</td>
</tr>
<tr>
<td>Stanovich (1980)</td>
<td>interactive compensatory</td>
<td>bottom up word recognition is default route, but can be achieved through context</td>
</tr>
<tr>
<td>Rumelhart (1980)</td>
<td>parallel interactive</td>
<td>all sources of information can be processed at once, so reading fluency may not reflect overall proficiency</td>
</tr>
<tr>
<td>Gough and Tunmer (1986)</td>
<td>simple view of reading</td>
<td>fluency can only be as high as general language comprehension</td>
</tr>
</tbody>
</table>
Summary

This statement from Fuchs et al. (2001) nicely sums up the marvelously complex nature of ORF and reading comprehension:

...oral reading fluency represents a complicated, multi-faceted performance that entails, for example, a reader's perceptual skill at automatically translating letters into coherent sound representations, unitizing those sound components into recognizable wholes and automatically accessing lexical representations, processing meaningful connections within and between sentences, relating text meaning to prior information, and making inferences to supply missing information. That is, as an individual translates text into spoken language, he or she quickly coordinates these skills in an obligatory and seemingly effortless manner, and because oral reading fluency reflects this complex orchestration, it can be used in an elegant and reliable way to characterize reading expertise. (p. 240)
Models of Oral Reading Fluency Assessment

There are many variations on oral reading assessments. The reading may be timed at one minute, with miscues deducted, or timed at two minutes (Gable et al., 1990), or a passage may be read in its entirety, and a score for one minute of the reading taken on a proportional basis. The student may be provided with a reading from a basal or from other classroom materials which are considered to be at instructional level, as established by some kind of readability formula (Shinn, 1989), or given readings which are not adapted for level. Sometimes a warm-up activity or warm-up period is provided, and sometimes not. As students read the text, teachers generally record and time it, and later count the words read and deduct the miscues. Leu noted that the miscue systems used vary considerably, and are not always confirmed for reliability or validity (Leu, 1982). Perhaps as a response to this critique, and to Dowhower's description of the qualities overlooked in miscue systems (Dowhower, 1991), descriptive fluency rubrics have begun to be used in place of, or in addition to, systems using words correct per minute (Johns, 1997; Pinnell et al., 1995; Zutell & Rasinski, 1991).

The NAEP and MFS Oral Reading Fluency Rubrics

Two of the best-known fluency rubrics are the scale developed by NAEP (National Assessment of Education Progress), called the "Integrated Reading Performance Record" (IRPR), which comes from a U.S. government agency which oversees educational progress in the U.S. (Pinnell et al., 1995), and the Zutell-Rasinski Multidimensional Fluency Scale (MFS) (Zutell & Rasinski, 1991). Both of these scales move away from a single numerical count of words-read-minus-miscues to a sketch of a reader's performance which includes prosody and expression.
The IRPR, which was used to test a large sample of American fourth graders who participated in a 1992 NAEP Reading Assessment project (Pinnell et al., 1995), assigns a single number to the oral reading performance, based on a set of descriptors which include phrase groups, syntax and expression. Speed and accuracy are folded into the descriptors but not precisely counted. The oral reading portion of the reading assessment is only one of a number of assessments, and follows silent reading practice of the target passage. This measure has been used and validated in many educational settings (Cervetti, Jaynes, & Pearson, 2002), in concert with other reading comprehension measures. Table 2.2 shows the IRPR rubric.

Zutell and Rasinski (1991), looking for a measure that encompassed many of the qualities of fluent oral reading, devised another descriptive rubric which they called the Multidimensional Fluency Scale (MFS); unlike the IRPR, it contains a rubric for three separate subskills: phrasing, smoothness, and pace. Each one of these categories has four levels of proficiency; thus, an oral reading performance is given three different numerical ratings on the MFS scale. Some would say that this scale allows for the best of both worlds: it is a handy numerical overview, but based on rich description of three fluency constructs. (See Table 2.3).

However, neither the IRPR and MFS includes a WCPM measure (words read correctly in a fixed time), or describes number or type of miscues. Getting a combination of the information available from both kinds of assessments can prove cumbersome for classroom purposes.
Table 2.2

The NAEP Integrated Reading Performance Record (IRPR) Oral Reading Fluency Scale

Level 4
Reads primarily in large, meaningful phrase groups. Although some regressions, repetitions, and deviations from text may be present, these do not appear to detract from the overall structure of the story. Preservation of the author's syntax is consistent. Some or most of the story is read with expressive interpretation.

Level 3
Reads primarily in three- or four-word phrase groups. Some smaller groupings may be present. However, the majority of phrasing seems appropriate and preserves the syntax of the author. Little or no expressive interpretation is present.

Level 2
Reads primarily in two-word phrases with some three- or four-word groupings. Some word-by-word reading may be present. Word groupings may seem awkward and unrelated to larger context of sentence or passage.

Level 1
Reads primarily word by word. Occasional two-word or three-word phrases may occur—but these are infrequently and/or they do not preserve meaningful syntax.

Note. (Pinnell et al., 1995, p. 15)

Use of Grade-level Norms

Hasbrouck and Tindal (1992) compiled oral fluency norms from a large database of school districts in which fluency measures are taken two or three times a year, by having students read from
grade level basal texts. Their data were compiled over a nine year period, and established norms for oral reading fluency for grades 2-5. Others have

Table 2.3
Multidimensional Fluency Scale

| Phrasing:                                                                                     |
| 1. Monotone with little sense of phrase boundaries; frequent word-by-word reading.            |
| 2. Frequent two- and three-word phrases; giving the impression of choppy reading; improper stress and intonation that fails to mark ends of sentences and clauses. |
| 3. Mixture of run-ons; mid-sentence pauses for breath, and possibly some choppiness; reasonable stress/intonation. |
| 4. Generally well-phrased, mostly in clause and sentence units with adequate attention to expression. |

| Smoothness:                                                                                   |
| 1. Frequent extended pauses; hesitations, false starts, sound-outs, repetitions, and/or multiple attempts. |
| 2. Several "rough spots" in text where extended pauses, hesitations, and so on, are more frequent and disruptive. |
| 3. Occasional breaks in smoothness caused by difficulties with specific words and/or structures. |
| 4. Generally smooth reading with some breaks, but word and structure difficulties are resolved quickly, usually through self-correction. |

| Pace:                                                                                       |
| 1. Slow and laborious.                                                                      |
| 2. Moderately slow.                                                                         |
| 3. Uneven mixture of fast and slow reading.                                                  |
| 4. Consistently conversational.                                                              |

extended these norms to oral reading in higher grades. When they are based on curriculum-based materials, such regular classroom checks of oral reading fluency can provide a handy measure of overall reading comprehension which is more sensitive to curriculum and more valid than standardized tests (Blachowicz et al., 2001; Deno, Mirkin, & Chiang, 1982; Madelaine & Wheldall, 1999; Marston, 1989).

There do not appear to be published grade level oral reading norms for secondary or post secondary students although norms exist for silent reading speed.

Timed one minute readings

One minute readings are often used to get fluency "snapshots" (Blachowicz et al., 2001; Hasbrouck & Tindal, 1992). Deno, Mirkin, and Chiang (1982) validated the proposition that a one minute oral reading sample is adequate to get the same level of discrimination as a standardized reading test (p. 44).

Number of readings

Gable et al. (1990) found that it was preferable to make instructional decisions about students based on several oral readings, not just one, and advised that when readings are being used to chart student progress, they should be done regularly. Hintze et al. (1997), however, found that a single oral fluency sample passage worked as well as a graded series for charting developmental fluency rates across the curriculum (p. 536). Most research using oral fluency snapshots as an assessment rather than a treatment involves use of a single passage. In addition, there may be a fatigue factor in asking the student to read multiple passages in one sitting, which can affect results.

Readability level
When oral reading is used in combination with other reading instruments to establish reading level, a variety of readings can be chosen to establish a student's oral reading baseline. These are based upon carefully matching the readability level of the text with the reading level of the learner. Furthermore, reading progress can be simulated by giving texts of differential difficulty in a short time, such as research by Markell and Deno (1997), in which below grade level, grade level, and above grade level passages were employed in a short experimental time period to simulate reader growth over time. As might be expected, children show better ORF scores as they move up through the middle elementary grades, and an individual reader shows a higher fluency score with easier text.

However, when oral reading is used as part of a treatment for improving reading level, it is important to carefully consider readability levels of texts given to students. Cahalan-Laitusis and Harris (2003) found that first and second grade struggling readers given text one grade level above their instructional reading level had smaller gains in reading fluency than readers whose texts were matched to their instructional reading level.

Markell and Deno (1997) noted that small changes in reading aloud cannot predict equivalent small changes in comprehension based on questions after reading from a text, whereas large increases in ORF can predict changes in performance on comprehension tasks over time and between grades and individuals. Baker and Good (1995) and Blachowicz et al. (2001), on the other hand, found that regular samples of ORF through CBM reading were very sensitive indicators of individual student progress and the appropriateness of the level of reading instruction being offered. Cahalan-Laitusis and Harris (2003) also found that changes in ORF and changes in Oral Reading Accuracy (ORA) could be demonstrated after even a week of instruction in a directed reading program, although the progress was not in steady increments.
**Nature of the Text and Other Considerations**

In addition to readability level, the nature of the text to be read and the reading task influence both silent reading comprehension and ORF (Hintze et al., 1997).

When the high correlation between ORF and silent reading comprehension was first found, research followed to establish whether ORF's correlation with reading comprehension would remain equally strong with less-controlled reading material, such as that found in a literature-based or whole language-based classroom. Although performance levels differed, the correlations held up regardless of the nature of the text (Cahalan-Laitusis, C. & Harris, A., 2003; Fuchs & Deno, 1992; Hintze, Shapiro, & Conte, 1997).

When the text is at a manageable level and has been chosen to be age and content appropriate, struggling readers benefit, since they are likely to become frustrated quickly if the level is too difficult. Lipson and Lang (1991) note that weak readers need the satisfaction of identifying the words in the text without difficulty in order to benefit from techniques such as repeated reading, which will be described shortly. Students also benefit when text familiarity is enhanced through the use of predictable books (Lipson & Lang, 1991), and when there is a familiar story line or well-written text with natural dialog resembling that of spoken language (Zutell & Rasinski, 1991).

Other factors such as topic familiarity or interest level of the passage, the point when the timing of the oral reading begins, the wording of instructions, reading fatigue from multiple passages, and rhetorical organization of the reading passage all affect performance on the ORF measure. Many of these concerns are included in Leu's (1982) critical article, which noted numerous inconsistencies in measuring ORF, and called for a more standardized protocol in order to derive maximal benefit from it.
Goodman et al. (1969) note that some "self-teaching" occurs in the course of doing an oral reading - that is, unknown vocabulary is disambiguated and read correctly after its first occurrence, and a certain comfort is achieved after the initial paragraph. For this reason, in some assessment models, the timing of the reading begins only after students have read several sentences. In another variation, students read a text orally, then retell it orally, then retell it in writing, then read their written retelling (Goodman et al., 1969). Rasinski (1990) noted that retellings after oral readings tended to be less accurate and detailed than other, less complex measures of comprehension, and concludes that the results "cast suspicion on the practice of having students retell what they can recall from a passage they have read orally" (p. 43).

Two other adaptations of ORF assessment were tried by Parker, Hasbrouck, and Tindal (1992), in an attempt to interest more special education teachers in using this simple measure. In one, the time limit was removed from the reading; in the other, only meaning-changing miscues were deducted. These modifications did not further increase ability of the assessors to distinguish students in special education.

Tasks also have an effect on oral fluency performance. Espin and Foegen (1996), for example, structured the comprehension portion of their experiment about content learning and oral reading by following an oral reading of the passage with a silent rereading of the same passage, followed by giving oral answers to written multiple choice questions about the passage. The multiple choice questions were carefully divided into text-explicit, text-implicit, and background-knowledge questions. Other ORF measures may be taken using retelling or written responses.

As mentioned earlier, some models, including the Informal Reading Inventory and tests for special education screening, couple oral reading fluency tests with listening comprehension tests, in
order to isolate the decoding skill from cognitive skills. If the listening comprehension proficiency is at grade level while the reading comprehension is much lower, it indicates a fluency or decoding problem, and fluency-building activities are appropriate (Samuels, 2002a, p. 7). On the other hand, a low score in listening comprehension leads to a different kind of diagnosis and treatment.

Miscue analysis

In the late 1960's, Kenneth and Yetta Goodman and others developed a taxonomy of oral reading miscues (Goodman, 1965; Goodman & Burke, 1972, 1973), which was designed to show developmental stages of reading proficiency. Their miscue analysis (called "error analysis" in linguistics, but purposely not labeled that way by the Goodmans, who wanted a more positive, developmental spin) laid the foundation for much of the ORF miscue counting done to this day. K. Goodman and Y. Goodman described miscue analysis in this way:

The text is what the brain responds to; the oral output reflects the underlying competence and the psychological processes that have generated it. When expected and observed responses match, we get little insight into this process. When they do not and a miscue results, the researcher has a window on the reading process. (Goodman & Goodman, 1977, p. 319).

The Goodmans and their team at Wayne State University worked on miscue analysis through several multi-year grants, and developed a detailed topography of miscues, which has been published in a number of editions, and has formed the basis of others' miscue systems. The purpose of their system was to learn about the nature of reading and see its relationship to a theory of reading, not to establish norms or treatments, and must be seen in that light.

To give a brief overview of their complex, not very user-friendly system, the Goodmans counted number of miscues per one hundred words. The miscues were divided into many categories, with, for example, nine categories for phonemic proximity to target word alone (Goodman & Burke,
1973, p.19). A large number of divisions were made for semantic and syntactic acceptability, from which the general observation was derived that "semantic acceptability scores, then, are never higher and are generally lower than syntactic acceptability scores" because a sentence can make sense with nonsense words in the correct syntactic relationship, but cannot without it, since without correct syntax, we can never know that "the meaning of any sentence has been reached" (p. 142). This is supported, but modified, by other research since that time which indicates that in sentence-processing tasks, syntax is accessed before semantic category (Fender, 2001).

In the abstract for their six year grant on oral reading performance, the closest thing to a general statement about oral reading and reading proficiency is the following:

The single best indicator of reading proficiency is the percent of miscues semantically acceptable before correction (Goodman & Burke, 1973, p. i.).

It is important to note that the authors highlight the percentage, not number, of meaning-changing miscues as the measure that signals reading proficiency best.

Miscues usually include substituted words, skipped words, added words, and nonwords. Pauses, repetitions, and self-corrections are usually not counted as miscues. Miscues are seen as developmental, and "better" miscues are demonstrative of more complex processing. Other modifications of miscue coding are done in different environments. In an ESL environment of students with language impairments, for example, English words read without their word endings were deducted from oral reading scores, because the teacher felt the word endings were crucial to the students' reading comprehension and spoken English (Rousseau & Tan, 1993).

Miscue analysis can reveal important information about a student's level of understanding. Martellox, for example, noted that less proficient readers in her study made miscues of closer
graphic similarity than did the more proficient readers; however, the graphemic approximations they made didn't make sense semantically (Goodman et al., 1969, p. 12).

Self Correction Miscues

Self-correction in reading texts aloud reveals a great deal. Student self-monitoring - that is, the development of metacognitive strategies, is a characteristic of better readers. Allington (1983a) reports on several studies which indicated that self-correction of errors "is a potent predictor of reading development" (p. 553). Better readers self-corrected without prompting from the teacher, whereas less proficient readers tended to correct few errors on their own (Au, 1977; Clay, 1969; in Allington, 1983a). Allen said that readers with poor comprehension scores didn't correct miscues as much as better readers, but high comprehenders had both high and low amounts of self correction (Goodman et al., 1969, p. 8). The tendency to self correct becomes greater as the miscue moves farther away from the target word.

The Goodman group noticed that reader self-correction of intonation showing sentence boundaries was common. Editing strategies in correcting miscues in the students' own writing also took place quite frequently. Proficient readers were successful in their self corrections 97% of the time. Overt correction behavior went down as readers became more proficient and internalized silent corrections instead.

The Goodmans also noted that a pause in reading is a sign of a self-correction. "Excessive corrections and/or lack of corrections can both be signs of reading difficulties....also, the lack of an attempt to correct, or unsuccessful corrections, can be an indication of a concept load which is too heavy, or sentence structure which is either too complex or comprised of a pattern unfamiliar to the reader (Goodman et al., 1969, p. 10).
Share (1990) found that first graders at a higher level of reading had fewer self-corrections in oral reading than those at a lower level, suggesting that self-corrections become more covert as reading fluency increases.

In general, self-correction miscues are not deducted from miscue systems, and in some miscue analyses, they are noted as a positive feature and totaled on their own, as an indication that the student is reading for meaning and self monitoring (Clay, 1969). In instructional situations, self correction can be viewed as an indication that the reading is at the reader's instructional level (Gable et al., 1990). By extension, however, one would expect few self-corrections in texts at the reader's independent level, because word recognition would be largely automatic.
Miscues and Literacy Development

Following the developmental theme, the researchers noted that by sixth grade, reading comprehension scores "had no relationship to either the number of miscues that they made or to the number of corrections that they made." (Goodman et al., 1969, p.15).

Interestingly, the Goodmans found that second grade and sixth grade readers made significantly more miscues than fourth graders. As younger readers developed, proximity of graphic and phonemic miscues to target words increased, as expected. Then a plateau is reached, and in sixth grade, there is a slight decline in accuracy, probably because increased attention was paid to semantic and syntactic concerns. This matches nicely with Chall's stages of reading development (Chall, 1996), in which readers move through effortful processing of text supplemented by lots of guessing from context, to a stage of proficient word identification that is closely tied to the text, to a mix of processing text by word identification and guessing from context, which produces some miscues, but at a higher level.

The Goodmans also found that the vast majority of sixth graders' miscues were syntactically and semantically acceptable substitutions.

Critique of oral scoring systems

In 1982, Leu did a thorough critique of the different systems for scoring oral reading. He decried the lack of standardization in the counting and weighting of miscues, and felt that methods used should be explicitly justified on theoretical grounds to get full value from the ORF measure. He noted that there are different standards for amount of deviation from the graphemic presentation (some count letters in common; others are all-or-nothing; still others note first letter convergence); and there are many different protocols as well for dealing with syntactic and semantic substitutions.
Leu also questioned whether the processing in error-free oral reading is really the same as the processing heard when a miscue is spoken. He postulates that processing strategies by the student (for example, more lexically-focused versus more contextually-focused strategies) are likely to differ as portions of text become easier or harder for the individual reader, or when the purpose for the reading differs. Deno, Mirkin and Chiang (1982), in this same vein, found that error performance alone on an ORF assessment was not as valid a measure of reading proficiency as correct performance (words read correctly). It is not entirely clear how much counting or analyzing errors can really tell us about a reader's competence, especially in terms of its possible negative affect when used as a classroom technique. The Goodmans recognized that miscue counting, although useful in plotting the nature of developmental reading stages, might not be useful as a pedagogic tool because, if overextended, it could lead to a deficit model of student learning.

Others critique oral reading scoring systems from a different perspective. Raynor and Pollatsek (1989) argue that careful tracking of eye movements provides a more accurate picture of the reading process than any miscue analysis because "in reality, most oral reading errors are the result of processes occurring after the lexicon has been accessed" (p. 181). They contend that reading aloud tells as much about the articulation process as it does about how meaning is accessed from print, due to the lag between eye speed and vocal speed.
Oral Reading of Connected Text

Oral reading forms part of informal reading inventories through both graded word lists and graded passages. It should be noted that there are important differences between the reading of word lists and the reading of connected text. In reading word lists, or nonword lists, a "pure" kind of decoding is possible, which shows ability to match phonemes and graphemes, but connected text, even without follow-up comprehension questions, requires the reader to chunk or phrase, to pause, and to use intonation, all skills which are components of literacy and reading comprehension. In fact, reading word lists correlates inconsistently with other reading skills, including both oral and silent reading of connected text (Fuchs et al., 2001). Thus, all oral fluency practice described below focuses on reading connected text.

Oral reading practice as a treatment to improve reading comprehension

Repeated Reading

Repeated reading is a well-supported, venerable technique for increasing oral fluency. Many studies in the decades since its formal introduction (Samuels, 1979) have affirmed its value, for its confidence building as well as its skill building. Since its widespread implementation, a good deal of "fine tuning" has been done, and variations on repeated reading have shown positive results.

Some research has found that the value of transfer in repeated reading depends upon how many words are shared with the repeated passage (Samuels, 2002b). Daly et al. (1997) tested this with four students using a "high content overlap" passage created by the researchers which used 80% of the words found in the basal reading. All students improved from the combinations that included repeated reading. However, Fleisher et al. (1979), found that word recognition of overlapping
words was not as useful as reading connected text. Dowhower (1987), working with second graders, found that improvement was heightened by doing repeated reading of a number of stories because the "redundancy of the language over many stories resulted in a high degree of vocabulary overlap and thus led to reader success" (p. 403).

Lipson and Lang (1991) speculate that repeated oral reading may benefit readers because it gives them the opportunity "to impose a prosodic structure on the information, which improved their comprehension." (p. 220). It is known that when a student copies a text performance by a fluent reader, that student's prosody improves (Dowhower, 1991, p. 172). What is not clear, however, is whether reading aloud with better prosody will actually improve reading comprehension, or whether it merely accompanies it.

Although most oral reading practice has taken place in classrooms in which students are moving toward effortless decoding, usually in second or third grade, it appears that even emergent readers can benefit from repeated readings. Turpie and Paratore (1995) looked at the effects of doing regular repeated readings on at-risk first grade emergent readers. Previous research had focused on children in grades 2-5, the "confirmation stage" Chall facetiously calls "ungluing from print" (Chall, 1996, p.18), but Turpie and Paratore's research indicated that, even at the emergent level, repeated reading can show measurable increases in fluency, accuracy, self-corrections, and understanding of grade-level text -- all of which correlate with reading comprehension. Improving in these areas serves students below grade level who must nonetheless keep up with the curriculum.

*Auditory Modeling*

Others have tried different kinds of auditory modeling, in which an expert other (teacher, parent, more experienced reader) reads aloud, serving as a model which the reader can emulate.
This method has been found to produce decisively superior results in experimental situations involving oral reading fluency interventions (Kuhn & Stahl, 2002). One of the best known of these, the Oral Recitation Lesson, developed by Hoffman in 1985, consists of teacher modeling, student practice, and a culminating student performance (Hoffman, 1987). Other modeling techniques include assisted reading, paired reading, choral reading, repeated reading with a listening component, echo reading, shared reading experience, and read-along, among others (Carbo, 1978; Chomsky, 1976; Dowhower, 1991; Rasinski, 1990).

**Text segmentation**

Practicing reading aloud by segmenting text into lines that break at natural phrase endings, or by marking in "hatches," is a technique some have used with success. In one study, segmented text produced better comprehension in young readers than conventional text (O'Shea & Sindelar, 1983, in Stahl & Kuhn, 2002). This technique was validated in research comparing it to other techniques that used only repeated reading (Hoffman, 1987). Of course, some poetry segments phrases into different lines, and is a good place to look for authentic text which is naturally segmented. Rasinski (1990) proposed an alternate method of checking knowledge of text segmentation, not by reading aloud, but by marking the text with a pencil. The reader's skill in segmenting can be matched with marks placed by at least 50% of fluent readers.

**Other Methods**

Breznitz and Share (1992) have done work with L1 Hebrew-speaking children designed to improve both accuracy of decoding and comprehension by manipulating reading rate through oral reading activities which speed up the presentation of the text according to a calculation based on the
student's best self-paced rate. In a number of studies they conducted, they found that fast-paced oral reading helped improve short term memory and reading comprehension.

It is possible to get students involved in charting their own oral reading progress, using paired reading. One student times the other as the passage is read aloud, and the student plots the speed and the number of miscues on a graph. Building metacognitive habits is one byproduct of doing repeated oral reading on a regular basis (Moskal, 2002).

Partner reading pairs a weaker and stronger reader from the same class, and students in these dyads improve considerably. Another way to cultivate more fluent reading is through cross age or buddy reading (Worthy & Broaddus, 2002), in which struggling readers have regular opportunities to read children's books aloud to younger children. When they practice reading at home, and work on "reading with expression," their reading confidence and fluency improves. The built-in practice, the performance aspect, and the positive feedback all contribute to the likelihood of success for such a technique. Kuhn and Stahl (2002) note that this technique seems to help below-grade-level tutors, but not those already performing at grade level. This can be done just as effectively within an ESL classroom or between classrooms.

Worthy and Broaddus (2002) tout Reader's Theatre as an effective way to use natural, authentic text in a meaningful context. Instructional-level texts can be chosen and adapted by students for performance in the classroom. When students practice a speaking part for a classroom performance, they practice language for an authentic communicative and social purpose, while unknowingly "drilling" on subskills. It's a powerful integrated activity.

Training teachers to be sensitive to fluency needs in the classroom
Zutell and Rasinski (1991) note the lack of emphasis placed on fluency building activities in the classroom, and describe ways in which teachers can be trained to become more sensitive to these factors. The training includes learning to mark texts at phrase and clause boundaries and listening to tapes of children reading aloud, in order to help teachers perceive the natural breaks in texts in order to similarly guide their students. Worthy and Broaddus (2002) call for systematic, carefully planned oral reading components in the regular language arts classroom, and in addition to Readers' Theatre, endorse repeated reading, modeled fluent reading, poetry, plays, and buddy reading as natural transitions into fluent reading of extended text. Rasinski et al. suggest using poetry and song lyrics as well (Rasinski et al., 1994; Rasinski, 2000).

It is important not to look at "fluency" as a monolith, but rather as a set of skills used by a student reading different texts with different purposes. Lipson and Lang (1991) suggest that teachers bear this range clearly in mind. "Teachers are likely to be on firm ground," they say, "if they ask not whether a student is fluent but rather, "What can this student read fluently," and "Does the range of situations require expanding?" (p. 225).

Rebecca Barr (personal communication, February, 2000) described the strength of the fluency assessment succinctly: "It can provide enough information to confirm hunches, prompt further assessment, and begin the process of intervention." Fluency activities are a handy instrument in the toolkit of reading resources.

Second Language Reading and Oral Reading Fluency

Introduction
This section begins with a brief overview of important general concepts in second language learning and acquisition, followed by a review of research into second language (L2) reading and how it compares with native language (L1) reading. These sections are followed by a summary of research about L2 oral reading and a brief overview of reading fluency activities used in the L2/ESL classroom. Care has been taken to provide some background information about concepts or terms which may bear on the study's results, so that those notions will already be familiar to the reader later on in the study.

Because analysis of the study's results will be processed through the lenses of at least two distinct academic disciplines, reading and second language acquisition, it seems useful to present a brief overview of some of the concepts in second language acquisition which may bring to bear upon the study's discussion section. The following is not meant in any way to be comprehensive, and the brief descriptions are mainly for purposes of familiarizing those outside linguistics with some key notions, not to use the study to stake a position on them.

Definitions and Abbreviations

In this study, "ELL" is used as an abbreviation to refer to English language learners. This is a convenience that does not take into account that English may be the third or fourth language being studied. The term also makes the assumption that English is being studied within an English-speaking environment, not as a foreign language in a non-English-speaking country. At the time of this writing, there are numerous competing alternate terms for the field and the learners, and ELL, meaning both "English language learning" as an adjective, and "English language learners," was deemed the most useful. A full list of terms and abbreviations can be found in the Glossary.
Historical Development of the Field

In many ways, the teaching of second and foreign languages did not establish its own "gravitas" until the last thirty years. Academically, it has been housed in departments of English, foreign language, linguistics, developmental studies, or adult education; often, it has had no academic standing at all and has been treated as a service unit for foreign visitors.

This has changed quite a bit in the past three decades; the field of teaching English to speakers of other languages has grown in all directions, spawning journals, conferences, training programs, textbooks lines, a large and well-organized professional organization, and establishing ESL standards for most state boards of education. With the advent of more global communication, English language teachers around the world are talking to each other more than they ever did, and teachers from many nations have an opportunity to interact. The ESL field still has lingering "identity problems," and an occasional lack of respect from those in more historically established fields, but its distinct identity as a field is now indisputable. This study hopes to add to the knowledge base in the field, particularly on the topic of adult L2/ESL reading.
Since theories of second language learning and acquisition all attempt to account for reading, among other competencies, several theories will be sketched briefly, with their applications to reading highlighted.

**CUP Hypothesis and Thresholds Theory**

This key hypothesis, developed by Cummins out of the Linguistic Interdependence hypothesis (Cummins, 1979), supports the view that there is a common underlying proficiency (CUP) to language competence, and that what is learned in the first language acts strongly upon what can be learned in the second. According to the CUP hypothesis, it is only surface features, such as phonology, syntax, and semantics, that are language-specific, with the common underlying proficiency forming the "roots" of all language acquisition.

The Thresholds Theory posits three levels of proficiency in L2: one of "limited bilingualism" in which L1 is not developed enough to support growth in L2, one of "less balanced bilingualism," in which the minimum threshold is reached to function in one language, but is still not fully formed for the other, and the third, highest level, one of "balanced bilingualism," in which L2 can be attained at a high level at no cost to L1. It is at this level that bilingualism bestows cognitive advantages (Baker, 2001).

The societal implications of accepting or rejecting such a model are large. If one supports the goal of achieving balanced bilingualism, second or foreign language study must be made available and funded for a significant number of years of a child's education. If, on the other hand, the Thresholds Theory is rejected, fast track immersion programs may disregard or even halt first language attainments in favor of a rapid transition over to the language of social prestige (Garcia, 2000).
Linguistic Coding Hypothesis

Sparks and Ganschow's (1995) linguistic coding hypothesis suggests that students with stronger proficiency in a first language achieve higher levels of proficiency in L2 than students with weaker proficiency in L1. Like research in general intelligence and language proficiency, it appears to be a well-supported assumption.

BICS and CALP

"CALP," which stands for Cognitive Academic Language Proficiency, is a term coined by Cummins to characterize the language skills necessarily for successful academic learning of the kind encountered in school settings. This cluster of skills needs to be taught explicitly, as it is to L1 children, with accommodations made for the interplay between two languages. "BICS," its complement, is the social language, called "Basic Interactive Communication Skills," which is acquired unconsciously and effortlessly through the course of social interaction.

These concepts help educators understand the phenomenon at L2/ESL children who appear "fluent" in English and thus are often assumed by school systems without ESL/bilingual trained staff to also know CALP, and the children simply don't do well. BICS takes only a couple of years to master, while CALP needs to be carefully scaffolded over a period of many more years.

Input Hypothesis and Comprehensible Input

Second language acquisition professionals largely accept the input hypothesis of Stephen Krashen (1985) as a core concept of second language learning. Its main idea is that a learner must be exposed to "comprehensible input," that is, language at an understandable level to the learner, both inside and outside the classroom, in order for language development to occur. Traditionally, teaching a second language has been divided into four skill areas: listening, reading, writing, and
speaking, with listening and reading considered "receptive" and speaking and listening "productive." It should be noted that this is different from the constructivist view of reading, which would call reading a constructive process, consisting of an interaction of text and reader, rather than a receptive one.

Comprehensible input is conceived in terms of using the receptive competencies of listening or reading, while comprehensible output has been considered to comprise the productive competencies of speaking and writing. Accompanying this concept is the important idea of "delayed oral production" -- that oral output can only occur after a certain amount of comprehensible input has been absorbed.

Following this notion, then, in order to produce language through reading aloud from a text in a second language, a certain amount of listening comprehension would have to have occurred before a reader could not only recognize, but also produce, the words on the page. The skill of reading aloud requires comprehensible input through listening and reading, and comprehensible output through oral production.

To produce the correct-sounding words for the oral production, the reader must have in memory either the sound of the written word, or the ability to decode the letters into a correct-sounding word -- both related to listening comprehension. Thus, oral reading may seem to be a shallow skill, but involves three of the four "big" skill areas traditionally associated with learning a new language. Only writing is not involved.

In addition to the four skill areas, there is a fifth area which can be bundled under several titles: Cognitive Academic Language Proficiency (CALP) (Cummins, 1984), inner thinking (Skutnabb-Kangas, 1981), or structural knowledge (Fender, 2001). Some might label the area
"grammar," or even the larger term, "competence." This area might encompass not only structural features, but also cultural understandings and prior knowledge. It is this slippery fifth area which is the hardest to pin down in studying an L2 adult learner, because their strengths and deficiencies are difficult to assess when the surface features of the second language are not developed enough to be a vehicle for testing.

One influential second language reading model comes from Bernhardt (2000), and was developed through examining studies by a number of researchers using data from L2 learners of several ages and first languages. In the model, L2 reading comprehension level equals L2 grammar knowledge, accounting for about 30%, and L1 literacy, at about 20%, with the rest unaccounted for. The remaining 50% may be explained by background knowledge, affective features, including setting, socioeconomic level, purposes for learning, etc. Bernhardt posits that a great deal of the rest of the explanation concerns the interrelationship between the two specific languages in question (Bernhardt, 2000).

Fender (2001), studying L2/ESL word integration among intermediate learners, confirms the necessity for L2 structural knowledge (grammar) as a precondition of reading connected text.

Grabe and Stoller (2002) support the idea of an L2 language threshold which must be reached in order to access knowledge already attained in during L1 reading, but point out that the threshold may vary according to text type and reading task.

One L1 model used in L2 reading research, called the competition model (MacWhinney, 1987), hypothesizes a system of "weighting" sets of cues which give the reader access to semantic functions. These weightings may, in the case of late L2 learners such as the adults in this study, be heavily influenced by the sets of cues already developed in L1. Fender described a "task effect" for
this theory: L2 learners seem to be able to process L2 text efficiently once they have acquired the processing skills necessary for the text's difficulty level, but only at or below that text's difficulty level, whereas L1 readers can rapidly process even texts which violate grammar rules, and texts with sentences of great length and complexity (such as the preceding one!).

Gough and Tunmer's reading comprehension model: \( RC = D + LC \), where RC is reading comprehension, D is decoding, and LC is linguistic competence, sometimes called listening comprehension, is also useful for L2 learners (Gough & Tunmer, 1984). In an L2 interpretation of the model, LC encompasses all the L1 literacy and global knowledge already obtained, and D represents not just decoding, but all the surface features of L2 which must be mastered.

Fitzgerald (1995) did a metareview of 67 research reports which focused on L2 reading, in order to see how cognitive features used by L2 learners and L1 learners were alike and different. She recognized that, in addition to cognitive processes, socioeconomic and sociocultural factors, as well as the closeness of the first and second languages, can be very important; however, for this research, she wanted to look at studies in which these had been factored out. Her review of research led her to the conclusion that, at least in academic tasks, L2 readers resemble L1 readers in substance, but process more slowly. She founds that the more proficient an L2 reader became, the more his or her processing strategies resembled those of an L1 reader. In other words, the differences were of degree, not kind. Other studies have lent credence to this view (Fender, 2001).

L1 and L2 Transfer

Others dispute that idea, saying that the semantic, syntactic, and lexical categories upon which L2 readers draw are profoundly different from those used by L1 readers. They contend that transfer -- that is, applying L1 linguistic knowledge to L2 tasks -- is a very powerful element in
reading and other tasks as well. Positive transfer facilitates the learning or use of skills in L1, for example, recognizing a word in L2 as a cognate of a word in L1. Negative transfer, or interference, on the other hand, blocks the development or functioning of a skill needed in L2 because it is framed differently, or doesn't exist, in L1, such as the case of gendered noun forms in romance languages, compared to neuter noun forms in English.

There is overwhelming evidence that knowledge does transfer between languages, in large amounts. In fact, the central argument of those in favor of dual language, dual immersion, and bilingual education rests on this important and extensive research. A great deal of research has focused on the amount and efficacy of transfer of cognitive and academic skills, including reading, and has given rise to the phrases, "you only learn to read once" (Anderson, 2003).

Transfer in reading will naturally be greater between cognate languages which share all or most of the same alphabet and some vocabulary or morphemes than non-cognate languages which use different alphabets, or do not use an alphabetic system. In oral reading, learners from cognate languages can be expected to decode faster and more accurately because of their greater familiarity with the alphabet and cognate words shared with their first language.

On the other hand, some transfer can be negative and obstruct development in the second language (this is referred to as "interference"). For example, an L2 reader may overlook certain L2 text features because they are not important in the reader's L1; an example of this is found in a study in which English-speaking L2 German readers with low reading proficiency in German tend to skip over definite articles, whereas more proficient L2 readers of German, and L1 German readers, process the articles in a text more carefully (Bernhardt, 1983, 1991). That is because articles in English, although important in signaling reference, do not give the same kind of semantic
information that they do in German, in which they signal both the case and gender of the words that follow.

Recent research has focused on evidence of two-way transfer between L1 and L2, and there is increasing evidence that L2 skills wash back onto L1 skills in a similar way to that of the effect of L1 skills on L2 (Pang & Kamil, 2003).

Fitzgerald concluded that cognitive reading processes of L2 learners are "substantially the same" (1995, p. 184) as those of L1 English learners and that L1 reading models make a relatively good fit with L1 reading models. Her metastudy of L2 reading research concluded that "considerable evidence emerged to support the CUP model" (p. 186) proposed by Cummins (1979, 1981). As explained earlier, it posits that language knowledge is universal at its core, with a common underlying proficiency, and that only the surface manifestations of languages differ from one another. Thus, learning a new language requires mining the core language structural knowledge which has manifested through L1, and mastering the new sets of surface forms of the target language. Of course, characterizing the complex features of a new language as "surface" gives the impression that learning them is simple or shallow, but it is not.

Shallow and Deep Orthography

The history of written languages is diverse, and numerous kinds of writing systems, called orthographies, developed. All of them were an attempt to capture and record speech; however, the level of detail of the phonetic information contained in the different writing systems varied considerably. Linguists use the terms "shallow" or "transparent" orthographies to designate those which have a close fit between the written and spoken form, and "deep" or "opaque" orthographies
to refer to those which require more guesswork to decode because the phonetic information is not as close a match to the graphemes.

Languages which have had a written form for a long time naturally have deeper orthography, because written language changes more slowly than spoken language, so the gap between the two forms widens more. These languages are considered by linguists to be harder to learn. In an article published in *Nature Neuroscience*, for example, it was demonstrated that Italians were considerably faster in reading words and nonwords aloud in their language than English readers, and PET scans of their brains while reading showed that the portion of the brain using phonological information was greater for Italians, while the portion of the brain used for naming objects and processing the meaning of words was used more with English speakers (Paulesu et al., 2000).

However, deep orthography languages make up for their phonetic inconsistencies by conveying a large amount of morphological information. Benczik (2001) points out that because of that fact, there is a logical tendency in school systems with deep orthography languages to combine the teaching of spelling and grammar.

A language with transparent orthography, such as Italian, Spanish, Polish, or Turkish, is easier for a child to learn to decode because of its regularity. Some have dubbed it "learner friendly orthography." English is deeper, because its meanings cannot always be retrieved from a direct, letter-by-letter rendering of the letters in a word ("read," for example, has two different pronunciations, and two different meanings, depending on its context; it can only be understood through the words around it). Chinese is even deeper; or more opaque, because, although Chinese has been found to contain some phonemic information in its characters (Li, 2002), the characters cannot be broken into a linear sequence of sounds. This has a bearing on how a reader approaches a
text. When the approach to word identification used in L1 doesn't match the approach needed for the TL, there are bound to be difficulties learning to decode.

One issue emanating from shallow and deep orthographies is that "word calling" (decoding without meaning) is more possible in a transparent orthography language than in a deep one, because in the latter case a word read correctly is more likely to have gone through an analytic process involving meaning construction (Paulesu et al., 2000). Another issue is that phonological awareness may be needed longer for children learning a deep orthography language than for those learning a transparent one (de Jong & van der Leij, 2002). In addition to speed of mastering decoding, in fact, the speed of the actual decoding is a more telling measure of reading maturity in a shallow orthography language than it is in a deep one, because less analytical work is going on in order to say a word.

Adult L2/ESL Reading Comprehension

Quite a bit of research has been done on international graduate students in intensive ESL programs at universities around the U.S. Some of these studies show that adult ESL readers use graphophonic, syntactic, and semantic cuing systems similarly to the way L1 adult students do, but more slowly, with fewer metacognitive strategies and less use of context (Fitzgerald, 1995, p.170). College level L2/ESL students tend to process verbal information more slowly in short-term memory, and in smaller chunks (Fitzgerald). This has implications for reading speed. As students become more proficient, the gaps between L1 and L2 adult readers narrow; however, second language readers rarely reach the speed of native language readers.

Acoustic Recoding in L2 Reading
In the realm of second language learning, Chu-Chang (1980) found evidence of a brief but measurable auditory representation of a word read silently in a second language before its meaning is accessed, which supports the theory that some listening comprehension occurs while reading. Pang and Kamil (2003) have demonstrated that phonological awareness, an important building block of reading, impacts silent reading equally in Chinese and English for bilingual, biliterate children who speak both Chinese and English, even though their two written language systems are not similar. Such studies indicate that some kind of listening comprehension is a component of reading.

The role of listening is important when researching reading comprehension of second language learners because knowing whether there is an auditory representation of a word, and if so, when in the reading process it gets activated, influences the way an L2 reading model looks. If an L2/ESL reader performs a word according to an echo heard in the head, then listening level in English is important; if an auditory representation is not necessary, then a reader should be able to decode and access meaning without such a prerequisite.

It is important to determine the weight or importance of L2 listening comprehension in an L2 model of reading; even if it is necessary, it is clearly not sufficient to construct meaning from print. L1 overall language and literacy skills may be a more important cognitive resource for L2 learners than their L2 listening level, especially if their first language shares much of the written code of the target language.

Reading Aloud in L1 and L2

The need to disaggregate decoding, recoding, and meaning construction with adult second language learners creates a more complicated landscape for assessing reading comprehension through oral reading than is the case with L1 children. That is why knowing the literacy and
education level of the L2 adults whose oral reading is being tested is a key factor in making a meaningful statement about their L2 oral reading.

At least three L2 oral reading scenarios can be described, and these contrast with L1 oral reading in important ways.

*Decoding without comprehension.* In L1 reading, when an emergent reader of normal abilities is able to pronounce a decoded word aloud, the meaning of the word then becomes available for a semantic match. The L1 reader draws upon the bank of words which the image and/or sound signals, and makes the match with a known meaning or develops a new one. When fluency is reached, the L1 reader can identify the words in the text as whole units and simultaneously construct meaning from them, making an effortless match between a word's written form, oral form, and meaning, as long as the word is already familiar to the reader, or can be construed from context.

However, L2/ESL learners who are fully literate in L1 may be able to decode English words successfully (that is, match sight and sound) but not make a semantic match to the word's meaning, because they are missing knowledge of vocabulary, syntax (word order) or discourse in English, the target language. Consequently, ability to read the word aloud may not necessarily access the word's meaning. As described in the previous section about L1 reading comprehension and oral reading, "word calling" for normal L1 learners seems not to be a provable phenomenon (see Chapter Two, p. 28), but in this scenario, it could occur for L2 readers. Also, such a scenario is less likely when English is the target language, because of its deep orthography.

*Comprehension without recoding (ability to pronounce).* On the other hand, some L2 learners may be able to recognize the meaning of a word when reading it silently, but be unable to pronounce the word when reading aloud because they do not know the phoneme-grapheme
correspondences of English, or cannot make the sounds. These learners may have a different representation of the sound due to a different alphabet, or have no phonetic representation of the word in mind at all. Nevertheless, they may know the meaning of the word. For example, most Americans would recognize the phrase "E pluribus unum" as the American motto "From many, one," without being able to pronounce it using Latin phonemes, or perhaps without being able to pronounce it at all. Nonetheless, we comprehend the Latin words.

**Decoding and pronouncing with negative transfer.** A third possibility is that an L2 reader decodes and pronounces a word or string of words using his or her L1 knowledge in a way which interferes with the sound or meaning of the word in the target language. This can result from phonemic interference from L1, a false cognate, or other negative transfer from L1. Thus, a string of words could be apparently correctly rendered, but not understood, or incorrectly rendered, but understood, depending on the nature of the interference.

Some linguists, such as Schreiber (1980), consider fluency a reader's ability to apply features of spoken language to the reading of written text (Strecker et al., 1998, 298). Does that mean that L2/ESL readers cannot "do" fluency if they lack the target language's spoken language patterns? When post-secondary L2 students read aloud, different features may be found from those found listening to an L1 child.

It is possible that these differences may be better captured with a fluency rubric which allows the literate adult to demonstrate knowledge of punctuation, syntax and other text conventions that accrue with his or her L1 literacy than using a speed minus miscues format, where L1 phonemic interference may give the appearance of a lower reading level than is actually the case.
Since this study makes the assumption that the reader is literate, the ability of the participants to construct meaning from text is not under question. If the reader comes from a European/Romance language background, it can also be assumed the reader can decode the Roman alphabet. The issue is mapping words decoded in English to both the English sounds and semantic associations of the words, and doing it quickly, while reading connected text. If the reader's L1 has a language system that is unlike the target language, on the other hand, such as the Chinese relationship to English, learning to decode any alphabetic system is an added burden.

Therefore, ability to decode and pronounce words from connected text only tells us some of the information about the reading process of literate L2 adults, since we already know that the adult knows how to read. However, we also know that there are significant differences in the ways low proficiency and high proficiency L2/ESL readers process text, with the reading process of higher proficiency readers more closely resembling that of L1 readers (Fitzgerald, 1995; Fender, 2001).

Oral reading can be an important measure for SLA research because it is one of the "online" gauges of reading -- that is, it takes place in real time, so that some of the constructive process of reading can be sketched.

**ORF and English Language Learners**

Although relatively little research has been done on oral reading fluency in a second language, some studies have validated it as a measure of reading comprehension. Research conducted by Baker and Good (1995) established the reliability and validity of using curriculum-based ORF assessment with a group of second grade bilingual students. The study not only validated the measure at as high a level as for native speakers of English, but found, interestingly, that "CBM [curriculum based measurement of oral] reading in English may be a better measure of
English reading proficiency than [of] English oral language proficiency for bilingual students" (Baker & Good, p. 573).

In another piece of research, Ramirez (2001) found that fifth grade Spanish learners of English as a second language had higher correlations between their oral reading fluency and several measures of reading comprehension than with any other measure, including simple decoding (Ramirez, 2001).

*L2 Reading Proficiency and its Relation to L2 Oral Proficiency.* Baker and Good's observation (1995) suggests that a bilingual child's oral language proficiency in the target language may not be as strongly connected to his or her silent reading comprehension as are other measures. A similar study of foreign language learners with and without L2 reading difficulties (Sparks & Artzer, 2000), likewise concludes, "...one's ability to read words in a FL [foreign language] is not necessarily related to one's oral proficiency in the FL" (p. 13). Moreover, Durgunoglu et al. (1993), in a study of bilingual children, found that phonological awareness in L1 is a better predictor of L2 reading ability than L2 oral language proficiency.

Fitzgerald (1995) similarly concludes, after examining a number of research studies on this topic, that "it is not possible to make a simple statement about the relationship between ESL reading proficiency and oral proficiency" (p. 181).

These findings seem to fit with Cummin's (1981) theory that a second language learner develops two overlapping but distinct systems: BICS (Basic Interpersonal Communicative Skills), which involves using listening and speaking skills in everyday situations, and CALP (Cognitive Academic Language Processing), which involves reading, writing, and the academic skills. BICS,
which accounts for communicative oral proficiency, does not necessarily reflect CALP, which is academic proficiency, including reading.

L2 Oral Reading Prosody. Ability to use native like stress and intonation patterns while reading aloud in a second language may tell other important features about the reading proficiency of the L2/ESL learner. Johnson and Moore (1997) found a moderate but significant relationship between the reading scores of L2/ESL students and how native like their pausing behaviors were when reading English text aloud.

Of course, patterns of stress and intonation differ not only among native speakers of a language, but also differ widely among languages, and when an L2 learner tries to apply culturally appropriate L1 patterns of stress and intonation to the new language, misunderstandings can result. Clay & Imlach (1971), for example, found that more proficient L1 English readers used falling pitch between phrases, whereas poorer readers used sustained or rising pitch. However, Mexican Spanish intonation calls for rising pitch at clause endings. For Hispanic students of English as a second language, among others, then, some English intonation patterns need to be taught explicitly.

In her work with L1 children, Dowhower described five features of prosody, which she equates with the linguistics term "suprasegmental features" (Dowhower, 1991, p. 166), for evaluating oral reading: 1.) minimal pausal intrusions; 2.) appropriate phrase length; 3.) correct chunking; 4.) phrase final vowel lengthening; and 5.) correct intonation (Dowhower, 1991; Dowhower, 1987, p. 395). Suprasegmentals include more than one phoneme or sound (a "segmental"), and can cross syllable, word, phrase, and sentence boundaries. Used as an instrument for analyzing L1 reading, prosody helps show whether oral fluency in L1 has been mapped onto written text.
Although intended for teachers of first language speaking children, the features Dowhower has described are vitally important in a L2/ESL learner's mastery of spoken English, and none of them can be taken for granted. It is their absence or poor execution, which in large part defines what is called "a foreign accent." In addition to suprasegmentals, English language learners need to learn the individual phonemes, the individual word stress patterns, phrase stress patterns, and subtleties of fast speech reductions that come with English, both for listening comprehension and oral production. These skills can be meaningfully practiced through oral reading, especially while listening to or reading along with a skilled English reader.

Interestingly, prosody has not been situated within the reading competency in second language research, but resides within the domains of listening comprehension and oral production. The idea that the quality of suprasegmentals produced during reading aloud might tell us something about an L2 reader's silent reading comprehension is, to my knowledge, a new idea in the field.

*Oral Fluency Practice with L2 Learners*

Since L1 research indicates that ORF practice not only reflects comprehension, but contributes to it, at least at some stages, it would seem to follow that second language students would get an especially great benefit from fluency building techniques. Since second language readers may not yet have internalized the prosodic structure of the target language, learning where and how to chunk oral language can clearly benefit the ability to read written language. However, since learners do not always know how a passage should sound, modeling, using a combination of repeated listening and repeated reading, would best serve second language learners' needs (Kuhn & Stahl, 2002; Li & Nes, 2001).
Schreiber (1980) recognized that punctuation is, in many ways, an attempt to codify in print features of natural oral language; thus, reading aloud can help instill the prosodic features which are still being developed in an L2 learner. Oral reading fluency activities seem natural choices to help second language students not only read better, but build competence in several other areas in which they are striving to improve.

Although there are many anecdotal accounts of oral reading in the L2 classroom, there is little research documenting oral fluency practice with L2 learners, either child or adult, as an aid to reading comprehension. That makes sense, because it has not been demonstrated that L2 oral reading correlates with reading comprehension, nor that practicing the former improves the latter. However, the previously mentioned fluency building activities would benefit an L2/ESL student because of the practice they provide in pronunciation and listening. Auditory modeling, the optimal setup, can be accomplished through teacher or tutor modeling, pairing L2/ESL students with native speakers or more advanced learners, or by using an audiotaped text. Moreover, oral reading can help students stitch together the pieces of language competency they need in order to achieve their goals.

*Oral Reading Fluency Activities for L2 Children.* Li and Nes (2001) did a small study of four Chinese immigrant children given weekly English language paired reading activities at grade level, led by a skilled adult. Like their native speaking counterparts, they made impressive gains in accuracy and fluency, even in the maintenance period when the sessions became less frequent and then ceased. Although comprehension was not part of the test design, the treatment showed an impressive increase of speed and accuracy with even a few exposures to the skilled reader's model. This slightly adapted model of repeated oral reading is especially pertinent to Chinese learners, who
can benefit from expert modeling of the stress and intonation patterns of English, in addition to the phonemes and surprasegmentals.

In another case, McCauley and McCauley (1992) used teacher-led choral reading to promote language learning by elementary L2/ESL students. Although its purpose was not expressly to improve reading, the technique recognized the need to imprint patterns of oral language, including prosody, into an L2/ESL learner's schemata. Kozub (2000) discovered that Reader's Theatre was very effective with her English language learners.

The work done by Dowhower (1987) with L1 second graders is applicable to L2/ESL students. She found that repeated reading of several texts with a similar level of difficulty resulted in students learning "which words 'went together' and how to mark those units as they practiced" (p. 403). These successive approximations can help L2 students get closer to target structures. Marking phrase boundaries is also a useful activity, especially for adult learners who are already literate in their first language. From marking boundaries, they can proceed to practicing oral interpretation of the text.

Classroom techniques which foster oral reading fluency fit well into the ESL curriculum and help develop self confidence in the target language, while at the same time providing a social milieu for learning.

**Oral Reading Fluency Activities for L2/ESL Adults.** In two studies of silent repeated reading by ESL students in Japan, Taguchi (1997) and Taguchi & Gorsuch (2002) found that weak beginning ESL readers at a Japanese university significantly increased their silent reading rates; however, there was no evidence of transfer effects to a new passage in either oral or silent rates. Taguchi speculates that because of the density of a reading task, L2 readers may require "multiple
readings for deeper processing of a text" (2002, p. 16) on a regular basis. In certain contexts, multiple oral readings of L2 texts, especially with auditory modeling, may help L2 adult readers get at some of the density of the reading task through a different point of entry.

Using techniques such as Reader's Theater (Kozub, 2000) and English language poetry performance with L2 learners can appeal to learners of high school age and above. These techniques naturally provide authentic rereading practice with a built-in performance component. The author (Lems, 2001, 2002) and others have successfully used poetry performance in the adult L2/ESL classroom. Initially, the first language instructor can provide exaggerated stress and intonation to highlight prosodic contours. Practicing the prosody while preparing for a poetry or drama performance allows students to develop of the expressive features so important to the development of L2 oral fluency, and adds a positive social dimension to the practicing.

What has been practiced and published in the reading field in the area of oral reading fluency practice can be usefully applied to second language acquisition research and pedagogy.

Summary

In summary, it has been shown that oral reading fluency corresponds very powerfully with silent reading comprehension in many diverse venues, including some L2/ESL instructional settings. It has been shown that the oral reading construct is multidimensional, and can be measured in a number of ways. It has been shown that the robustness of the ORF measure varies according to grade level, task, and readability level, with declining importance in secondary school level reading. It has been shown that developing oral fluency skills can improve silent reading comprehension, with proven benefits in modeling oral reading. The research about L1 oral reading can be applied to
theories of second language acquisition, with accommodations made for differences between literate L2 adults and bilingual L2 children who are not yet fully literate.

The fields of second language teaching, foreign language teaching, adult basic literacy, and bilingual education might consider studying the oral reading fluency of their learners. If similar results ensure, it could be useful to the field to try some of the previously-described oral reading fluency practice techniques which are proving successful in boosting L1 silent reading comprehension, and carefully record their results. This study is one small step in that direction.
CHAPTER THREE
Research Design and Methods

Purpose of the Study

The purpose of this descriptive study is to determine the relationship between adult second language ESL (L2/ESL) oral reading fluency (ORF) and silent reading comprehension (SRC). In the previous chapter, it was established that such a correlation has been strongly and robustly validated with first language (L1) children at various stages of reading proficiency, and at least two studies (Baker & Good, 1995; Ramirez, 2001) have found a similar correlation for bilingual Hispanic children studying English. Scores obtained from evaluating a taped oral reading correlate so closely with silent reading comprehension, in fact, that one article states, "Results of the current study are consistent with those of previous validation studies which have suggested that evaluating comprehension may be redundant to assessing oral reading fluency" (Hintze, Shapiro, & Conte, 1997, p. 547). Thus, there is reason to suppose that the oral reading of literate L2/ESL adults might tell us something about their silent reading comprehension as well.

To test this hypothesis, which is the driving question of the study, oral reading fluency measures for 232 post-secondary L2/ESL students in Levels 1, 3, and 5 of an ESL program were taken and compared with other measures of their performance. These included final exam total score, language laboratory final exam score, and final grade. The reading and cloze vocabulary sections of the final exams of 58 Level 3 students were also looked at and compared with the previously-examined measures.

The second question of the study is to see which measure of oral reading fluency, words correct per minute (WCPM), or the Zutell-Rasinski (1991) multidimensional fluency scale (MFS),
correlates better with measures of reading comprehension. This question parallels current research with L1 children, in which different fluency instruments are being compared (Cervetti, Jaynes, & Pearson, 2002).

The third question of the study is to describe how the oral reading of selected strong, average, and weak Level 3 (intermediate level) L2/ESL students might be characterized, and what miscue analysis can add to the description. The seven case studies were chosen on the basis of the students' final exam score, language lab final exam score, and teacher commentary on the end-of-term summary sheets. The purpose of this qualitative piece is to see whether the descriptions might lead toward a different set of criteria than those found in any of the existing ORF scales.

The overall purpose is to advance knowledge about the learning process of literate adults studying English as a second language, and to see how oral reading fluency might fit into the picture.

Research Questions

The following research questions guide the design and execution of this dissertation: 1.) Is there a correlation between second language adult ESL oral reading fluency and silent reading comprehension? 2.) Which measure of oral reading fluency correlates better with reading comprehension for L2/ESL adults, words correct per minute (WCPM), or the Zutell-Rasinski multidimensional fluency scale (MFS) rubric? 3.) How might the oral reading of strong, average, and weak L2/ESL students at the intermediate level be characterized, and what can miscue analysis of that reading add to the description?
Design of the Study

Setting

Students who participated in the study were undergraduate immigrants in an English as a Second Language (ESL) program at a medium-sized, metropolitan university in the Midwest. The ESL program is a semi-intensive, academic, five level program which provides 14 contact hours of instruction per week within ten week quarters (eight weeks during the summer). The program uses a grammar-centered approach, and averages around 200 students per quarter, with smaller numbers in the summer. It offers morning, evening, and weekend classes.

Eleven of the contact hours are spent with a single classroom teacher, who teaches the integrated skills of reading, writing, listening and speaking, all within a graded grammar sequence. The reading component consists of a set of fixed readings from a reader, usually 5 or 6 in a quarter, with target vocabulary chosen from each reading.

Each class within a level covers the same curriculum and takes the same final exam, which covers all the grammar and vocabulary taught at the level and is approximately 16 pages in length. Students receive regular assessment of their progress, including written quizzes and tests, a required midterm, and feedback on homework, dialog journals, class projects, and formal presentations. The types of assessment used vary from class to class, according to teacher preferences.

However, all students must obtain a score of 70% or above on the final exam in order to proceed to the next level. For Level 1-3 students, the course culminates in a grade of Pass or No Pass, and for Levels 4-5, students receive a letter grade. Thus, students who may have strong listening, speaking, or writing skills, but who do not have a good grammar base, will not move to the
next level. Approximately 15% of students repeat a level at least once, and a small number repeat it twice.

Two hours per week (one hour only for weekend students) are spent in the language laboratory, with a different teacher. The language laboratory curriculum follows the grammar curriculum of the five level program, and adds listening and pronunciation practice focusing on features of spoken English. A level-wide language lab final exam, consisting of written responses to listening cues, is given during the ninth week of the course, and its score is factored into the student's final grade. In addition, one hour per week is spent in the computer laboratory, practicing grammar, vocabulary and idioms for each level.

The program has seven full time faculty and 10-15 adjuncts. One of the faculty at each level and lab in the program is also a coordinator, who oversees the curriculum and writes the final exam, among other things. Coordinators make sure that all faculty follow the final exam scoring key meticulously, to insure uniform grading in the level. There is a quarterly meeting of all the coordinators to oversee articulation between the levels and maintain quality.

Placement into the program is done through an oral interview, followed by a written grammar test for lower performing students, or a writing sample for students expected to enter Levels 3 - 5. Students whose writing sample and oral skills are both above the exit outcomes for Level 5 are placed out of the program, into developmental "bridge" coursework, or directly into content area classes.

Although speaking level is of some interest, the score on the grammar test or writing sample is decisive in determining placement. If, for example, a student misses an important grammar item
covered in Level 1, the student will be placed in Level 1 even if able to use some grammar from Level 2 or speak with some skill.

The placement system is backed up by a pretest given to all students on the first day of the quarter. The pretest consists of grammar items taught at the target level and the one below it, to make sure new students can function at the level in which they have been placed. Scores of below 30% correct result in the student being moved down a level, and scores of above 80% entitle the student to take the final exam for that level. If a grade of 80% correct is achieved on the final exam, the student can begin at the higher level immediately.

Students must possess a high school diploma or its equivalent in order to enter the ESL program. Because of that requirement, students can by-in-large be assumed to be fully literate. That requirement also establishes their minimum age at 17.

The students include well-educated adults who worked in professional jobs in their native countries, students who have completed some college, and those who have just finished high school and are entering college for the first time. Approximately 95% of the students are immigrants who qualify to receive financial aid. There is also a small number of international students paying full tuition, or working in companies which pay for their studies, and some U.S.-born students whose home language was not English.

Polish students comprise a minimum of 60% of the program enrollment, followed by smaller numbers of Ukrainians, mainland Chinese (most speaking Cantonese as a first language), Hispanics (largely Mexican), Bulgarians, and small numbers of many other nationalities (e.g. Japanese, Turkish, Congolese, Palestinian, Bosnian...).
Most of the students are working-class and hold jobs while attending school, with the exception of mothers of small children. The length of time students have already lived in the U.S. can vary from one week to twenty years; no general statement can be made about this. In addition, there is great diversity in terms of age, prior years of schooling beyond secondary school, amount and quality of prior English study, years away from formal education, amount of English spoken on the job, and so on.

Participants

Participants in the study consisted of 232 L2/ESL adults in a postsecondary ESL program.

*First Language of Participants*

The first languages of the participants are summarized in Table 3.1 and Figure 3.1.

<table>
<thead>
<tr>
<th>First Language</th>
<th>Number</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Polish</td>
<td>143</td>
<td>61.6</td>
</tr>
<tr>
<td>Ukrainian</td>
<td>33</td>
<td>14.2</td>
</tr>
<tr>
<td>Chinese</td>
<td>23</td>
<td>9.9</td>
</tr>
<tr>
<td>Spanish (Mexican)</td>
<td>14</td>
<td>6.0</td>
</tr>
<tr>
<td>Bulgarian</td>
<td>9</td>
<td>3.9</td>
</tr>
<tr>
<td>other</td>
<td>10</td>
<td>4.3</td>
</tr>
<tr>
<td><strong>TOTAL</strong></td>
<td>232</td>
<td>100.0</td>
</tr>
</tbody>
</table>

It is important to note that these students come from three different kinds of orthographic backgrounds: the Polish and Spanish speaking students have an alphabet which is cognate with English (it uses the same alphabet as the target language, English).
with a transparent orthographic structure (words sound the way they are spelled); the Ukrainians and Bulgarians have a non-cognate alphabetic language (they have alphabets, but not the one used by English) with a transparent orthographic structure; and the Chinese have a syllable-based logographic system with a phonological component (Li, 2002) but not an alphabet, nor any cognate words with English (Pang & Kamil, 2003). Since oral reading involves decoding words in English language orthography, which is a "deep orthography," (see discussion of shallow and deep orthography in Chapter Two), the contrasts among these first language systems can be expected to impact oral reading performance features.

**Participant Level in the ESL Program**

The students comprised three proficiency levels within the program: beginning level (Level 1), intermediate level (Level 3), and advanced level (Level 5).
Their distribution is represented in Table 3.2.

Table 3.2

*Participant Characteristics by Level in Program*

<table>
<thead>
<tr>
<th>Level in Program</th>
<th>Number</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>14</td>
<td>5.9</td>
</tr>
<tr>
<td>3</td>
<td>154</td>
<td>66.4</td>
</tr>
<tr>
<td>5</td>
<td>64</td>
<td>27.1</td>
</tr>
<tr>
<td><strong>TOTAL</strong></td>
<td>232</td>
<td>100.0</td>
</tr>
</tbody>
</table>

Figure 3.2 shows the distribution of class levels expressed in a pie chart.

Figure 3.2

*Participant Class Levels Represented on a Pie Chart*

The large majority of participants came from Level 3, the intermediate level.

Table 3.3 summarizes the number of students in each level by first language and gender.
Table 3.3
Summary of Participant Characteristics

<table>
<thead>
<tr>
<th>Level</th>
<th>Number</th>
<th>First Language (L1)</th>
<th>Number in Level by L1</th>
<th>Female/Male</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>14</td>
<td>Polish</td>
<td>5</td>
<td>6/8</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Ukrainian</td>
<td>4</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Chinese</td>
<td>0</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Spanish</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Bulgarian</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Other</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>3</td>
<td>154</td>
<td>Polish</td>
<td>48</td>
<td>106/48</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Ukrainian</td>
<td>28</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Chinese</td>
<td>5</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Spanish</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Bulgarian</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Other</td>
<td>4</td>
<td></td>
</tr>
<tr>
<td>5</td>
<td>64</td>
<td>Polish</td>
<td>50</td>
<td>45/19</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Ukrainian</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Chinese</td>
<td>5</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Spanish</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Bulgarian</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Other</td>
<td>4</td>
<td></td>
</tr>
<tr>
<td>TOTAL</td>
<td>232</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Participants in Question 1

The first question, which asks whether there is a correlation between L2/ESL oral reading and silent reading comprehension, is addressed by examining two sets of variables, which will be called Part A and Part B.

Part A. In the first part, the words correct per minute (WCPM) of students' one-minute oral reading samples were calculated and compared with scores on the students' final exam, language laboratory final exam, their final grade, and other computations based on those instruments. The participants in this group consisted of all 232 students.
Part B. In the second part of the first research question, the scores on the reading and cloze vocabulary sections of the final exams of 58 Level 3 students were examined, and used as an alternate dependent variable. Since first language could have a decisive effect on performance measures, it was disaggregated from the data. The first language of the 58 Level 3 students is summarized in Table 3.4.

Table 3.4
First Language of Participants in Question 1, Part B

<table>
<thead>
<tr>
<th>First Language</th>
<th>Number</th>
</tr>
</thead>
<tbody>
<tr>
<td>Polish</td>
<td>29</td>
</tr>
<tr>
<td>Ukrainian</td>
<td>12</td>
</tr>
<tr>
<td>Chinese</td>
<td>6</td>
</tr>
<tr>
<td>Spanish</td>
<td>5</td>
</tr>
<tr>
<td>Bulgarian</td>
<td>3</td>
</tr>
<tr>
<td>Slovakian</td>
<td>2</td>
</tr>
<tr>
<td>Lithuanian</td>
<td>1</td>
</tr>
<tr>
<td><strong>TOTAL</strong></td>
<td><strong>58</strong></td>
</tr>
</tbody>
</table>

Level 3 Students  Because only Level 3 students are used in Question 1, Part B, and also comprise the large majority of participants in the overall study, the specific learning level they occupy will be described in some detail. Level 3's expected student learning outcomes, according to the Department of Applied Language Faculty Handbook (1999), are the following:

- Students will acquire vocabulary and structures, such as high frequency academic and colloquial language, beyond the survival level and will begin to discuss abstractions.

- Students will be capable of the following: making inferences and drawing conclusions.

Appendix B has the Expected Student Learning Outcomes of the program for all levels.
As the learning outcomes indicate, Level 3 is the threshold level at which students move beyond day-to-day survival skills and begin to acquire academic skills needed for reading, writing, and future academic and professional work. Phrased in the theoretical language of second language acquisition, this means that students will begin to develop "CALP" - Cognitive Academic Language Proficiency, which is a prerequisite for successful learning in the academic content areas, in addition to whatever skills they have already developed in "BICS" - Basic Interactive Communication Skills (Cummins, 1981).

Students are placed into or advance into Level 3 with many kinds of prior experience. Some are verbally proficient but cannot read or write accurately in English. Others have many years of classroom study but have never deployed the English learned there for practical use in an English-dominant setting. Very few of them have had the opportunity to develop CALP in English. These cognitive and academic skills must be learned explicitly, with guidance and instruction (Cummins, 1976, 1984).

Since all the participants are high school graduates, it can be assumed they have developed some CALP in their L1, but the amount varies by individual and according to learning expectations of different educational systems in the students' native countries. Because CALP skills are being developed at the same time in the ESL classroom and also being transferred in varying amounts from L1, Level 3 students make an especially interesting group to study.

Participants in Question 2

The second question, as to whether words correct per minute (WCPM) or a multidimensional fluency scale (MFS) correlates more closely with silent reading comprehension measures, involved 80 mixed level students. The participants included the Level 3 students involved in Part B of the
first research question, one group of Level 1 students, and one group of Level 5 students, with an attempt made to provide balance among language and gender.

Participants in Question 3

The third question, which asks how the oral reading of a sample of strong, average, and weak level 3 students can be described, and what role miscue analysis might play in that description, used a case study approach involving seven Level 3 students.

These students were drawn from among the group of 58 Level 3 students involved in Part B of the first research question, and were selected on the basis of their final exam scores, language lab final exam scores, and qualitative teacher comments on the end-of-term summary sheets. The oral reading of these seven students was described in number and quality of miscues (WCPM), MFS pace, phrasing, and smoothness, and other features not included in current rubrics.

Removal of Repeaters

Through examination of the class lists, it was observed that four students had repeated Level 3, and thus had two sets of scores. The data for the second set of scores was removed, leaving only the students' performance for the first time through the level. No other repeaters were found in the data set. Therefore, unless the student came back to repeat a level after an extended time out of school, it can be assumed that this data comes from students going through the level for the first time. Some participants performed a fluency sample both at the end of Level 3 and Level 5, but the length of time between the assessments was at least 7 months, or more if the student took time off during the summer. It can be safely assumed that the oral reading fluency assessment did not affect the fluency performance in Level 5.

Instruments
The study uses the final exam (FE-T) as the proxy for reading comprehension. That is because, at all three levels, the exam has many features in common with standard academic and reading achievement tests: it is timed (3 1/2 hours), it is lengthy (16 pages), and it has a diverse series of task types that require reading comprehension not only for answering content questions, but also for following directions. Fuchs, Fuchs, and Maxwell (1988) found that a measure of WCPM - words correct per minute - correlated with the Stanford Achievement Test subtests at $r = .89$.

The choice of an asynchronous measure of reading comprehension -- that is, a measure conducted at a different time and using a different text from the one used for the oral reading --- is well-established in oral reading research models (Cervetti, Jaynes, & Pearson, 2002, p. 8). Rasinski notes that, in oral reading assessment, especially when the text is not previewed prior to the reading, "readers often channel their attention and cognitive energy into decoding and allocate little attention to understanding the passage" (1990, p. 41). As a result, comprehension measures taken immediately after oral reading may not give an accurate picture of reading comprehension (p. 42).

The instruments used in this study, the data they provide, the participants using the instruments, and the research question(s) they address, are summarized in Table 3.5.

The following is a description of each instrument listed in order of its appearance on Table 3.5.
Table 3.5

Summary of Instruments and Abbreviations, Data, Participants, and Research Questions Involved in Study

<table>
<thead>
<tr>
<th>Instruments</th>
<th>Data Provided</th>
<th>Participants</th>
<th>Research Question</th>
</tr>
</thead>
<tbody>
<tr>
<td>One minute timed oral reading (ORF)</td>
<td>words correct per minute (WCPM), miscue ratio (MR), significant miscue ratio (SMR), total words read (TWR), total miscues (TM), total significant miscues (TSM)</td>
<td>Question 1A: 232 students, 1B: 58 Level 3 students</td>
<td>Ques.1A correlated w/ FE-T, LLFE, FG FE-R, FE-V, FE-L, MFS</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Question 2: 80 mixed level students</td>
<td>Ques.3 - as descriptor in case studies</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Question 3: 7 Level 3 students</td>
<td></td>
</tr>
<tr>
<td>Final exam total (FE-T)</td>
<td>% correct</td>
<td>all 232 students</td>
<td>Question 1 - as above Question 2 - as above Question 3 - as above</td>
</tr>
<tr>
<td>Level 3 final exam Reading section (FE-R)</td>
<td>% correct</td>
<td>58 Level 3 students</td>
<td>Ques.1B-correlated w/ WCPM, FE-T, LLFE, FG</td>
</tr>
<tr>
<td>Vocab section (FE-V)</td>
<td></td>
<td></td>
<td>Question 2 - correlated w/ WCPM, FE-T, LLFE, FG, FG, MFS</td>
</tr>
<tr>
<td>Listening section (FE-L)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Level 3 final exam w/ no listening section (FE-NLS)</td>
<td>% correct</td>
<td>58 Level 3 students</td>
<td>Question 1B- correlated WCPM, LLFE, FG, FE-V FE-R, FE-L</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Question 2 - correlated w/ WCPM, FE-V, FE-R, FE-L, MFS</td>
</tr>
<tr>
<td>Language lab final</td>
<td>% correct</td>
<td>all 232 students</td>
<td>Question 1a:</td>
</tr>
</tbody>
</table>
exam (LLFE) correlated with WCPM, FE-T, FG;
1b: correlated with WCPM, FE-T, FG, FE-R, FE-V
Table 3.5, cont.  
*Summary of Instruments, Data, Participants, and Research Questions Involved in Study*

<table>
<thead>
<tr>
<th>Instruments</th>
<th>Data Provided</th>
<th>Participants</th>
<th>Research Question</th>
</tr>
</thead>
<tbody>
<tr>
<td>LLFE, cont.</td>
<td></td>
<td></td>
<td>Question 2 - correlated with WCPM, FE-T, FG, FE-R, FE-V, MFS</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Question 3 - as above</td>
</tr>
<tr>
<td>Final Grade (FG)</td>
<td>Levels 1 and 3: pass/no pass</td>
<td>all 232 students</td>
<td>Question 1 correlated w/ WCPM, FE-T, LLFE, FE-V, FE-L</td>
</tr>
<tr>
<td></td>
<td>Level 5: letter grade</td>
<td></td>
<td>Question 2 - same as above plus MFS</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Question 3. as above</td>
</tr>
<tr>
<td>Summary Sheet (SS) w/ teacher</td>
<td>comments on student performance</td>
<td>7 level 3 students</td>
<td>Question 3 - to assist in choosing case studies</td>
</tr>
<tr>
<td>comments</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Zutell-Rasinski Multidimensional</td>
<td>numerical scores on phrasing, smooth</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Fluency Scale (MFS)</td>
<td>ness and pace</td>
<td>80 mixed level stud.</td>
<td>Question 2 - correlated w/ WCPM, FE-T, LLFE, FE-R, FE-V, FE-L</td>
</tr>
<tr>
<td></td>
<td></td>
<td>including 58 Level 3</td>
<td>Question 3 - as above</td>
</tr>
<tr>
<td></td>
<td></td>
<td>w/ FE-R, FE-V, FE-L</td>
<td></td>
</tr>
<tr>
<td>Miscue Rubric</td>
<td>quantitative and qualitative miscue</td>
<td>7 Level 3 case</td>
<td>Question 3 - as above</td>
</tr>
<tr>
<td></td>
<td>data</td>
<td>studies</td>
<td></td>
</tr>
</tbody>
</table>

*One minute Timed Oral Reading (ORF)*

The reading passage used for the ORF measure, "A Real Bargain," is a 721-word article taken from the popular ESL text, *Even More True Stories: an Intermediate Reader (2nd. ed.)* (Heyer, 2000). The book, which takes lively newspaper feature articles and adapts them to different readability levels, is used as the Level 3 reader in the ESL program. Heyer says of the readability level of the stories, "The vocabulary and structures used in the stories are carefully controlled to
match those of a typical intermediate ESL course. At the same time, all attempts have been made to keep the language natural" (p. ii).

The oral reading passage was scored for readability using two different formulas. Using the Fry readability formula (Fry, 1977), it was estimated at sixth grade, first month level and the Flesch-Kincaid readability level was 5.1 (generated from Word 6.0 software). Research with adult ESL/EFL students using L1 English readability formulas (Greenfield, 1999; Jacob, 2002) have found them reasonably valid when adapted to specific situations, and as no readability levels exist specifically for L2 adult readers, the numbers are useful.

Using a curriculum-based text for oral reading fluency evaluation is well validated in the literature (Deno et al., 1985; Fuchs & Deno, 1992; Hintze et al., 1997; Shinn et al., 1992). Curriculum-based measurement has proven to be a strong counterforce to using standardized tests, for reasons including flexibility, cost, reliability and validity, and ease of administering (Deno, 1983, p. 221; Marston, 1989). Another advantage of taking a text directly from the curriculum is that it can be assumed to be at or near the instructional level of the class.

Students were tape recorded reading from the ORF passage for one minute, and from this, several kinds of data were calculated: words correct per minute (WCPM), total words read (TWR), total miscues (TM), total significant miscues (TSM), and the ratios of miscues to total words read, miscue ratio (MR) and significant miscue ratio (SMR). The taping took place as part of the oral interviews which are given in the ESL program at the end of Levels 3 and 5. Because of low interrater reliability (Stam, 2000) on the oral interview scores, they are not included in the study.

Using a one-minute oral reading sample to determine ORF has been repeatedly shown to be a valid assessment procedure (Deno, et al., 1982; Fuchs et al., 2001; Hasbrouck & Tindal, 1992).
Deno et al. state that "when a global index of relative reading proficiency is the purpose of measurement, such an index may be easily obtained within 1 minute without using a standardized test" (p. 44). For second grade bilingual students, a study found that "the reliability of a 1-min CBM reading measure was clearly sufficient for screening purposes for both English-only and bilingual students" (Baker & Good, 1995, p. 572).

The system of deducting miscues from words read in a timed reading is widely used, and there are a number of different miscue systems to choose among (Bernstein, 2003; Cervetti et al., 2002; Fuchs et al., 2002; Goodman & Burke, 1973; Johns, 1997; Leu, 1982). The reliability of the miscue coding in this study was established through use of a written miscue coding key based on the passage. The coding key deducted omissions, substitutions (including nonsense words, mispronunciations resulting in incomprehensible words, and partial renderings), and added words. It did not deduct self-corrections, pauses, starts or attempts, recognizable words spoken with a "foreign accent," or unnatural intonation patterns. The miscues were then classified by "foreign accent" (not deducted), miscue (deducted), and significant miscue (deducted). Miscues included all miscues, and were used in the calculation of miscue ratio; significant miscues were used in the calculation of significant miscue ratio. The complete miscue coding key used with the ORF passage can be found in Appendix C. Other features such as word and sentence stress, intonation, appropriate pause lengths, and smoothness were evaluated using the Multidimensional Fluency Scale (MFS), and address research question two.

The students performed the oral reading at the end of the eighth week of class. At that point, nearly all of the class content had been covered, and the students tested had persisted through most
of the course. This had the advantage of controlling for the amount and quality of instructional time among the participants.

The oral reading was timed twice, once by the interviewer, and a second time by the fluency rater, to establish one minute samples. Any samples of fewer than 50 seconds were discarded; when a sample was significantly longer than a minute, the first 60 seconds were evaluated and the rest discarded.

Final Exam Total (FE-T)

The final exams used in the ESL program were chosen as the main measure of reading comprehension. The lengthy, timed, written exams are designed to check comprehension and understanding of the grammar, target vocabulary, and idioms covered at each level. Exams are designed so that the number of points given reflects the item's importance in the curriculum (personal communication with ESL program faculty, 2003). The final exam total score (FE-T) is given in percentage of items answered correctly.

The reading comprehension section of the final exams may introduce some uncontrolled vocabulary, but the passage is carefully chosen to be at students' instructional level (Betts, 1946). On the Level 1 final exam, the reading section constitutes 4% of the total score; on the Level 3 final exam, it is 7% of the total score, and on the Level 5 final exam the reading section is 5% of the total score.

The final exams' content validity was established through discussions with the faculty who wrote them and through examination of the course syllabi alongside the final exams. Faculty stated that the final exam was closely tied to the syllabus, and a close match was found between the syllabi and the sections on the final exam. Appendix D has the course syllabi for Levels 1, 3, and 5, and
Appendix E has a list of the section headings and point totals for each of the final exams for Levels 1, 3, and 5. They can be seen to closely compare.

*Readability Levels.* The readability levels for the reading comprehension sections of the three final exams are summarized in Table 3.6. For purposes of comparison, the readability level of the ORF passage used in the timed oral reading is also included.

Table 3.6
*Passage length and readability levels for reading sections of Level 1, 3 and 5 final exam and ORF passage used in oral reading*

<table>
<thead>
<tr>
<th>Level</th>
<th>#words</th>
<th>words per sentence</th>
<th>Fry readability</th>
<th>Flesch-Kincaid Grade level</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>151</td>
<td>7.9</td>
<td>2.1</td>
<td>2.7</td>
</tr>
<tr>
<td>3</td>
<td>257</td>
<td>8.7</td>
<td>6.1</td>
<td>4.1</td>
</tr>
<tr>
<td>5</td>
<td>580</td>
<td>22.8</td>
<td>11</td>
<td>12</td>
</tr>
<tr>
<td>ORF</td>
<td>715</td>
<td>12.0</td>
<td>6.1</td>
<td>5.1</td>
</tr>
</tbody>
</table>

*Note.* Fry (1977); Microsoft Word 6.0 software (1998).

In Levels 3 and 5, there are also cloze vocabulary sections which test target vocabulary taught at the level; on the Level 3 exam, it was between 8-9.5% of the total score (depending on the quarter the exam was given), and it was 12% of the total for the Level 5 exam.

The final exam has many features of a standardized reading test. As with a standardized test, students cannot consult their notes or their classmates to find answers. The knowledge tested must be retrieved from the students' long term memory - in other words, learned. Also, like a standardized test, it is timed; therefore, students must have a certain threshold reading speed in order to be able to
complete the exam. Furthermore, in addition to content knowledge, the test requires metacognitive awareness of the different task types, and the ability to make inferences about how to perform them in a timely fashion. It also requires vocabulary knowledge of words contained within the sections and in the instructions. All of these cognitive skills are core skills of reading comprehension. A representative copy of the Level 3 final exam can be found in Appendix F.

Since the final exam is at the end of the ten week course, all students have been through a similar instructional experience, which adds further stability to the final exam variable.

On a theoretical level, choosing a curriculum-based comprehensive written test as a measure of reading comprehension corresponds with an L2 reading model which states that reading comprehension level can be predicted by a combination of the student's second language grammar level and native language proficiency (Bernhardt & Kamil, 1995).

**Listening Sections on Level 1 and Level 3 final exams**

The Level 1 and Level 3 final exams contain listening sections (see section on the Level 3 final exam, below).

The Level 1 final exam devotes 11% of its final exam to listening activities. It includes three short sections: two consisting of questions read by the teacher and answered by the student in writing, and a short, taped passage followed by written comprehension questions to be answered in written sentences. These sections are graded half on the basis of their demonstration of listening comprehension, and half on the accuracy of the written response; therefore, 5.5% of the final exam score for Level 1 students could be considered to be based not on reading comprehension alone, but also on listening skills. This is a small portion, but bears mention.
Since it was not possible to obtain the final exams of the 14 Level 1 students who took the oral fluency measure, a separate score could not be obtained for the listening sections, or a total score which excluded the listening sections. However, another set (n=45) of Level 1 final exams was obtained, and the scores of the students were calculated with and without the three listening comprehension sections. The correlation was .793 at \( p \leq .001 \). That indicates that there are some differences in the skills contained in the listening section and in the test as a whole, although they are not very large.

The Level 5 final exam does not contain a listening comprehension section.

When not otherwise stated, the reading comprehension variable (FE-T) assumes the inclusion of the listening sections contained in the Levels 1 and 3 final exams.

*The Level 3 Final Exam*

Because Part B of the first research question involved looking at two subsections of the Level 3 final exam, most of the in-depth analysis pertaining to final exam score revolved around the Level 3 final exam. The Level 3 final exam is 15 pages long and is a timed, written test based on the Level 3 curriculum. It contains 18 sections and a variety of task types. See Appendix F for a complete Level 3 final exam, and Appendix E for a list of sections and scores for each final exam.

Since the final exam score, which is being used as a proxy for reading comprehension, actually consists of many kinds of skills, it was hypothesized that the two sections pertaining specifically to reading might be especially sensitive to measuring distinct reading comprehension skills.

The majority of the sections on the Level 3 final exam match closely with grammar competencies taught at the level; however, there are a few sections which specifically target reading
skills. They include a section specifically written to test reading comprehension (7% of the total), vocabulary pre-selected from the readings used in the course (between 8 - 9.5% of the total, depending on which quarter's final exam was used), and idioms taught in the course (7% of the total). There is also a short listening comprehension section, consisting of writing answers to questions read by the teacher. It comprises 4% of the total points.

For the 58 students whose final exams were obtained, final exam scores were calculated with and without the listening comprehension section; thus, the listening comprehension section of the Level 3 final is used in two formats, as an independent (predictor) variable, when it is removed from the final, and as part of a dependent (outcome) variable, when it forms part of the final exam.

The format of the exam has been used, with minor incremental modifications, for more than 20 years of the program's existence, but has never been validated or tested for reliability.

The Level 3 Final Exam with no Listening Section (FE-NLS)

As previously explained, in order to have a reading comprehension measure which was as pure as possible, the listening comprehension section of the Level 3 final exam was removed for 58 students, and two total scores on the Level 3 final exam score were calculated for the 58 students whose final exams were available to the researcher: one final exam total score with the listening section included (FE-T), and the other final exam score with no listening section (FE-NLS).

This measure was used only for the 58 Level 3 students whose exams were scrutinized. For each of the 58 exams, the number of points correct in the listening section was removed from the total number of points correct, the number of possible points in the listening section was removed from the point total of the final exam, and a new percentage of correct items obtained. The
correlation between the scores on the Level 3 final exams with and without the listening section was .919, at the .001 level of significance.

The Reading and Vocabulary Sections of the Level 3 Final Exam (FE-R, FE-V)

To address Part B of Question one, student scores on the reading and vocabulary sections of the Level 3 final exam were studied. The purpose of using those two sections as outcome measures was to isolate the parts of the Level 3 final exam which matched the standard reading comprehension formats the best. These two sections were also tested as alternate dependent variables, for the same group of 58 Level 3 students.

The reading passage in the final exam was a 257 word article entitled "The Happiness Report." Its readability level was calculated at first month, sixth grade level (Frye, 1977), the same level as the oral reading passage taken from the Level 3 reader for the timed oral reading. By another readability formula, the Flesch reading ease level, the score came to 80.8, which is exceptionally close to the Flesch reading ease level of the timed oral reading (79.1). The Flesch-Kincaid level was 4.1, compared to 5.1 for the timed oral reading (generated from Microsoft Word 6.0 software).

The reading is followed by six questions, three of them based on information in the text and three of them more open-ended, each requiring an answer of one or more sentences written by the student. The answer key gives the following instructions:

Give a full point for complete and correct answers. Do not deduct points for grammar and spelling. Deduct 1/2 point for incomplete answers. Use your best judgment. (Level 3 final exam answer key, 2001)

Thus, the answer key indicates that instructors should focus on students' ability to demonstrate reading comprehension, not grammar accuracy.
The vocabulary section consists of four short cloze passages, with target vocabulary listed above them (extra words are included), which are to be written in the appropriate blanks. The answer key instructs teachers to "give one point if perfect. Deduct 1/2 point for spelling or tense errors." The 11 target words, with 6 distracters, come from the six readings used in the Level 3 reader. The text used for the fluency sample is from that same reader, but not covered in the syllabus.

The reading comprehension and vocabulary cloze sections of the Level 3 final exam can serve as direct measures of reading comprehension; their task types are commonly used to do just that. Of cloze vocabulary passages, Fuchs et al. (2001) remark, "cloze is considered a measure of reading comprehension because correct replacements are generated by means of reasoning processes that include comprehension" (p. 244).

Listening Comprehension Section of the Level 3 final exam (FE-L)

The small listening comprehension section was separated from the Level 3 final exam total and analyzed as well. The listening comprehension section consisted of 6 sentences, read aloud by the teacher, which the student answers with a complete sentence. Scoring on that section awarded a full point for error-free answers that "demonstrate comprehension," and deducted up to 1/2 point for errors of any kind, including spelling. Like the other two sections, there was a balance between content and form. Even when the listening section was included in the Level 3 final exam total score, therefore, only 2% of the points on the total score were based on pure listening activities.

The listening portion of the Level 3 final exam was added fairly late into the study, when evidence emerged that listening comprehension might have a more important relationship to oral reading proficiency than initially accounted for; it was able to provide another small measure of
listening comprehension, when taken and deducted from the final exam total and used instead as an independent variable.

*Language Lab Final Exam (LLFE)*

Each level is given a short language lab final exam in the ninth week of the quarter, which consists of 40 points and takes about a half hour to administer. It is graded by the language laboratory instructor, converted to a percent, and factored into the final grade, calculated by the teacher. The exam consists of listening to a series of short, taped items which highlight the grammar or listening features at the level. Some of the items consist of true/false or multiple choice questions, and others require writing a short answer. The answer key gives credit for the students’ demonstration of listening comprehension, not their grammar accuracy. There is no spoken component in the language lab final exam. Individual language lab final exams were not available for further study.

*Final Grade (FG)*

The final grade, given by the teacher, consists of a weighting of the final exam, final language laboratory exam, and other measures of student participation and progress such as homework, quizzes, and participation. In Levels 1 and 3, the final grade consists of a pass or a no pass grade. In Level 5, a letter grade of A,B,C or U is given. In this research study, a no pass and a "U" were equated, since both require retaking the course and both normally result from a final exam score below 70%. Calculation of the final grade follows a formula which varies at different program levels, but gives the teacher some discretionary latitude. Participation and homework are two of the components in the formula, and the teachers write and grade their own midterm. Normally, it can be assumed that a student who scores below 70% on the final exam is also weak in
other areas of performance, but the score may be because of health or job problems, not lack of academic achievement or ability.

**Summary Sheet (SS)**

At the time the final grade is turned in, the teacher also writes qualitative remarks about the student in a small space provided on the end-of-term summary sheet. The summary sheet shows a student's overall performance, with quantitative and qualitative features able to be seen at a glance.

**Multidimensional Fluency Scale (MFS)**

The MFS (Zutell & Rasinski, 1991) uses three criteria in evaluating oral reading: pace, smoothness, and phrasing. MFS pays more attention to prosody and less to miscues than other oral reading evaluations. Using a rubric in place of miscue counting arose as a response to reading researchers who felt that a speed and accuracy system did not account for some of the features of strong, average, or weak readers (Dowhower, 1991). The MFS has been used in other research on oral reading fluency (Pinnell et al., 1995; Moskal, 2002, p. 96). In fact, the question as to whether a miscue-based system which does not account for prosodics or a prosodic-based system which does not count miscues is more powerful holds great interest for researchers at the present time (Cervetti, Jaynes, & Pearson, 2002). The MFS was performed by two raters, the researcher and a doctoral student in reading with extensive background administering L2/ESL and bilingual programs. The MFS was performed for 80 students, most of them from Level 3.

**Miscue Rubric**

In order to count miscues, a consistent miscue coding system was necessary. Drawing for its foundation upon the widely-accepted norms of deducting for substitutions, omissions, and insertions,
but not deducting for starts or self corrections, the system was further refined to account for foreign accent features. Three levels of miscue were established: undeducted miscues, which were intelligible renderings of the target word(s), but spoken with a foreign accent; miscues which may have been due to foreign accent or decoding problems, but did not affect meaning; and significant miscues, which had the potential to alter the meaning of the word or the text surrounding it. The miscue system was applied consistently to all fluency samples. A chart containing all miscues made for each word, and their classifications, created a consistent coding system so that a miscue found in one oral reading would be classified the same way when it appeared in another reading. Appendix C contains the miscue coding key, and a list of all the variations produced for each word.

Missing Data

To be included in the data set, a student had to have an oral fluency score of words correct per minute, a final exam score, and a final grade, as well as information about gender, first language, and level in program; however, a small number of students (4) were absent on the day of the language lab final exam and therefore had no language lab final exam score. To obtain a score for these students, a stepwise regression was run, using the language lab final exam as the dependent variable. It was found that the miscue ratio, coupled with the final exam score, accounted for 77% of variance on the language lab final exam score at ≤.001 level of significance (r= -.464 for miscue ratio and .561 for final exam score). The regression formula (Y = B₁ · X₁ + B₂ · X₂...... + constant) was calculated for each of the 4 students (Perney, 2000), and a language lab score obtained (standard error of estimate = 6).

Procedures

A summary of the procedure timeline appears in Table 3.7.
# Table 3.7

*Timeline of Procedures*

<table>
<thead>
<tr>
<th>Activity</th>
<th>Dates</th>
</tr>
</thead>
<tbody>
<tr>
<td>Obtained permission of university, department, faculty, students</td>
<td>Winter 2001</td>
</tr>
<tr>
<td>Conducted taped oral readings</td>
<td>Fall 2000 - Fall 2001</td>
</tr>
<tr>
<td>Coded taped readings using miscue rubric</td>
<td>Fall 2002 - Spring 2003</td>
</tr>
<tr>
<td>Gathered additional performance data</td>
<td>Fall 2000 - Spring 2003</td>
</tr>
<tr>
<td>Examined and coded 58 Level 3 exams</td>
<td>Fall 2002- Spring 2003</td>
</tr>
<tr>
<td>Trained another rater, who recoded 80 selected fluency samples using MFS</td>
<td>Winter 2003 - Spring 2003</td>
</tr>
<tr>
<td>Compared scores on two fluency systems</td>
<td>Spring 2003</td>
</tr>
<tr>
<td>Chose 6 Level 3 students based on teacher comments and examined performances</td>
<td>Winter 2003 - Spring 2003</td>
</tr>
<tr>
<td>Analyzed all data using quantitative and qualitative methods</td>
<td>Winter 2003 - Summer 2003</td>
</tr>
</tbody>
</table>

**Permission**

First, permission to carry out the research and obtain the needed supplementary data was granted by the university’s institutional research review board, with the approval of the ESL program’s department chair and the cooperating teachers and coordinators.

**Taping**

232 students were taped for one minute reading the story "A Real Bargain," as part of their end-of-term oral interviews. Since Level 1 students do not take part in an oral interview, their oral readings were obtained separately.
Coding Oral Reading using WCPM

The oral reading of the 232 students was coded using a system of words correct per minute (WCPM). A line-by-line miscue coding key, specifically based on the reading passage, was developed and used to insure reliable coding (See Appendix C).

Gathering and Analyzing Additional Performance Data

Additional data, including final exam score, final language laboratory exam score, and final course grade was obtained for all of the students. Correlations were performed to see how these measures correlated with the fluency measures based on WCPM.

Coding Reading, Vocabulary, and Listening sections for 58 Level 3 Students

The reading, vocabulary, and listening sections of the Level 3 final exam were coded for 58 students, and added to the other measures as new variables. These new measures were correlated with the WCPM oral reading measure and other performance data.

Training Other Raters and Coding 80 Samples using MFS

For 80 mixed level students, an additional fluency score was obtained, using the MFS fluency rubric (Zutell & Rasinski, 1991). The MFS rating, consisting of a total score and three subscores, was done by three trained instructors: the researcher; a colleague in the ESL field who is also a doctoral student in reading; and a retired ESL teacher with a masters degree in reading. The researcher scored all 80 samples; the doctoral student scored 70, and the reading teacher scored 10. The two scores for each student were averaged, so that each students' MFS score consisted of an average based on two evaluations.

Comparing Scores on two Fluency Measures

All of the previous fluency variables were compared with the MFS scores for 80 students.
Choosing and studying seven Level 3 students

Seven Level 3 students were chosen as representative strong, average, and weak learners, on the basis of their final exam score, language lab final exam score, and teacher comments. Their oral reading was listened to again, and a full description of its characteristics made. The evaluations were done by the researcher.

Data Analysis

An overview of data analysis performed, broken down by research question, is presented in Table 3.8.

For Question One

Question one asks if there is a correlation between adult L2/ESL oral reading fluency and silent reading comprehension. It is addressed through statistical correlations which include Pearson correlations, measurements of central tendency, analysis of variables, regression analysis, frequencies, and descriptive statistics.

The WCPM reliability was established through several means. For timing, two timings of the oral readings were done, one by the teacher and the second by the researcher. For miscue counting, a miscue coding key was created specifically for the reading (see Appendix C for the miscue coding key). All miscues were assigned a code to insure reliable coding. The miscue coding was based on Goodman and Burke (1973) and Samuels (1979), among others, who deducted substitutions, omissions, inserted words, and non words, but not pauses or self-corrections.
Table 3.8

*Data Analysis Performed for Each Research Question*

<table>
<thead>
<tr>
<th>Research Question</th>
<th>Data Analysis Performed</th>
</tr>
</thead>
<tbody>
<tr>
<td>Question 1: Is there a correlation between second language adult ESL oral reading</td>
<td>Part A: Correlations, regressions of WCPM, FE-T, LLFE, and FG for all students in sample, with sorting by first language and level. Part B: Correlations, regressions of WCPM, FE-T, LLFE, FE-R, and FE-V for 58 Level 3 students</td>
</tr>
<tr>
<td>fluency and silent reading comprehension?</td>
<td></td>
</tr>
<tr>
<td>Question 2: Which measure of oral reading fluency correlates better with reading</td>
<td>Correlations, regressions of MFS, WCPM, FE-T, and LLFE for 80 Level 3 students, and with FE-R and FE-V for 58 Level 3 students.</td>
</tr>
<tr>
<td>comprehension for L2/ESL adults, words correct per minute (WCPM), or the Zutell-</td>
<td></td>
</tr>
<tr>
<td>Rasinski multidimensional fluency scale (MFS) rubric?</td>
<td></td>
</tr>
<tr>
<td>at the intermediate level be characterized, and what does miscue analysis of that</td>
<td></td>
</tr>
<tr>
<td>reading add to the description?</td>
<td></td>
</tr>
</tbody>
</table>

For Question Two

Question Two asks which correlates better with adult L2/ESL silent reading comprehension, a method of words correct per minute (WCPM) or the Zutell-Rasinski Multidimensional Fluency Scale (MFS).

The MFS fluency rubric used for the 80 samples assigned numbers based on qualitative judgments of oral reading performance; this was confirmed by having two trained raters listen to each sample. The result was averaged. These scores were correlated with silent reading
comprehension measures previously taken using words correct per minute, and compared, then evaluated with regression analysis.

Each fluency sample was evaluated, using the MFS scale, by two different raters. 70 of them were done by the researcher and a reading doctoral colleague, and an additional ten MFS scores, added when another set of final exams suddenly became available, were rated by the researcher and a retired teacher with a masters degree in reading. The ratings were done using the MFS scale (see Table 2.3).

**Interrater Reliability for MFS.** The second rater was given an MFS rating instruction sheet, which can be found in Appendix G, and a copy of the researcher's scoring sheet for the first three taped samples, done by the first rater. The two MFS ratings were averaged, both for total score and for the three subscores, and the subscores used for all subsequent data analysis. The correlations for the MFS between the two raters and the mean score used for each MFS measure are summarized in Table 3.9.

Table 3.9
**Interrater Reliability for MFS Total and Subscores and Mean Score for each MFS Measure**

<table>
<thead>
<tr>
<th></th>
<th>Rater 2 MFS total</th>
<th>Rater 2 MFS pace</th>
<th>Rater 2 MFS phrasing</th>
<th>Rater 2 MFS smoothness</th>
</tr>
</thead>
<tbody>
<tr>
<td>Rater 1 MFS total</td>
<td>.72</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>mean</td>
<td>2.57</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>SD</td>
<td>.72</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Rater 1 MFS-pace</td>
<td></td>
<td>.62</td>
<td></td>
<td></td>
</tr>
<tr>
<td>mean</td>
<td></td>
<td>2.62</td>
<td></td>
<td></td>
</tr>
<tr>
<td>SD</td>
<td></td>
<td>.81</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Rater 1 MFS-phrasing</td>
<td></td>
<td></td>
<td>.54</td>
<td></td>
</tr>
<tr>
<td>mean</td>
<td></td>
<td></td>
<td>2.57</td>
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<tr>
<td>SD</td>
<td></td>
<td></td>
<td>.79</td>
<td></td>
</tr>
<tr>
<td>Rater 1 MFS-smoothness</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>------------------------</td>
<td>-------</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>mean</td>
<td>.64</td>
<td></td>
<td></td>
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<tr>
<td>SD</td>
<td>2.47</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>n=80</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Note. The significance level is \(\leq 0.001\).

As can be seen from Table 3.9, interrater reliability on the MFS is .72 overall, and lower for each of the three submeasures, with the phrasing measure just above chance. The higher correlation of the total can be explained by the greater number of items. The fact that two trained professionals in the field would score so divergently on the taped samples reveals a vulnerability of the MFS and similarly-descriptive fluency rubrics.

For Question Three

The third research question asks how the strong, average, and weak reading of intermediate level students can be characterized, and what miscue analysis can add to the description. The question was addressed through repeated listening to the fluency samples of the seven case studies, with descriptive notes taken about them. Since close listening is qualitative, reliability could not be established. Regularities were sought when the descriptions were completed, and are included in the results and discussion chapters.

About the Data Set

Because a number of different groups and variables are included in the data set, it is important to clarify the sample size with regard to each group and variable. Table 3.10 shows sample size for each of the variables and groups.

When results of the three research questions are reported in Chapter 4, it should be remembered that some of the samples analyzed are a significantly different size from other ones. Their sizes affect their significance level. Table 3.10 serves as a reference for evaluating the significance of various outcomes with respect to their sample sizes.
Table 3.10
Size of Data Set for Groups and Variables

<table>
<thead>
<tr>
<th>Group or Variable</th>
<th>number</th>
<th>number with FE-NLS</th>
<th>number with MFS</th>
</tr>
</thead>
<tbody>
<tr>
<td>total sample size</td>
<td>232</td>
<td>58</td>
<td>80</td>
</tr>
<tr>
<td>Level 1 students</td>
<td>14</td>
<td>0</td>
<td>14</td>
</tr>
<tr>
<td>Level 3 students</td>
<td>154</td>
<td>58</td>
<td>57</td>
</tr>
<tr>
<td>Level 5 students</td>
<td>64</td>
<td>0</td>
<td>9</td>
</tr>
<tr>
<td>Polish students</td>
<td>143</td>
<td>29</td>
<td>40</td>
</tr>
<tr>
<td>Ukrainian students</td>
<td>33</td>
<td>12</td>
<td>16</td>
</tr>
<tr>
<td>Chinese students</td>
<td>23</td>
<td>6</td>
<td>6</td>
</tr>
<tr>
<td>Hispanic students</td>
<td>14</td>
<td>5</td>
<td>6</td>
</tr>
<tr>
<td>Bulgarian students</td>
<td>9</td>
<td>3</td>
<td>6</td>
</tr>
<tr>
<td>Other languages</td>
<td>10</td>
<td>3</td>
<td>6</td>
</tr>
</tbody>
</table>

n = 232
CHAPTER FOUR

Results

The purpose of this descriptive study was to answer three research questions: 1.) Is there a correlation between second language adult ESL oral reading fluency and silent reading comprehension? 2.) Which measure of oral reading fluency correlates better with reading comprehension for L2/ESL adults, words correct per minute (WCPM), or the Zutell-Rasinski multidimensional fluency scale (MFS) rubric? and 3.) How might the oral reading of strong, average, and weak L2/ESL students at the intermediate level be characterized, and what can miscue analysis of that reading add to the description?

This chapter is organized by first presenting the descriptive statistics for the measures taken, followed by findings according to each of the research questions, followed by additional findings of interest.

The means, standard deviations, minimum and maximum scores on all measures taken for the full group of participants (n=232) are summarized in Table 4.1. A few observations can be made. There is a wide range of WCPM, 131 words, between the lowest and highest score, which shows that the measure can discern dramatic differences in performance despite its brief time frame. The WCPM mean, which can be averaged to 110, is comfortably above the threshold cited by L1 reading researchers as the necessary minimum to construct meaning from print (Hasbrouck & Tindal, 1992; Markell & Deno, 1997). The final exam score has a smaller range, 47 percentage points, than the language lab final, which has a spread of 72%, but the mean for the language lab final is three points higher than the mean for the final exam. The mean miscue ratio and significant miscue ratio are close, averaging about 4 words miscued for every 100 read.
Table 4.1

*Minimum, Maximum, Mean, and Standard Deviation for Measures Taken for All Participants*

<table>
<thead>
<tr>
<th>Measure</th>
<th>Minimum</th>
<th>Maximum</th>
<th>Mean</th>
<th>Standard Deviation</th>
</tr>
</thead>
<tbody>
<tr>
<td>words correct per minute (fluency sample) (WCPM)</td>
<td>41</td>
<td>172</td>
<td>109.67</td>
<td>24.74</td>
</tr>
<tr>
<td>total words read (TWR)</td>
<td>52</td>
<td>174</td>
<td>114.68</td>
<td>23.76</td>
</tr>
<tr>
<td>total miscues (TM)</td>
<td>0</td>
<td>30</td>
<td>4.81</td>
<td>4.41</td>
</tr>
<tr>
<td>total significant miscues (TSM)</td>
<td>0</td>
<td>24</td>
<td>3.75</td>
<td>3.77</td>
</tr>
<tr>
<td>final exam score (FE-T)</td>
<td>50</td>
<td>97</td>
<td>80.75</td>
<td>9.90</td>
</tr>
<tr>
<td>lang. lab final exam score (LLFE)</td>
<td>28</td>
<td>100</td>
<td>83.32</td>
<td>10.89</td>
</tr>
<tr>
<td>total raw score (final exam and lab final) (TRS)</td>
<td>95</td>
<td>171</td>
<td>143.14</td>
<td>16.29</td>
</tr>
<tr>
<td>miscue ratio (MR)</td>
<td>.00</td>
<td>.283</td>
<td>.04547</td>
<td>.045</td>
</tr>
<tr>
<td>significant miscue ratio (SMR)</td>
<td>.00</td>
<td>.27</td>
<td>.0357</td>
<td>.039</td>
</tr>
</tbody>
</table>

n = 232

Question One

Is there a correlation between second language adult ESL oral reading fluency and silent reading comprehension?

*Weak to Moderate but Highly Significant Correlations*

There are weak to moderate, but highly significant (p ≤ .001) correlations between adult L2/ESL oral reading fluency measures and the silent reading comprehension measure (n=232). This
can be seen in the correlations between various presentations of the fluency measure (WCPM, TWR, TM, TSM, MR, and SMR) and the final exam score (FE-T) shown in Table 4.1. In addition to the fluency measures and final exam score, correlations with the language lab final exam score (LLFE) and the percent correct score on the reading sections of the Level 3 final exam (FE-R + FE-V) are shown. The correlations reveal a range of between $r = .21$ and $r = .32$ for the fluency measures and the final exam score, with the weakest correlation for speed (TWR) and the strongest for significant miscue ratio (SMR). The correlations are in the same range, and less significant, for the smaller sample of Level 3 students ($n=58$) whose scores on the Level 3 reading (FE-R) and vocabulary (FE-V) sections of the final exam were available; thus, the attempt to use a more refined dependent variable did not enhance correlations with the fluency measures.

Interestingly, speed (TWR) alone was less predictive of SRC than accuracy alone (TM, TSM), and both speed and accuracy were less predictive than the miscue ratios (MR, SMR) similar to L1 research with upper elementary children in which accuracy had more predictive value than speed (Pinnell et al., 1995; White, 1995).

*Increase in Correlation as Level in Program Increases*

When the sample was broken into subgroups by level in program, the correlation between fluency measures and FE-T was stronger for Level 3 than Level 1, and stronger for Level 5 than Level 3, and increased again between Level 3 and Level 5. The highest correlation was at Level 5, between miscue ratio (MR) and final exam ($r = -.46 p \leq .001$). Correlations by level in program can be seen in Table 4.2.
Table 4.2  

Correlations for Measures of Oral Reading Fluency and Other Measures

<table>
<thead>
<tr>
<th>Measure</th>
<th>Final exam (FE-T)</th>
<th>Lang. Lab final (LLFE)</th>
<th>Reading and vocab of Level 3 final (FE-R + FE-V)</th>
</tr>
</thead>
<tbody>
<tr>
<td>words correct per minute</td>
<td>.26**</td>
<td>.39**</td>
<td>.23</td>
</tr>
<tr>
<td>(WCPM)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>total words read</td>
<td>.21**</td>
<td>.35**</td>
<td>.18</td>
</tr>
<tr>
<td>(TWR)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>total # of miscues</td>
<td>-.29**</td>
<td>-.30**</td>
<td>-.29*</td>
</tr>
<tr>
<td>(TM)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>total # of sig. miscues</td>
<td>-.30**</td>
<td>-.32**</td>
<td>-.13</td>
</tr>
<tr>
<td>(TSM)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>miscue ratio</td>
<td>-.31**</td>
<td>-.41**</td>
<td>-.33*</td>
</tr>
<tr>
<td>(MR)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>significant miscue ratio</td>
<td>-.32**</td>
<td>-.42**</td>
<td>-.18</td>
</tr>
<tr>
<td>(SMR)</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

n = 232; n= 58 for FE-R and FE-V correlations  
**p ≤ .001  *p ≤ .05

Also, by Level 5, the fluency measures are more strongly correlated with final exam than with language lab final exam, unlike Levels 1 and 3. This suggests that adult L2/ESL fluency may become a useful assessment measure only when a certain threshold of listening comprehension is reached, and listening has become more "automatized."

Variation in Correlations and Descriptive Statistics by First Language

When the sample was broken into subgroups by first language, there was a large range in the correlations (see Table 4.3). The strongest correlation between oral reading and silent reading comprehension was found with Hispanic students (n =14), where correlations reached r = -.68 (p ≤ .01) for the miscue ratio (MR) and the reading measure, FE-T. This supports other research on Hispanic learners of English, in which Spanish-speaking L2/ESL children's ORF scores were strongly correlated with their silent reading comprehension assessments (Baker & Good, 1995;
Ramirez, 2001).
Table 4.3

*Correlations for Measures of Oral Reading Fluency and Other Measures by Level*

<table>
<thead>
<tr>
<th>Measure</th>
<th>Final exam (FE-T)</th>
<th>Lang. Lab final (LLFE)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>words correct per minute (WCPM)</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Level 1 (n=14)</td>
<td>.04</td>
<td>.63*</td>
</tr>
<tr>
<td>Level 3 (n=154)</td>
<td>.27**</td>
<td>.38**</td>
</tr>
<tr>
<td>Level 5 (n=64)</td>
<td>.41**</td>
<td>.39*</td>
</tr>
<tr>
<td><strong>total words read (TWR)</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Level 1</td>
<td>.06</td>
<td>.64</td>
</tr>
<tr>
<td>Level 3</td>
<td>.22**</td>
<td>.34**</td>
</tr>
<tr>
<td>Level 5</td>
<td>.35**</td>
<td>.35**</td>
</tr>
<tr>
<td><strong>total # of miscues (TM)</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Level 1</td>
<td>.06</td>
<td>-.01</td>
</tr>
<tr>
<td>Level 3</td>
<td>-.26**</td>
<td>-.25**</td>
</tr>
<tr>
<td>Level 5</td>
<td>-.42**</td>
<td>-.34**</td>
</tr>
<tr>
<td><strong>total # of sig. miscues (TSM)</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Level 1</td>
<td>-.11</td>
<td>-.19</td>
</tr>
<tr>
<td>Level 3</td>
<td>-.27**</td>
<td>-.23**</td>
</tr>
<tr>
<td>Level 5</td>
<td>-.40**</td>
<td>-.37**</td>
</tr>
<tr>
<td><strong>miscue ratio (MR)</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Level 1</td>
<td>-.06</td>
<td>-.40</td>
</tr>
<tr>
<td>Level 3</td>
<td>-.29**</td>
<td>-.32**</td>
</tr>
<tr>
<td>Level 5</td>
<td>-.46**</td>
<td>-.37**</td>
</tr>
<tr>
<td><strong>significant miscue ratio (SMR)</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Level 1</td>
<td>-.18</td>
<td>-.59*</td>
</tr>
<tr>
<td>Level 3</td>
<td>-.29*</td>
<td>-.28**</td>
</tr>
<tr>
<td>Level 5</td>
<td>-.43**</td>
<td>-.38**</td>
</tr>
</tbody>
</table>
n = 232
** correlations are significant at the .01 level
* correlations are significant at the .05 level

Also, the average score on the listening measures (LLFE and FE-L) of the Hispanic students was somewhat lower than for the other language groups; however, one outlier disproportionately affected the listening measure. If the sample number had been larger, the findings could have been better confirmed.

Because the number of some of the first language groups was small, two significance levels were included in Table 4.4. The Poles had significant correlations (p ≤ .01) for most of the correlations, but correlations of p ≤ .05 were obtained for several fluency measures for the Hispanics, Bulgarians, and Ukrainians. Except for the higher correlations of Hispanics on a number of the fluency measures and FE-T, no regularities could be observed.

Table 4.4

<table>
<thead>
<tr>
<th>Measure</th>
<th>Final exam (FE-T)</th>
<th>Lang. Lab final (LLFE)</th>
</tr>
</thead>
<tbody>
<tr>
<td>words correct per minute (WCPM)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Polish (n=143)</td>
<td>.24**</td>
<td>.24**</td>
</tr>
<tr>
<td>Ukrainian (n=33)</td>
<td>.10</td>
<td>.53**</td>
</tr>
<tr>
<td>Chinese (n=23)</td>
<td>.15</td>
<td>.51</td>
</tr>
<tr>
<td>Hispanic (n=14)</td>
<td>.55*</td>
<td>.66*</td>
</tr>
<tr>
<td>Bulgarian (n=9)</td>
<td>.52</td>
<td>.76*</td>
</tr>
<tr>
<td>other languages (n=10)</td>
<td>.30</td>
<td>.34</td>
</tr>
<tr>
<td>total words read (TWR)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Polish</td>
<td>.19**</td>
<td>.21**</td>
</tr>
<tr>
<td>Ukrainian</td>
<td>.12</td>
<td>.47**</td>
</tr>
<tr>
<td>Language</td>
<td>TM</td>
<td>TSM</td>
</tr>
<tr>
<td>---------------</td>
<td>--------</td>
<td>------</td>
</tr>
<tr>
<td>Polish</td>
<td>-.29**</td>
<td>-.14</td>
</tr>
<tr>
<td>Ukrainian</td>
<td>-.11</td>
<td>-.42*</td>
</tr>
</tbody>
</table>
| Chinese       | -.37   | -.29 *
| Hispanic      | -.73** | -.72**|
| Bulgarian     | -.56   | -.54 |
| Other languages | -.50   | -.53 |

**Table 4.4 (cont.)**

<table>
<thead>
<tr>
<th>Language</th>
<th>MR</th>
<th>SMR</th>
</tr>
</thead>
<tbody>
<tr>
<td>Polish</td>
<td>-.31**</td>
<td>-.21*</td>
</tr>
<tr>
<td>Ukrainian</td>
<td>.05</td>
<td>-.52**</td>
</tr>
<tr>
<td>Chinese</td>
<td>-.30</td>
<td>-.25</td>
</tr>
<tr>
<td>Hispanic</td>
<td>-.68**</td>
<td>-.86**</td>
</tr>
<tr>
<td>Bulgarian</td>
<td>-.75*</td>
<td>-.85**</td>
</tr>
<tr>
<td>Other languages</td>
<td>-.43</td>
<td>-.46</td>
</tr>
</tbody>
</table>

*significant at the .05 level.
**significant at the .01 level.

n = 232  ** significant at the .01 level; * significant at the .05 level.
Note. Because of smaller sample sizes for some language groups, this scale uses a different level of significance from other tables in the chapter.

Chinese Performance on Fluency Measures and Other Measures

Fluency scores for Chinese students (n=23) are significantly below those of students from other language groups, not only for words correct per minute (WCPM), but also for number of miscues (TM) and number of significant miscues (TSM) (see Table 4.5); however, their scores on the final exam and language lab final exam fall within the

Table 4.5

Mean Fluency Scores According to First Language

<table>
<thead>
<tr>
<th>L1</th>
<th>Number</th>
<th>WCPM</th>
<th>TM</th>
<th>TSM</th>
</tr>
</thead>
<tbody>
<tr>
<td>Polish</td>
<td>143</td>
<td>117.84</td>
<td>4.05</td>
<td>3.01</td>
</tr>
<tr>
<td>SD</td>
<td>20.74</td>
<td>3.32</td>
<td>2.68</td>
<td></td>
</tr>
<tr>
<td>Ukrainian</td>
<td>33</td>
<td>101.70</td>
<td>5.06</td>
<td>4.15</td>
</tr>
<tr>
<td>SD</td>
<td>25.65</td>
<td>3.99</td>
<td>3.58</td>
<td></td>
</tr>
<tr>
<td>Chinese</td>
<td>23</td>
<td>83.22</td>
<td>9.74</td>
<td>8.09</td>
</tr>
<tr>
<td>SD</td>
<td>20.73</td>
<td>8.00</td>
<td>7.07</td>
<td></td>
</tr>
<tr>
<td>Hispanic</td>
<td>14</td>
<td>105.50</td>
<td>5.43</td>
<td>4.43</td>
</tr>
<tr>
<td>SD</td>
<td>23.80</td>
<td>4.03</td>
<td>3.23</td>
<td></td>
</tr>
<tr>
<td>Bulgarian</td>
<td>9</td>
<td>90.56</td>
<td>4.89</td>
<td>3.78</td>
</tr>
<tr>
<td>SD</td>
<td>32.12</td>
<td>2.67</td>
<td>1.92</td>
<td></td>
</tr>
<tr>
<td>Other language</td>
<td>10</td>
<td>105.40</td>
<td>2.50</td>
<td>1.90</td>
</tr>
<tr>
<td>SD</td>
<td>17.55</td>
<td>2.01</td>
<td>1.85</td>
<td></td>
</tr>
</tbody>
</table>

n = 232
normal range (see Table 4.6). For that reason, their performance is of special interest.

The discrepancy between Chinese performance in fluency and in silent reading tasks is reflected in the correlations in Table 4.4, which indicate that there is no significant relationship between fluency scores and silent reading measures for the Chinese learners.

Table 4.6 \textit{Mean and Standard Deviation for Final Exam and Language Lab Final Exam by First Language}

<table>
<thead>
<tr>
<th></th>
<th>Final Exam Mean</th>
<th>SD</th>
<th>Lang. Lab Final Mean</th>
<th>SD</th>
</tr>
</thead>
<tbody>
<tr>
<td>Polish</td>
<td>81.36%</td>
<td>9.64</td>
<td>85.10%</td>
<td>9.10</td>
</tr>
<tr>
<td>Ukrainian</td>
<td>79.14%</td>
<td>10.83</td>
<td>81.00%</td>
<td>11.30</td>
</tr>
<tr>
<td>Chinese</td>
<td>77.87%</td>
<td>10.37</td>
<td>80.57%</td>
<td>8.87</td>
</tr>
<tr>
<td>Hispanic</td>
<td>82.14%</td>
<td>9.52</td>
<td>76.86%</td>
<td>20.20</td>
</tr>
<tr>
<td>Bulgarian</td>
<td>79.67%</td>
<td>13.26</td>
<td>80.67%</td>
<td>16.27</td>
</tr>
<tr>
<td>Other language</td>
<td>82.96%</td>
<td>6.15</td>
<td>83.30%</td>
<td>10.20</td>
</tr>
<tr>
<td>Total</td>
<td>80.75%</td>
<td>9.90</td>
<td>83.32%</td>
<td>10.89</td>
</tr>
</tbody>
</table>

\(n = 232\)

Apparently, oral reading by adult L2/ESL Chinese students is not demonstrative of their inner structural knowledge. Since the Chinese students perform far below the rest of the sample on oral reading fluency measures, but are on target for their reading and listening measures, they apparently have some other means of constructing meaning from print which does not access the oral renderings of the words being read.
Correlation of Fluency Measures with Listening Measure

Overall, the measures of oral reading fluency have slightly stronger correlations with the language lab final exam (LLFE) than the final exam (FE-T) or reading sections of the Level 3 final exam (FE-R + FE-V) (see Table 4.1) although for total miscues (TM) and total significant miscues (TSM), the numbers are very close. Thus, for the sample in this study, oral reading is more closely associated with listening comprehension than it is with silent reading. In addition, listening comprehension is a better predictor of silent reading comprehension than any fluency measure is. This supports both L1 and L2 reading theories which claim that listening comprehension, which is emblematic of general language level, is a strong predictor of silent reading comprehension (SRC) (Dymock, 1993; Gough & Tunmer, 1986; Krashen, 1985).

In sum, looking at the original question, "Is there a correlation between second language adult ESL oral reading fluency and silent reading comprehension?" one might conclude the following: there is a weak but significant correlation, which is slightly stronger for measures of accuracy than speed, and strongest for miscue ratio; the correlation increases as proficiency level increases; among different first language groups, the correlation is highest for Hispanic learners, and lowest for Chinese; and all fluency measures correlated better with a listening measure than with the silent reading comprehension measure.

Question Two

Which measure of oral reading fluency correlates better with reading comprehension for L2/ESL adults, words correct per minute (WCPM), or the Zutell-Rasinski multidimensional fluency scale (MFS) rubric?

WCPM and MFS Have Similar Levels of Correlation and Significance
MFS correlates with silent reading comprehension at a level of .29, only slightly better than WCPM, and at the same level of significance (see Table 4.7). Thus, it can be said that MFS, like the previous fluency measure, has a weak but highly significant correlation with adult L2/ESL silent reading comprehension. The correlations between WCPM, MR, MFS, FE-T, and LLFE are shown in Table 4.7.

Table 4.7

<table>
<thead>
<tr>
<th>Measure</th>
<th>MR</th>
<th>SMR</th>
<th>MFS</th>
<th>FE-T</th>
<th>LLFE</th>
</tr>
</thead>
<tbody>
<tr>
<td>WCPM</td>
<td>-.52</td>
<td>-.52</td>
<td>.88</td>
<td>.26</td>
<td>.39</td>
</tr>
<tr>
<td>MR</td>
<td>.96</td>
<td>-.59</td>
<td>-.31</td>
<td>-.41</td>
<td></td>
</tr>
<tr>
<td>SMR</td>
<td>-.61</td>
<td>-.32</td>
<td>-.42</td>
<td></td>
<td></td>
</tr>
<tr>
<td>MFS</td>
<td>.29</td>
<td>.46</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>FE-T</td>
<td></td>
<td></td>
<td></td>
<td>.55</td>
<td></td>
</tr>
</tbody>
</table>

n = 232; for MFS scores = 80.

All correlations are significant at ≤ .001.

Prosodic Features of MFS did not Enhance its Predictive Power

The MFS has three subskills, which are averaged to get the MFS total score. They consist of phrasing, smoothness, and pace (see MFS, p. x). The study found that none of the subskills of the MFS had significantly higher correlations with FE-T than the total MFS score. However, when the subskills were put in a stepwise regression analysis to predict FE-T, the pace subskill was as strong a predictor (9%) of the reading measure as the total MFS score, and the other two skills (phrasing and
smoothness, which could be considered the more "prosodic" measures) were discarded. Therefore, it appears that prosodic features did not serve as predictors for performance in SRC.

*MFS Predicts Listening Measure better than Silent Reading Measure*

Like the other set of fluency measures, MFS is more highly correlated with the LLFE than with FE-T (see Table 4.7). The correlation of MFS and LLFE ($r = .46 \leq .001$) is the strongest correlation of any of the oral reading fluency measures and either silent reading or listening comprehension.

*MFS has Low Interrater Reliability*

Using the MFS revealed that it has low interrater reliability. Because of the subjective nature of the judgments made about pace, phrasing, and smoothness, even trained raters score just above chance for some of the submeasures (see Table 3.5). WCPM and MFS scores are highly correlated with each other ($r = .88; p \leq .001$), and therefore provide similar information. However, the lower level of interrater reliability for MFS makes it a less reliable tool than the more quantitative fluency measures.

*Miscue Ratio has the Highest Correlations with SRC*

Miscue ratio (MR) and significant miscue ratio (SMR) have slightly higher correlations with the FE-T, FE-R+FE-V and LLFE (-.31 and -.32, respectively) than either the MFS (.29) or WCPM (.26) measures do (see Table 4.1). Something about the proportion of speed and accuracy provides a slightly better portrait of the other competencies (silent reading and listening) than a system which deducts miscues from total words read.

When the two fluency measuring systems, words correct per minute and a fluency rubric, are compared, one finds that the speed measure in MFS correlates with silent reading comprehension
better than the prosody measures, and that the accuracy measure in WCPM correlates better with SRC than the speed measure. Therefore it appears that accuracy, expressed in the form of miscue ratio or significant miscue ratio, is the best predictor of the fluency measures available.

**MFS does not Account for Many L2/ESL Oral Reading Features**

If a fluency rubric is to be used with adult L2/ESL students, it needs to account for several features the MFS did not pick up. The second MFS rater, who provided a written comment sheet which appears in Appendix H, found the MFS to be missing some of the salient descriptors needed for such students. Since the students are all literate, periods, commas and run-ons were not an issue in all but a few extreme cases. However, she found it "difficult, at times, to distinguish between number 2 and 3 of phrasing. I found myself wanting something in between. Many of the students phrased in two or three word chunks, but some at a more advanced stage than others." The researcher had the same concerns, and an attempt was made to provide a more relevant fluency rubric for adult L2/ESL students. The third attempt at a rubric appears in Appendix I.

In sum, looking at the original question, "Which measure of oral reading fluency correlates better with reading comprehension for L2/ESL adults, words correct per minute (WCPM), or the Zutell-Rasinski multidimensional fluency scale (MFS) rubric?" one might conclude the following: the MFS is very slightly more correlated with SRC than the WCPM score, and at the same level of significance; miscue ratio is more correlated with SRC than either WCPM or MFS; of the MFS subskills, pace was the only predictor for silent reading comprehension, and the prosodic measures did not add to the prediction; interrater reliability on the MFS is low; like WCPM, the MFS correlates better with the listening measure than with the silent reading comprehension measure; and
the MFS is missing certain descriptive features needed to characterize the performance of adult L2/ESL learners.

**Question Three**

How might the oral reading of strong, average, and weak L2/ESL students at the intermediate level be characterized, and what can miscue analysis of that reading add to the description?

A list of the characteristics of the seven students chosen appears in Table 4.8. The table includes gender, first language (L1), final exam score total (FE-T), Final grade (FG), language lab final exam total score (LLFE), and teacher comments (TC). In Level 3, final grade is a "P" (pass) or "N" (no pass). The students were chosen on the basis of a combination of teacher comments, final exam score, and language lab final exam score.

The fluency scores of the students appear in Table 4.8, followed by a description of each student's oral fluency performance. The fluency measures include words correct per minute (WCPM), total words read (TWR), total miscues (TM), total significant miscues (TSM), miscue ratio (MR), significant miscue ratio (SMR), multidimensional fluency scale (MFS), MFS-phrasing, MFS-smoothness, and MFS-pace.

*Good Silent Readers may not Perform Well on ORF*

Students who performed well on the final exam do not necessarily have high ratings on their oral reading. The TWR score for Student #1, a strong student, for example, is below all of the other TWR rates except one of the weak students, Student #7, and the Chinese student, Student #5. In MFS smoothness, Student #1 actually scored at the level of the Chinese student, #5, and below all of the others, including the two weak students. It should be noted that the strong student who did not
read well orally was Bulgarian, which uses an alphabet other than the Roman alphabet; his discomfort with decoding was surely related to that.
Table 4.8

*Characteristics of Seven Level 3 Students Chosen for Miscue Analysis*

<table>
<thead>
<tr>
<th>Student</th>
<th>Gender/L1</th>
<th>FE-T/FG</th>
<th>LLFE</th>
<th>TC</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>M/Bulgarian</td>
<td>96/P</td>
<td>100</td>
<td>One of the best in the class</td>
</tr>
<tr>
<td>2</td>
<td>F/Polish</td>
<td>98/P</td>
<td>95</td>
<td>One of the best students in the class.</td>
</tr>
<tr>
<td>3</td>
<td>F/Hispanic</td>
<td>83/P</td>
<td>95</td>
<td>A good student, but needs more practice with grammar and spelling</td>
</tr>
<tr>
<td>4</td>
<td>M/Polish</td>
<td>80/P</td>
<td>98</td>
<td>missed some classes, but did his best to make up the work.</td>
</tr>
<tr>
<td>5</td>
<td>F/Chinese</td>
<td>88/P</td>
<td>79</td>
<td>hard-working, has enough &quot;real world&quot; exposure to participate in discussions on current events. works well in pair and small group situations.</td>
</tr>
<tr>
<td>6</td>
<td>F/Polish</td>
<td>64/N</td>
<td>61</td>
<td>Erratic performance. Compositions were always perfect...not sure if they were done without assistance. Work took a nosedive after the midterm.</td>
</tr>
<tr>
<td>7</td>
<td>F/Ukrainian</td>
<td>65/N</td>
<td>68</td>
<td>Serious and methodical, but has trouble applying structures to &quot;real&quot; situations. Spelling is very weak for this level. Needs more time with Level 3.</td>
</tr>
</tbody>
</table>

On the basis of the qualitative descriptions in concert with the fluency statistics, the following general statements can be made:

*The Strong Students Miscue Less*
The stronger students, however, make fewer miscues, both total (TM) and significant (TSM). The two strong students had one miscue or none, compared to three, four or five for the average or weak students. They demonstrate a higher level of accuracy than the weak students.

*The Chinese Reader has Low ORF but Good Reading Scores*

The Chinese student seems to be a "special case." Her score is extremely low on all fluency measures; however, her performance on the final exam and language lab final exam are in the high average range, and the teacher comments are generally positive. Like the Bulgarian student, the Chinese student did not learn to read using the Roman alphabet, and, additionally, speaks a language which shares no cognate words with English.

*Power of Miscue Analysis Impeded by Foreign Accent Issue*

Overall, miscue analysis is not as powerful a window into the reading process for adult L2/ESL students as it is for L1 children because of the "foreign accent" issue. The reading performance does not inform the rater whether a miscue derives from a problem with understanding the word's meaning, or pronouncing it. For example, numerous participants in the study pronounced the word "used" with two syllables. It was impossible to know how many of them understood that the word in this article meant "second hand," both when mispronounced and when pronounced correctly. Further, it is impossible to know whether a mispronounced rendering is developmental -- that is, in the process of becoming ameliorated -- or has already reached a plateau as part of a permanent foreign accent.

The coded text with the miscue analysis sheet for three representative students of the seven analyzed appears in Appendix J.
Table 4.9 shows descriptive statistics of all the fluency measures of the seven learners. It can be clearly seen that the WCPM of Student #1, one of the strong students, is merely twelve points above that of Student #7, one of the weak ones. Student #1 also scored a “2” on the MFS total score, below that of all of the other five students. The total words read (TWR) are identical for one strong and one weak student. Miscue ratio (MR) is larger for average or weak students, as is significant miscue ratio (SMR), and total miscues (TM) are fewer for the strong students. Still, if one of the students had not been identified as strong, average, or weak, being presented with this data would not necessarily result in an accurate classification, especially in the case of Student 1.

Description of Case Studies

A description of each of the intermediate level students in the case study follows.

**Student 1(high)**

This Bulgarian male scored 96% on a very challenging final exam. Two of the five points missed on the final exam came from the vocabulary and listening sections, and all the mistakes were on small mistakes in form, such as a spelling error or a wrong preposition. The student's handwriting is excellent and even.

On the timed oral reading, the student read slowly and with few errors. The total words read (TWR) score was 98, and there was one miscue, the nonword "laning" in the place of the target word "leaning." The comment made on the evaluator's marking page said, "slow and accurate...not smooth....foreign accent." The student made one self
Table 4.9

Fluency Scores for Seven Level 3 Case Studies

<table>
<thead>
<tr>
<th>No.</th>
<th>WCPM</th>
<th>TWR</th>
<th>TM</th>
<th>TSM</th>
<th>MR</th>
<th>SMR</th>
<th>MFS-phrase</th>
<th>MFS-smooth</th>
<th>MFS-pace</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>strong students</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1</td>
<td>97</td>
<td>98</td>
<td>1</td>
<td>1</td>
<td>.010</td>
<td>.01</td>
<td>2</td>
<td>2.5</td>
<td>1.5</td>
</tr>
<tr>
<td>2</td>
<td>129</td>
<td>129</td>
<td>0</td>
<td>0</td>
<td>.000</td>
<td>.00</td>
<td>3.5</td>
<td>4</td>
<td>3</td>
</tr>
<tr>
<td><strong>average students</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3</td>
<td>119</td>
<td>120</td>
<td>1</td>
<td>0</td>
<td>.008</td>
<td>.00</td>
<td>2.67</td>
<td>2.5</td>
<td>2</td>
</tr>
<tr>
<td>4</td>
<td>153</td>
<td>158</td>
<td>5</td>
<td>3</td>
<td>.032</td>
<td>.02</td>
<td>3.84</td>
<td>4</td>
<td>3.5</td>
</tr>
<tr>
<td>5</td>
<td>62</td>
<td>67</td>
<td>5</td>
<td>3</td>
<td>.075</td>
<td>.04</td>
<td>1.34</td>
<td>1.5</td>
<td>1.5</td>
</tr>
<tr>
<td><strong>weak students</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>6</td>
<td>125</td>
<td>129</td>
<td>4</td>
<td>1</td>
<td>.031</td>
<td>.01</td>
<td>3</td>
<td>3</td>
<td>2.5</td>
</tr>
<tr>
<td>7</td>
<td>85</td>
<td>88</td>
<td>3</td>
<td>3</td>
<td>.034</td>
<td>.03</td>
<td>2.33</td>
<td>2</td>
<td>2</td>
</tr>
</tbody>
</table>

*Note.* Miscue ratio is kept at three digits, because the ratio numbers are so small.

correction, reading "the" for "he" and then correcting it, two "starts" in which he began a word and then started again, and a couple of long-ish pauses. He also pronounced "stopped" with two syllables, which was not deducted as a miscue because it fell into the category of a foreign accent feature. In fact, the one miscue, which counted as a significant miscue as well, is really a function of foreign accent, because the student does not yet have the correspondence between written and spoken vowel sounds of English, but it was deducted because "laning" is not understandable as a word to a normal English-speaking listener.
On the MFS, the student also received low scores. His average was 2, and he got 2.5 on phrasing, 1.5 on smoothness, and 2 on pace. One of the raters specifically cited his reading style as "not smooth."

This student's style is to read slowly and accurately, problem-solving along the way through self-correction, starts, and pauses. He uses all three of those devices to buy time while he figures out words either through decoding or through context. He certainly does not fit an expected profile of a high achiever, in terms of his WCPM or his MFS. However, his one miscue could be a word he understands while reading silently, but cannot pronounce correctly.

**Student 2 (high)**

This Polish female fits the classic profile of what one would expect from a high achiever. In addition to a high final exam score and language lab final exam score, her oral reading is fast for Level 3 (129 WCPM) and error free, giving her a miscue ratio of zero. The only comment written by the evaluator was "very accurate." Her MFS score, a composite 3.5, has no sub-score below 3. Seeing her fluency measures would make one predict that she would do well in silent reading, since she processes quickly and accurately, and with expression.

**Student 3 (average)**

This Hispanic female scored an 85% on the final exam and in the mid-nineties on the language lab final exam. Her listening is obviously good, but not perfect, and her performance on the final exam is worthy but not without gaps. On the WCPM measure, she scored 119, just above the average for the entire sample (110 WCPM). She had no significant miscues on the reading. Her MFS score was average, just like her WCPM and final exam score. Looking at the miscue scoring sheet shows a large number of starts (7) and bears the comment, "fits and starts, but makes phrase
breaks correctly." The "ed" endings of the past tense verbs were all made using the long form, but were not deducted because they were classified as a foreign accent feature; they are a common error found in Spanish language learners of English.

**Student 4 (average)**

This Polish male read extremely quickly, with a number of errors (5) and three significant miscues. The rater wrote, "Excellent, fast, good expression, accurate, confident." This score is at the upper end of the sample, even including Level 5 students. The miscues that were made included omitting a preposition, omitting the "ed" in "started," which changes its tense, pronouncing "certain" as "curtain," and changing the word "caught" to "catch." This last point is an interesting phenomenon; the mispronunciation shows an awareness that the target word is connected to the base form, catch. Since the "gh" is very ambiguous in English, the student transferred his knowledge of the meaning of the written form of the word into the closest approximation he could find. The final exam, however, is full of numerous small and large grammar mistakes, including some "Polish" spellings of English words. The high score on the LLFE indicates the learner might have regular exposure to an English-speaking environment, which might contribute to the self confidence in the oral reading.

**Student 5 (average)**

This Chinese woman was chosen because she is representative of the special characteristics of the Chinese learners in the sample. The rater comment on the side of the evaluation sheet was "very choppy, word by word with phoneme, stress, and intonation problems." If she were classified on the basis of the fluency sample alone, she would be right at the bottom. There were six starts and three long pauses. The miscues included: "des" for the word "Indianapolis," "close" for "clothing,"
"val" for "valuable," "anquite" for "antique," and a skipped period. In most of these, there is little attempt to deal with letters that come after the first syllable, if even that. It seems the pronunciation of an unknown word just trails off after the initial consonant, or consonant and vowel. It looks similar to the attempts of a very young learner who hasn't got the basic decoding system down yet, and does not break a word into syllables. The "concept of syllable" does not seem to be operating for any words unfamiliar to the student, except for "anquite." This is a student who reads very slowly and inaccurately, with peculiar stress and intonation, many repeats, and long pauses, who nonetheless scores well enough on the outcome measures to move to the next level of the program.

Student 6 (weak)

This Polish female had a score (125) that was both above the average for the level (108), and above the average for the Poles overall (118). On the basis of the oral reading sample, one might have expected a strong or average performance on the final exam, but it was filled with errors, including several answers on the reading section (FE-R) that did not answer the question. The listening section (FE-L) had two errors. On the miscue coding sheet, the only comment is "strong." There are a few starts and a couple of examples of unnatural intonation (she says "something caught\ his eye" with falling intonation on "caught" instead of "eye"), but overall, it is a reasonable performance. The MFS score is robust as well; she got an average of 3. Nothing in the rendering of the passage would signal the grammar problems found in the final exam.

Student 7 (weak)

This Ukrainian female was the slowest reader of the group, with three significant miscues. Notations in the margin of her miscue scoring sheet say, "decent phrasing, pretty accurate, just slow." There were a number of pauses, mispronounced words, and starts; in fact, her profile
resembles that of student #1, the Bulgarian man in the "strong" category. What is the difference? Perhaps the accuracy of her word recognition is lower; after all, he made no significant miscues, and she made three. Her final exam shows numerous tense errors, missing items, and other target grammar errors. In addition, her listening comprehension section has 2 ½ errors, two of which demonstrated a lack of listening comprehension. On one of them, she answered with present perfect to a prompt in past perfect, and in the other, she used "maybe" as a verb to a prompt whose correct answer was, "She must be cold." A generally "sloppy" style on the final exam seems to go with a more careful, but still error-prone style on the oral reading. The MFS was not especially strong, with an averaged score of 2.33. Smoothness and phrasing got scores of 2, but surprisingly, the raters perceived her pace to be a 3. It may be a reflection of the four starts and three miscues made during the reading, which reduced her total WCPM score.

In sum, looking at the original question, "How might the oral reading of strong, average, and weak L2/ESL students at the intermediate level be characterized, and what can miscue analysis of that reading add to the description?" one might conclude the following: speed does not necessarily increase as SRC proficiency increases, but accuracy does; Chinese students are a "special case" who do not fit the profile of the other language groups; and the value of miscue analysis is limited because it is impossible to know if a student miscued because of not knowing the meaning of the word, or not knowing how to pronounce it correctly.

Other Findings

*Fluency Measures Increase as Level in Program Increases*

All measures of oral reading fluency in the study, including those centered on words and miscues and those describing expressive features, show performance increases by level in the ESL
program. The mean WCPM increases, and mean TM, TSM, and MR decrease as students progress through the levels (see Table 4.10). The improvement between Level 3 and Level 5 is not as great as that found between Level 1 and Level 3, but it is still considerable. The improvement in oral reading fluency across levels can be detected using WCPM or MR, as well as the MFS (see Table 4.11). Thus, oral reading fluency can be considered to be a valid measure of progress in overall language proficiency.

Table 4.10

*Descriptive Statistics of Fluency Measures by Level in Program*

<table>
<thead>
<tr>
<th>Level</th>
<th>Number</th>
<th>WCPM</th>
<th>TM</th>
<th>TSM</th>
<th>MFS</th>
</tr>
</thead>
<tbody>
<tr>
<td>Level 1</td>
<td>14</td>
<td>73.36</td>
<td>9.96</td>
<td>8.50</td>
<td>1.83</td>
</tr>
<tr>
<td>SD</td>
<td></td>
<td>18.35</td>
<td>4.93</td>
<td>3.72</td>
<td>.58</td>
</tr>
<tr>
<td>Level 3</td>
<td>154</td>
<td>106.75</td>
<td>4.73</td>
<td>3.61</td>
<td>2.63</td>
</tr>
<tr>
<td>SD</td>
<td></td>
<td>21.00</td>
<td>4.35</td>
<td>3.73</td>
<td>.61</td>
</tr>
<tr>
<td>Level 5</td>
<td>64</td>
<td>125.02</td>
<td>3.89</td>
<td>3.03</td>
<td>3.33</td>
</tr>
<tr>
<td>SD</td>
<td></td>
<td>12.48</td>
<td>3.69</td>
<td>3.14</td>
<td>.55</td>
</tr>
</tbody>
</table>

*Key Role of Listening Comprehension*

Based on the realization that, in this study, listening comprehension played a key linking role between oral reading and silent reading comprehension, I tried to come up with an adult L2/ESL silent reading comprehension models which would include the listening measures and the oral reading fluency measures, using regression analysis. Models 1 and 2 include the two listening measures, the language lab final exam (LLFE) and listening section of the Level 3 final (FE-L), along with the main fluency variables (WCPM, MR, and MFS), with the dependent variable the Level 3 final exam with no listening section (FE-NLS). Models 3 and 4 used only one listening
measure, LLFE, and the final exam for all three ESL program levels (FE-T). The regressions for these four models can be seen in Table 4.11.

Together, the fluency and listening variables could explain 65% of performance on the reading comprehension measure for the sample. However, when the same variables were entered into a stepwise regression analysis, the fluency variables of WCPM, MR, and MFS were excluded from both models, and the two listening measures accounted for 63% of the variance in the measure of reading comprehension (FE-NLS), with the fluency variables accounting for only about 2% of the predictive value. It appears that fluency variables add little explanatory power to a combined model, so long as a listening comprehension variable is available.

In models 3 and 4, the predictive value of LLFE was reduced to 45%, and adding the fluency measures did not enhance the predictive value by even a single percentage point.

In sum, the findings indicate that, in general, the fluency tools did mirror overall progress in proficiency level, and listening comprehension predicted silent reading comprehension better than any fluency measure or combination of measures, with little increase in predictive power by adding in fluency measures.
Table 4.11  *A Model of Adult L2/ESL Silent Reading Comprehension with Predictors of Listening Comprehension and Oral Reading Fluency*

<table>
<thead>
<tr>
<th>Variable/Regression Method</th>
<th>Dep. Variable</th>
<th>$\beta$</th>
<th>$R^2$</th>
<th>F value</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Model 1: LLFE, FE-L, WCPM, MFS and MR using Enter Method</strong></td>
<td>FE-NLS</td>
<td>.81 / 65%</td>
<td>18.91</td>
<td></td>
</tr>
<tr>
<td>LLFE, FE-L, WCPM, MFS, MR/enter</td>
<td>LLFE</td>
<td>.57**</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>FE-L</td>
<td>.40**</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>MR</td>
<td>.12</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>MFS</td>
<td>.08</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>WCPM</td>
<td>-.10</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Model 2: LLFE, FE-L, WCPM, MFS and MR using Stepwise Method</strong></td>
<td>FE-NLS</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>LLFE, FE-L, WCPM, MFS, MR/stepwise</td>
<td>LLFE</td>
<td>.73**</td>
<td>.73 / 54%</td>
<td>64.39</td>
</tr>
<tr>
<td></td>
<td>FE-L</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Step 1: FE-L</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Step 2: FE-L, LLFE</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>LLFE</td>
<td>.50**</td>
<td>.80 / 63%</td>
<td>46.98</td>
</tr>
<tr>
<td></td>
<td>FE-L</td>
<td>.39**</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Model 3: LLFE, WCPM, MFS and MR using Enter Method</strong></td>
<td>FE-T</td>
<td>.68 / 46%</td>
<td>16.22</td>
<td></td>
</tr>
<tr>
<td>LLFE, WCPM, MFS, MR/enter</td>
<td>LLFE</td>
<td>.71**</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>MR</td>
<td>.02</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>MFS</td>
<td>.01</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>WCPM</td>
<td>-.04</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Model 4: LLFE, WCPM, MFS and MR using Stepwise Method</strong></td>
<td>FE-T</td>
<td>.68**</td>
<td>.68 / 46%</td>
<td>67.01</td>
</tr>
<tr>
<td>LLFE, WCPM, MFS, MR/stepwise</td>
<td>LLFE</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Step 1: LLFE</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

for FE-T, n=232; for FE-NLS, n=58.  $R= $ multiple correlation coefficient.  $R^2 = $ Squared multiple correlation coefficient.  * $p < .05$; ** $p < .001$.  


CHAPTER FIVE

Discussion

I undertook this study to see what kind of relationship the oral reading of the adult L2/ESL students I teach might have to other aspects of their competence, with an expectation that there would be a significant correlation with their performance in silent reading comprehension. I wanted to see if that relationship, if proven robust, might lay the foundation for some kind of fluency intervention such as those that have been used so successfully with first language children. I realized that no classroom applications could be made unless and until it could first be shown that a student's oral reading fluency reflected silent reading comprehension, and inversely, that practicing the skills of oral reading would wash back upon silent reading skills as well.

Since this study appears to be the first which combined this population and this set of variables, related questions needed to be asked about what instrument would best be able to measure an adult L2/ESL student's oral reading to begin with. Since a lively debate exists at the present time in the reading field as to whether a "counting system" including rate and accuracy, or a fluency rubric which counts prosody, is more predictive, the issue of the assessment instrument also entered into the mix, and formed my second question. Finally, miscue analysis of a few select samples was undertaken as a way to examine just what kinds of deviations from the text adult L2/ESL students make. Miscue analysis of second language students has been done extensively and for many years (Goodman & Goodman, 1978), but not particularly with regard to its impact on the silent reading competency. The following observations can be made based on the study's results.

*Using Oral Fluency Measures with Adult L2/ESL Students*
Even if a strong case cannot be made for using timed oral readings to predict adult L2/ESL silent reading comprehension, it is clear that oral reading assessment has several important features which provide information about adult L2/ESL students. For one thing, like ORF scores for L1 children, an oral reading score is sensitive to progress across levels (see Table 4.8); as student proficiency goes up, oral reading fluency goes up as well.

*Value of Miscue Ratio and Miscue Analysis*

Although their percentages are not very high, oral reading fluency scores in this study predicted 14% of performance on silent reading comprehension tasks, using miscue ratio (MR). Miscue ratio can also predict up to 37% of performance on listening comprehension tasks. Although these are small to moderate percentages, they are highly significant (p< .001), and can give ESL teachers valuable information about the unseen development of silent reading comprehension in their students.

Hearing a student read a text aloud gives an instructor or researcher a glimpse into the thinking and meaning construction process of the reader, and miscue analysis provides a golden opportunity to take this glimpse. For example, listening to a large number of Level 3 students revealed that many of them made several attempts at an unknown word of more than one syllable, usually resolving the attempt successfully, similarly to the process an emergent L1 reader. However, on an unknown word of one syllable, such as "thrift," they were less likely to try again, and tended to let their first rendering stand. Such behavior signals to a teacher that more attention may need to be paid to seemingly simple words.

Many of the students engaged in some self-correction, which showed that self-monitoring was going on for these students. The self corrections were sometimes made to match the phonemes
of the word to the English vowel system, after first attempting the word using the "European" vowel system. Other times the reader continued reading past the miscue, either silently or aloud, and then went back to correct the word, after matching it to a word orally understood in English. When miscues were not corrected and were consistent with first language vowel patterns, it probably meant that the reader considered them to be insignificant differences, similar to miscues from dialect differences in native speakers (Goodman & Goodman, 1968). Consistent L1 vowel interference as shown in miscue analysis from oral reading helps ESL teachers identify the need for supplementary practice on these sounds, possibly including more explicit instruction on their differences.

One of the most common and interesting miscues was the very preponderant substitution of the word "catch" for the word "caught." This indicated that the student was aware of the semantic relationship between the two words, even though they are not very similar graphemically or phonemically, and that the issue was one of phonics, not word recognition. One of the most confusing digraphs in English is the "gh," since it has three phonemic possibilities. In addition, the "au" spelling has several pronunciations. To sidestep these difficulties, the easiest way for these students to signal that they understood the word but couldn't pronounce it was to render it in base form instead of past tense. Of course, it still counts as a miscue. However, the thinking that is likely to undergird the substitution reveals that reading comprehension has probably taken place, and that the error was on the level of sound, not meaning. An ESL teacher can see from such miscues that the semantic relationship is developing with regard to that group of words.

By Level 3, it is also clear that the number of miscues or self-corrections in themselves did not signal stronger or weaker reading comprehension. As the case studies point out, some readers have a slower, more deliberate style, with few self-corrections, while others speak more quickly and
double back to reread words, correcting them. Miscue analysis shows the ESL teacher that there are (at least) two styles of capable reading in adult L2/ESL developing readers.

One difference observed in listening to post-secondary adults reading in a second language is the general confidence adults show in moving their eyes, mind and voice across a line of text. Even if they don't know all the words, the act of decoding has become an automatic activity, and its use and function are fully understood. A striking difference in confidence level, however, can be observed with the Chinese students, for whom decoding in English is still a completely unfamiliar enterprise, and in that oral reading, they resemble timid emergent L1 readers. Clearly, the skill that the Chinese students have not acquired at the same proficiency level as their alphabetic counterparts is automaticity of decoding. ESL teachers in a mixed class containing Chinese students may want to provide extra opportunities for those students to practice the decoding skill, in order to get it to a level of automaticity comparable to their that of their classmates.

By the time adult L2/ESL students reach Level 3, parsing is not really an issue, except for the Chinese learners. By Level 3, these fully literate, post-secondary level students have had enough exposure to print in L2 and enough formal education to know basic syntax as well as print conventions, such as periods, commas, and capital letters.

Oral reading shows developmental level and the effect of first language to some extent, but it is also subject to the particularities of the adult reader, regardless of level and language. Literate adults learning an L2 have individualized strategies from their previous academic experience that work well for them; for this reason, successful students may pick their way through an oral reading task, fastidiously, or read at a rapid rate and make a few nonsignificant miscues.
Thus, the short answer to the original research question, whether oral reading fluency in adult L2/ESL learners correlates with their silent reading comprehension, must be answered "No, but with qualifications......" The question is not whether adult L2/ESL reading resembles that of L2 children or L1 adults more; it resembles neither one of them very much. According to research (Baker & Good, 1995; Ramirez, 2001), young Hispanic L2/ESL learners' oral reading closely paralleled that of L1 children in its ability to reflect silent reading comprehension, albeit through a somewhat different process. It appears that generality cannot be extended to L2/ESL adults. On the other hand, adult L2/ESL students must struggle with L2 decoding and pronunciation problems, something not found at all in literate L1 adults.

*Reflections on the Model*

Doing this study created in me a growing interest in building a theoretical model of adult L2/ESL oral reading performance. Although, overall, oral reading alone did not yield strong predictive results for silent reading comprehension, a model which combined listening comprehension and oral reading fluency was able to predict silent reading comprehension in adult L2/ESL students 46% overall (see Table 4.11), rising as high as 54% when Level 3 students were examined alone. The fact that two measures predicted about half of performance on a silent reading comprehension task was of interest to me.

As I attempted to sketch out the model, my thinking took two directions: 1.) How might one show the stages of adult L2/ESL reading development? and 2.) Looking at these stages, is there a critical period during which taking oral reading fluency measures can be useful in adult L2/ESL instruction?
Stages of Adult L2/ESL Reading Development. What differs between L2/ESL adults and L1 children learning to read is the point at which decoding and comprehension converge, and the set of prerequisites needed to achieve it. Decoding English requires knowledge of its sound-spelling relationships, not those of the learner's first language, and this knowledge is acquired as a literate adult; in addition, a literate L1 adult already has an oral and written L1 vocabulary base. Therefore, the decoding skill, which requires listening comprehension, knowledge of the graphophonemic rules of English, and some L2 vocabulary, has to "catch up" with the L1 literacy already possessed by the learner.

The steps to adult L2/ESL silent reading comprehension might look something like the right half of Table 5.1, which I constructed to contrast the steps of reading comprehension development in L1 children and L2 adults.

The oral reading of L2 adults has importance for silent reading comprehension because, as with L1 children, it demonstrates whether or not the learner can decode efficiently and thereby have the ability to access textual meaning (Stanovich, 1996). Without this ability, unknown words cannot be retrieved, and reading proficiency cannot develop. Furthermore, oral reading helps the L2 learner link oral and listening skills with
Table 5.1

Steps to Silent Reading Comprehension for L1 Children and L2 Adults

<table>
<thead>
<tr>
<th>L1 children</th>
<th>L2 adults</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Achieving L1 listening comprehension</td>
<td>1. Achieving full literacy in L1, listening comprehension, oral production, learning sound-symbol correspondence or whole words recognition (if applicable) in L1, decoding known words, learning to decode unknown words through successful decoding</td>
</tr>
<tr>
<td>2. Achieving oral production in L1</td>
<td>2. Reaching threshold of listening comprehension in L2, with (optional?) oral production threshold, possibly at lower level. Nested within listening comprehension is vocabulary knowledge and knowledge of structure/grammar</td>
</tr>
<tr>
<td>3. Learning sound-symbol correspondences of L1 words through orally known words</td>
<td>3. Master L2 sound/symbol correspondence written system, which depends partly on similarity to L1 system. The further from L1, the greater the need for explicit (classroom) instruction.</td>
</tr>
<tr>
<td>4. Decoding and understanding known words through oral language base, understanding of sound-symbol correspondence, background knowledge. Being able to pronounce these known words when reading aloud, and access their meanings.</td>
<td>4. Decoding known words in L2 through L2 oral language base, cognates from L1, explicit vocabulary instruction, general understanding of print conventions. Being able to pronounce these known words when reading aloud, and access their meanings.</td>
</tr>
<tr>
<td>5. Learning to decode and understand groups of known &amp; unknown words through successful decoding, whole word recognition, guessing of new meanings from context, background knowledge, and explicit instruction in vocabulary</td>
<td>5. Learning to decode and understand groups of unknown words through successful decoding, whole word recognition, knowledge of cognates, background knowledge, and vocabulary learning system (which can come from prior L1 or from explicit classroom instruction)</td>
</tr>
</tbody>
</table>

reading skills, goals that must be reached in order to develop a balanced competence in L2.

However, decoding is not the whole story. There are two reasons that might explain why adult L2 oral reading appears not to be as predictive a measure as it is for L1 readers. First, L2
decoding is not connected to universal literacy skills, but only the language-specific skill of decoding in L2. Therefore, it does not tell us how well a person can comprehend, but only how well the person can access the L2 written system.

Second, since the L2 learner does not necessarily have an L2 oral language base from which to draw, it is impossible to know whether the word to be accessed is known in oral form, to serve as a reference point for successful decoding. The importance of listening comprehension is that it enables the learner to access more words, once decoding is in place (Krashen, 1985).

Referring to Table 5.1, it can be seen that for L2/ESL adults, the decoding skill enters after numerous preconditions have been met, at number 4 in the table. Applying that to students in the ESL program at which this study took place, it would appear that the conditions described in number 4 are met sometime around Level 3 or Level 5; at that point, oral reading is able to perform as a sensitive measure. The extent to which an oral reading fluency measure correlates with final exam score rises from insignificance in Level 1, to \( r = .29 \) for miscue ratio (MR) for Level 3, up to \( -.46\% \) for MR for Level 5 (see Table 4.3). By Level 5, it appears that oral reading performance can help complete a total picture of proficiency. This leads to the second question of interest.
Critical Period for Adult L2/ESL Oral Reading Fluency. After I had constructed the table showing steps to adult L2/ESL silent reading comprehension, and had done the data analysis which showed a higher correlation for students as they reach higher levels in the ESL program, I began to speculate that there may be a critical period during which oral reading fluency could be a useful measure of adult L2/ESL reading progress. The idea of a critical period for measuring oral reading fluency has been substantiated for L1 children (Fuchs et al., 2001), but the question of at what stage oral fluency would be most sensitive for L2/ESL adults has not been researched.

I surmise that oral reading fluency as a measure of adult L2/ESL silent reading appears to become significant after a certain number of requisite skills are in place. I have tried to sketch these with an in-progress theoretical model, called the Adult L2/ESL Oral Reading Fluency "Critical Period" model, shown in Figure 5.2. The model attempts in a preliminary way to sketch some of the language development of L2 adults, accounting for the different language backgrounds from which they come, and the period in which oral reading fluency might reflect that developmental process.

The requisite skills needed to perform oral reading include a threshold level of listening comprehension (enough receptive oral vocabulary to access the English phonemic-semantic system); a threshold level of decoding (enough knowledge of the English graphophonemic system to figure out how words sound); and a threshold of recoding/pronunciation (enough oral proficiency to pronounce some of the target words in the English phoneme system). In this model, the critical period, during which oral reading is a sensitive assessment, comes into play after students reach an (as-yet unspecified) listening threshold, and fades away when students have achieved a mature level of silent reading, as is the case for L1 readers. When the three skills begin to flatten out on the chart,
it means that the requisite skills for silent reading comprehension are in place, and oral reading fluency no longer closely reflects the learning process.

Figure 5.1

*Adult L2/ESL Oral Reading Fluency “Critical Period”*

As the figure indicates, students from nonalphabetic languages (such as the Chinese) take a longer time to reach the threshold level of listening comprehension, and the oral fluency measure
may not be a useful assessment for them until this threshold level has been reached. In the area of decoding, students from alphabetic languages start with an advantage because they already know how to decode, and the greatest advantage goes to those from languages using the Roman alphabet (such as the Polish or Hispanic students). Those from cognate languages with non-Roman alphabets (such as Ukrainians or Bulgarians) learn to decode less quickly, and the last group to reach parity with the other groups in decoding is the group from non-cognate, non-alphabetic languages using a logographic system, such as the Chinese. Finally, the recoding/pronunciation skill favors those from a cognate language, too, since there are many familiar words in European languages which have similar pronunciations to their English counterparts.

My in-progress model speculates that the critical period for adult L2/ESL oral fluency begins when a listening threshold is reached, and tapers off when decoding and recoding skills achieve automaticity and become more-or-less stable. For first language children, the minimum or "threshold" level would occur when children have achieved sight recognition of a couple of hundred words and have some sense of how to decode, and the exit level would normally be reached in third or fourth grade, when decoding becomes automatic and fast, and silent reading becomes the way reading is practiced. For second language adults, however, the minimum threshold is instead a listening comprehension level of, perhaps, a couple of hundred words, not sight recognition of words, and some knowledge of how to decode and pronounce the English sound and spelling systems.

For adult L2/ESL students, the prerequisites for using an oral reading measure are not in place at the beginner level because of the lack of listening comprehension, and are still in formation at the intermediate level. By the time students are at the high intermediate or advanced level,
however, the skills needed in order for oral reading to correlate with silent reading comprehension begin to be put in place, although the correlation is still only moderate.

Such a trend differs from that of children learning to read in a first language, where oral fluency measures are strongest before they reach full literacy (Espin & Deno, 1993; Espin & Foegen, 1996). By the time an L1 reader has reached a mature level and decoding has become automatic, oral reading fluency wanes in importance (Chall, 1996), and measures such as vocabulary knowledge and organizational skills become stronger determinants of reading comprehension.

*The Place of Listening Comprehension.* The most surprising finding over all was that listening comprehension correlated better with the oral fluency sample than the final exam, and was the largest predictor of performance on the final exam. What did that mean?

Studies of first language children's scores on oral reading, silent reading comprehension, and listening comprehension have indicated that poorer readers were also poorer listeners (Dymock, 1993; Shankweiler et al., 1999). Listening comprehension is, in a sense, all the meaning-making from text that cannot be attributed to the many subskills of reading; it is all the rest. Listening comprehension is a core construct in second language acquisition because it provides the oral language "bed" upon which all the other skills can be built. Second language learners appear to need a threshold level of listening comprehension before they are able to begin to read (Cummins, 1984). This threshold provides them with a sufficient number of samples of the oral features of English, along with its vocabulary and syntax that they can begin to generalize from it. Phrased in linguistics terms, it could be said that the BICS skill of listening and speaking is necessary, but not sufficient, for development of the CALP academic skills (please see a discussion of BICS and CALP in Chapter 2, p. 57).
Interestingly, in the study, the correlation between the listening comprehension measure and the silent reading measure remained relatively constant across levels, with language lab final exam predicting 29% of the final exam score (FE-T) for Level 1 students, 25% for Level 3 students, and 28% for Level 5 students. The listening measure (LLFE) is written to match the curriculum and level of the students, so it becomes increasingly more advanced, but it retains about equal importance as the students move up through the levels. This is in contrast to the strength of the fluency measure's correlation with SRC, which increases as proficiency increases. One can conclude that listening comprehension continues to be a stable measure which accounts for about 25% of reading comprehension across proficiency levels for adult L2/ESL students.

It is often said that ESL teachers can be misled by orally adept L2/ESL students who have acquired BICS skills into thinking they have CALP skills in place, but in the case of oral reading fluency, it may work in the opposite direction. That is because the CALP skills a student has developed through schooling in their first language, including reading skills, may not be able to be activated in the target language without the development of some BICS skills. Perhaps the BICS listening skill could be considered something like the "lubricant" that allows CALP skills to be put into play in the new language. Thus it may be that the development of the listening comprehension skill proceeds in parallel to the reading skill, in a synergistic way.

The simple model of reading (Gough & Tunmer, 1986), \( RC (reading\, comprehension) = D \) (decoding) + \( LC \) (listening comprehension) suggests that, once decoding is accounted for, the critical factor in reading comprehension is general language comprehension, which can be equated with listening comprehension, and that model seems to receive support from the current study.

*Where does Decoding Diverge from Comprehension?*
A key question in analyzing these results is the extent to which decoding corresponds with comprehension. This question has intrigued L1 reading comprehension researchers. De Jong and van der Leij (2002), for example, found that the development of decoding ability and reading comprehension did not proceed entirely in parallel; reading comprehension, at least in L1 Dutch students studied from first to third grades, appeared to be influenced by not only word decoding, but also vocabulary and listening comprehension, after first grade. In other words, learning to decode and learning to construct meaning from written text did not proceed along exactly the same trajectory. They cite another study (Hoover & Tunmer, 1983, in de Jong & van der Leij, 2002, p. 51) which found the correlation of decoding and comprehension to decline to .45 in the later grades, after a correlation of .55 in the early grades. Apparently, when attentional resources are freed up from word identification tasks, more attention can be devoted to comprehension strategies (LaBerge & Samuels, 1974; Reynolds, 2000).

Shankweiler et al. (1999) summarize the declining relationship between decoding and reading comprehension as reading level increases in the following way:

As the learner gains word recognition skills, there is increasing potential for other factors to influence comprehension, hence for a loosening of the link between decoding and comprehension. Thus, as reading skill advances, we could expect a decrease in the correlation of decoding with reading comprehension and a corresponding increase in the correlation of listening and reading comprehension (p. 74).

In the case of adult second language learners, then, perhaps oral reading as a gauge of decoding skill cannot operate until the graphophonemic system, listening comprehension skills, including basic listening vocabulary, and L2 recoding skills are in place, and then, once these are in place, fails to reach as high a correlation with SRC as it would for L1 learners, precisely because the learner is a literate adult and has presumably already reached a mature level of reading
comprehension in L1. Once the prerequisites for decoding L2 text have been achieved, other adult
reading strategies take over and decoding no longer correlates highly with silent reading
comprehension.

Limitations of the Study

Limitations fall into three categories: the sample, the instruments, and the data analysis.

They will be discussed in turn.

Sample

In the area of the sample, the total sample size is more than adequate (n=232), but some
subsets within the sample are too small for meaningful multivariate analysis. If the data is
disaggregated by first language, only the Polish students are numerous enough (n=143) to allow
solid generalizations. The second best represented group, Ukrainians, has only 33 representatives,
and the numbers go down from there. Notably, the small number of Hispanic students (n=14),
atypical of most post-secondary programs for U.S. immigrants, renders the research less useful than
it might otherwise be for bilingual research in the American context.

The small sample size of some first language groups limits complete analysis of the
variables, which are significantly different by first language groups in fluency measures (see Table
4.3), but not in mean language lab final exam score or final exam score (see Table 4.5).

If the data is disaggregated by level in the program, Level 3 students are well-represented
(n=154), and Level 5 students are numerous enough (n=54) to form some generalizations about, but
the Level 1 students (n=14) comprise too small a sample to result in stable analyses.

Also, some of the measures were drawn from a smaller group of students than the 232. The
Multidimensional Fluency Scale (MFS), which was contrasted with the method of words correct per
minute (WCPM), was administered to 80 students' ORF samples rather than all 232, so analyses performed using that measure are based on a smaller sample size. The subscores for the reading (FE-R), vocabulary (FE-V), and listening (FE-L) sections of the Level 3 final exam (FE-T) were only available for 58 students, so analyses which included those measures had a smaller number of participants. Because analyses using both MFS and the subscores of the Level 3 final exam would yield a common group of only 48 students, they were not performed. A summary of the sample sizes by instrument, first language, and level in program can be found in Table 3.10.

Although quite a bit of information was available on participants in the study, it would have been useful to have information about the number of years they had been out of school before returning, their highest education level, and their age.

**Instruments and Data Analysis**

The second area and third areas, limitations of the instruments and data analysis, will be discussed together.

**Readability level of ORF passage.** Hintze, Shapiro and Conte (1997) and others warn that passages chosen for ORF assessments must be at the readability level of the students. The passage used in the study, "A Real Bargain," has a readability level which matches that of Level 3 students; however, it is above the reading level of the Level 1 students, based on the readability level of the reading passage on their final exam (see Table 3.6). Although the study benefited from having the same miscue system for the passage for all 232 participants, it suffered from having a passage above the readability level of the beginning students. It cannot be ruled out that a significant correlation between oral reading fluency and silent reading comprehension could have been found for students at the beginning level using a passage closer to their reading level.
Final exam as measure of SRC. Another concern was the extent to which the final exams could be considered valid measures of silent reading comprehension. Since the final exams came from three different levels within the program, the reading tasks were different and varied. That was not in itself a disadvantage, because it insured an appropriate readability level for each exam; however, the reading activities and amounts varied considerably. In addition, the tests had small modifications over the course of the year and a half in which they were used.

The Level 1 final exam contained a listening portion which could not be disaggregated from the total score, due to the lack of access to the tests; therefore, analysis of Level 1 student reading performance was compromised not just by the small sample size, but also by a final exam which had non-reading tasks in it. Notwithstanding the listening section, however, the Level 1 final exam could be considered a good measure of overall academic language skills. Appendix E has the point totals for all sections of the final exams for the three levels.

Although each of the tests was lengthy (at least 130 points) and had used the same format over a number of years, their reliability was not tested because few of the actual test copies were available for review.

Miscue coding. Two sets of instruments were used to evaluate the oral reading, and the first of these involved timing words read and counting miscues. The miscue coding system used by Goodman and Burke (1973) and others is problematic as a tool because of the "foreign accent" problem found with adult L2/ESL learners. It was impossible to know whether a student who miscued was mispronouncing a word he or she knew, but couldn't pronounce, or a word whose meaning was not known. Therefore, in order to insure reliability, it was necessary to devise a
customized miscue coding system specifically for the passage, in order to standardize the miscue counting.

Once the coding system was set up, many samples had to be recoded. Appendix C has the complete miscue coding system used for the passage. Even with the coding key, many judgment calls had to be made along the way about subtle features of pronunciation. This is a peril which would beset anyone researching L2 oral reading fluency, and must be done meticulously in order to achieve stable results.

It was helpful to discover that the best configuration of the oral reading data is in the form of miscue ratio (MR), which expresses a more nuanced relationship than words correct per minute. Since both the WCPM and MR measures have small but significant predictive power for silent reading comprehension; one wonders if a better instrument might increase the predictive power.

*The Multidimensional Fluency Scale (MFS).* The MFS scale proved to be a rather "blunt instrument." Since no individual word level features are counted, and the scale is used to convey an impression of a total performance, there is no place to account for certain common oral reading features found in L2/ESL readers. This limitation can clearly be seen in the only moderate level of interrater reliability (see Table 3.5) and in the moderately low correlation between MFS and outcome measures.

One of the subskills of the MFS is "smoothness," but the stuttering attempts of many adult L2/ESL decoding efforts need to be described more precisely than their amount of "smoothness." Such attempts show non-automaticity of decoding, but is lack of "smoothness" really the appropriate way to characterize it? Also, fluid elisions between words are part of a definition of "smoothness" in English, and while there are L2/ESL students who make smooth elisions, most do not.
On the MFS, when an L2/ESL student does not make elisions, it may be coded to indicate that the student read "word by word." However, that implies he or she cannot read connected text, which is not the same at all. It is just as likely to mean that the learner hasn't been exposed to the pronunciation rules for crossing word boundaries (such as the "final t + y --> ch" rule, in which "don't you" is pronounced "donchu" in correct American English).

At the other extreme, when L2/ESL students pronounce final consonants, they could be "hypercorrecting," not from a lack of fluency, but from lack of practice in speaking informal English. Briefly, then, there is much that the MFS cannot explain for adult L2/ESL readers.

Language Lab Final Exam. Finally, the language lab final exam achieved unexpected importance in the study. It was a shorter exam (40 points for all levels) and the mean score varied considerably between Level 1 and the other two levels (see Table 4.4). The relative shortness of the test and difference in the mean for Level 1 students may negatively impact its reliability as a variable.

Directions for Further Research

Need for an Adult L2/ESL Oral Reading Fluency Rubric

After coding many oral reading samples, one gets the impression that WCPM accounts for many cases quite well, but that the cases it doesn't account for are recurrent and troubling. Something has to be added to an adult L2/ESL rubric to get a better picture of the fluency of these learners. A prosody-sensitive scale such as that used in the MFS has promising aspects; however, there needs to be a system to decide which words are to be considered "correctly" decoded. In other words, at what point of variance from standard American English can a word be considered correctly decoded, and at what point does it become a miscue?
Since prosody correlates well with reading proficiency in L1 children, it seems unfortunate to have to discard it for use with adult L2/ESL students, but the fact is that some features of "foreign accent" may never be remediated, no matter how many years the new language is spoken. If prosody is accounted for in a rubric for adult L2/ESL students, it could be grouped within a larger category called "foreign accent," which examined intelligibility of several systems used by the learner: individual phonemes, suprasegmentals (the linking between words), stress (which syllables and words in a sentence receive stronger articulation), and intonation. Prosody as "expressive reading" is probably not distinguishable from these other foreign accent features in an adult L2/ESL learner.

In an attempt to make the MFS give a better approximation of adult L2/ESL performance, the researcher tried to make a new scale, loosely based upon Zutell and Rasinski's (1991). After three tries, it was found that the new, revised adult L2/ESL MFS did not predict performance on the final exam any better than the MFS. A copy of the third draft of an Adult L2/ESL Multidimensional Fluency Scale appears in Appendix I.

Need for Adult L2/ESL Oral Reading Fluency Norms

In addition to the need for a better rubric to describe adult L2/ESL oral reading performance, adult L2/ESL oral fluency norms need to be established. Since there is not a large body of data about oral reading fluency scores of adult L2/ESL students, the norms would probably be set up according to individual program learning outcomes. Thus far, the only norms the researcher is aware of were generated in this study, and they apply only to a single assessment, not a series over time.
The mean of WCPM for intermediate (Level 3) students was 107 when reading a passage at their readability level (see Table 4.8). Their readability level is equivalent to that of L1 readers in the first month of sixth grade (see Table 3.6). Looking at the L1 oral reading fluency norms, given in WCPM, for grades 2-5 (Hasbrouck & Tindal, 1992), a WCPM of 107 falls into the 50% percentile for the fall of 5th grade. The 50% percentile rate for sixth graders is 115 for fall and 145 by spring of the academic year. That means that even when intermediate adult L2/ESL students are reading texts at sixth grade level in terms of text readability, their oral reading level is significantly slower than that of native speaking children reading text at the same level.

Therefore, adult L2/ESL ORF norms will differ from those of L1 children, with a slower mean oral reading rate for L2/ESL adults than for L1 children reading texts at the same level. The slower oral reading rate matches the slower L2 silent reading rate found in even very proficient L2/ESL adult readers (Anderson, 1999; Taguchi, 1997).

Since, to the researcher's knowledge, no one has done a study showing adult L2/ESL students’ oral reading progress over time, nor any study of adult L2/ESL fluency interventions, their usefulness is not known. They should be considered for their value in predicting performance and their utility as classroom motivators.

Need for a Similar Study with a Large Hispanic Sample

Since the number of Hispanics was so small (n=14), possible conclusions from the study were downplayed; however, it must be mentioned that the strongest correlations between oral reading fluency and silent reading comprehension were, by far, found among the Hispanic students (see Table 4.2). There may be something important going on for this group. The fact that English has a deeper orthography than Spanish (see discussion of shallow and deep orthography in Chapter
2) mean that decoding for Spanish learners of English is more likely to include comprehension than decoding in Spanish. The studies of oral reading for L2/ESL Hispanic children (Baker & Good, 1995; Ramirez, 2002) corroborate the notion that oral reading might be more predictive for this group.

Need for a Study of Vocabulary Knowledge

When an adult L2/ESL reader cannot construct meaning from print, it may be because of lack of listening comprehension in English, or lack of vocabulary knowledge in either the L1 or L2. Vocabulary knowledge is of critical importance in L2 second language acquisition, and any study of silent reading comprehension needs to contain a measure of it. The closest finding in this study related to the importance of vocabulary is the correlation of correct percent on the reading and vocabulary sections of the Level 3 final with performance on the overall final exam (see Table 4.1); however, there could be a study which highlighted vocabulary. Ramirez (2001) found vocabulary was a less powerful predictor of SRC than oral reading fluency, and it would be useful to attempt to confirm this with a contrasting vocabulary measure.

A confirmatory study which includes an oral fluency measure, a listening comprehension measure, and a silent reading comprehension passage at independent reading level, using students from another post-secondary ESL program, would be a useful follow up to this research.

Conclusion

This study is a story of falling into two different rabbit holes. As I mentioned in my introduction, the first fall plummeted me into the study of adult L2/ESL oral reading, without my really intending to do so. Then, while looking for oral reading fluency's importance in adult L2/ESL
silent reading comprehension, I tripped into a second hole, which led to listening comprehension as an important variable in silent reading. The listening comprehension/silent reading connection was the last thing in the world I was looking for. When I began doing the deep reading for the study based on my research questions, I had not included an extensive reading list for L2 listening comprehension. When it began to emerge as an important factor in the results, I needed to go back and catch up with myself. I have ended up with a study which puts three of the classic components of foreign language study -- reading, speaking, and listening, into a new configuration. With exciting recent research about the reading-writing connection, it would probably only be a matter of time until writing entered the mix as well.

To apply a metaphor, I had hoped oral reading fluency might be a "main course at the banquet" of adult L2/ESL reading, but it ended up instead to be a tasty topping, part of the spread, but not a main ingredient. Whether the topping's seasoning consisted of WCPM, MR, or the MFS didn't much matter: It needed to be coupled with listening comprehension to form a prediction that exceeded 50%. Alone, it had too little explanatory power to warrant a model of its own. To continue the metaphor, it was not a meal in itself, but it improved the quality of the meal; moreover, the spices in the topping are still partially unknown. Still, its level of predictability, when combined with the listening measure, is tantalizingly close to the levels reached in Bernhardt and Kamil's regression analysis (1995) of L2 reading comprehension, which assigns about 50% of the variability in reading comprehension scores to a combination of first language literacy level and second language grammar. In this case, the second language "grammar" may be considered to be L2 listening level, and the first language literacy level may be the combined skills of rapid and accurate L2 decoding and recoding.
Most researchers who have worked hard, as I have, are left with far more questions than answers, and a sense of frustration which almost overpowers the small satisfaction of finding something new, and I am now among them. What accounts for the other 50% of adult L2/ESL silent reading comprehension? I can guess at some of it -- first language literacy, motivation, living circumstances, and such. However, there are devilishly many unknowns.

Like most researchers, I am eager to have a chance to conduct a new study, along the same lines, but with a better design, based on what I now know. I hope that opportunity will present itself.

Ultimately, my goal as a professional educator in the ESL field is to help adult students learn English more efficiently and effectively, in order to survive and thrive in the environment in which they find themselves. I believe that research must serve human and planetary betterment, no matter how distant it may seem from practical application at the time it is undertaken. If something in this research, and its discoveries about both oral reading fluency and listening comprehension, can help post-secondary ESL teachers and programs cultivate those skills in their students more effectively, then I shall have even deeper satisfaction than that of obtaining my doctoral degree.
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Appendix A

Glossary of Definitions and Abbreviations

References to the authors of these terms appear in the body of the dissertation at the places in which they are first mentioned, and their citations can be found in the references portion of the dissertation.

BICS - basic interpersonal communicative skills. These oral and listening skills are acquired naturalistically in a second language environment, through extensive contact and meaningful input.

CALP - cognitive academic language proficiency. These are the "school" skills which come later in the learning of a second language and need classroom support.

CBM - curriculum based measurement

CBFM - curriculum based fluency measurement

decoding - successfully matching graphemes and phonemes in a word. In this dissertation, decoding does not automatically include comprehension. It also does not imply that the word is necessarily read aloud.

deep orthography - a written language whose graphemes do not have a one to one correspondence with its phonemes; in other words, it doesn't sound the way it looks.

ESL - English as a Second Language. For purposes of this dissertation, ESL students comprise students studying English inside an English-speaking country.

fluency - a rate of accuracy and speed sufficient to construct meaning from text, whether oral or written.

interference - this term is synonymous with L1 negative transfer. Interference can include a problematic foreign accent, a false cognate, etc.

L1 - first language, native language

L1 positive transfer - knowledge in L1 can be applied to learning L2

L2 - second language

L2/ESL - a learner of English as a Second Language. This does not necessarily mean it is the learner's second language - it could be the third, fourth, etc. It simply means English is the language of study, and is not the native language of the learner.
MFS - Zutell and Rasinski’s Multidimensional Fluency Scale (1991), a rubric with four levels of skill in three areas of performance in oral reading: pace, phrasing, and smoothness.

oral fluency snapshots - used interchangeably with oral fluency samples and timed oral readings, to mean classroom-based measurement of oral reading.

NAEP - National Association of Education Progress, a national clearinghouse to rate educational advancement in U.S. schools. The NAEP fluency rubric was first devised to aid in this mission.

ORF - oral reading fluency. In this dissertation, ORF is used as a conceptual measure, to include all of the oral reading fluency instruments.

recoding - reconstructing a word which has been decoded before saying it aloud, or constructing meaning from a decoded word

shallow orthography - a written language whose graphemes have one to one correspondence with its phonemes; in other words, it sounds exactly the way it looks.

SLA - second language acquisition - language acquired effortlessly, though social contact. Often used in contrast to second language learning (intentional, usually in a classroom setting)

SRC - silent reading comprehension

TL - target language - the language which is being learned or studied.

WCPM - words correct per minute. This is a numerical score based on words read orally in a fixed time period minus miscues, as determined from a miscue coding system. In this paper, it is used synonymously with "the fluency measure" or "the fluency sample."
Appendix B

List of Expected Student Learning Outcomes
for students in ESOL Program

I. Department/Program Objectives
   a. State the learning objectives or student outcomes of this program/department.

The ESL courses are designed to give the students the English skills necessary to succeed in undergraduate degree program coursework. Each course focuses on the development of students' vocabulary, grammar, listening, speaking, reading, and writing in English.

ESL Level 1

- Students will become familiar with and respond to classroom language and will acquire high-frequency vocabulary and structures needed to discuss immediate and habitual activities at the most basic level.
- Students will be capable of the following: giving simple directions, making introductions, telling time, and giving and obtaining personal information.

ESL Level 2

- Students will begin to discuss past and future activities and to make comparisons.
- Students will begin to use complex sentence structures.
- Students will be capable of the following: expressing personal preferences; describing people, places, and things; and extending invitations.

ESL Level 3

- Students will acquire vocabulary and structures, such as high frequency academic and colloquial language, beyond the survival level and will begin to discuss abstractions.
- Students will be capable of the following: making inferences and drawing conclusions.

ESL Level 4

- Students will acquire sophisticated vocabulary and structures needed to pursue academic study at the college level.
• Students will be capable of the following: expressing unreal situations, giving advice, and expressing hopes and wishes.

**ESL Level 5**

• Students will review and expand upon vocabulary and structures previously presented in preparation for content coursework in a degree program.

• Students will be capable of the following: debating, problem-solving, and making critical judgments.

**Writing Skills Development**

• Students will learn to critically examine their own and others’ writing.

• Students will learn proofreading and revision skills as well as elementary word processing skills, which facilitate writing and editing.

• Students will improve their sentence-level skills in spelling, punctuation, agreement, usage of tenses and verb forms, subordination, capitalization, and syntax.

• Students will improve their discourse-level organizational skills in logical development of a main idea, use of transition words and phrases, and use of various modes of exposition.
Appendix C

Miscue Coding Key for "A Real Bargain"

Rubric for Undeducted Miscues, Deducted Miscues and Significant Miscues

Substitutions which were not counted as miscues because they are foreign accent features are written in plain type.

Substitutions, insertions, or omissions which were counted as miscues are typed in *italics*.

Substitutions, insertions, or omissions which were considered to be significant, meaning-changing miscues are typed in **bold italics**.

The null sign (Ø), which signals an omission, has three forms: the standard form (Ø), italic form (Ø) and bold italic form (Ø).

Undeducted miscues are listed first, followed by miscues, followed by significant miscues.

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*Note: The table reflects the phonetic and morphological analysis of the text.*
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- Ø ad
- Ø ad

- antikwa
- antikway
- anti-Q
- antikwas
- ankwit
- ankwat
- antikwer
- eldest
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- antikal
- eldest
- anque
- entake
- akwarian
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Line Thirteen

| was covered with dust so Mr. Jones wiped it with his |
|---|---|---|---|---|---|---|
| covered | doost dest dust | this Mrs. many | Johnson Jo wip-ed wab weeped whipped wrapped whipo | is Ø | in |

Line Fourteen

| handkerchief | . Under the dust was a color map of Paris |
|---|---|---|---|---|---|
| handkerchi handkrif handchif handker handcherf her I don't know handker handchif handcraft handkrif | An doost the Ø coaler mop |

Line Fifteen

| It looked old . On the back of the map . someone had |
|---|---|---|---|---|---|---|
| He look-ed look on |

Line Sixteen

| written the price : $3 . Mr. Jones was quite certain that |
|---|---|---|---|---|---|---|
| write-n write Ø preese Ø $30 quit coy kweet sertine |

Line Seventeen
the map was worth more than three dollars, so he dos

Line Eighteen

bought it. He thought he could probably sell it for $40.

Line Nineteen

Later, at home, Mr. Jones looked more closely at the

Note:

Since the average number of words read was 109, most of the miscues appear in the first 12 lines, and fewer occur as each line proceeds. Punctuation was marked separately on the coding, but only missed periods were marked. Intonation irregularities are not marked in this miscue coding system, but were noted on the individual transcripts. The most common intonation feature was rising intonation when readers decoded a word they were not sure about. This was often followed by repetition of the word with normal intonation.
Appendix D

Course Syllabi for ESL Levels 1, 3, and 5
ESL LEVEL ONE SYLLABUS

TEXTS:

The New Grammar In Action I  
(Barbara H. Foley with Elizabeth R. Nebblett: 1998, Heinle & Heinle)

Grammarwork 1: English Exercises in Context, 2nd edition  
(Pamela Peterson Breyer: 1995, Prentice Hall Regents)

*Word By Word Picture Dictionary*  
(Steven J. Molinsky, Bill Bliss: 1994, Prentice Hall Regents)

*Language Lab Manual/Resource and Composition Book, 5th edition*  
(Department of Applied Language: 1993, NLU)

**Week One:** Present tense of ‘BE’, Contractions of ‘BE’, Subject Pronouns, Yes/No questions, Short Answers, Information Questions with ‘WHAT’ and ‘WHERE’, ‘BE’ + Adjectives. **Vocabulary:** Colors and Clothing.

**Week Two:** More Verb ‘BE’, Singular and Plural Nouns (Spelling and Pronunciation), ‘THIS/THAT/THOSE’, Possessive Pronouns, Possessive ‘S’, Numbers, Time, **Vocabulary:** Occupations, Country/Nationality/Language. **Composition:** Unit 1.

**Week Three:** Prepositions of Place, Verbs in Simple Present, Time Expressions, Irregular Plural Nouns, Questions with ‘WHOSE’, **Vocabulary:** Classroom, Work, and Everyday Activities.

**Week Four:** More Prepositions of Place, Simple Present Tense Questions, Information Questions with Subject ‘WHO’, ‘THERE IS/THERE ARE’, ‘HAVE TO’, Adverbs of Frequency with ‘BE’ and NON-’BE’ Verbs. **Vocabulary:** City Places, Health Words. **Composition:** Unit 2.


**Week Six:** Present Continuous Tense, Present vs. Present Continuous, More ‘THERE IS/THERE ARE’ vs. ‘THEY ARE’, **Vocabulary:** Colors and Clothes, Everyday and Work Activities. **Composition:** Unit 3.

**Week Seven:** More Present Continuous, More ‘THERE IS/THERE ARE’, Questions with ‘HOW MUCH/HOW MANY’, Verbs with Two Objects, Two-Word Verbs. **Vocabulary:** Outdoors, Fast Food, Money.

**Week Eight:** ‘CAN’, Verbs in Imperative, Possessive Pronouns, More Two-Word Verbs. **Vocabulary:** Weather, Sports, Occupations. **Composition:** Unit 4.
**Week Nine:** Past tense of ‘BE’, ‘HAVE TO/WANT TO/NEED TO/LIKE TO’. **Vocabulary:** Body and Health, More Occupations.

**Week Ten:** Review, Final Writing Sample, **MINI-FINAL EXAM, FINAL EXAM**
ESL Level 3 Syllabus

Texts:  
Idioms in American Life by Julie Howard (IAL)  
Even More True Stories by Sandra Heyer (EMTS)  
Level 3 Notebook 2002-2003 edition only (Notebook)

NOTE: (*) Indicates that material for studying the grammar structure is only found in the Level 3 Notebook.

Week 1  
Pretest/Writing Sample  
Review of Verb Tenses: review of past, future, used to, question formation, and prepositions

Azar: Non-progressive Verbs  
Simple Pres. and Present Progressive-Questions and Short Answers  
Prepositions  
Principle Parts of the Verb  
Spelling of -ing and -ed forms  
Simple Past and Past Progressive  
Past Time Using Time Clauses  
Used to  
Prepositions IN, AT and ON  
Be going to vs. Will  
Using Present Progressive to Express Future Time  
Yes/No Questions  
Yes/No and Information Questions

IAL: Lesson 1  
EMTS: Unit 3 “The World’s Largest Family  
Notebook: Week One  
COMPOSITION: Assignment 1 given

Week 2  
Present Perfect; Present Perfect Progressive; Articles; *Review of Adverbs and Adjectives

Azar: Past Participle and Present Perfect  
Simple Past vs. Present Perfect  
Present Perfect Questions and Answer Practice  
Using Since and For  
Tag Question Practice  
Pres. Perfect vs. Simple Past Exercises  
Present Perfect Progressive
Review of Articles (New-to-NLU students, please review non-count nouns, Azar pp193-205)

**IAL:** Lesson 2

**EMTS:** Unit 8 “The Black Cat”

**Notebook:** Week Two

**COMPOSITION:** Assignment 1 due

**Week 3**

Placement of Midsentence Adverbs; Verbs of the Senses; *So / Such (a/an)...that;

Comparative and Superlative of Adjectives and Adverbs

**Azar:** pp. 181-184 Midsentence Adverbs

331-333 Comparative and Superlative Forms of Adj. and Adv.

337-338 Repeating Comparatives (optional)

338-339 Using Double Comparatives (optional)

339-341 Using Superlatives

**IAL:** Lesson 3  pp.11-15

**Notebook:** Week Three  pp. 66 - 91

**FIRST TEST:** Including material through Week 2

**Week 4**

*Nouns with Comparative and Superlative form; Degrees of Difference using Comparatives; The Same/Similar/Different/Alike; As….as (Equality of Comparison) NOTE: This material is covered extensively in the Notebook

**Azar:** pp. 328-331 Making Comparisons with As…As

342-344 Using The Same/Similar/Different/Alike

334-336 Using Comparative including Degree of Comparison

336-337 Using MORE with Nouns

**IAL:** Lesson 4 pp. 16-22 Review Lessons 1-4 pp.23-25

**EMTS:** Unit 13 “An Unexpected Adventure” pp. 98-105

**Notebook:** Week Four pp. 93 -112

**COMPOSITION:** Assignment 2 given

**Week 5**

Verbs followed by Gerunds and Infinitives; Review for Midterm given in Week 5 or Week 6

**Azar:** pp. 246 Gerunds and Infinitives Introduction

247-249 Verb + Gerund

250-251 Go + -ing

251-252 Verb + Infinitive

253 Verb + Gerund or Infinitive

253-256(top of page) Verb + Gerund or Infinitive Exercises

**IAL:** Lesson 5  pp. 26-30
Notebook: Week Five  pp. 113 - 137

COMPOSITION: Assignment 2 due

MIDTERM EXAM: Including material through Week 5, given end of Week 5 or beginning of Week 6, depending on instructor

Week 6 *Causative Verbs; Verb + Object +Infinitive; Time Clauses in the Future

Azar: pp 53-58 Time Clauses in the future

IAL: Lesson 6

EMTS: Teacher’s Choice

Notebook: Week Six pp. 138 - 157

COMPOSITION: Assignment 3 given

Week 7 Modals (Part 1: p.105 I-V): *Be able to/Know how to/ Be permitted to/Be allowed to

Passive voice in Present, Present Perfect, Past and Future

Azar: pp. 94-95 The Form of Modal Auxiliaries
  95-97 Expressing Ability: Can and Could
  98-99 Expressing Possibility: May and Might
  Expressing Permission: May and Can
  100 Using Could to Express Possibility
  100-102 Asking for Permission: May I, Could I, Can I
  276-287 Passive Voice

IAL: Lesson 7

EMTS: Unit 12 “Postponing Death” pp. 90-97

Notebook: Week Seven pp. 158 - 177

Week 8 Modals (Part 2: p.105-6  VI -IX ); BE supposed to; Past perfect; So/Too/Either/Neither

Azar: pp 105-107 Expressing Advice: Should, Ought to, Had Better
  108-109 Expressing Necessity: Have to, Have Got to, Must
  109-111 Expressing Lack of Necessity: Do Not Have to
  Expressing Prohibition: Must Not
  112-113 Making Logical Conclusions
  119-123 Stating Preferences: Prefer…to, Like…Better, Would Rather
  189-192 Using the Past Perfect
228-233  So/Too/Either/Neither
307-308  Using Be Supposed to

IAL:  Lesson 8  pp.41-46;  Review: Lessons 5-8  pp.47-50
Notebook:  Week Eight  pp. 178 - 213

COMPOSITION:  Assignment 3 Due

Week 9  Grammar  Catch up; Begin Review for Final Exam
EMTS:  Unit 11  “The Plain People”  pp. 83-87
Notebook:  Week Nine  pp. 214 - 243
Oral Interviews
Language Lab Final exam
All Composition Rewrites Due

Week 10  Review for Final Exam
Final Writing Sample, Final Exam
ESL LEVEL 5 SYLLABUS

Textbooks: The American Ways TAW
Understanding and Using English Grammar (3rd Edition) UEG
ESL 5 Workbook WKBK
Idioms in American Life IAL
Face the Issues FI

WEEK 1 Writing Sample; Review of Verb Tenses; Articles with Words Beginning with Consonants and Vowels

TAW Chapter 1 pp. 1-19, "Introduction"

UEG pp. 12-33 (Present; Present Progressive; Past; Past Progressive)

IAL Lesson 17

WKBK pp. 3-13

COMPOSITION 1 (writing sample)

Conversation Class
Introductions, UEG p. 1

WEEK 2 Review of Verb Tenses; Count/Noncount Nouns; Articles (Basic Usage and Usage with Proper Nouns); Expressions of Quantity; Forms of Other

TAW Chapter 2 “Traditional American Values and Beliefs”

UEG (Present Perfect; Present Perfect Progressive; Past Perfect; Past Perfect Progressive)

WKBK

Conversation Class
FI Unit 10 Follow-Up Activities "Meet You on the Air"
**WEEK 3**  
Future; Future Progressive, Future Perfect; Future Perfect Progressive; Review of Verb Tenses; Adverb Clauses of Time

**TAW**  
Chapter 5 “The Heritage of Abundance”

**UEG**  
(Future; Future Progressive; Future Perfect; Future Perfect Progressive)  
(Review of Verb Tenses; Adverb Clauses of Time)

**WKBK**  
**IAL**  
Lesson 18

**ESL Level 5 Bridging**

**COMPOSITION 2**

**Conversation Class**

**FI**  
Unit 8 Follow-Up Activities “From One World to Another”

**WEEK 4**  
Adverb Clauses of Time; Cause/Effect; Purpose; Unexpected Result; Opposition; Punctuation

**TAW**  
Chapter 6, “The World of American Business”

**UEG**  
(Adverb Clauses of Time, Cause/Effect, Unexpected Result; Opposition)  
(Cause/Effect; Punctuation; Purpose)  
(Unexpected Result)  
(Direct Contrast)

**WKBK**  
**Conversation Class**

**FI**  
Unit 2 Follow-Up Activities, "Living Through Divorce"

**WEEK 5**  
Modal Perfect; Modal Progressive; Modal Perfect Progressive; Condition; Giving Examples

**TAW**  
Chapter 8 “Ethnic and Racial Assimilation in the United States”

**UEG**  
(Modal Perfect)  
(Modal Perfect; Modal Progressive; Modal
Perfect Progressive)  
(Condition)  
(Condition)  
(Relationships)  
(Giving Examples)

WKBK  
IAL Lesson 19

COMPOSITION 3

Conversation Class
FI Unit 12 Follow-Up Activities, "A Healthier Way of Looking at Men and Women"

WEEK 6 REVIEW AND MIDTERM EXAM

WKBK Conversation Class
FI Unit 5 Follow-Up Activities, "A Boy's Shelter for Street People"

WEEK 7 Noun Clauses; Used to/Be Used to/Get Used to; Would (Habitual Past); Passive; Participial Adjectives

TAW Chapter 9, "Education in the United States"

UEG (Noun Clauses) (Used to; Would) (Passive) (Participial Adjectives) (Linking Verbs)

WKBK  
IAL Lesson 20

Conversation Class
FI Unit 7 Follow-Up Activities, "The Dirty Dozen"

WEEK 8 Gerunds and Infinitives
TAW Chapter 10, "Leisure Time: Organized Sports, Recreation, and Television"

UEG (Gerunds and Infinitives)
(Gerunds and Infinitives)
(Preposition Combinations With Adjectives and Verbs)

WKBK

Proverb handout

Conversation Class
FI  Unit 9 Follow-Up Activities, "Attached to Crime"

WEEK 9 Simple Form; Gerunds and Infinitives; Verbs of Perception; Causative Verbs

UEG (Gerunds; Infinitives; Verbs of Perception; Simple Form; Causative Verbs)

IAL Review Lesson 17-20

WKBK ORAL PROFICIENCY INTERVIEWS

COMPOSITION 4 — PROVERB WRITING ASSIGNMENT

Conversation Class
FI  Unit 3 Follow-Up Activities, “A Couch Potato”

WEEK 10 Review, Final Writing Sample, and Final Exam

WKBK.
*FINAL WRITING SAMPLE
**FINAL EXAM

Please note: This syllabus is subject to revision at any time.
### Appendix E

List of Section Headings and Point Totals of Level 1, Level 3, and Level 5 exams

<table>
<thead>
<tr>
<th>Level 1</th>
<th>total: 133 points</th>
<th>points</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Listening comprehension - writing responses to spoken questions</td>
<td>7</td>
<td></td>
</tr>
<tr>
<td>2. Listening comprehension - circling multiple choice to spoken questions</td>
<td>3</td>
<td></td>
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<tr>
<td>3. Listening comprehension - writing responses to written questions after listening to a taped dialog</td>
<td>5</td>
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<tr>
<td>4. Grammar - multiple choice for cloze sentences</td>
<td>13</td>
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<tr>
<td>5. Question formation - writing questions with answers below them</td>
<td>30</td>
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<tr>
<td>6. Prepositions - writing prepositions into cloze sentences</td>
<td>11</td>
<td></td>
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<tr>
<td>7. Singular/plural - rewriting singular sentences in plural and vice versa</td>
<td>6</td>
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<tr>
<td>8. Negatives - changing affirmative sentences to negative</td>
<td>10</td>
<td></td>
</tr>
<tr>
<td>9. Writing sentences from cue words - making complete sentences from cues</td>
<td>5</td>
<td></td>
</tr>
<tr>
<td>10. Verbs - writing correct verb form in cloze sentences</td>
<td>5</td>
<td></td>
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<tr>
<td>11. Two-word verbs - choosing correct two word verb (provided) and writing it in blank</td>
<td>10</td>
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<tr>
<td>12. Verbs - writing the correct verb form in cloze sentences</td>
<td>6</td>
<td></td>
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<tr>
<td>13. Writing there is/there are sentences - writing from picture cues</td>
<td>7.5</td>
<td></td>
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<tr>
<td>14. Past tense BE - choosing and writing correct form of BE (provided) in cloze sentences</td>
<td>5</td>
<td></td>
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<tr>
<td>15. Auxiliary verbs - writing the correct auxiliary verbs in cloze dialog</td>
<td>2.5</td>
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<tr>
<td>16. Reading comprehension - reading an illustrated story and writing sentences answering content questions about it</td>
<td>5</td>
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</table>

<table>
<thead>
<tr>
<th>Level 3</th>
<th>total: 134 points</th>
<th>points</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Present perfect/present perfect progressive - writing sentences from content word cues</td>
<td>6</td>
<td></td>
</tr>
<tr>
<td>2. Past perfect - writing sentences from content word cues</td>
<td>4</td>
<td></td>
</tr>
<tr>
<td>3. Vocabulary - choosing and writing target vocabulary words in short cloze</td>
<td>11</td>
<td></td>
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<tr>
<td>4. Comparative/superlative - writing correct form of word (supplied) in cloze sentences</td>
<td>10</td>
<td></td>
</tr>
<tr>
<td>5. Equality of comparison - reading short biographies and three people and writing sentences about them from cues, using equality of comparison</td>
<td>7</td>
<td></td>
</tr>
<tr>
<td>6. Articles - inserting articles into a cloze dialog</td>
<td>6</td>
<td></td>
</tr>
<tr>
<td>7. Negatives - changing affirmative sentences to negative</td>
<td>10</td>
<td></td>
</tr>
<tr>
<td>8. Modals - circling multiple choice in cloze sentences</td>
<td>5</td>
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</tr>
<tr>
<td>9. Modals - writing correct tense of modal phrases (provided) in cloze sentences</td>
<td>4</td>
<td></td>
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<tr>
<td>10. Modals - writing sentences in response to situations needing modals writing it in blank</td>
<td>2</td>
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<tr>
<td>11. Question formation - writing questions with answers below them</td>
<td>8</td>
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<tr>
<td>Level 5</td>
<td>total: 100 points</td>
<td>points</td>
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<tr>
<td>1. Reading comprehension - reading 250 word article and writing sentences answering content questions about it</td>
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<td>5</td>
</tr>
<tr>
<td>2. Articles - inserting articles into a cloze paragraph</td>
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<td>7</td>
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<tr>
<td>3. Perfect modal - writing sentences using perfect modals in response to questions following a 5 line story</td>
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<tr>
<td>4. Used to/get used to/be used to - choosing the correct one in cloze paragraph</td>
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<tr>
<td>5. Vocabulary - choosing and writing target vocabulary words in short cloze passages</td>
<td></td>
<td>12</td>
</tr>
<tr>
<td>6. Participial adjectives - writing correct form of word in cloze sentences</td>
<td></td>
<td>5</td>
</tr>
<tr>
<td>7. Prefixes - adding the correct prefix (supplied) for words in cloze sentences</td>
<td></td>
<td>6</td>
</tr>
<tr>
<td>8. Noun clauses - writing portions of sentences changed to noun clauses</td>
<td></td>
<td>5</td>
</tr>
<tr>
<td>9. Gerunds/infinitives/base form/past participles - writing verbs in correct form in cloze sentences</td>
<td></td>
<td>8</td>
</tr>
<tr>
<td>10. Forms of &quot;Other&quot; - choosing and writing correct form of word (provided) in cloze sentences</td>
<td></td>
<td>4</td>
</tr>
<tr>
<td>11. Combining sentences using connectors - writing new sentences from two separate ones using a provided connector</td>
<td></td>
<td>5</td>
</tr>
<tr>
<td>12. Combining sentences using connectors - writing new sentences from separate ones using a provided connector</td>
<td></td>
<td>6</td>
</tr>
<tr>
<td>13. Sentences completion - writing the end of sentences after connectors</td>
<td></td>
<td>4</td>
</tr>
<tr>
<td>14. Word forms - choosing and writing the correct forms of words of words (provided) in cloze sentences.</td>
<td></td>
<td>8</td>
</tr>
<tr>
<td>15. Mixed tense - writing the correct form of verbs (provided) in two cloze passages</td>
<td></td>
<td>10</td>
</tr>
<tr>
<td>16. Idioms - writing sentences using idioms (provided) which respond to situations described in 3-5 lines of text</td>
<td></td>
<td>6</td>
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</tbody>
</table>
Appendix F

Sample of Level 3 Final Exam
ESOL Level Three Final Exam

I. Present Perfect/Present Perfect Continuous
Write sentences from the cues provided, using present perfect and present perfect continuous. Do not change the order of the words. (6 points)

1. she/enjoy/swimming/since/she/be/a little girl.
   ________________________________________________________________
   ________________________________________________________________
3. how long/you/work/at the company/so far?
   ________________________________________________________________
4. I/pass/Level 3/yet.
   ________________________________________________________________
5. you/ever/go/to Japan?
   ________________________________________________________________
6. we/take/this test/20 minutes/up to now.
   ________________________________________________________________

II. Past Perfect
Write sentences using simple past and past perfect. (4 points)

1. before/I/come/to the U.S./I/live/in Kiev.
   ________________________________________________________________
2. I/can/register for school last quarter/because/I/get/my financial aid/yet.
   ________________________________________________________________
3. he/take a taxi/after/he/miss/the bus.

4. by the time/Lars/get to work yesterday/he/already drink/two cups of coffee.

III. Vocabulary
Write the best word or words from the list below in the blanks. There will be extra words. You will need to change some words to negatives or different tenses. (16 points)

remarkable elderly relative
grow up grateful celebrate

1. It is ________________________________ that some people can postpone dying. Scientists have studied this ability in _____________________ people. Have any of your _________________________ ever done this?

2. If a driver __________________________________, he or see will be given a ticket by the police. A police officer often parks behind a sign or bridge so that the police car isn’t ___________________________. Then it’s possible to catch drivers who do this.
3. The Smiths ___________________________ their old sofa and gave it to a _____________
________________________________________While I was there, their sofa _______________________.

************

escape  scenery  (to) kid
admit  take care of  responsibility

4. Emily comes to our house on Fridays. She _________________________ our two year old
son. It’s a big _______________________________. Last week, our son broke a glass while
Emily was there. She __________________________ that she was watching TV when he broke
it.

************

be against  on (one’s) own  keep (one’s) promise
snowstorm  keep track of  after all

5. Mr. and Mrs. Albina have 53 children. They ___________________________ birth control.

When Mrs. Albina was a child she was left in an orphanage. She said she wanted to raise all her
children and she _________________________________. Now most of them are grown and
living _________________________________.

************

everyday  discovery  calm
graffiti  suspect  calm

6. When Giuseppe Fiorelli made his _________________________ of Pompeii, he found many
________________________ household objects buried beneath the dirt.

IV. Adjective and Adverb Forms - Positive, Comparative, Superlative
Complete each sentence with the correct form of the word in parentheses (______). First decide if the sentence needs an adjective or an adverb. Then choose the base, comparative, or superlative form. Do not use "as _____ as". (10 points)

1. Leo has looked (angry) ______________________________ lately. He must be having problems with his parents again.

2. Mrs. Benevidez has decided to give the job to Norma because she writes (good) _______________________________ of all of the people who applied.

3. I was tired for a week, but today I feel (little) _______________________________ tired I did last week.

4. If you want to be a successful saleswoman, you have to learn how to talk to everyone (friendly) _______________________________.

5. They don’t see eye to eye. Lena thinks that Ricky Martin sings (beautiful) _______________________________ Enrique Iglesias, but Inez doesn't agree.

6. This ring isn't (expensive) _______________________________ piece of jewelry I've ever owned, but it is my favorite because it belonged to my great-grandmother.

7. It's true. The grass in my neighbor's yard looks (green) _______________________________ the grass in my yard.

8. My dog only weighs 12 pounds, but he barks (loud) _______________________________ of all the dogs on our block.

9. People who don't have much money sometimes give (generous) _______________________________ people who are rich.

10. I still don't speak English perfectly, but I make (few/little) _______________________________ mistakes I used to.
V. Equality of Comparison and Comparative/Superlative

Look at the information below about three people and make sentences about them, using the word(s) in parentheses. **Do not write the same sentence twice.** (8 points)

**National Screw Company**

**Employee Data**

Rama is from India. He has lived in Chicago for about 3 years and has worked for National Screw for 2 ½ years. He makes $8.50 an hour. He is married, with two young sons. In his free time, he plays chess. Last week, he worked 40 hours.

Hai Tao is from China. He arrived in Chicago last year and has worked for National Screw for a month. He makes $7.25 an hour. He's single. In his free time, he plays computer games and studies English. Last week, he worked 37 hours.

Samira was born in the U.S. She has worked at National Screw Company for 2 ½ years. She makes $7.05 an hour. She is divorced, with one daughter and one son. In her free time, she goes camping with her kids. Last week, she worked 37 hours.

In your sentences, use the employees' first names.

1. (the most)

2. (fewer...than)

3. (the same [...] as)

4. (just as......as)

5. (different from)
VI. Articles. Write a, an, the, or 0 (no article) in the blank. (5 pts.)

Some people worry about their cars all the time. Not me! I don't have a car. I just have ____________ bike that I keep in ____________ basement of my apartment building. I don't have to go to _________________ mechanics. I save a lot of ____________ money on ____________ gas. _______ best thing is that I can leave quickly in ____________ morning.

I just put on my clothes, eat ________________ breakfast, take out ____________ bike, and go out ____________ door.

VII. Modals

Part A: Circle a, b, c, or d for the correct modal. Only ONE is correct. (5 pts.)

1. __________________________ I leave early today, please?
   a. Must
   b. Should
   c. Could
   d. Had better
2. Some people _______________________ sit in the sun than stay in the shade.
   a. ought
   b. would rather
   c. could
   d. should

3. Honey, you look tired. You _______________________ go to bed!
   a. don't have to
   b. had better
   c. aren’t supposed to
   d. may not

4. Yesterday, we _______________________ do any homework.
   a. must not
   b. didn’t have to
   c. can
   d. shouldn’t

5. _______________________ drive?
   a. Might you
   b. Was you able to
   c. Can you to
   d. Do you know how to

Part B. Use the words in parentheses ( ) in the sentence. (4 pts.)

6. I _______________________ sleep last night. ( - be able to)

7. She _______________________ use a sharp knife. ( - be allowed to)

8. I _______________________ be in class tomorrow. ( - might)

9. He didn’t show up. What time ___________ he ________________ arrive? (be supposed to)

Part C: Write answers to the following questions, using modals. (2 points)

1. Your arms are full of books and you can’t open the door. Politely ask someone to help you.
   ___________________________________________
2. He’s wearing a ring on his fourth finger. What logical conclusion can you make?

VIII. Question Formation. Write good questions in the blanks. (8 points)

Andy: What's that?
Will: Oh, it’s a little camping stove.

Andy: ____________________________________________________________?
Will: I bought it because my wife and I are going camping in Wisconsin this weekend.

Andy: Lucky! __________________________________________________?
Will: We go camping almost every weekend during the summer, and then
two or three times after Labor Day. ________________________________
______________________________?

Andy: No, not since I came to the United States. Back in my country, I used to
camp a lot.
Will: ____________________________________________________________?

Andy: I’d love to come with you, but I’m working on weekends.
Will: I didn’t know you had two jobs. ________________________________
______________________________?

Andy: Oh, for about three months. I’m trying to make some extra money for the
holidays.
Will: ____________________________________________________________?
Andy: In an auto parts store. It’s a pretty crazy place. It’s always full of people.

Will: _____________________________?

Andy: I prefer this job. It’s a lot more relaxed here. But they don’t give me enough hours here.

Will: I know what you mean. By the way, I’m looking for a substitute for this Sunday.

______________________________?

Andy: Sorry, I’m not able to. During those hours I’ll be at my other job. Maybe Lindsey can take those hours for you.

Will: Yeah, I could ask Lindsey. That’s a good idea.

IX. Gerunds, Infinitives, Causatives
Write a verb in each blank. Some blanks will need the negative form of a gerund or an infinitive. (6 points)

1. A: My daughter plays drums in a rock band. They practice in our garage.

   B: Really? How can you stand (listen) __________________ to all that loud music?

   A: I don’t mind (hear) __________________________ them. They are actually pretty good. I make them (keep) _________________________ the door and windows closed.

2. My mother keeps (tell) __________________ me my hair is too long. Last night, I
decided (cut) _____________________________ it. How do you like it?

3. A: How do you get your kids (- fight) ______________________ with each other?
   
   B: My wife and I always sit down at the table and help them
   (talk)_________________ about their problems and find a solution.

4. Mrs. Hilbert, you should avoid (eat) __________________ meat. I don't want you
   (get) ___________________ heavier.

5. My nephew is an unusually intelligent boy. He learned (play the violin)______________ when he was 6 years old.

6. I love you, and I promise (- hurt) ______________________________ you anymore.

7. Mr. and Mrs. Yasunori sold their condo in the city and bought an old farm house
   because they prefer (live) ______________________________ in the country.

X. Too, but, either, so, neither

Complete the sentences. (6 points)

1. Marcy hasn't found a job, _____________ I ____________.

2. This watch doesn't work. ________________________ that one.

3. They'll go to the movies tonight, and ______________________ we.

4. I have never liked to cook._________________________ my mother.

5. I hadn't eaten by the time the show began. They ________________________.

6. You should study chemistry. Your classmates ________________________.

XI. So/such (a/an)

Write the correct words in the blank. (5 pts.)

1. Don't be ___________________ quiet! Talk to me!

2. There are _________ many books I want to read and I have _______ little time to read them.

3. It's ___________________ long way from your house to mine that I'm going to stay home tonight.
4. You always give me __________________ nice things on my birthday.

XII. Verb Tense Review

Fill in the blanks with the best tense of each verb in parentheses ( ) . Use negatives when you see (- ). (20 points)

Dear Sir,

I ________________________________ (live) at 667 Underhill Road for six years already. I __________________________ (be) a homeowner and a taxpayer. I ____________ _____________ (write) you today because one hour ago, the city _________________ (remove) the tree in front of my house. In fact, the tree _______________ (still/lie) on my sidewalk. Why __________ this __________ (happen)?

The tree wasn't in bad condition. In fact, it ___________ (have) a lot of green leaves and new branches. Many birds ________________ (live) in that tree, and now they ___________________________ (- have) any place to go.

________________ you ___________________________ (plant) a new tree there?

If so, I would prefer a sugar maple. I ____________________________ (already/look) at some tree catalogs, and I think a maple is the best for my property. Last year, the city ___________ (put) in a new sugar maple tree across the street, and everyone ___________________________ (like) the new tree a lot. It ___________________________ (give) maple syrup last spring, and it _____________________ (turn) beautiful colors last fall.

Please ____________________________ (answer) my letter soon, because we all ____________________________ (want) to know your plans. What __________ you
What plan do you have to do now? We’ve told you what we need. Everyone ____________(count) on you! Sincerely, Ruth Ellis

XIII. Passive Voice

Change the following sentences into passive sentences. Some of them do not need the “by” phrase. (8 points)

1. Thieves stole some diamonds last night.

________________________________________________________________________

2. No one caught the thieves.

________________________________________________________________________

3. People saw a green car near the jewelry store.

________________________________________________________________________

4. The police are going to search the area.

________________________________________________________________________

5. The police always question the neighbors.

________________________________________________________________________

6. Someone robbed that jewelry store last month.

________________________________________________________________________

7. No one is going to find the thieves.

________________________________________________________________________

8. The thieves sold the diamonds.

________________________________________________________________________

XIV. Time Clauses in Future

Make a sentence with the time clause, using future and present simple. (5 points)

1. I/get home/I/call/you (as soon as)

________________________________________________________________________

2. you/can/take Level 4/you/have to/pass/this final exam! (before)
3. she/feel better/she/rest (after)

4. you/come to Chicago/I/show you/the city (when)

5. the students/be able to/go home/they/finish/the final exam (when)

XV. even though/because/although
Write the correct word in the blank. (3 pts.)

1. I called the police ____________________________ I didn’t want to.

2. ____________________________ it was raining, she brought her umbrella.

3. _____________________________ the test was long, the students did a good job.

XVI. Idioms in American Life
Use the following idioms in sentences to respond to the situation. You may use each idiom only once. Don’t forget, sentences can be negative and in different tenses. (10 points)

had better let someone down count on someone
go to pieces on purpose do one's best
be out of shape drop off be up to someone
go Dutch take after on second thought
see eye to eye make sense

1. You look and act exactly like your grandmother. Tell about it.

2. Your teacher wants you to write more quickly, but you can’t. Explain that you are trying hard, but this is as fast as you can write.
3. You tried to help your mother in the kitchen. You dropped and broke a dish and she got angry. What can you say to her?

4. Your friend promised to help you move last weekend, but he never called. What can you say to him?

5. Your friend tells you that she and her husband disagree about many things. Give her some advice.

6. You get very, very nervous when you take a test, and you get low grades. Explain to the teacher what happens to you during a test.

7. It’s raining very hard and you are at school. You need a ride home. Ask your friend with a car to help you.

8. Your friend has a low-paying job with a terrible boss and long hours. She wants to quit and find another job. Give her advice.

9. At first, you wanted to go out with friends this weekend, but now you are tired and don’t want to go. Tell your friends.

10. Your seven year old daughter spends the whole afternoon in front of the TV. She never plays outdoors. Give her some advice.
XVII Reading Comprehension and Writing (10 points)

1. According to Michael Crichton, when does happiness usually come to people?

2. “Terminally ill” people are going to die soon from a disease. According to the author, what do they understand about happiness?

3. What is the main idea of the article? Use your own words.

4. What makes you happy? Write at least two sentences about it.

The Happiness Report

"Most often it occurs when we're not paying attention to it." That's what Michael Crichton says about happiness.

He goes on to say that we know more about what doesn't make us happy than about what does. For example, people think that they'll be happy as soon as they get married or get a better job. But they aren't. He also says that buying things won't make us happy, either. He says that the more you pay attention to yourself, the more unhappy you become.

His advice is this: "If you want to be happy, forget yourself. Get busy helping others. The world needs you." People who help others are often the happiest in the world.

Next he asks this question: "Who knows all this?" Answer: He himself. "Nobody on their deathbed ever wished they had spent a few more days at the office or bought that new car. What matters is friends, family, and human relationships: what you did for other people and what they did for you... That's the heart of happiness."

Finally, he tells us, "Make the world a better place and... you'll be happy."

An article in Self Magazine also asked some famous people about what makes them happy. Here are some of their answers:

Neil Simon, a famous writer, said, "Money brings some happiness, but after a certain point, it just brings more money."

Jessica Tandy, a famous actress, said, "I'm happiest when I'm working."

Governor Ann Richards said, "Being Governor of Texas—I've never been happier."
1. Do you think money brings happiness? Why or why not? Explain.

XVIII Listening Comprehension  List to the question and write an answer, using a complete sentence. (5 points)

1. 

2. 

3. 

4. 

5. 

This is the end of the test!

130 points total
Appendix G

Instruction Form for MFS Rater

Instructions for rating fluency samples using MFS scale

1. Listen to the first three fluency samples as you look at the completed sample rubrics. If needed, play the three samples more than one time, until the ratings make sense to you.

2. Write the number of each sample at the top of the MFS scale sheet. Inclusive numbers are written on each side of the tape, but individual samples do NOT begin with a number. You have to keep track of them. If you hear a participant's name, do not write it.

3. Then, start listening to the ratings, beginning with the first three. As you listen to each sample, glance at the descriptors on the rubric, and circle or underline the features you notice. The focus of the fluency rubric is on pace, smoothness, and phrasing, so focus on those features. If you want to, write additional comments about the sample somewhere on the same page. In the beginning, you may want to listen to a sample two or three times; when you get more comfortable, you will only need to listen once.

4. After each sample, stop the tape recorder and rate the sample, using all three categories. Try to avoid "half points." Then take the average and write it at the bottom of the rubric.

5. Continue until all samples have been rated. It is a good idea to take a break regularly; the end of the side of a tape is a good natural break point.

6. When completed, please write a few informal thoughts about the samples or the rubric, based on your rating experience, on a piece of paper. It can be as short or long as you wish.

6. Please return the rated samples, tapes, and impressions page to the research coordinator. Thank you very much!
Fluency Reflection

May 17, 2003

Measurement Scale

I found it difficult, at times, to distinguish between number 2 and 3 of phrasing. I found myself wanting something in between. Many of the students phrased in two or three word chunks, but some at a more advanced stage than others. I did not think that the students had run ons, as number 3 would suggest but they certainly phrased better than others who were at the beginning stages of two word phrases and did not read word by word. It helped me if I did not look at the passage but rather listened across the room for the phrasing, smoothness and pace.

Students

I seemed to have many 2s in phrasing and 3s in smoothness. It appeared to me that the students read on tape by level of proficiency. I would have several who appeared to be level 1 or 2 in clusters. It was apparent on numbers 48-57 that the students were more advanced in English proficiency. The instructor in me kept thinking where I would concentrate instruction
with each student. On many, the native language they spoke was apparent by their pronunciation of English. Others needed explicit phonics instruction. Others vocabulary development. I felt, over all, they attended to periods and commas very well and seemed to have literacy skills in another language. I wonder if there is a correlation in their fluency and their comprehension.
Appendix I
L2/ESL Fluency Rubric, Version 3

L2/ESL Adult Multidimensional Fluency Scale

name of student/#: ________________________________

A. Decoding - may have one or more of these features

1. A number of significant miscues. Many starts and/or pauses. Miscues not self-corrected.

2. A few significant miscues. Several starts and/or pauses. Some miscues self-corrected.

3. Several miscues, but none significant. Some starts or pauses. Most miscues self-corrected.

4. Very few miscues (except those due to "foreign accent"). No need for self-correction.

B. Foreign Accent

1. Has problems with one or more English speaking patterns, resulting in reading that is largely incomprehensible.

2. Can produce most English speaking patterns reasonably accurately, but some text is incomprehensible or distorted.

3. Can produce most English speaking patterns, but some text requires effort to be understood.

4. Shows working knowledge of English speaking patterns, with slight L1 retentions, but text is completely intelligible.

C. Phrasing - may have one or more of these features


3. Some choppiness, but correctly chunked, with reasonable stress/intonation.

4. Well-phrased, correctly chunked, and with adequate expression.
D. Pace and Confidence

1. Slow and effortful, tentative.

2. Slow or uneven, or "speed reading," lack of confidence

3. Moderately slow pace, with careful but confident delivery.

4. Pace similar to literate L1 adult, self-confident delivery.

average of four measures: ___________

(written by Kristin Lems © 2003; adapted from Zutell and Rasinski, 1991, p. 215)
Appendix J

Coded Miscue Analysis Sheets for Three Representative Case Studies

Case Study #2

A FEW years ago Ed Jones was shopping at a thrift store in Indianapolis, Indiana. He walked past the used clothing and stopped at the used books. He looked at the books and then at some old dishes. Mr. Jones was looking for something that might be valuable. If he found something valuable, he would buy it cheaply and then resell it, perhaps to an antique dealer. But today Mr. Jones didn’t see anything he wanted, so he started walking toward the door. Then something caught his eye. Leaning against a wall there was a large cardboard map.

Mr. Jones walked over for a closer look. The map was covered with dust, so Mr. Jones wiped it with his handkerchief. Under the dust was a color map of Paris. It looked old. On the back of the map, someone had written the price: $3. Mr. Jones was quite certain that the map was worth more than three dollars, so he bought it. He thought he could probably sell it for $40. Later, at home, Mr. Jones looked more closely at the map. He decided it might be very old. Maybe it was worth even more than $40.
FEW years ago Ed Jones was shopping at a thrift store in Indianapolis, Indiana. He walked past the used clothing and stopped at the used books. He looked at the books and then at some old dishes. Mr. Jones was looking for something that might be valuable. If he found something valuable, he would buy it cheaply and then resell it, perhaps to an antique dealer. But today Mr. Jones didn’t see anything he wanted, so he started walking toward the door. Then something caught his eye. Leaning against a wall there was a large cardboard map.

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Later, at home, Mr. Jones looked more closely at the map. He decided it might be very old. Maybe it was worth even more than $40.
A Real

A few years ago Ed Jones was shopping at a thrift store in Indianapolis, Indiana. He walked past the used clothing and stopped at the used books. He looked at the books and then at some old dishes. Mr. Jones was looking for something that might be valuable. If he found something valuable, he would buy it cheaply and then resell it, perhaps to an antique dealer. But today Mr. Jones didn’t see anything he wanted, so he started walking toward the door. Then something caught his eye. Leaning against a wall there was a large cardboard map.

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