2008

The effect of Responsiveness to Intervention tier 2 on underachieving students in vocabulary development at the secondary level

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Recommended Citation

The University of San Francisco

THE EFFECT OF RESPONSIVENESS TO INTERVENTION TIER 2 ON
UNDERACHIEVING STUDENTS IN VOCABULARY DEVELOPMENT AT THE
SECONDARY LEVEL

A Dissertation Presented
to
The Faculty of the School of Education
Learning and Instruction Department

In Partial Fulfillment
of the Requirements for the Degree
Doctor of Education

by
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San Francisco, CA
December 2008

This dissertation, written under the direction of the candidate's

dissertation committee and approved by the members of the committee,

has been presented to and accepted by the Faculty of the School of

Education in partial fulfillment of the requirements for the degree of

Doctor of Education. The content and research methodologies presented

in this work represent the work of the candidate alone.

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Table of Contents

Table of Contents Continued

CHAPTER 1

One of the most pressing policy challenges for K-12 education is closing the

academic achievement gap. An academic achievement gap refers to the observed

disparity on a number of educational measures between the performance of groups of

students, especially groups defined by gender, race/ethnicity, and socioeconomic status

(National Governors Association, 2007). Recent changes in federal education policy have

attempted to accomplish closing the gap through the passage of the No Child Left Behind

Act of 2001(NCLB). NCLB requires states to set the same performance goals for children

from economically disadvantaged families, children with disabilities, children with

limited English proficiency, and children from all major ethnic and racial groups. Within

NCLB guidelines, the 21st century teaching profession faces a national challenge to

educate all students to proficiency by 2014 (NCLB, 2001). Proficiency, defined by the

National Assessment of Educational Progress (NAEP, 2005) represents solid academic

performance when reading scores reach *Proficient*, at which point students are able to

find, understand, summarize, and explain relatively complicated literary and

informational material (see Table 1).

Statement of the Problem

Achieving proficiency on national and state assessments has proven to be difficult

for some secondary students. In 2005, a representative sample of over 21,000 high school

seniors from 900 schools across the country were assessed in reading. Subject matter

achievement is reported in two ways: scale scores and achievement levels so that student

performance can be more easily understood. Based on their scale scores, students are

reported as performing at five achievement levels: *Advanced*, at or above *Proficient*, at or above *Basic*, below *Basic,* and *Far Below Basic*.

Table 1. NAEP Levels, 2005.

Reading Score Levels Age 13	*Performance Ability*
Far Below Basic - 150	follow brief written directions and carry out simple, discrete reading tasks
Below Basic - 200	understand, combine ideas, and make inferences based on short uncomplicated passages about specific or sequentially related information
Basic - 250	search for specific information, interrelate ideas, and make generalizations about literature, science, and social studies materials
Proficient - 300	find, understand, summarize, and explain relatively complicated literary and informational material
Advanced - 350	demonstrated competency over challenging subject matter, including subject-matter knowledge, application of such knowledge to real-world situations, and analytical skills appropriate to the subject matter

The percentage of students performing at or above *basic* decreased from 80% in 1992 to 73% in 2005, and the percentage of students performing at or above *proficient* decreased from 40 to 35% (Grigg, Donahue, & Dion, 2007). Recent NAEP data also suggest that national trends in standardized tests in reading, mathematics, and science confirm the existence of achievement gaps for certain ethnic-minority student populations. For example, in 2005, only 18% of Hispanic students and 15% of African-American students performed at or above proficient in reading (Grigg et al., 2007). Further data indicate that 89% of Hispanic students and 86% of African American middle and high school students read below grade level, meaning that they performed below proficient (Perie, Grigg, & Donahue, 2005).

English Learners

One particular subgroup, English learners (ELs), faces numerous challenges to progressing to the level of proficient on standardized tests. NAEP data suggest that reading performance at or above *basic* level was demonstrated by 38% of 17-year-olds in 2004, down from 41% a decade earlier compared with 96% for non-EL students. Ninety-six percent of the eighth-grade ELs scored *below basic* in 2004 (NAEP, 2005) compared with 5% for non-EL students. Based on these scores, it appears ELs continue to struggle to gain the academic language needed to close the achievement gap.

Not only must English learners be proficient on statewide assessments, but they must also pass the high school exit exam. In California, the California High School Exit Exam (CAHSEE) is designed to ensure that all high school graduates have achieved a solid foundation of knowledge and skills in English Language Arts (ELA) and mathematics based on state-adopted content standards (CA Department of Education, 2007). In 2007, 64% of ELs tested in grade 10 did not pass the CAHSEE. That number translates to almost 35,000 tenth graders. The only decline in the percentage of students passing in spring 2007 was for students classified as EL. The EL students' struggle to master content standards is further evidenced as well on the California Standards Test (CST) where the percent of ELs scoring at *proficient* or above in Spring 2007 was 16% (CDE, 2007). In contrast, 28% non-ELs scored *proficient* or above.

Referral for Special Education Services

Traditionally, schools have two educational options for students: general education and special education. General education is the expected starting point for all students. The goal of every school district is to make the general education environment

the appropriate placement for all students. Bender and Shores (2007) define special education as educational programs and assignments including special classes and programs or services designed to develop the educational potential of children with disabilities. Special education should not be a separate program, but rather should be one aspect of a continuum of supportive services and programs provided to ensure that the general education environment is a responsive environment (Bender & Shores, 2007).

Students who fail to progress in general education classes are often referred for special education services. Sufficient research documents special education referral as the common practice in response to academic failure (Office of Special Education Programs, 2002). A special education referral is a written statement that a child has a suspected disability that interferes with learning and may have a need for special education supports (Fuchs & Fuchs, 2005; Mastropieri & Scruggs, 2005; Ysseldyke, 2005).

Historically, students referred for learning disabilities have been identified based on the I.Q. discrepancy/ability model. This model bases decisions for special education services on a statistically identified difference between a child's cognitive level through I.Q. testing and achievement level as measured by assessments in English or the student's primary language if it is other than English. Although the Individuals with Disabilities Education Act (2004) requires that eligibility teams determine if a student's lack of progress is the result of limited English proficiency, most policy decisions relative to special education services are based on first-language Caucasian English speaking children (Vaughn, Mathes, Linan-Thompson, & Francis, 2005). Adequate consideration has not been given to the role of the ELs' unexpected underachievement that could possibly be explained by their limited English proficiency (Klingner, Artiles, & Mendez

Barletta, 2006). As a result, some ELs are incorrectly identified as needing special education services.

Distinguishing Learning Disabilities from Linguistic Differences

One of the issues in the forefront of the diagnosis of disabilities within EL populations is whether or not language acquisition issues can be differentiated from learning disabilities (Klinger, et al.,2006). Cummins (1984) found that assessment of a child's academic language proficiency is critical to distinguishing learning disabilities from linguistic differences. Assessments should not only measure interpersonal communication skills but should also measure the literacy-related aspects of language. Unless these skills are measured, teachers may attribute low achievement to learning disabilities when they may actually be related to low academic language proficiency. At this point is where many English learners are referred for assessment to determine if a learning disability exists. Processes in language acquisition can be mistaken as markers for learning disabilities (Artiles & Ortiz, 2002). Students who are learning English as a second language may appear to be distracted, inattentive, impulsive, disruptive, and disorganized as a result of the mental fatigue associated with the time required to translate instruction and directions and the partial or incomplete understanding of instruction and directions. Students with limited English proficiency often display characteristics and behaviors that are similar but unrelated to disorders and disabilities requiring special education (Roseberry-McKibbin, 2002). As a result, EL students displaying these characteristics may be inappropriately identified as having a need for special education intervention.

Data that highlight the overrepresentation of culturally and linguistically diverse populations receiving special education services remain a concern (Artiles & Ortiz, 2002). Students of color dominate placement in two disability categories: speech or language impairment (SLI) in which Hispanics comprise 46% of the students identified nationwide, and specific learning disability (LD), where once again, Hispanics dominate with 55% identified (U.S. Department of Education, National Center for Education Statistics, 2006). Additionally, national findings suggest that African American students have 185% greater probability to be identified with mental retardation compared to white students. Native Americans and Alaskan Americans have 50% greater probability to be identified with LD than white students. Nationally, Hispanics have 17% greater probability of being identified as LD than white students (Parrish, 2002). Consequently, a disproportionate number of ELs are referred for special education services and the majority (56%) of those students exhibit reading difficulties and SLI (24%) (U.S. Department of Education and National Institute of Child Health and Human Development, 2003).

Since the 1990s, policymakers have been debating the I.Q. discrepancy/ability model, as many believe this method of identification has led to the overrepresentation of students with learning disabilities, particularly minority children whose language difference may not, in actuality, be a language disability (Klingner et al., 2006). In an effort to reform the eligibility criteria for learning disabilities, the National Research Center on Learning Disabilities issued the Common Ground Report (2002), which suggested changing the focus from failure to intervention. Response to Intervention (RTI), a framework for prevention and early intervention which involves determining

whether all students are learning and progressing adequately when provided with high-quality instruction and intervention. RTI has been recommended as an alternative to the discrepancy/ability model (Gresham, 2002; Vaughn & Fuchs, 2003). Part of the rationale and purpose behind the RTI model is to reduce inappropriate referrals to special education services for students who are culturally and linguistically diverse. By increasing the number of schools using effective literacy interventions, policymakers hope to reduce the overrepresentation of minority children receiving special education services *(National Center for Culturally Responsive Educational Systems, 2006)*

Response to Intervention Model

Although there is no universal model as of yet, interventions within the RTI model are often divided into three tiers of instruction (see Figure 1). Tier 1 provides high-quality instructional and behavioral support for all students in the general education setting, where approximately 80% of the students are experiencing difficulties. Monitoring is in the form of ongoing curriculum-based assessment and progress monitoring is used to guide instruction. In Tier 2, students who experience academic difficulties (approximately 15%) receive more specialized instructional support. Progress monitoring continues to determine instructional effectiveness and integrity. Variations on this model are typically found at Tier 2. If students (approximately 5%) continue to experience academic difficulties, a comprehensive evaluation by a multidisciplinary team is appropriate at Tier 3 in order to determine eligibility for special education services (National Joint Commission on Learning Disabilities, 2005).

Figure 1. Response to Intervention Guidelines.

Pyramid of RTI Support

Tier 2:
Targeted Group
Intervention:
Some At-risk students
High Efficiency
Rapid Response

Tier
3
5%

Tier 3:
Intensive Intervention

Tier 2
15%

Tier 1
Core Instruction
Preventative & Proactive
All Students
80%
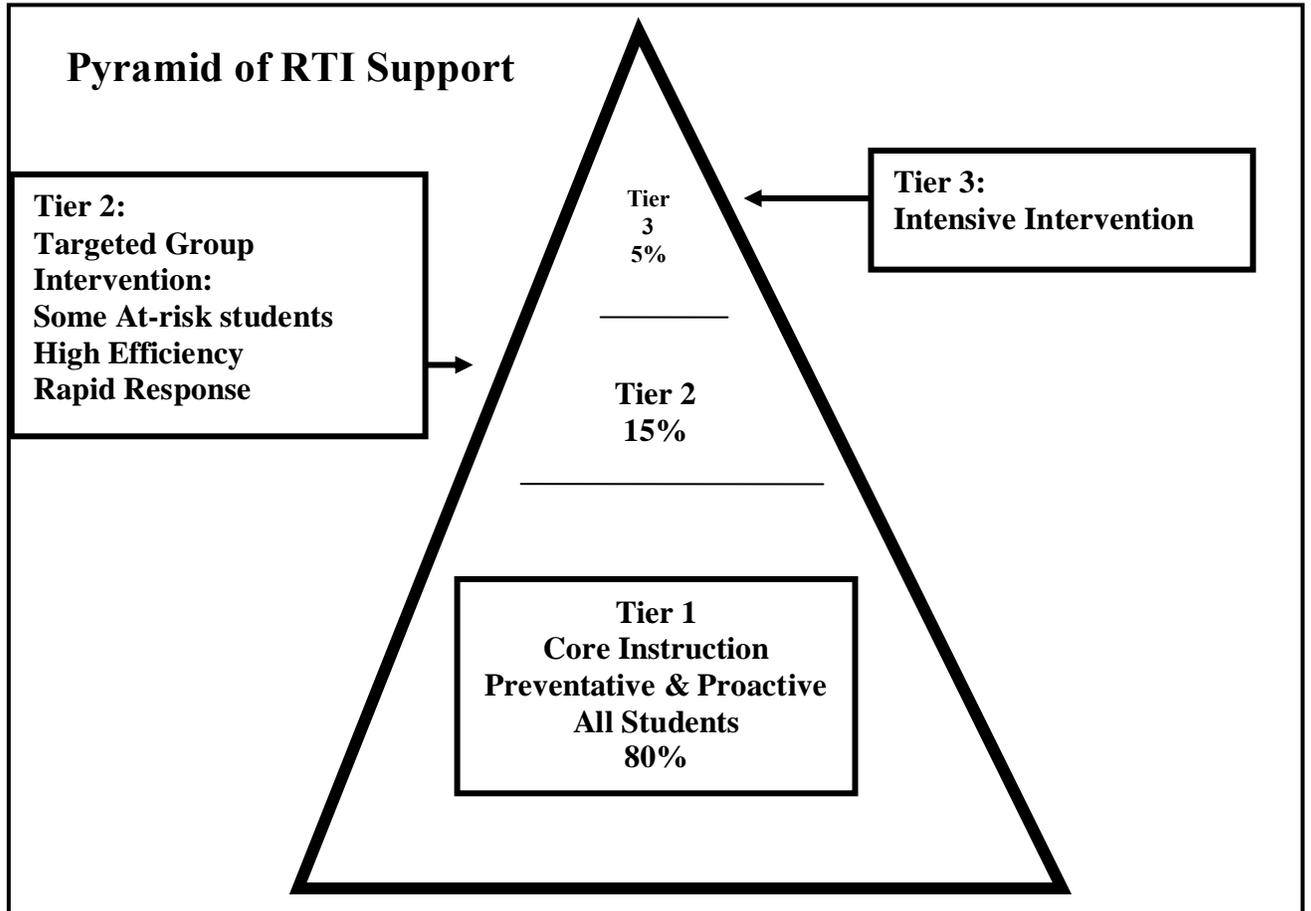
Much of the RTI research to date has centered on early intervention in the primary

grades, particularly in reading (Elbaum, Vaughn, Hughes, & Moody, 2000; Fuchs, Fuchs,

& Compton, 2004; Fuchs et al., 2005, Fuchs et al., 2007 Torgesen et al., 2001). The

application of RTI literacy interventions in the general education classroom for secondary

students remains unclear. For ELs neither the data collected as part of the referral process

nor the decisions made from these referrals reflect that professionals adequately

understand second language acquisition or other differences that influence ELs' learning

(Artiles, Trent, & Kuan, 1997).

The Impact of Vocabulary Development on Academically Struggling EL Students

More research is needed to understand the aspects and interactions of EL students' academic literacy skills with regards to RTI. Vocabulary knowledge, strongly related to comprehension, is a highly significant variable in EL students' success in reading (National Institute of Child Health and Human Development, 2000).In a study to determine how EL students' first and second language proficiencies were related to their metalinguistic development in both languages and to their English reading comprehension, a significant portion of the variance in reading comprehension was explained by the extensiveness of students' vocabularies in English (Carlisle, Beeman, David, & Spharim, 1999).

Extensive research exists identifying that a limited vocabulary distinguishes more proficient readers from less proficient readers (Jiminez, Garcia, & Pearson, 1995). Problems in reading and writing occur most often due to limited vocabulary and syntactic knowledge of English (Dutro, 2005). As the gap of academic knowledge widens, so do the chances for academic success. Typically, a native speaker enters school with a vocabulary ranging from a few thousand words to up to 20,000 words. In addition, the native speaker has an internalized understanding of the syntax and phonology of English. ELs enter school with the same internalized understanding of syntax and phonology in their native language; however, these students have only limited knowledge of and experience in English phonology and syntax (Dutro, 2005). Proficiency in English means that the English learner can compete with their native speaking peers in all academic uses of English (Hakuta, 2000).

In order to become proficient, ELs in high school must master subject-matter vocabulary in a very short time. Content area teachers at the secondary level are not always aware of the vocabulary needs of the EL who need to know and understand highly specific terminology and content specific concepts that comprise state and nationally mandated high-stakes tests.

More research is needed on vocabulary interventions for secondary ELs that will best support students who are struggling academically in general education settings. Findings may help inform researchers and educators as to the role of vocabulary development in second language acquisition when determining whether an EL has a learning disability or if the student simply needs more instruction and time. Therefore, this study proposes to investigate the effects of a research-based instructional practice in vocabulary development on underachieving English Learners within an RTI Tier 2 model at the secondary level.

<div align="center">Theoretical Rationale</div>

The proposed study is based on two theoretical rationales: second language acquisition theory which supports language development and the standard treatment protocol, an effective means of implementing response to intervention which supports academically struggling students (Deno & Mirkin, 1977). Each theory will be discussed in relation to its foundation for the proposed study.

Second Language Acquisition Theory

Second language acquisition theory is important to this study because ELs' language learning difficulties can be mistaken as learning disabilities. While language development occurs naturally for native speakers, ELs must consciously develop

language and literacy skills. In order to provide ELs with effective language and literacy instruction, educators must first understand second language development. Second Language Acquisition is a continuum of learning through predictable and sequential stages of language development in which the learner progresses from no knowledge of the new language to a level of competency closely resembling that of a native speaker (Dutro, 2005). Second language acquisition theory supports language development as an essential component of the education of all students, particularly those whose first language is not English. Language development plays a critical role in thinking and learning. Researchers Skutnabb-Kangas and Toukomaa (1976) defined the distinction between surface fluency in language and academic language proficiency in a study on the language of Finnish immigrant students who had age-appropriate oral language skills but were otherwise illiterate in reading and writing. The distinction separated the receptive skills of listening and speaking from the productive skills of reading and writing. Problems arise when teachers think that a child is proficient based on social oral language skills.

Cummins (1979) formalized these distinctions in terms of basic interpersonal communicative skills (BICS) and cognitive/academic language proficiency (CALP) as two distinct types of language proficiency. BICS is the quantifiable, formal aspect of language, such as pronunciation, basic vocabulary, and grammar. CALP is the less visible and less quantifiable aspects of semantics and functional meaning, which can take from 5-7 years to master. For CALP, demands are high and often beyond the language proficiency of the students. Academic language is often abstract. This level of language learning is essential for academic success.

The distinction between BICS and CALP was adapted through an iceberg metaphor (Shuy, 1981) Figure 2 represents the convergence of the first and second languages at the point of shared common underlying proficiency. Proficiency on the surface level is conversational language proficiency found in everyday communication and acquired without formal schooling. Underneath the surface is academic classroom-appropriate language developed in academic settings through formal schooling. So then, the two icebergs are different above the surface just as two languages are different, but below the surface, both languages operate from the same central processing system meaning that educational knowledge can be developed in two languages as well as one language. Cummins pointed out that the language of the child needs to be developed enough to handle the cognitive demands of the classroom. If ELs have a poorly developed second language, then what they learn and how they express that learning (written or orally) will probably be poor as well. By using a variety of literacy and vocabulary strategies, the teacher's job is to help build the ELs' expressive vocabulary to match their receptive vocabulary.

Figure 2. BICS and CALP Cummins Model, 1989
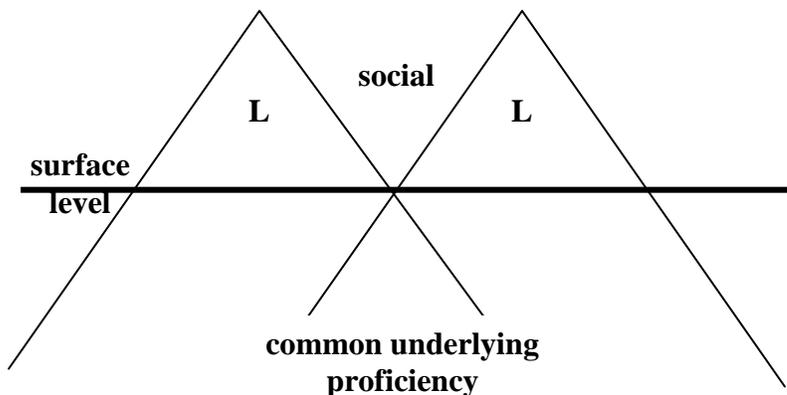
Second language acquisition theory and the distinction between BICS and CALP have directly influenced classroom instruction. A basic knowledge of second language

acquisition theory directly influences a teacher's ability to provide content area instruction to ELs. Understanding that ELs are going through a predictable and sequential series of developmental stages helps teachers predict what students currently can do while modifying instruction to help them move to the next stage. At each stage, students must continue to further develop specialized content-area vocabulary so that they are moving closer to the vocabulary competence and understanding of their native-speaking peers. This vocabulary competence, as well as other factors, must be developed well enough to process the cognitive challenge that secondary level texts present. In the proposed study, early intervention instruction in vocabulary development may help to create an academically successful experience for the students who otherwise will continue to struggle academically and possibly be referred for special education services.

<div align="center">Response to Intervention Model</div>

Deno and Mirkin's Standard Treatment Protocol

Recent finalization of the Individuals with Disabilities Education Act (IDEA) regulations has prompted many states to adopt some of the features of RTI. There has been no specific recommendation of a model of RTI as of yet; however, one of the most effective means of implementing RTI is through the use of the standard treatment protocol. The standard treatment protocol (Deno & Mirkin, 1977) is a theoretical model that proposed using a set of standard research-based interventions that would naturally progress from tier to tier and would be helpful to all struggling students. Students receive on-going curriculum-based measurements (CBM) for progress monitoring using appropriate probes. Several studies have used the standard treatment protocol in early elementary grades across both reading and mathematics with substantial results (e.g.,

Fuchs, et al.,2005; McMaster, Fuchs, Fuchs, & Compton, 2003; Vellutino et al., 2006). In one study involving forty general education third grade classrooms, the percent of unresponsive students who were given Tier 2 interventions was reduced from 86%-100% in the traditional mathematics instruction, to 12%-26% in the standard treatment protocol (Fuchs, Fuchs, Hamlett, Hope, Hollenbeck, & Capizzi, 2006). Even though the standard treatment model has less flexibility with the choices of interventions and may require more staff, the strategies are standard, research-based, and progress through all tiers of intervention (Bender & Shores, 2007). Intervention is designed for small group instruction, ongoing curriculum based monitoring of progress, and measures that monitor the fidelity and integrity of interventions and assessment (National Research Center on Learning Disabilities, 2005).

Since 1977, the standard treatment protocol has defined effective intervention. RTI is an important model because teachers can use RTI in the early identification of students at risk for academic failure and then are able to provide appropriate learning experiences for students. The hypothesis of RTI is that the sooner the struggling students are identified and taught appropriately using research-based strategies, the higher the likelihood that they can be successful and maintain their class placement as underachievement is reduced or eliminated (OSEP, 2002). The intent of RTI is to combine assessment and instruction and to address the weaknesses of the I.Q. achievement-ability discrepancy model currently used to identify a learning disability.

RTI alone is not sufficient to identify a leaning disability, but data collected from interventions could become part of a comprehensive evaluation for the identification of a learning disability and the determination of eligibility for special education

services (NJCLD, 2005). Because recent studies on RTI occur most often at the early

elementary level, more research needs to be conducted at the secondary level.

Specific to the proposed study, through the application of the RTI model at the

secondary level for struggling ELs, teachers applying a Tier 2 intervention using

vocabulary development may reduce or eliminate underachievement, enabling ELs to

improve performance on important state and national tests. In addition, by providing

early intervention to students who exhibit academic difficulties, educators may help

reduce inappropriate referrals of ELs for special education services (see Figure 3 for

conceptual framework).

Figure 3. RTI Conceptual Framework.
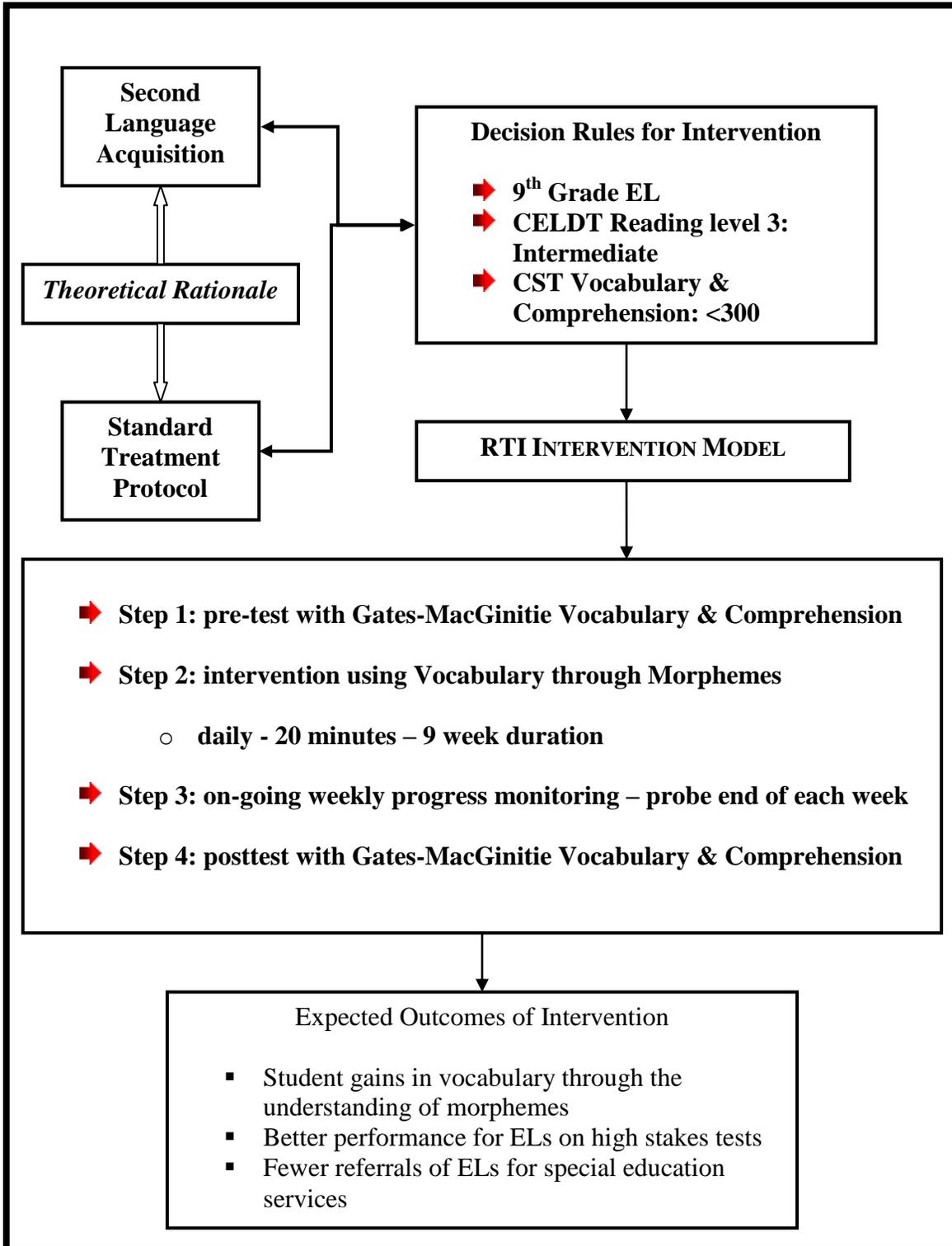
Background and Need

History of the Wait-to-Fail Model

In 1977, the first federal special education law, Public Law 94-142, regulated that in order for children to be identified as learning disabled and receive special education services, part of the diagnosis had to uncover a severe discrepancy between their achievement, as measured by standardized achievement tests, and their ability, as measured by standardized IQ tests (U. S. Department of Education, 1977). Identified also as the "wait to fail" approach, the model can only be applied after the students experience some level of curricular content for the ability/discrepancy to appear, usually not until third grade or beyond and after repeated failure (Fuchs & Young, 2006; Reschly, 2003).

Using this model, identification of students with learning disabilities has increased perhaps as much as 3% more than originally estimated nationwide, from 2% to more than 5%, representing over 50% of the special education population (Reschly et al., 2001; Fuchs, Fuchs, and Compton, 2004). Even though problems with the discrepancy model have further been identified (Fletcher et al., 1998; Stubing et al, 2002; Torgesen et al, 2001); the model persists as the most widely used for diagnostic purposes for specific learning disability (SLD), a disorder in one or more to the basic psychological processes involved in understanding or in using language, spoken or written, which may manifest itself in an imperfect ability to listen, think, speak, read, write, spell, or do mathematical calculations (34 CFR Part 300.5). SLD is often used interchangeably with learning disability (LD) and the researcher will refer to the latter throughout the study.

RTI Research

      In response to the wait-to-fail model, research supports RTI for ELs who struggle with reading rather than waiting for the students to fail for several consecutive years. Although there is an absence of research at the secondary level, studies involving K – 3 students are promising. Particular to RTI is a study by Vaughn, Linan-Thompson, and Hickman (2003) which focused on struggling readers. Fifteen ELs completed the study. Ultimately, all 15 students met exit criteria over the course of the study, although not at the same time. This study is significant because none of the ELs were referred for special education services.

      Studies support the need for intervention as soon as a child falls behind academically. In one study on the intervention of phonological awareness and alphabetic skills of kindergartners, researchers found that students in the experimental group who received an additional 30 minutes of instruction in small groups made effective gains through February of 1st grade (Coyne, Kame'enui, Simmons, & Ham, 2004) Further supporting early intervention, as a result of small group math intervention given to a group of at-risk math students in the 1st grade, researchers were able to reduce the prevalence rate of mathematics disability. The at-risk children improved on three posttest measures (Fuchs et al., 2005). Early intervention may help reduce the number of students referred for special education services. In a long-term study using segmentation, decoding, vocabulary building, and fluency intervention, students in small groups in Tier 2 were identified as needing additional support based on their standardized scores. Through daily, direct individualized instruction, the students eventually identified with a reading discrepancy showed moderate to large effect sizes over the historical control

group. Special education services averaged 15% in the historical control group.

Following through four years of participation, the rate of referral for the experimental

group was 8% (Coyne et al., 2004). In the proposed study, vocabulary intervention for

academically struggling ELs may prove to have similar results.

The Secondary English Learners' Connection with Vocabulary Development

Researchers across the nation studied the impact of vocabulary development for

secondary English learners. The National Reading Panel (2000) reported the

effectiveness of different approaches used to teach children to read. Identified were

positive relationships among 1st and 2nd language oral proficiency, native language

reading, and second language reading. Not only is phonological awareness important, but

also vocabulary in predicting effective text comprehension in second language reading

achievement.

One of the greatest comprehension challenges for ELs is vocabulary found in

secondary texts. In a study to determine how student's 1st and 2nd language development

related to metalinguistic development in both languages and their reading comprehension

in English, Carlisle et al., (1999) concluded that vocabulary development in both

languages impacts English reading comprehension. Avalos (2003) found that students

who had limited knowledge of phonetics, graphemes, semantics, syntax, and vocabulary

found English texts difficult to comprehend. Relevant to the proposed study, these

findings suggest that secondary students must have a strong command of academic

vocabulary in order to gain access to levels of proficient or higher on standardized tests.

For the ELs who need more time and more instruction, RTI Tier 2 may prove to be

effective.

The Distinction between Language Difference and Learning Disabilities

In a recent review of empirical research on English learners who struggle with reading and who may have learning disabilities, Klingner et al., (2006) were looking for research indicators that would differentiate between ELs with learning disabilities and ELs who struggle to acquire English literacy skills due to their limited English proficiency. This is an important distinction due to an exclusionary clause found in IDEA (1997) which states that a student should not be considered learning disabled if the discrepancy between ability and achievement is primarily the result of environmental, cultural, or economic disadvantage (U.S. Department of Education, 1977).

Criteria that defined the studies in the review included populations of $K-12$ only and ELs with LD or ELs who were struggling readers. Key findings were categorized by: 1) subpopulations of ELs who struggle to read, 2) the role of context in understanding the EL struggle to read, 3) referral issues with ELs struggling to read, 4) assessment practices with ELs who have learning disabilities, 5) predictors of reading achievement, 6) instructional interventions for ELs who struggle to read or may have LD, and 7) the process of language acquisition in both the first and second language in LD identification.

Findings identified several barriers within the categories that frame instruction for English learners who struggle academically. One finding is the difficulty in distinguishing between language acquisition and LD (Chiappe, Siegel, & Gottardo, 2002; Lindsey, Manis, & Bailey, 2003). In addition, very few research studies exist that describe interventions for ELs with LD or ELs who struggle to acquire academic literacy in English (Klingner & Vaughn, 1996; Linan-Thompson, Vaughn, Hickman-Davis, & Kouzekanani, 2003). More research is needed to determine which interventions will

improve the reading outcomes of academically struggling secondary English learners and make sure that teachers use interventions that are research-based and specifically designed for academically struggling secondary EL readers. Critical to this research will be the impact of vocabulary development for secondary English learners' reading comprehension.

The Critical Role of Interventions

Vocabulary is one of the foundations for comprehending texts. Very few skilled readers can tolerate many unknown words in a text without losing comprehension (Beck, McKeown & Kucan, 2002). The situation is more complicated for ELs. Previous research finds that not only do ELs know fewer words than native speakers, but ELs also know less about the meaning of those words (Verhallen & Schoonen, 1993). In an important study reviewing the research on methods to develop the vocabulary knowledge of ELs, several strategies emerge as especially valuable, including learning words in rich semantic contexts, instruction in root word meanings, and more time for direct instruction (August, Carlo, Dressler, & Snow, 2005).

In a study on how words are best learned from rich semantic contexts, 254 students from nine fifth-grade classrooms in four different states were given an intervention on target words on the topic of immigration over a 15 week period. Included in the lessons were practices that also taught the students to infer meanings from context and to use roots, affixes, cognates (shared words between languages), morphological relationships, and comprehension monitoring. Multiple ways of learning words led to improved knowledge of words studied (Carlo, August, McLaughlin, Snow, Dressler, Lippman et al, 2004). Similarly, when Perez (1981) studied the reading skills of 75

Mexican 3rd graders who were randomly assigned to four treatment groups which all used the same word list but were taught different vocabulary strategies, he found that active processing of word meanings leads to greater recall and understanding of word meanings.

Of greater investigation is the sequencing of words for instruction. Focusing on words from vocabulary inventories was highlighted in a study that identified a common sequence of vocabulary acquisition for English speaking students. Following students from 2nd grade to 5th grade who came from two different socioeconomic conditions (low and high), the researchers found that in 2nd grade the mean normative vocabulary was 5,200 root words which increased to approximately 8, 400 in 5th grade. Differences emerged between the lowest quartile of students who gained about 2.3 root words a day and the highest quartile of students who gained about 3 root words a day. Although on a daily basis the difference was small, throughout the course of the year, the gap widened. By the time these students reached 5th grade, the lowest quartile had only reached the 4th grade level of vocabulary based on the inventories. This lag was due to the number of words these students entered school knowing (Biemiller & Slonim, 2001). Perhaps these students would have benefitted from RTI Tier 2.

Sufficient research has proven that interventions for students who experience academic difficulties are key. In addition, the earlier the intervention occurs, the more likely students are to succeed. The more likely students are to succeed, the less likely they will be identified as needing special education services.

<center>Purpose of the Study</center>

The purpose of this study is to examine the effects of Response to Intervention (RTI) on underachieving secondary English learners' vocabulary development with the

intent to reduce inappropriate referrals of ELs for special education services. ELs face

many educational challenges from failing to progress in general education classes to

failing to achieve to proficiency on state and national assessments. The study will take

place within a large urban high school. Ninth grade ELs who are struggling academically

will be identified based on their language proficiency scores in reading and state

proficiency scores in English language arts reading and comprehension. Students will be

given a vocabulary intervention in small group instruction every day over six weeks

using a research-based strategy of developing vocabulary through the use of morphemes

(Ebbers, 2004). The teachers who participate in the study will receive professional

development related to vocabulary. Teachers will also become more knowledgeable of

the process of language acquisition, RTI, and the referral process of students for special

education services. Participating teachers will provide vocabulary instruction using the

strategies and materials they receive during the professional development. At the end of

the intervention, students should be better able to comprehend unfamiliar words found in

academic texts which should help them perform better academically in addition to

increasing their outcomes on state and national tests. Furthermore, when ELs are

performing well academically, they are less likely to be referred for special education

services.

<div align="center">Research Questions</div>

This study will address the following questions:

       1.   Does the RTI Tier 2 treatment group perform better than the control

                  group?

2.   To what extent do teachers of EL students use vocabulary interventions in the classroom and understand its importance?

3.   What do teachers characterize as successful implementation of a vocabulary intervention?

4.   How do teachers perceive the feasibility of RTI Tier 2 at the secondary level?

5.   In what ways do teachers' understanding of second language acquisition process impact their decision to refer ELs for special education services?

Significance of the Study

This study is particularly significant in the current climate of response to intervention. Accountability at the federal and state levels has put increasing pressure on teachers and schools to raise the achievement of all students to a level of proficient as defined by NCLB (2001). The implications for academically at-risk students are that they continue to struggle to master content standards. The complexity of texts at the secondary level is difficult for English learners who struggle with specific content based vocabulary. Secondary teachers are expected to cover a significant amount of content in a relatively short period of time. English learners who struggle with the amount and complexity of content continue to fall farther behind. Even though much is known about academically at-risk secondary students, little is known about the implementation and feasibility of RTI as a possible alternative to failure in the general education classroom. If this study finds that research-based instructional strategies at the secondary level in vocabulary development does in fact accelerate the learning of EL students who are performing below basic in ELA, recommendations for classroom practice can be made accordingly.

Definition of Terms

Academic Language: Refers to content-area specific concepts, skills and

vocabulary most commonly found in content-area reading and writing. It also includes

the structures, formats, and processes of textbooks, informal assessment, and

standardized tests (Dutro, 2004).

Basic Interpersonal Communication Skills (BICS): Refers to the lower threshold,

which involves having the ability to converse in peer-appropriate ways in everyday face-

to-face situations. BICS requires a relatively low level of listening comprehension and

expressive skills and it may be observed to develop between 1 to 2 years (Cummins,

1978).

Cognitive Academic Language Proficiency (CALP): Refers to the second

threshold that involves having language necessary for cognitively demanding tasks and is

required for accelerated cognitive as well as academic growth. CALP has been shown to

develop in approximately 5 to 7 years (Cummins, 1978).

Curriculum based measurement (CBM): An assessment tool characterized by

certain attributes such as alignment to the curriculum being taught. The measures are

technically adequate, having reliability and validity. CBM makes use of criterion-

referenced measures. The assessment uses standard procedures. CBM emphasizes

repeated measures over time with progress monitoring so immediate adjustments can be

made in the student's educational program when needed. (Hosp, Hosp, & Howell, 2007).

"English learner" or "pupil of limited English proficiency": In the state of

California - a pupil who was not born in the United States or whose native language is a

language other than English or who comes from an environment where a language other

than English is dominant; and whose difficulties in speaking, reading, writing, or understanding the English language may be sufficient to deny the individual the ability to meet the state's proficient level of achievement on state assessments, the ability to successfully achieve in classrooms where the language of instruction is English, or the opportunity to participate fully in society (California Department of Education, n.d.).

English Proficient: A term applied to students whose primary language is not English and who have met district criteria for proficiency and literacy in English either upon entry into the school system or through the district's redesignation process" (Parrish et al., 2002, Glossary).

Exclusionary Clause: In making a determination of eligibility under Section 614(b)(4)(A) of IDEA, a child shall not be determined to be a child with a disability if the determinant factor for such determination is lack of appropriate instruction in reading, including in the essential components of reading instruction (as defined in Section 1208(3) of ESEA); lack of instruction in math; or limited English proficiency [614(b)(5) of IDEA].

Response to Intervention: RTI is a multi-step approach to providing services to struggling students. Teachers provide instruction and interventions to students at increasing levels of intensity. Teachers also monitor the progress students make at each intervention level and use the assessment results to decide whether the students need additional instruction or intervention in general education or referral to special education (Council for Exceptional Children, 2007).

Specific Learning Disability (SLD): A disorder in one or more to the basic psychological processes involved in understanding or in using language, spoken or

written, which may manifest itself in an imperfect ability to listen, think, speak, red,

write, spell, or do mathematical calculations. The term includes such conditions as

perceptual handicaps, brain injury, minimal brain dysfunction, dyslexia, and

developmental aphasia. The term does not include children who have learning problems

that are primarily the result of visual, hearing, or motor handicaps, of mental retardation,

of emotional disturbance or of environmental, cultural, or economic disadvantage. SLD is

often interchangeable with *learning disability* (LD) (34 CFR Part 300.5).

Speech or Language Impairment (SLI): A communication disorder such as

stuttering, impaired articulation, language impairment, or a voice impairment, which

adversely affects a child's educational performance (34 CFR Part 300.5).

CHAPTER II

Literature Review

English learners (ELs) face numerous educational challenges. Students who fail to progress in general education are often referred for special education services. One of the issues at the forefront of the diagnosis of disabilities within EL populations is whether or not language acquisition issues can be differentiated from learning disabilities. When ELs encounter challenging vocabulary found in subject specific texts at the secondary level, their comprehension of content matter is a barrier to learning. Adequate consideration has not been given to the role of the ELs' unexpected underachievement in their classes and low performance on state assessments that could possibly be explained by their limited English proficiency.

One of the main advantages of an RTI model is its emphasis on appropriate learning opportunities for all students beginning in the general education classroom. Prior to the RTI model, little attention was paid to literacy interventions in the general education classroom for secondary students. Vocabulary knowledge, strongly related to comprehension, is a highly significant variable in EL readers' success. Findings may help inform researchers as to the role of vocabulary development in second language acquisition when determining whether an English learner has a learning disability or if the student needs research-based instruction.

In order to provide a context for the proposed study, this literature review examines studies in four areas of research critical to response to intervention (RTI): the overrepresentation of ELs for special education services, the language acquisition process, response to intervention, and vocabulary development. The first area of research

is the problem of overrepresentation of English learners receiving special education

services influenced in part by a lack of consistent policy in pre-referral and decision-

making guidelines and partly due to a lack of sufficient data on ELs. In addition to

overrepresentation of ELs, the second area of research examines linguistic research that

defines and separates a language difference from a learning disability, a distinction that

may prevent students from being identified as needing special education services.

Research in the third area will examine the literature on RTI as a proposed alternative of

early intervention for struggling English learners and an important component in the

prevention of school failure. Modification and adjustment of instructional practices prior

to identification of learning disabilities may prove to be a key factor to change the

overrepresentation of EL's receiving special education services. The final area of

research examines the impact of vocabulary development and its correlation with reading

comprehension and highlights the need for interventions that offer research-based

vocabulary instruction for students experiencing reading difficulties.

Overrepresentation of English Learners in Special Education

Recent research identifies that inappropriate referrals for special education

services of students result from factors other than the presence of a disability (Barrera,

2006; Deno, Grimes, Reschly, & Schrag, 2001; Marston, Muyskens, Lau, & Canter,

2003). Consequently, a disproportionate number of ELs are referred for special education

services and the majority of those students exhibit reading difficulties and speech-

language impairment (Ortiz, 1997). A series of studies aimed at understanding this

disproportionality confirm the absence of adequate policy and appropriate practices

related to the referral, assessment, and recommendations in identifying ELs for special

education services. In the proposed study, the researcher is concerned with the overrepresentation of ELs who receive special education services and the referral process.

In one investigation of the decision-making process used to determine the eligibility of minority students for special education services, Overton et al., (2004) wanted to determine how decisions were made to identify if a student needed special education services and whether assessment personnel declined to make eligibility decisions when the data were incomplete, (e.g. language information). Using a qualitative design, researchers developed two instruments, a questionnaire and four hypothetical case studies for 216 assessment personnel from the South Texas Rio Grande Valley school systems along the Texas-Mexico border. The student population eligible for special education services was 10% with 26% of the school population in bilingual programs, 11% in English as a second language programs, 11% in migrant programs; and 5% were classified as immigrants.

All four cases were about a hypothetical third grade 9-year-old boy, Ben. The cases varied in language dominance, significant IQ discrepancy, and language proficiency assessments in Spanish and English. Participants rated each case on a 6-point Likert scale ranging from strongly disagree to strongly agree for four statements as to Ben's eligibility. Participants gave an explanation for their decisions in an open-ended format. Ninety-three (43%) out of 216 participants returned the case studies used in the analysis.

Means on the cases were compared for significance by using *t* tests for independent samples and analysis of variance (ANOVA) procedures. Independent variables were considered: type of case scenario, years of assessment experience, gender,

and age. Dependent variables were the decision-making items. The open-ended responses

of the reasons for decisions were placed in themes, and then eligibility decisions were

reviewed by collapsing the responses. These qualitative categories were then analyzed for

frequencies to determine trends in reasoning.

Of the 93 surveys returned, 58% of all responses determined that Ben was not

eligible, 13% deferred from making a decision, and 25% determined that Ben was

eligible. Importantly, this means that when no language information was provided, more

participants were likely to agree to eligibility. There were no significant differences on

the other three statements of eligibility, presence or absence of learning disabilities, or

needing more information. In addition, participants assessing cases featuring a significant

discrepancy were more likely to indicate that Ben was eligible for services. No significant

differences were found with regards to with and without language differences, and with

and without a significant discrepancy. There was a slight tendency, based on means, to

state more information needed.

Other significant findings ($p = .001$) included years of experience, differences

between professionals with scenarios with a discrepancy noted and without a discrepancy

noted, with no language information provided versus language information provided, and

with a decision whether Ben was not eligible for special education services or if he had a

learning disability.

In this same study, it was important to look at qualitative data in which responses

were analyzed by case and across case for repeated themes and specific categories. What

were found across all cases included insufficient data, significant discrepancy, and

social/cultural/environmental reasons. Qualitative trends by discrepancy of decisions were identified by whether or not language information was provided.

The researchers noted that all participants who listed the reason of *educational need* in their decision-making process for Ben found him eligible for services. Clearly more research is needed on the impact of language dominance when secondary students are struggling academically and are consequently identified as learning disabled. The proposed study will identify students with educational need in the area of language acquisition. Through the application of an intensive vocabulary intervention, this study proposes to reduce the identification of academically struggling ELs as learning disabled.

Limitations to this study included a small sample size (N=93). In Texas only one standard deviation is required between cognitive ability and achievement in order to identify the existence of a learning disability. This may differ in other states. The cases were hypothetical and results may not generalize to eligibility decisions on real students. The study also did not use a randomly selected sample which possibly introduced a greater degree of the bias associated with volunteer participation. A larger investigation using a randomly selected sample may yield more generalizable results. In the proposed study, the sample will not be hypothetical. The sample will be identified by specific characteristics that are common within states with high populations of ELs, possibly making the proposed study generalizable to similar populations.

Providing language information is only one necessary piece of data when making appropriate eligibility determinations for ELs. In a similar study to investigate overrepresentation of ELs for special education services, researchers found that linking data from multiple sources is important when deciding whether ELs qualify for special

education (Wilkinson et al., 2006). The purpose of this study was to develop profiles of ELs in central Texas who had received native language literacy instruction and who were also identified as having a documented learning disability in their first language. Questions about the appropriateness of eligibility decisions prompted a comparison of decisions made by two groups: the district's multidisciplinary teams and an expert panel.

This two-year longitudinal study of profiles of ELs identified 21students with learning disabilities who had been documented as needing special education services through assessments in their first language, Spanish. Eighteen students were classified as non-English speaking, and three were classified as limited English speaking. In the district, 49% of the students were Hispanic. Thirteen thousand ELs received bilingual instruction. Almost 12% of the district's 77,000 students received special education services.

Data were collected from several sources and reviewed by three university-level special education faculty with an average of 19 years of experience in the bilingual field. The purpose of the review was to see if each panel member would independently qualify the student as having LD. The research questions queried qualification criteria for special education services, significant factors in student's archival records that led to the panelist's decision to qualify the student as exhibiting a learning disability, any unexpected information or processes that were not documented, and whether or not sufficient data were present to support the eligibility decision.

Based on the results of the study of data, 13 students unanimously qualified for special education services. For the remaining 8 students, a panel met to review data and come to consensus. Documentation for the decision was coded by topic and categorized, and then

reviewed and debriefed, making changes as needed to best represent the bases for their

decisions. Results were reported on two different groups. The first detailed the special

education referral process that was implemented by the districts supporting the 21

participants. The second presented the expert panel's analysis of the information

collected and documented through these procedures. Sixty-six percent of the referrals

were for reading difficulties. All participants' reported IQs fell within the average range;

therefore the district decided that all students were found to be eligible for special

education services for LD using only the achievement-discrepancy formula. However,

when the expert panel looked at data other than IQ versus achievement discrepancies, the

21 participants were classified into two groups: those students with sufficient evidence to

indicate a disability and those students without sufficient evidence.

For those students whom the panel did not qualify for special education services,

the group disagreed with the multidisciplinary team's decision on 10 students, and in

each case, cited the exclusionary law stating that there was not sufficient evidence that a

student's problems were not primarily the result of environmental, cultural, or economic

disadvantage (IDEA, 34 C.F.R. 300.7 (c)(10)(ii)). In addition, panelists questioned the

adequacy of interventions, if any were administered at all.

This study gives important insight into the possible causes of overrepresentation

of ELs for special education services based on the differences in decisions for eligibility

between the two groups. Clearly a need exists for improving referral practice. English

learners represent a statistically larger proportion of students in special education (Artiles

et al., 2005; Overton et al., 2004; Wilkinson et al., 2006). Significant to the proposed

study are the implications of this study highlighting the importance of documenting

sufficient evidence prior to the identification of learning disabilities, particularly

language information. In addition, through the application of the RTI model at Tier Two

using curriculum-based measurements, documentation of a student's progress would be

evident and could be used as part of the eligibility determination. Prior to identification

for special education services, early interventions that are linguistically and culturally

appropriate, research-based, implemented effectively, continued for a sufficient amount

of time, and evaluated accurately must be in place. To reduce overrepresentation of ELs

with LD, the RTI model suggests in Tier Two that interventions must occur with fidelity,

meaning that interventions are designed, implemented, and reviewed prior to referral to

Tier Three when eligibility decisions involve culturally, linguistically, and economically

diverse learners (MacMillan & Siperstein, 2002; Wilkinson et al., 2006).

Even though this study identified district practices that contributed to the

erroneous referral of ELs for special education services, the small sample size ($n = 21$)

and the lack of a comparison group limit generalization of this study to other studies.

Other weaknesses include the difference in procedures used throughout the district to

determine eligibility for EL students as opposed to non-EL students. In addition, results

from this study refer to EL students with disabilities, so generalization to non-EL students

with disabilities is not applicable. No type of standardized instrument was administered

consistently across students other than one achievement assessment and one intelligence

assessment. Assessments from multiple sources are important in order to obtain a general

picture of the student's academic ability in comparison to other students. There were no

instances of dual-language assessments, an important data piece to examine if the

disability exists in both languages or if the student is simply experiencing difficulty

progressing through the acquisition of the new language. A large number of different

tests were administered across a small sample size. Most of the data that led to the

panel's conclusions came from school records that were not maintained for research

purposes. Some data were available outside of the school records, making it accessible to

some and not to others. The study underscored the complexity in making decisions to

refer EL students for special education services.

     In the proposed study, all students will be identified based on three language-

based measures. The sample will be composed of academically struggling ELs, most of

whom have not been identified as having a disability yet but may be referred for testing if

the lack of academic progress persists. The researcher will also use a standardized

vocabulary instrument as both a pre- and post measure of progress. A comparison group

will not receive the intervention. The intervention will address the vocabulary needs of

the sample in order to investigate its impact on the academic achievement of struggling

ELs.

     Of even greater significance for ELs referred for special education services is

highlighted in a study examining the ability and achievement profiles of 201 students

identified as learning disabled as evidenced by their scores on the Wechsler Intelligence

Scale for Children (WISC III) and Wechsler Individual Achievement Test (WIAT) (Ward

et al., 1999). The data for this study were drawn from the records of 2,857 students who

were referred for assessment during a one-year period in a large urban Virginia school

district. The mean age of the students was 11.3 years. Sixty-eight percent were male. All

of the assessments were conducted by the division's 35 state certified school

psychologists. Subjects were selected from this population based on their having a

learning disability and having been tested with the WISC-III and WIAT. Even though all administrations of ability and achievement tests were conducted by school psychologists, classification decisions were made by multidisciplinary teams.

The sample consisted of 61.0% Caucasians, 31.1% African Americans, 3.7% Hispanics, and 4.2% other. The sample was mostly elementary students with 69.6% in grades 1 through 5, 27.4% in grades 6 through 8, and 3.1% in grades 9 through 12. Data reflected an initial evaluation for 52.4% of the sample. When the 2,857 cases from the referred population were compared to the 201 cases who met the criteria for inclusion in the study, there were no significant differences on age, $p > .05$; race, $p > .05$; or grade, $p > .05$.

The research questions addressed two phases. The first phase questioned how many subtypes of LD would emerge when scores from frequently used ability and achievement instruments were considered in the analysis. To address the first research question, the ability and achievement data from a sample of children with LD were cluster analyzed and the results compared to those of previous research.

The research question for phase 2 investigated how many subtypes of LD would emerge if cases were first screened for normally occurring profiles. In this phase the ability and achievement data were examined using the multivariate methodology which was applied to the data to identify cases with normally occurring profiles which were excluded from further analysis. The remaining cases representing stable exceptional profiles were submitted to clustering procedures.

Three of the five clusters demonstrated patterns of performance that did not indicate LD based upon ability and achievement data. Within these three clusters, two

demonstrated low average to average ability with commensurate achievement, and a third exhibited below average ability and achievement. The remaining two clusters showed a significant discrepancy based upon univariate regression between ability and achievement in reading and written language.

Relevant to the reality of overrepresentation of ELs for special education services, Ward et al. found that 70% of the identified students did not meet the discrepancy criteria and yet were labeled as having a learning disability. In the second cluster analysis, demographically, these students included 80% minorities and 71% males. Yet these students did not fit the discrepancy profile for learning disabilities. One explanation given by the researchers was that pressure is placed on educators to help children who struggle academically and consequently slip through the cracks without intervention. These pressures, along with school psychologists who generally are strong child advocates, tend to identify these children for special education services. The proposed model of response to intervention could be a viable and significant alternative that could avoid the inappropriate referral of ELs for special education services.

The implications of this research bear directly upon the decision processes involved with the identification of students with LD. These findings suggest that many children identified with LD actually show common characteristics that children normally show. Limitations to the study include an overall small sample size of ELs, yet the ELs were the majority of the students identified as learning disabled. In addition, most of the sample were primarily elementary male subjects. The proposed study will be entirely composed of ELs at the secondary level. Relevant to the proposed study, through the use of an intensive vocabulary intervention, academically struggling students may progress

more quickly through the normal language acquisition process and as a result, show positive academic growth. This progress would eliminate decisions to refer ELs for special education services.

Summary. Several factors influence the overrepresentation of ELs for special education services. Findings such as these highlight the importance of careful and thorough documentation when making referral decisions. The dilemma for the educational community reveals the absence of guidelines and data which can help assure consistency in decision-making. Inconsistent state and district referral policies contribute to the overrepresentation rates. In addition, the limited language proficiency of ELs is often overlooked. The impact of language dominance must be considered in the determination of eligibility of minority students to help distinguish linguistic differences from disabilities. Furthermore, multiple data sources are important in the referral-making process rather than dependence solely on the achievement- ability discrepancy formula. In order to substantiate and validate these findings, larger sample sizes are needed within studies that can be replicated across states and districts.

Research to date does not support RTI as an exclusive component to disability determination. The adequacy of interventions for ELs, especially at the secondary level, is questionable, and often unnoticed. Perhaps RTI using curriculum-based measurements which document on-going student progress could contribute important sources of data in order to understand how to best serve academically struggling ELs. The fact that ELs have continued to be overrepresented in special education programs highlights the need for a clearer understanding through the proposed study of the factors educators must take into consideration prior to referring ELs for special education services.

Language Acquisition or Learning Disability

The impact of language dominance is a significant factor when examining language proficiency within the referral process of academically struggling students. The highest disability category representative of the English learner population in special education is specific learning disability (USDOE & NICHD, 2003). In California for 2006-2007, this translates to more than 266,000 ELs. Much confusion exists about language proficiency and when to refer ELs for special education services (Harry & Klingner, 2006). As previously noted, variability of referral process and eligibility determinations across districts and states only confound the issue (USDOE & NICHD, 2003). Separating learning disability from language difference is complicated by a number of factors. A review of the research on language acquisition and learning disability reveal overlaps between the characteristics shared by students moving through the natural processes of learning a language and students with learning disabilities.

When an EL with a significantly different background is assessed similarly to native English speakers, often the English learner may appear to exhibit learning characteristics similar to peers with learning disabilities (Barrera, 2006). In this study on the efficacy of perspectives on learning disabilities and related models of assessment that support appropriate instructional strategies of ELs who are struggling with learning, Barrera proposed a revised framework for defining LD and offered an alternative assessment model for identifying information processing difficulties through curriculum-based dynamic assessment. Little research exists that identifies specific procedures and appropriate assessment tools to use with English learners (Ortiz, 1997). For students with limited proficiency in English, assessments must be able to distinguish between

disability-related learning difficulties and the normal processes of acquiring a new language. Barrera's three-year study of Mexican American secondary students examined curriculum-based dynamic assessments of authentic learning tasks to help educators to differentiate between the work of students with limited English proficiency and their peers identified as having LD.

The method for collecting data involved a combination of 38 general education and special education teachers who conducted assessments of 114 work samples from three groups of Mexican American students: 1) ELs with LD, 2) non-special education ELs, and 3) English proficient ELs. Dynamic assessments were collected over a three-year period, consisting of a reflection and analysis journal on learned content-area vocabulary terms. Reflection consisted of student identification of vocabulary activities that occurred before, during, and after class discussions or lectures on course content. Analysis reflected the students' construction and use of those vocabulary items. The dynamic assessment involved procedural instructions to the students on how to use the journal during a two-week period. After the two weeks of instruction, students were posttested on the new skill which involved the last day of journal entry without instruction.

Thirty eight teachers who assessed the journals were given two hours of training for scoring. Each teacher was given a two-week period to score the journals. Sessions were conducted in Minnesota and south Texas, and teachers were mixed from the two sites so that no teacher reviewed journals of students they knew. Teachers rated the number of keywords written, the number of keyword with notes, and the number of keywords with two sentences. Comparison among groups rated curriculum difficulty

level, perceived handwriting legibility, existence of other notes besides vocabulary and definitions, perceived accuracy of vocabulary use, number of words per vocabulary items, and the number of complete sentences used.

Multiple regression and multivariate analysis were conducted on the dependent variables: procedural, qualitative, quantitative, and global notes ranking and quality. The independent variable was membership in one of three learner groups: 1) students identified with both limited English proficiency and LD; 2) students identified with limited English only; and 3) bilingual/English proficient typically attributed to high-achieving learners.

Differences were found in the volume of material written, suggesting that an important variable in differentiating students with limited English proficiency and LD from their peers with limited English proficiency only may depend on whether these students are able to learn and understand sufficient vocabulary. Those students who were highly proficient wrote far less, suggesting previous vocabulary knowledge. Another finding relevant to the proposed study was that students with limited English proficiency had a lower average of keywords than all other groups, perhaps indicating that one factor contributing to limited growth in vocabulary and language is either limited exposure to the target language or the slower rate of acquisition for those students who might have difficulties with both academic content and language learning.

Implications at the secondary level suggest that more research is needed on the method of collecting classroom-based data that may provide insight into the differences among students from diverse linguistic backgrounds when learning disabilities are suspected. In addition, the results of outcome data through curriculum-based measures

are in the infancy stages, particularly at the secondary level. Date collection in the proposed study will consistently occur in two forms: daily check for understanding following instruction (in the form of a worksheet), and probe (or quiz) at the end of each week that will be used to make instructional decisions based on the progress or lack of progress of the participants.

This is also one of the weaknesses of the study. Assessment of this type is usually reserved for school psychologists, so results and procedures should be interpreted with caution. Note-taking tasks identified information processing, but the results should not reflect on the effectiveness or ineffectiveness of the strategy. The study did not explore how well or how poorly students applied the knowledge gained from the note-taking tasks, only the level of proficiency in taking the notes. The results were not used to make decisions about future instruction, an important consideration of outcome data.

Even though all ELs struggle at some point with language learning, not all struggling ELs have learning disabilities. An important three-year ethnographic study on the decision-making process of determining whether ELs who struggle with reading have learning disabilities was conducted on what occurs during Child Study Team (CST) meetings (Klingner & Harry, 2006). Relevant to the proposed study, Klingner and Harry wanted to know to what extent personnel involved in the CST understood second language acquisition and to what extent consideration was given to language issues. Furthermore, researchers wanted to learn how school personnel determined if an EL who was a struggling reader had a learning disability. They were also interested in the roles of team members. Both researchers were experienced special education teachers with extensive knowledge of decision-making processes and ethnographic studies.

Participants included nine schools from a major urban school district in a southern state which were chosen from a larger study of 12 schools representing a range in ethnicity, socioeconomic status, language, and schools' rates of referral. District data results revealed an overrepresentation of culturally and linguistically diverse populations. Researchers used ethnographic data collection techniques to study the entire referral process to understand how and why students were identified as needing special education services. The sample included 19 students who were identified as ELs upon referral. Student grade levels ranged from K – 5. Levels of English proficiency ranged from just beginning to learn English to moderately proficient in English to no longer considered to be an English learner.

The method used for collecting information was a qualitative design using ethnographic techniques through extensive field notes during CST meetings (21); classroom observations (627); other meetings (14); psychological evaluations (5); and home and community settings relevant to target students (15). Additional data were gathered from 272 open-ended individual interviews with students, parents, and school-based and district personnel and an additional 84 informal conversations. Pertinent documents were examined: Individual Education Plans (IEPs), psychological and other evaluations and reports, students' test protocols and work samples, school district guidelines and policies, and data on special education placement in the school district. Researchers applied grounded theory and ethnographic techniques to look for patterns, categories, themes, and explanations to establish validity.

Results of the study revealed a wide range of knowledge concerning the referral process and the role of language within the referral process. Findings also exposed the

overall lack of attention given to the prereferral process; therefore, rather than an attempt

to identify an explanation for the lack of progress, most students were simply tested

based on the assumption that their academic or behavior problems were the problem of

the child and not possibly an external problem.

Important to the proposed study was the primary concern of Klingner and Harry

in the additional findings of their research of the lack of consideration of language issues,

possibly due to the misinterpretation that students' difficulties were due to deficits rather

than a lack of English proficiency. Even though some professionals in this study were

knowledgeable about how to differentiate between English language acquisition and

learning disabilities, others were not. In addition, districts showed great variability in

policy concerning assessment, identification, and decision-making for recommendation

of students for special education services. Administrators, psychologists, and others

involved in the process did not understand the process of language acquisition and

confused it with processing disorders, low intelligence, problems with attention, or

learning disabilities. Even more disconcerting was that no connection was made by

trained personnel to see these characteristics as typical behavior or students acquiring a

new language. Prereferral intervention strategies, a central part of the CST process and

integral to RTI, were underused and misunderstood.

Within a process meant to provide a network of support for children and their

families, the CST process from this study clearly fell short on many levels. If the

prereferral process includes an investigation of previous strategic interventions given to

these students, it is possible that fewer ELs would be referred for special education

services if schools effectively respond to the language and learning needs within general

education. Clearly further research is needed to identify the language and literacy learning needs of underachieving secondary ELs to determine who should or should not be identified as qualifying for special education services. Identification should occur early with schools effectively responding to ELs' language and learning needs within general education (Ortiz, 2002). Response to intervention models can support students with meaningful prereferral strategies and regular progress monitoring (Fuchs & Fuchs, 2005). Greater attention should be given to language issues in terms of second language acquisition and how this relates to the academic performance of English learners (Case & Taylor, 2005). RTI models, as in the proposed study, can provide the support that struggling ELs need through intervention using vocabulary strategies that will increase language acquisition necessary for successful progress in the general education setting. The use of weekly progress monitoring of students can identify failure early so that interventions can happen accordingly.

Limitations to the study are few. One may be replicating it in other parts of the US. This study was conducted in a southern state on ELs exclusively, which was the focus of the study. In addition, the small sample size of 19 students may limit the ability to generalize results.

Central to the proposed study is an investigation by Macswan and Rolstad (2006) on the accurate measures of EL language ability when tests for native speakers are used to measure language ability. Participants for this study were students in two urban public schools in central Arizona. The composition of the students in the district was predominately low-income and racially diverse. Students were identified based on three criteria: Spanish as a first language, age 6-8, and level of English proficiency. The

Spanish language tests used were the common tests for measuring Spanish literacy: the Language Assessment Scales (LAS) (DeAvila and Duncan, 1996) intended to assess vocabulary and comprehension, and the Idea Proficiency Test Spanish I-Oral (IPT-Spanish) (Amori and Dalton, 1996) intended to assess vocabulary, comprehension, syntax, and verbal expression. Six native Spanish speakers administered the tests and the interview to 145 students. Participants also told a story so that researchers would have a natural language sample, a common practice used by linguists concerned with the study of child language acquisition and language disabilities. The language samples were then coded morphologically and rated for error.

Surprisingly, distributions were similar for both groups with natural language samples: 74% of the students tested below "fluent" on IPT Spanish scores and 73% tested below "fluent" on the LAS. More surprising to the researchers were the results of the morphological tests for error within the natural language sample in which results were opposite from the standardized tests. The proportion of error was 5% or less for most of the students; for morphology the results showed 10% or less for 90% of the students, and for syntax, 100% of the students were error free. The evidence suggested that common tests of native Spanish language ability using the LAS and the IPT-Spanish fail to accurately assess language proficiency. True to research that identifies language error within the normal range of 10% or less, the natural language samples revealed 141 of the 145 participants were well within the normal range. Normally developing linguistic minority children acquire the language of their speech community effortlessly and without instruction, just as majority language children do. The resulting four students reported high morphological errors. Research suggests that as many as 5% of children

have a form of specific language disability (Leonard, 1997). If the remaining four students were to be found to have a specific language disability, the proportion of children in this sample would fall within the expected range of language disability.

Furthermore, studies on districts with the highest range of language disability were found to use the LAS and the IPT-Spanish as measures of proficiency (Artiles et al., 2005). Spanish students are more likely than any other language group to be tested with these measures due to the large number of Spanish immigrants to this country. Using the results of these erroneous tests, Spanish speaking students are more likely to be identified with language disability and be inappropriately referred for special education services than any other language group.

The implications of this research suggest that for states and districts to use only one measure of assessment without an authentic language sample will continue to give inaccurate data on the native language proficiency of ELs. This inaccurate data may continue to erroneously suggest that ELs who score poorly on the standardized tests may possibly be considered as having a learning disability. Even though learning disability and language difference share common characteristics, assessments must be able to differentiate those differences, not confound them. As suggested by the literature, through the use of authentic assessments of vocabulary and morphology development, fewer children might be inappropriately referred for special education services and instead, receive appropriate classroom instruction. In the proposed study, although a standardized pre- and posttest will be administered, the weekly probes (quizzes) will be developed by the researcher and authentically assess the morphological component that will have been taught to the students during the weekly intervention.

Limitations to the study might involve gathering the individual authentic samples from subjects if the study were replicated in a state without adult Spanish speakers in the schools. In Macswan and Rolstad's Arizona study, native speakers were available to test the subjects in Spanish. In addition, testing students individually is time-consuming and costly.

Summary. Alternative assessment models may be one key factor to accurately distinguish between characteristics of the ELs' second language acquisition processes versus characteristics of a suspected learning disability. Further, ELs identified through the CST process as needing additional help are often classified as having a learning disability when in fact, they may not. Within these studies, the reliability of standardized assessments in languages other than Spanish remains unknown. Alternative assessments are costly and time-consuming. States and districts with large proportions of ELs may find that hand-scoring thousands of authentic language samples may prove to be impossible. In the proposed study, the researcher will directly address some of the main findings and limitations found within these studies, primarily: the understanding teachers have about the language acquisition process when referring ELs for testing for a learning disability, the pre-referral practice of using appropriate interventions rather than no consideration of intervention, and data collection that is authentic, frequent, and informative.

Response to Instruction as a Means to Identify Students with Reading/Learning Disabilities

In response to the factors that contribute to the trend of the overrepresentation of ELs for special education services, RTI is a promising new process of intervention using

research-based best practices to provide appropriate instruction for academically

struggling students with the likelihood that the students can be successful and maintain

their placement in the general education classroom (Mellard & Johnson, 2008). An initial

step in the RTI process is early identification of students who are at risk for academic

difficulties, including English learners. Through the use of effective strategies and

progress monitoring, RTI can help schools and teachers effectively identify and address

the needs of all learners (Fuchs & Fuchs, 2005).

Sufficient research exists identifying effective, research-based reading strategies

for academically struggling readers at the elementary level (Elbaum et al., 2000; Vaughn

et al., 2005). Studies by Vaughn et al., (2003) demonstrate the importance of early

intervention for struggling readers. The researchers designed a response to treatment

study of 45 second-grade students in diverse geographic sites in Texas identified as at

risk for reading disabilities.

The study was designed to determine: 1) after a 10-week intervention in reading

instruction, how many students at risk for LD would not meet the exit criteria; 2) how

many of those who met the exit criteria would thrive in the general education setting

without further intervention; and 3) the feasibility of using response-to-treatment model

to identify students with LD by a school or district (Vaughn et al., 2003). Of the 45

students selected, the majority were Hispanic ($n = 35$), 15 were English learners, all of

whom were tested for language proficiency in both English and Spanish. Other specific

measures of proficiency were administered immediately prior to intervention and then 30

weeks later. One measure, the Test of Oral Reading Fluency (TORF) (Children's

Educational Services, Inc., 1987) was administered four times, prior to treatment and then

after each of 10 week intervals. Any student who met the exit criteria at any point along the way were still administered the TORF as scheduled. The criteria for exit from intervention were pre-established. Students who did not meet the criteria were then assigned to groups of three and continued receiving intervention for 10 more weeks. The intervention was provided by tutors who had been trained for more than 20 hours prior to the study. In addition, the tutors met each week with the researchers to talk about those students who were not making progress and received further training on how to address those issues. Tutors were also observed by researchers for fidelity to implementation (eight times).

The intervention was based on the essential components for beginning readers (National Reading Panel, 2000): phonemic awareness, phonics with special attention to systematic mastery of sound-letter relationships as well as word families, fluency (word and text), instructional level reading and comprehension, and spelling. For students who remained in the intervention for the third 10 week period, modifications were made to adjust for student skill level and rate of progress. Exit criteria were examined at four specific times: 1) after 10 weeks of intervention – 10 students; 2) after 20 weeks of intervention – 14 students; 3) after 30 weeks of intervention – 10 students; and 4) no exit – 11 students.

Results of the study revealed that all 15 ELs successfully met exit criteria. Significant to note, the "no exit" students represented fewer than 25% of the struggling students in this study. More significant to note is that 22 of the 24 students who met the exit criteria continued to make gains in the general education classroom without further intervention. After showing no gains without intervention, the two students who needed

additional intervention outside of the general education classroom and were given it

began to progress again. Researchers followed these two students into third grade where

small gains made them at risk for reading failure, once again. In this study, fluency,

passage comprehension, and rapid naming were the significant predictors of students who

would not meet exit criteria.

Evidence from the Vaughn et al. study supports that not all students will make

adequate progress in the general education classroom without on-going interventions.

However, the implications of the results for ELs were promising as all of the ELs met

exit criteria. The proposed study suggests that by using response to intervention,

particularly in the area of vocabulary development, the number of academically at-risk

students may be significantly reduced because ELs may be more prepared to understand

content vocabulary demands found in secondary texts. This study focused on early

elementary grades. More research is needed at the secondary level on response to

intervention for struggling students as an option for identifying students with reading

problems.

Response to intervention is an on-going process, not one that is administered one

time only. In that light, one limitation to the study was the inability to follow through

with students the next year to see which students were able to continue in Tier One

without support. Any study on RTI would benefit from long-term follow-up of

participating students. The question of who qualifies for special education services

continues to remain difficult to answer due to the biases inherent in referral systems. The

need to identify appropriate interventions for ELs is problematic when most research to

date is focused on interventions for English speaking students (Artiles & Ortiz, 2002).

There is an additional need for studies examining the effectiveness of interventions for struggling EL readers. Specifically, the proposed study will examine the effectiveness of a vocabulary intervention to support ELs.

Building on the previous study, Vaughn, Mathes, Linan-Thompson, and Francis (2005) designed a study of two randomized, controlled trials with ELs at risk for reading difficulties. The research was based on previous interventions for native English speakers with reading difficulties. The researchers wanted to examine the same interventions to meet the needs of struggling English learners. The purpose of the study was to: (1) develop two interventions for struggling ELs, one in Spanish and one in English; (2) identify ELs with significant reading problems who received initial reading instruction in Spanish, and those who received initial reading instruction in English, and (3) match the language of the intervention to the language of the students' initial reading instruction. Vaughn et al. looked at the generalizability of native English speaker interventions to ELs then they tested the effectiveness of delivery.

Four major phases identified this study: (1) development of the interventions that were the core interventions based on previous research-based practices (Proactive Reading) for struggling native English speakers (Mathes, Denton, Fletcher, Anthony, Francis, & Schatschneider, 2005), (2) develop a set of language support activities so that the instruction would be appropriate for ELs, (3) develop a Spanish intervention for the students who were receiving initial reading instruction in Spanish, and (4) develop an oracy (ability to express oneself coherently and to communicate freely with others by word of mouth) intervention in English and Spanish.

Student participants were identified through several measures of language and literacy in both Spanish and English: letter naming and letter sound identification, phonological processing, standardized proficiency tests, and basic early literacy skills. In four groups of participants, two intervention groups, one Spanish-based and one English-based, and two control groups, one Spanish-based and one English-based ($n = 106$), daily direct instruction was given to small groups of $3 – 5$ struggling first-graders for 40 minutes by trained tutors over an 8-month period. Five content strands were identified: phonemic awareness, letter knowledge, work recognition, connected text fluency, and comprehension strategies. Short five minute daily language support activities were then created for the ELs in each intervention lesson. Imbedded in the lessons were practices that have been found to be effective with ELs: use of visuals, gestures, and facial expressions in teaching vocabulary and clarifying meaning of content, provision of explicit instruction in English language use, and opportunities to give elaborate responses (Vaughn et al., 2005). The intervention in Spanish followed the sequence and development of Spanish literacy acquisition applied to the same instructional design in Proactive Reading. The oracy intervention addressed students' language and vocabulary needs in every intervention lesson for 10 minutes through the use of read-alouds (Hickman, Pollard-Durodola, & Vaughn, 2004). The objective for the use of read-alouds was to build and extend students' vocabularies and improve their listening comprehension and oral expression.

Seven steps were used: (a) overview of the theme and the selected expository story; (b) pre-teach two to three vocabulary words; (c) read aloud to the students (200-250 words of text) addressing literal and inferential comprehension; (d) reread the

passage while students listen for the new vocabulary words; (e) select target students to lead the summarization of what was read; (f) ask questions and provide a scaffold to process key words and comprehension of text; (g) connect key vocabulary words and concepts every day to increase comprehension.

Results reported for the Spanish intervention significantly favored the treatment group in phonological awareness, oral language scores, measures of word attack skills, and oral reading passages. These differences were not found on the English measures for the students in the Spanish intervention. The English intervention results that were significant for the intervention group included rapid letter naming, phonological processing, letter sound identification, word attack, and reading comprehension. Posttest performances of the intervention students across English outcome measures were consistently, significantly, and meaningfully greater than those of comparison students (Vaughn et al., 2005).

This study was important because many of the strategies associated with improved outcomes for at risk native English speakers were also associated with improved outcomes for ELs in the beginning stages of reading. Struggling beginning readers did not have to wait to fail, rather the students received interventions as soon as they fell behind. Yet little research exists on early response beyond third grade. More research is needed on the effect interventions might have on at-risk secondary ELs with different profiles of language and literacy skills. Implications from this study support one of the strengths of RTI Tier One: the strategies and instructional methods used, for example vocabulary and concept development, language support activities like retelling a story, repetitive language and routines, and modeling new information were critical to

supporting all beginning at-risk students. In the proposed study, vocabulary instruction for all ELs at the intermediate language level may support all students, including those who might be identified as struggling academically.

Possible limitations to the study include the necessity for dual-language classes. Many school districts do not have the number of teachers that would be required to provide these services. In addition, the intervention was limited to early elementary students whose academic struggles may look different from the academic struggles of secondary level students.

Research suggests that the language acquisition of first language readers defines instructional strategies that are effective for ELs as well, although instruction may need some modifications (Fitzgerald, 1995). Even though abundant data exist around literacy for native speakers and some of the strategies are transferable when teaching literacy skills to ELs, less is known about the critical instructional strategies for ELs with learning disabilities (Linan-Thompson et al., 2003). Based on research similarities between native and non-native speakers, researchers Tam, Howard, and Heng (2006) designed a single-subject experimental study to examine the effectiveness of fluency-building methods with a group of five elementary-level English learners.

Students were identified by their teachers as needing an intervention to improve their reading proficiency. The students' level of English was Level 2, which means that their literacy skills were beginning to develop and all of the students' skills were far below grade level. Students ranged from 3rd to 5th grade. All 5 students were tested for learning disabilities. Two were identified as having specific learning disabilities, one was identified as having developmental disabilities, and two were not diagnosed as having

any disability. A reading diagnostic test was administered to all students to ascertain reading levels in word recognition, oral reading, and reading comprehension. Then readability of passages was determined. The researchers based the intervention on three reading strategies shown to improve students' word recognition skill and reading fluency: vocabulary development, error correction, and repeated readings (Mastropieri & Scruggs, 1997), although little information exists of the usefulness of these strategies with ELs.

The experimental design for this study used a multiple baselines across subject design. The baselines were *new passage each session* condition and *same passage to criterion* condition. When students achieved a consistent state of response under baseline conditions, the researchers applied the intervention to one of the subjects while the other subjects remained at baseline conditions. When the subject attained criterion-level or stable-responding, the same intervention was applied to another subject until all subjects received the intervention. Dependent variables were words read correctly per minute, words read incorrectly per minute, measurement of reading rate, and correct answers to comprehension questions. As an experimental control, story-telling procedures were implemented for two purposes. First, the time used for the story-telling controlled for the instructional time in the intervention and second, the data collected during story-telling would show whether or not improvement in oral reading and reading comprehension occurred without systematic instruction. Generality probes which were new, untaught instructional passages at the same level of difficulty in each of the phases of the study were administered throughout the study.

Results of this study indicated that the mean number of correctly answered comprehension questions were higher during both intervention conditions than during

baseline. In addition, both intervention conditions produced an increase in reading rates and compared with baseline, the incorrect reading rate declined for all subjects. One significant implication of this study revealed that interventions are not intended only for those students with identified disabilities, rather interventions are intended for any student who is academically struggling. The study also implies that at an early elementary level, the same interventions that are successful for native speakers may also be successful for ELs. In the proposed study, the researcher will identify any EL who is experiencing difficulty with understanding English, regardless of prior or no identification of a disability. In addition, the intervention of vocabulary development using morphographs may be of benefit for any student who might be struggling to understand difficult texts at the secondary level.

Due to the nature of response to intervention at Tier Two, the possibility of identifying differing academic weaknesses, especially as children advance in grade levels may make this study difficult to transfer to older struggling students. However, these results underscore the importance of small group, explicit vocabulary instruction to ELs to improve their reading proficiency, no matter what grade level the student is in. An additional weakness of this study, a very small sample size of 5 students, can also be viewed as its strength when applied to the concept of a RTI Tier Two intervention.

Summary. Implementation of RTI, particularly at the secondary level, currently lacks specific recommendations. What is known though, is that within the RTI model, interventions for students who are unsuccessful in the general education classroom are delivered in Tier Two. This level of instruction is targeted to a specific academic skill for a specific amount to time and delivered within small group instruction with regular

progress monitoring to determine the effects of the intervention (Bender & Shores, 2007).

Research shows that students who do receive additional intervention outside of general

education make statistical educational gains in specific areas (Vaughn et al., 2003;

Gersten & Dimino, 2005). Moreover, appropriate instruction for ELs at risk for reading

difficulties is available using similar strategies identified as successful for native speakers

with a few modifications and adjustments (Vaughn et al., 2005). When the interventions

are based on RTI Tier Two conditions, improved results for struggling students are

produced following the model of small group explicit instruction (Tam et al., 2006).

Although there may be challenges to implementation, the focus on early intervention,

even at the secondary level, may help ensure that appropriate learning experiences for all

students exist.

When RTI in Tier Two is implemented at the first indication of academic failure,

elementary students are more able to close the achievement gap and more able to keep

pace with their peers. Yet research has yet to show how effective this intervention would

be for academically struggling secondary students who are several years behind their

peers. In addition, because the research base is small identifying strategies that might be

effective for ELs, generalizing interventions that have been proven to be effective for

English speakers may be appropriate. Although this knowledge base is small, further

studies following students who received interventions early in elementary grades through

their upper level grades may help substantiate the importance of RTI at the secondary

level. The proposed study intends to explore an intervention for secondary level ELs who

are significantly behind their English speaking peers using a generalized vocabulary

intervention of the study of morphology that is also appropriate for their English speaking peers.

RTI and the Effective Use of Vocabulary Development

Research on appropriacy of interventions for older students continues to evolve. In the past 25 years, there has been very little research on the development of strategies and interventions for ELs at the secondary level (August, et al., 2005) and even fewer on vocabulary development for students with learning disabilities. Yet low vocabulary knowledge continues to be one explanation for poor reading comprehension (National Institute of Child Health and Human Development, 2000). In a review of 19 vocabulary studies composed of 27 investigations, researchers Jitendra, Edwards, Sacks, and Jacobson (2004) concluded that for students with reading difficulties, vocabulary learning during independent reading is inefficient. Therefore, these students must be explicitly taught the skills of word learning and vocabulary development. Unfortunately, current practice deemphasizes vocabulary instruction when according to research on explicit vocabulary instruction, several approaches support instructional methods that directly teach vocabulary (National Reading Panel, 2000). More research is needed to test the effectiveness of explicit vocabulary intervention with English learners who struggle with reading and comprehension.

ELs who do not have a strong vocabulary continue to struggle to gain meaning from text while reading, and struggle to understand new concepts presented in oral discussions (NRP, 2000).Vocabulary development is the understanding of specific words presented in text or oral language. In a recent study on third and fifth graders, gains occurred in their vocabulary knowledge and reading comprehension (Nelson & Stage,

2007). The primary purpose of the study was to assess the effects of contextually-based multiple meaning vocabulary instruction on the vocabulary knowledge and reading comprehension of students.

A sample of third grade students (n = 134) and fifth grade students (n = 149) from a Midwestern public school system were drawn from 16 third (n = 8) and fifth (n = 8) grade classrooms which were randomly assigned to an experimental or non-specific treatment group. All students who reasonably attempted to complete a pre- and post-testing were sampled. Students were classified into two groups, low and high, based on their initial vocabulary and comprehension achievement on their pre-test Gates-MacGinitie Reading Tests (4th Edition). Statistically significant within the sample population were the percentages of fifth grade European Americans and Hispanic students in the low initial overall vocabulary and reading comprehension group. Students of European American descent were less likely to be in the experimental group.

A pre/post experimental and non-specific treatment group design was used in this study. All instruction was delivered by classroom teachers over four months. In the experimental group, teachers selected a total of 36 target words they thought to be most relevant to their students and delivered instruction on multiple meaning vocabulary within the language arts period. In the non-specific group, all students received the standard language arts instruction. Teachers had received two hours of training on a three-step process to implement the contextually-based multiple meaning vocabulary strategy. Each target word was taught over 2 days for approximately 20-30 minutes a day. The meanings for the target words were presented nine times in six different contextually-based instructional contexts. Teachers completed a questionnaire on a 5-

point Likert-type scale that focused on their perceptions of the efficacy of the treatment. With one exception, all teachers rated themselves as always following the procedures they had been taught for the strategy. Student vocabulary gains were assessed by using the alternate forms of the Gates-MacGinitie Tests of Vocabulary and Comprehension that were not used in the pre- and posttesting.

The findings reported that third and fifth grade students with low initial vocabulary and comprehension achievement who received the contextually-based multiple meaning vocabulary showed statistically significant gains in their vocabulary knowledge although the magnitude in effect sizes of improvements for students with low initial vocabulary and comprehension were small (3rd grade: ES = .28 and 5th grade: ES = .14). In contrast, those students in the non-specific group did not show significant gains. The researchers noted that limited gains in the fifth graders may have been due to the kind of words taught as those words did not span content areas because teachers were allowed to choose words that they thought were most relevant to their students (Nelson & Stage, 2007).

The results of this study suggest that students with the lowest initial vocabulary and comprehension scores tend to benefit the most from an intervention. In addition, teachers reported the efficacy of the instruction as high with 95% confidence intervals indicating that no teacher chose "undecided" on the Likert–type scale. Based on the small amount of time spent on professional development with the teachers, extensive time spent on effective teaching strategies may not be necessary. These results may imply that in the proposed study, teachers may have the confidence to deliver the intervention with

efficacy following instruction by the researcher. In addition, by choosing ELs with low vocabulary, those students may make the greatest gains following the intervention.

Limitations to the study included the small number of words taught and the length of time for instruction – four months. Gains may have been more significant if the study had spanned the entire school year. In addition, a more direct measure of the words taught might show greater changes in the students' vocabulary development. Yet the relatively short instructional time did yield some positive gains. The sample of students drawn from the Midwest may not be representative of other populations. Learning, as a language based activity, is fundamentally and profoundly dependent on vocabulary knowledge (NRP, 2000). This study focused on multiple-meaning words, whereas a focus on core meaning of words might be a first step to developing vocabulary in academically struggling readers.

In a supporting study investigating narrowing the gaps in vocabulary knowledge between Caucasian and Latino students, researchers designed an intervention in which the meanings of academically useful words were taught using morphology, multiple meaning strategies, and cognates (Carlo et al. 2004). Although ELs scored lower than Caucasian students on pre- and post tests, gains were significant in their vocabulary development through learning word analysis and vocabulary learning strategies. This study tested whether improvements in vocabulary related to improvements in reading comprehension for ELs. The goal of the study was to increase the ELs' knowledge of academic words found in middle and high school texts. The supposition was that a lack of the knowledge of these types of words impeded the natural process of learning new word meanings from simply being exposed to those words in reading. When ELs must rely on

incidental vocabulary learning, they are less able than native English readers to use context and linguistic clues to word meaning.

The participants were 254 bilingual and monolingual 5th graders in four schools in California, Virginia, and Massachusetts. Two of the schools serve large Spanish speaking populations. One hundred forty-two of the students were ELs and 112 were native English speakers. Students were randomly assigned to the treatment and comparison groups in this quasi-experimental design where the students in the comparison group received no intervention other than what might normally happen to all students within the regular instructional day. All students were pre- and posttested.

The intervention was conducted over 15 weeks of instruction which was given for 30-45 minutes four days a week. Each week 10-12 target words were taught. Each fifth week consisted of a review of the previous 4 weeks. The intervention was imbedded within the context of immigration. Curriculum materials were provided to the teachers including detailed lesson plans and quasi-scripted lesson guides, as well as other materials. Teachers met in a support group bi-weekly with the researchers, once previous to each week's lesson to prepare to teach and after each week's lesson to discuss barriers. To account for fidelity of treatment, teachers were videotaped three times during the intervention.

The independent measures on six tasks: Mastery; Word Association; Polysemy, defined as a word or phrase with multiple, related meanings (i.e., "become" She got scared); Cloze; and Morphology. The task for Mastery consisted of 36 target words that had been directly taught. The task was designed to determine if the words were successfully learned. Students were asked to select the definition that best described the

word. The Word Association task consisted of 20 words, half of which were included in the curriculum. Students were asked to draw lines from the target word to the three of six words written in a circle around the target word that always "go" with that word. For the Polysemy task, students were given a list of six words with related meanings and instructed to write as many sentences showing the different meanings. Points were awarded on the basis of the frequency of the response; for example, three points were given for the word "bug" in the sentence, "There was a bug in the program." The Cloze passage used multiple-choice passages with content word random deletion in three stories with six cloze items each. Ten of the deleted words were taught in the intervention. The paper and pencil Morphology task asked students to identify base forms of derived words (i.e., discussion: What did he want to _____?).

All tasks were assigned points for responses that were subjected to a multivariate analysis of variance that occurred in both the fall and spring. The intervention group showed significant gains over time and condition, indicating that even though the sites of the intervention differed by demographics, effective vocabulary instruction occurred despite these influences. Additional outcomes concluded that students in the intervention classrooms gained knowledge of unfamiliar words both through explicit instruction and, over time, through incidental reading. In addition, their reading comprehension improved, leading researchers to conclude that direct vocabulary instruction is effective and teaching children strategies for inferring the meaning of unknown words is effective when students are taught how to use context clues, how to analyze morphographs, and how to identify cognates.

Teaching vocabulary directly is effective, even when the strategies taken from previous research was conducted on mono-lingual English speaking students. Differences in results may imply differences exist due to the demographics or perhaps the quality of the instruction. Several vocabulary strategies were investigated which might prove to be challenging within strict curricula. Teachers would need to carefully design their instructional day to be able to include some of the strategies on a consistent basis. In the proposed study, the researcher will focus on only one intervention strategy: vocabulary development using morphographs. In addition, the intervention will occur in an identified intervention class for the participants. This class will be held at the same time every day.

The study was limited in that the researchers did not use a standardized measure of reading comprehension, instead using a cloze test. Perhaps using a variety of reading comprehension measures would yield more informative results. In addition, the English-proficiency levels of the ELs had no general measure; therefore, the interaction between the proficiency and the intervention could not be measured, and it is unclear whether the effects of the intervention vary as a function of English proficiency. The researchers also were not able to test long-term effects on either the students or the teachers; nor were they able to know if students were successful using the strategies they learned across content areas. Yet one important distinction emerged: teaching new words was less emphasized than teaching about words, a skill that students might be able to use to help them decode the meanings of unfamiliar words found within semantically rich contexts on their own.

At present, it is generally agreed that thousands of words are acquired incidentally but most children are acquiring root words at a much slower rate. Root words are crucial

because as students mature past 6th grade, they infer meaning at a much faster rate from unknown words than younger children. However, students who have been educationally disadvantaged must acquire vocabulary at a faster rate than more advantaged children (Biemiller & Boote, 2006). In an important study that may give insight on vocabulary development for secondary students, researchers investigated the effects of teaching root words in primary grades on transfer of word meanings to new contexts (Biemiller & Boote, 2006). This study was the second of two designed to increase word meaning acquisition. The revisions in the second study are possibly more applicable to secondary students: retention of learned word meanings and transfer of word meanings to new contexts.

The sample included 2 teachers, 28 kindergarten children, 37 first graders, and 42 second graders. Approximately half of the children were English learners. Word meanings that the children would not know were selected from books chosen by the teachers and the librarian. Students were pre-tested on word meaning, and words that were known by 85% or more of the children were eliminated. Forty-two words meanings were taught to the kindergarten children, 55 word meanings to Grade 1, and 46 word meanings to Grade 2. In all grades, the same 40 word general vocabulary test was administered. In each grade, the tests of words being taught were used for both the pre-test and the posttest using text sentences. A second set of posttest items using the same word meanings was designed using new sentences not derived from the books.

The research design was a pre-test-posttest-delayed posttest study of the effectiveness of changes in instruction to increase word meaning acquisition. In the delayed posttest, researchers examined the retention of learned word meaning. The study

also included a small no-intervention group in an additional class of 11 students who were pre- and posttested at the same time as the experimental group.

Results showed substantial stability in children's initial vocabulary size on the two different books with correlations between .72 and .87 across the different grades. The average gain meanings were 8.2 word meanings in kindergarten, 12.4 word meanings in Grade 1, and 8.5 word meanings in Grade 2. Differences were tested with a mixed-method ANOVA with between-group factors of grade, cohort, and gender showing no impact on gains. However, gains were significant on several measures: between pretest, posttest, and delayed posttest percentages of word meanings known (the effect size between pretest and delayed posttest was 2.97). Children in Grade 1 made larger gains (42%) than children in kindergarten or Grade 2 (30%)., and the overall posttest-delayed posttest gain was 6% meaning that children continued to gain vocabulary for 4 weeks without further instruction.

Based on these findings, researchers suggested that adding 400 word meanings per year is a reasonable goal. With acquisition of 22% of word meanings taught, 1,800 word meanings would have to be taught for 400 meanings to be learned. With acquisition of 41% of word meanings taught, about 1,000 word meanings would have to be taught. This would mean teaching 25 meanings per week. The method of vocabulary instruction used was simple direct instruction.

Even though this study occurred with children in primary grades, the results are encouraging for the proposed study because many of the students most likely to be identified for RTI Tier Two will be students who are reading below grade level. To determine what vocabulary word meanings will be needed by specific grade levels and in

what order to teach them is difficult to determine. However, this weakness most likely

will not stop low-vocabulary students build larger vocabularies. Within the model of RTI

Tier Two, this study supports the possibility of teaching enough root word vocabulary to

be useful and possibly impact student academic literacy.

Demographic information as to the location of this study is unknown, weakening

a comparative study. The study was limited to early elementary students who possibly do

not read fluently yet. In addition, teachers and the librarian choose the books that they

identified as appropriate for the children. While this might be the only way to choose

appropriate texts, the selections were limited by three people.

Even though teaching specific vocabulary is a commonly found practice in

secondary classrooms, not much research exists to determine the effects of teaching

word-learning strategies within content-specific subjects. In an investigation comparing

the effects of instruction using morphology versus subject-matter context to develop

vocabulary, Baumann et al., (2003) conducted a quasi-experimental study on 157 fifth

graders in eight classrooms in a middle-sized southeastern U.S. city with the goal of

examining the effects of two differing interventions of vocabulary instruction. The fifth-

graders were identified as racially and ethnically diverse with an average of 57% eligible

for free or reduced-price lunch. Intervention took place over a two month period and in

addition to the classroom instruction, included 9 quantitative tests for the students: 2

pretests, 7 posttests, chapter tests, and 3 descriptive post-assessments for the teachers and

the students that asked them to evaluate the effectiveness of the intervention.

Teachers in both groups taught the same amount of time and administered the

assessments at the same times. The differences occurred in the delivery of vocabulary

instruction. The student participants were divided into two groups: those who received morphemic and contextual analysis instruction (MC) and those who received textbook vocabulary instruction (TV) that was imbedded in the students' social studies textbooks. Student participants in both groups documented their vocabulary in notebooks used as learning logs throughout the study.

In the MC group, vocabulary instruction followed an explicit instruction model with the initial instruction for the first few weeks using morphemic analysis strategies without context clues so as to not confuse the students by teaching context clues at the same time. Later the instruction in context clues were integrated into the use of morphographs and continued integrated for the remainder of the study. In the TV group, students were directly taught content-central vocabulary from the textbook selection using a variety of strategies.

Findings were predictable: the students in the TV instruction scored an average of 7.68 points higher on the Textbook Vocabulary Test than students in the MC intervention; students in the MC intervention scored significantly higher with an average of 9.27 points more than the TV students, thus indicating that students learned the vocabulary strategies that they were taught. Both intervention groups showed statistically significant classrooms effects for transfer of knowledge to new words but no significance between groups, suggesting that the students were able to apply what they had learned about vocabulary. In addition, the results showed that both groups used their respective vocabulary strategies to learn social studies. Both the teachers and students reported that they enjoyed the vocabulary program but some teachers felt that they did not have sufficient time to cover both the subject matter content and the vocabulary strategies.

Although the limitations restrict this study within the context of fifth-grade social studies, the study also highlights three key findings. First, teaching vocabulary development through morphemic analysis in conjunction with subject-specific texts does not restrict students' knowledge of the subject matter. Second, explicit instruction of vocabulary strategies supports subject-matter knowledge. Third, students at various levels of vocabulary knowledge and subject-matter knowledge benefitted from both interventions. The educational implications point to the important role of morphemes in vocabulary development. The potential value to students may be to assist them in learning unfamiliar words within secondary contexts across content areas. The proposed study combines the key findings of using explicit vocabulary instruction using morphemic analysis with the possibility of assisting the students in understanding unfamiliar words across content areas, thus supporting subject-matter knowledge.

Even though the TV group showed significant gains in comprehension of textbook vocabulary, the TV students may have been limited to only those words. A more appropriate choice of intervention that might extend to a lifetime of understanding unfamiliar words would be through the morphemic and contextual analysis instruction (MC).

Summary. At present, improving reading literacy is a national challenge. Research suggests that vocabulary development may be one key to improve reading. The findings from research indicate several instructional implications for teaching vocabulary. Secondary ELs with weak vocabulary knowledge must be explicitly and systematically taught the skill of word learning and vocabulary development over time (Jitendra et al., 2004). In addition, improvements in vocabulary will relate to improvement in

comprehension when the methods of direct instruction are used to teach students to analyze morphographs (Carlo et al., 2004). Further, root word knowledge strengthens word meaning knowledge of unknown words and literate students might actively attempt to apply word knowledge to determine word meaning (Biemiller & Boote, 2006). Some of the most pressing limiting factors continue to be training teachers to implement the strategies and follow student progress over time while giving the students more time for the interventions. If teachers are to use this intervention, then care must be given to make sure that the teachers themselves are strong in the knowledge of morphographs. The proposed study will make a strong effort to train the teachers in this type of vocabulary intervention.

Chapter Summary

Given the dramatic increase in language-minority individuals in the United States over the past decade, schools have been particularly challenged with the academic achievement of English learner populations. There is a considerable body of research that has investigated the success of ELs in school. Some research in this section has explained the decision-making referral process of academically struggling ELs for special education services. What is apparently lacking are consistent and sound policies and practices that assure due process in decision-making. Other studies in this section examined linguistic research that reveals overlaps between ELs identified as having learning disabilities and ELs progressing along the continuum of the natural process of second language acquisition. These overlaps are overlooked or misunderstood, at best. Further studies in this section investigated response to intervention, a proposed alternative to the current practice of identifying students as having learning disabilities.

When considering the implications from the impact of secondary students who fail to progress in general education settings, findings from studies such as these hold promise for improving early intervention efforts for ELs at risk for reading difficulties with less developed vocabularies. RTI, based on best practices in instruction, uses effective strategies and progress monitoring to immediately address students' needs. Most of the research explored in this section focused on interventions in the elementary grades (K-5). Few studies, however, have investigated the effects of a research-based instructional practice in vocabulary development on underachieving English Learners within an RTI Tier Two model at the secondary level.

This proposal is designed in its investigation to follow guidelines for response to intervention in the following ways: students will be identified for the intervention based on multiple measures that identify a lack of academic progress in the general education setting. In addition, the researcher will conduct professional development for the teachers in three areas: the second language acquisition process, the identification of learning disabilities, and the explicit direct instruction of vocabulary development using morphographs. This literature review provides the foundation and rationale for this study.

CHAPTER III

Methods

All secondary students need access to grade-level content knowledge in order to be successful in school and pass high-stakes tests. English learners (ELs) face numerous educational challenges. In particular, ELs without the academic skills necessary to improve their second-language reading vocabularies risk being inappropriately referred for special education services.

The purpose of the proposed study was to examine the effects of Response to Intervention (RTI) on vocabulary development. The proposed study attempted to answer the following research questions:

1.   Does the RTI Tier 2 treatment group perform better than the control group?

2.   To what extent do teachers of ELs use vocabulary intervention in the classroom and understand its importance?

3.   What do teachers characterize as successful implementation of a vocabulary intervention?

4.   How do teachers perceive the feasibility of RTI Tier 2 at the secondary level?

5.   In what ways do teachers' understanding of second language acquisition process impact their decision to refer ELs for special education services?

Data Analysis

The overall research design of this study was a pre/post quasi-experimental and non-specific treatment group design. Mean scores on both the pretest and posttest were

measured through an independent t test, which calculated that the pretest scores were not equivalent. To reduce the effects of pre-study differences, an Analysis of Covariance (ANCOVA) was calculated. ANCOVA allowed the researcher to remove the effect of a known covariate. In this way, it becomes a statistical method of control. With methodological controls (e.g., random assignment), internal validity is gained. When such methodological controls are not possible, in this case due to the constraints of the Master Schedule at the school site, statistical controls were used. The covariate was the pretest score on the same measure.

The independent variable was the treatment on 2 levels, the experimental group and the control group. The dependent variable was the posttest score on vocabulary development using morphographs. The qualitative component of this study was descriptive using a pre- and post focus group format with the participating teachers. The focus group responses were used to gain information about the teachers' knowledge and understanding of the differences between language acquisition and language disorders, and literacy intervention using research-based vocabulary strategies.

The post-focus group reflections wanted to identify changes, if any, in the teachers' understanding of the language learning process for vocabulary development. Both the pre- and post focus groups were tape-recorded and transferred into transcripts. Following the research questions as guides, the researcher color-coded each section. In addition, transcripts were coded for recurring themes of key words and phrases that are indicative of RTI, vocabulary strategies, ELs, and special education. Inter-rater reliability was established by having an additional researcher who is familiar with RTI, vocabulary

interventions, students with disabilities, and the selected school site code at least 25% of

the transcripts. The themes will be discussed in the findings section of the study.

Sample

Participants of this research study included five English Language Arts teachers

and eighty-two 9th grade English learners (ELs) attending a high school located in the

East Bay area of San Francisco. The high school is a traditional school containing grades

nine through twelve and has a student population of 1,700 students from diverse

backgrounds. Approximately 45% of the school population is of Hispanic heritage, 25%

are Caucasian, 14% are African American, 28% are English learners. Fourteen percent

are identified as students with disabilities, and 54% of the total population is identified as

socioeconomically disadvantaged, meaning that they receive free or reduced lunch. The

school is identified as an academically underperforming school based on a score of 1 out

of 10 on the Academic Performance Index (API), a statewide rank that reflects how a

school compares to 100 statistically matched "similar schools." A similar schools rank of

1 means that the school's performance is comparable to the lowest performing 10

schools, while a similar schools rank of 10 means that the school's academic performance

is better than at least 90 of the 100 similar schools. The API is an additional indicator

within the Adequate Yearly Progress, criteria that all schools must meet as part of the

federal No Child Left Behind act. In the 2006-2007 school year, only 8% of the

population of English learners attending this school tested at *Proficient* or above in

English Language Arts.

Initially the researcher identified ELs in the ninth grade cohort who are all

enrolled in general education English language arts classes. The student participants were

identified based on their California English Language Development Test (CELDT) reading sub-strand score and their California Standards Test (CST) scores in the Vocabulary and Comprehension sub-strands. From those students, only ELs who scored a 3 (intermediate) on their most recent CELDT reading sub-strand score, and who scored basic or below (<300) on their English Language Arts Vocabulary and Comprehension sub-strand of the CST were asked to participate in the study. The researcher chose level 3 (intermediate) on the CELDT because this level is where students have acquired a sufficient amount of English so they are reading to understand text. ELs at this level may also be more motivated to achieve academic improvement because they are facing high stakes tests.

Teacher participants were volunteers from the pool of all English Language Arts teachers. Demographic data were collected on the teachers once the participants volunteered: years teaching ranged from three to ten years; levels of education ranged from Baccalaureate degrees to Master Degrees. Two teachers in the control group were Education Specialists, one with a Master's Degree in special education. All teachers have experience in working with students with disabilities, and one teacher in the treatment group has 20 years of experience in teaching English learners. All of the Education Specialists in this school district teach within the collaborative model, meaning that they partner with subject matter teachers and co-teach. At the secondary level all collaborative Education Specialists must have subject matter competence in the collaborative classes. For example, a teacher who collaborates in ELA must be subject matter competent in English.

Setting

      The intervention occurred in the classrooms of the participating teachers. All classrooms were equipped with white boards and overhead projectors. All classrooms had large windows and were air-conditioned. Most of the classrooms are located in buildings constructed in 1905; however, two of the teachers have classrooms in a brand new addition to the school.

Procedures

      The study occurred over six weeks, the 1st quarter of the school year at the high school. This quarter occurs during the months of September through October. The intervention took place during the regular school day within a forced elective support class that all ELs must be enrolled in due to their lack of progress in English. (All students in this study are enrolled concurrently in a regular 9th grade English Language Arts class.) Student participants were given a pretest to determine their level of vocabulary development using the Gates-MacGinitie Reading Tests (4th Edition) (2000) vocabulary and comprehension scores. After the pretest was administered, the support classes were randomly assigned to either an experimental group or a comparison group.

      Teacher participants were volunteers for this study and were assigned based on which group they taught. If a teacher had more than one class of support, then she or he was given the same assignment for both classes in order to avoid a potential contamination. All teachers volunteering for this study in the treatment group taught vocabulary instruction 55 minutes each day for the duration of the six weeks. During that time, teachers maintained records of students' progress based on weekly probe (quiz) scores. The remaining students in the comparison group received instruction that was not

the specific Vocabulary through Morphemes instruction. Students in the control group might have received vocabulary instruction as a matter of course in the classroom instruction that falls within the scope and sequence of the adopted materials, but all students would have received this instruction. The control group did not receive the weekly intervention probes. When the treatment was over, a posttest was administered to all participants to measure their level of vocabulary development. The posttest used the same measure as the pretest using the Gates-MacGinitie Assessment. Results of student progress helped evaluate the effectiveness of the intervention. Teachers participating in the intervention received instruction in the use of the vocabulary materials, *Vocabulary Through Morphemes* (Ebbers, 2004). In addition, participating teachers were given professional training in several related areas: the problem of overrepresentation of English Learners for special education services, the process and impact of Second Language Acquisition for English Learners, and Response to Intervention. An overview of the trainings can be found in Appendix K. All of the participating teachers received the professional training prior to the start of the study.

Intervention

The students in the experimental group received vocabulary instruction from the teacher participants every day for six weeks for $50-55$ minutes a day during their support class using the *Vocabulary Through Morphemes* (Ebbers, 2004) program. Morphemes are Greek, Latin, and Anglo-Saxon prefixes, suffixes, and roots used to build English words. Through the *Vocabulary Through Morphemes* program, students learned to analyze the structure of words, learned to decode words through morphemes, and understood common prefixes and roots. Students also studied analogies, related word

families, and synonyms and antonyms. These strategies helped students become more

linguistically aware of words and develop academic language (Ebbers, 2005). The

program contains 82 lessons that provide structured, systematic instruction. Weekly

vocabulary probes were used as assessments to monitor progress. Appendix J contains a

sample of a student page.

Measurement Instruments

       Gates-MacGinitie Reading Tests. Student participants were given a pretest to

determine their level of vocabulary development using the Gates-MacGinitie Reading

Tests (4th Edition)(2000) vocabulary scores. The vocabulary test has a 20 minute test time

with 45 items. This is a multiple choice test of word knowledge. The student's task was

to choose the word or phrase that meant most nearly the same as the test word.

       The vocabulary test was administered as recommended by the developers. The

test has a short script that the researcher read describing how to complete the sample

questions. The test was hand-scored by the researcher using a scoring key. The scoring

results in raw scores for vocabulary yielded results that were then converted into derived

scores, standard scores, percentile rank scores, and Lexile scores describing students'

levels of performance. Gates-MacGinitie has a mean score of 50 and a standard deviation

score of 21.06.

       Weekly Probes. During the intervention, *Vocabulary through Morphemes* weekly

vocabulary probes (quizzes) were used to measure student progress throughout the

intervention. The progress monitoring vocabulary probes contained the morphemes that

the students were taught and learned for that week. The format of the probes was

vocabulary-matching with the number of correct matches scored. The students matched

the morpheme to the definition, and then wrote a definition for words that were not in the lessons for the week but that contained the morphemes that they learned (Espin, Busch, Shin & Kruschwitz, 2001). The researcher discussed the results of the probes with each teacher and looked for patterns of errors that the students made in order to identify what needed to be taught or re-taught. A discussion of these findings can be found in Chapter V.

Focus groups. Teachers who participated in this study were in a focus group which was tape-recorded and gave the researcher some information about the teachers' knowledge and understanding of the differences between language acquisition and language disorders, and literacy intervention using research-based vocabulary strategies. Prior to the focus group, the researcher had the focus group protocol reviewed by six university professors and pilot tested the focus group with four teachers selected from a graduate class of classroom teachers attending the researcher's School of Education. These teachers are experienced in special education and literacy. Results determined changes for the focus group protocol prior to the actual study.

The results of the participants' focus group determined the type of professional development the teachers needed. The professional development took place prior to the study in after school sessions, two sessions of two hours each covering the use of vocabulary using morphemes, the model of RTI, and the language acquisition process.

Following the six week intervention, the teacher participants met in a post-focus group to discuss the process, barriers, successes, and future of RTI at the secondary level. Discussion of findings is in Chapter V. The focus group questions and protocol can be found in Appendixes B and C.

Reliability/Validity Procedures

To establish reliability, the researcher made sure that all instructions to teachers and preparation for administration of the vocabulary intervention were standardized by being given at the same time to everyone. In addition, the materials used for the intervention (Vocabulary through Morphemes) were the same materials for all teacher and student participants in the experimental group. Probes (quizzes) were administered weekly throughout the six week intervention, giving a total of six measures for growth. The probe data were reviewed weekly by the researcher with the teachers to see which students and teachers need more assistance. The weekly feedback on student progress will be discussed when interpreting the results. The Gates-MacGinitie Reading Tests of Vocabulary and Comprehension have been determined reliable and valid through the publisher, Riverside Publishing. The researcher also minimized the effects of external effects to make sure that testing did not occur near the time of an important school event, such as the California State Standards Test.

Content validity was established through piloting the teacher focus group questions with university professors and teachers not participating in the study. The pilot groups were experts in the fields of vocabulary development and have knowledge of English Learners, special education services, and students with disabilities.

Teacher fidelity to the intervention program was established through collaboration with other teacher participants and with the researcher. As part of the professional development for the teachers in preparation for the intervention, the researcher defined procedures associated with assessing fidelity and integrity of the intervention. The researcher met with the teachers every Friday when the results of the intervention through

the probes were picked up at the school site. In addition, the researcher was available to meet with any of the teachers to provide support if they need assistance or had questions or concerns at any time. The researcher observed the teachers at least three times during the intervention to make sure that they were teaching vocabulary using the materials with the strategies provided by the researcher to the students identified for the intervention.

Limitations

Limitations to the study may include a small sample size and limited timeframe of only six weeks. Teacher effects may influence the outcomes even though care was taken by the researcher to implement fidelity measures. The sample of students from one school district in one geographical location may not be representative of the general population of 9th graders. Only one standardized vocabulary knowledge measure was used. The vocabulary instruction in the treatment group may not have been closely aligned with instruction in the general education ELA contents, so the treatment may not have been tied closely to state standards. The students in both the treatment group and the control group had an added advantage of the extra instructional time (50 - 55 minutes per day). Teachers who received professional development in vocabulary strategies and were given the materials *Vocabulary Through Morphemes* were asked to not use the materials or the strategies in their general education classes until after the study was completed. It was expected that teachers would honor this instruction, but there is no way the researcher could control for this.

Human Subjects

The use of human subjects as research participants was approved by the University of San Francisco Institutional Review Board for the Protection of Human

Subjects and the school district where the experiment took place. This decision was based on a review of the study aim, background and design, participants, a description of the subject population and research procedures, as well as assurance of subject anonymity. (See Appendixes D through I for consent forms for parents and teachers. All forms for parents are also provided in Spanish.)

Chapter IV

Results

This quasi-experimental study examined the effect of Response to Intervention

(RTI) on the vocabulary development of underperforming English learners (ELs) who,

due to their poor academic performance, are at risk of being inappropriately referred for

special education services. The six-week treatment (also referred to as Tier 2 because the

class was designed as a support class for English Learners) was a 55-minute daily

intervention using Vocabulary through Morphemes (Ebbers, 2004). The intervention's

design was based on the nation-wide developing framework of Response to Intervention

(RTI) Tier 2 which is a specially designed class that seeks to give support for students

who are not progressing adequately in Tier 1, which is identified as the general education

classroom (see Figure 1, page 8 for an overview of RTI and Appendix A, page 129 for

the core features of RTI).

At this school, there were enough ELs who were identified as needing English

language support to create five support classes. Two of the classes were the treatment

group and three classes were the control group. All five classes of English learners

received some kind of English language support, but in this study, the Tier 2 treatment

group (two classes) focused entirely on vocabulary development using morphemes. The

three control classes did not have access to the specific vocabulary intervention that the

treatment group received, in which students learned to decode words through morphemes

(suffixes, prefixes, and roots) and to understand common prefixes and roots.

Treatment group students also studied analogies, related word families, and

synonyms and antonyms. Detailed lesson plans provided structured, systematic

instruction. Progress was measured through the use of weekly probes. The results of the probes were also used to analyze errors. Error patterns were then used to guide the teachers' instruction so they knew what to re-teach.

In contrast, the control group's teachers' focus was to supplement the English Language Arts content that the students were covering in their general education English Language Arts class. Teachers in the three control classes were given liberty to decide what the students needed class by class. All five classes in the study were support classes for ELs who met the decision rules for support. To qualify for support classes students needed a reading score at level 3 on the California English Language Development Test (CELDT) and a score less than 300 on the vocabulary and comprehension portion of the California Standards Test (CST).

Students in both the two experimental and three control classes were receiving some kind of support class for the duration of the school year unless the student made sufficient progress and no longer required the support. This determination was based on the student earning a grade of B or higher in ELA classes. The students, identified by the decision rules, were randomly assigned to classes and then the classes were randomly assigned to either a treatment or a control group. At the onset of this study there were 54 students in the control group and 52 in the treatment group. At the conclusion of the study both groups had 41 students. The discrepancy between group size at the beginning of the study and at the end was due to factors beyond the researcher's control. Some students had schedule changes due to misplacement. This meant that their English skills were either too high or too low to justify placement in a support class designed for students who were struggling academically in their ELA class. In addition, a few

participants were absent either for the pre- or posttest. Only students who were present for both tests were included in the study.

The students in both groups were pre- and post-tested with the Gates-MacGinitie Reading Tests of Vocabulary and Comprehension (4th Edition, 2000). In addition, the study investigated teachers' knowledge and understanding of the differences between language acquisition and language disorders and their understanding of the importance of an intervention for ELs using research-based vocabulary strategies.

The results are presented in two sections. The first section addresses the question of whether the RTI treatment group performed better on a vocabulary measure than the non-treatment group. The second section presents findings from the pre- and post-study focus groups including teacher understanding of the vocabulary development of ELs, teacher perception of the feasibility of RTI treatment and whether or not the teachers, based on the professional development they received covering the nature of language acquisition and the process of RTI, would change how they refer ELs for special education services.

Results: Research Question 1

The first question hypothesized that the RTI Tier 2 treatment group would perform better than the control group on vocabulary knowledge as measured by the Gates-MacGinitie Test of Vocabulary and Comprehension. The total score possible is 45 points. The pretest means for Group 1 (the experimental group) and Group 2, (the control group) were 15.15 and 20.25 respectively (see Table 2). The standard deviations were 4.37 and 4.68. The data for both groups were normally distributed with skewness values of .68 and .73. The pretest means are not equal although the variances are. The posttest

means for the control group were 24.22 and for the experimental group were 18.51. Such

things happen when using intact groups.

Table 2. Raw Scores on Pretest and Posttest Means.

Group	N	Raw Pretest Mean	SD	Raw Posttest Mean
1	41	15.15	4.374	18.51
2	41	20.25	4.685	24.22

In order to adjust for pre-study between differences the data were analyzed using

covariance (see Table 3). The adjusted mean scores for the experimental group were 20.9

and for the control group were 21.8. The mean gains scores for Group 1 and Group 2

were 2.85 and 3.17. The results of the t-test revealed that there was no statistically

significant differences between the gain scores for the treatment group ($M = 2.85$) and the

control group ($M = 3.17$). This seemed to suggest that the treatment using morphemes did

not significantly improve the ELs understanding of vocabulary. Table 2 presents the

mean gains, standard deviation, adjusted means, and Standard Error Mean score results

using the pre- and post test scores on the vocabulary level of both groups.

Table 3. Adjusted Scores for Vocabulary Treatment.

Group	N	Raw Pretest Mean	SD	Raw Posttest Mean	Adjusted Mean
1	41	15.15	4.374	18.51	20.9
2	41	20.25	4.685	24.22	21.8

The conceptual framework for this study identified three expected outcomes: outcome one applies to research question 1: students would show gains in vocabulary through the understanding of morphemes (see Figure 3 on page 16 for a full overview of the framework). A pre-analysis comparison of the pre-test score means revealed that the groups were not equal prior to the study. The control group mean was almost 5 points higher than the experimental group (see Table 3) prior to the study. Group 2, the control group, also had greater variance thus there were more students in the control group who scored higher on the pretest. After adjusting for pre-test mean score differences, post-test scores for both groups were nearly identical (20.9 for the experimental group and 21.8 for the control group). This means that despite the advantage of the control group, the experimental group caught up in only 6 weeks. Group 1 met the first expected outcome in the conceptual framework by showing gains in vocabulary development through the use of morphemes.

Results: Research Question 2

Question 2 asked to what extent teachers of ELs use vocabulary intervention in the classroom and understand its use. In the pre-study focus group, all teachers reported the use of some kind of daily vocabulary instruction, whether to activate prior knowledge, or to set the context for the lesson of the day in the regular English Language Arts (ELA) class. ELs in this study are in two "English" classes. One is the general ELA class and the other is the support class. The support classes are designed to help the ELs on a daily basis. In other words, the support classes contain a composite of ELs from all the other ELA classes that the particular teacher teaches throughout the day. So if a 9th grade ELA teacher has four classes of 9th grade ELA, then she would select all the ELs

from those four classes who met the decision rules for support into one class. The rationale for this process is that the general education ELA teachers would best know what the ELs need to be taught in the support classes in order for those students to be successful in her ELA class. This process meets the description in the pyramid of support for RTI Tier 1 (see Figure 1, page 8) where the students receive core instruction. Then the support classes (RTI Tier 2) were designed to meet the needs of those students who were experiencing academic difficulties and needed to receive more specialized instruction. (National Joint Commission on Learning Disabilities, 2005).

Teachers reported that ELs struggle with language in ELA classes because the vocabulary system used in the state-adopted materials are above the students' ability to comprehend the material. One teacher reported that his Hispanic students' word consciousness, which he described as identifying and understanding root words, suffixes, prefixes, and parts of speech, is so underdeveloped that they fail to make connections from Spanish to English when he (the teacher) used shared cognates. The teachers agreed that a vocabulary intervention that would give the students the knowledge of the structure and meaning of English words would be beneficial. They also agreed that EL students should be pre-tested in order to identify where to begin developmentally with the morpheme intervention.

All teachers expressed their concerns about the struggle ELs face while repeatedly trying to pass the California High School Exit Exam. Although prior to the study none of the teachers had ever delivered this type of morphographic intervention, they agreed that a vocabulary intervention could be beneficial to helping students improve comprehension

skills so the students could have a better chance to pass state exams, participate more fully in class discussions, and progress through their high school courses successfully.

        In the post-study focus group, the teachers in the treatment group reported that the students' word awareness became more apparent when they learned sequenced vocabulary using morphemes to decode unfamiliar words. The more the students learned word consciousness by using morphemes the more confident they became and the more likely they were to take risks with new vocabulary. However, students faced challenges in learning morphemes because this type of word learning was entirely new to them. This issue will be explored more fully in the Chapter V discussion.

Results: Question 3

        Question 3 asked how teachers would identify a successful vocabulary intervention. In the pre-study focus group, all teachers indicated that they needed additional instructional time, outside of the regular ELA class period, in order to successfully meet the linguistic needs of their ELs. In the general ELA class, vocabulary is not explicitly taught every day. Teachers must follow the adopted state texts which require reading and writing about an anthology of literature. These reading and writing assignments are difficult for ELs whose CELDT reading score is at level 3 or lower and who score below 300 on the reading and comprehension section of the CST. When English Learners and native speakers are in the same English class, using the state adopted text, little time can be given to help students who struggle to understand vocabulary. Due to the difficulty level of the texts for the ELs, all participating teachers reported that they needed dedicated time, outside of their English Language Arts classes to adequately teach vocabulary to their ELs. Teachers felt that if they had additional time,

they could teach students to decode, decipher, comprehend, and manipulate language. All of the teachers who volunteered for this study reported confidence in their ability to deliver effective vocabulary instruction using morphographs.

In the post-study focus group findings, teachers in the treatment group reported that the added time, which was a dedicated class period every day, gave the students an added opportunity to learn vocabulary. The benefits teachers identified from this instructional time spent on the structural analysis of words through morphemes enabled the students to begin to learn to analyze the structure of words and to use context clues, networks of related words, and morphemes to find meaning. Teachers found that many of the ELs did not know shades of meanings of words, for example, "toast" can be a bread product or a speech given in recognition of a person. These types of words are easily understood by native speakers. The required state ELA texts are fraught with these kinds of words which become an impediment to comprehending poetry, short stories, expository readings and many other literary genres for the EL.

Results: Question 4

Question 4 asked how teachers perceive the feasibility of RTI at the secondary level. After a professional development session conducted by the researcher covering RTI, participants in the pre-study focus group agreed that RTI would make sense as an option for academically struggling students rather than seeing those students fail English class. Several factors were mentioned that could impede the use of an RTI intervention at the high school level including staffing, curriculum, training, academic credits, identification of eligibility, tracking problems, motivation, sustainability, timing, classroom space, and the master schedule. All participating teachers discussed the issues.

With regard to staffing, teachers felt that some of their colleagues would rather not teach an intervention class, electing to teach only in their core content area instead, such as English, mathematics, or biology, for example. In a large high school with significant numbers of English Learners, the teachers thought that staffing intervention classes for those ELs who struggle academically might be difficult.

For curriculum, teachers were apprehensive of "supplementary" materials that would not be developmentally appropriate for high school students; in other words, they would avoid curriculum that would be too babyish for their students. Some teachers in the focus group had used curricula in the past that the students found too elementary. Student motivation plummeted. Those teachers said that the past intervention using inappropriate materials had been an utter failure.

Motivation was then discussed as a possible barrier in an intervention class. Teachers reported that students who struggle academically are already at risk for failure, and while teachers had no actual "motivational scale" scores on any students, they reported that the students who are failing their classes do not come to class regularly, putting them even farther behind. The sustainability of the intervention was discussed in conjunction with motivation. If the students were not motivated to improve their vocabulary development then the intervention was doomed to failure. Teachers then looked at the materials and found them to be free of elementary content. I assured them that if they were selected to the treatment group that they would receive training and follow-though on the probes. We would also talk frankly with the students about their placement in the intervention classes and maintain a positive outlook focused on effort and attendance.

Concern about academic credits was discussed as well. Teachers questioned how students would receive credit for a support class and how those credits might be identified on the students' report cards. The administration answered those concerns by identifying the support classes as a Humanities elective. Teachers then asked how students would be identified for an intervention. As required throughout the state of California, ELs are routinely tested for language levels in speaking, listening, reading, and writing as measured by the CELDT. A CELDT Reading cut score of level 3, identifying the student at the Basic level, was one indicator for eligibility in the intervention class. The teachers and I identified an additional cut score of less than 300 on the reading and comprehension section of the CST. This placed the EL in the National Assessment of Educational Progress (NAEP, 2007) level of Basic or below. All students need to reach the level of Proficient. Identifying ELs below Proficient made them eligible for the support class.

The practice of tracking, or placing all students of the same ability level into one class was questioned by the teachers. It was pointed out that the support class would be the only class with homogeneous grouping. All other core content classes for the students were de-tracked. In addition, classes were arranged in the master schedule so that any student could move in or out of the support classes if that student excelled so as not to need the intervention any longer. The student then would take an elective class in lieu of the support class. Teachers were more amenable to this process, stating that they would not like to see a student "stuck" in a support class they no longer needed.

In the post-study focus group, the teachers in both groups discussed feasibility again, mentioning that scheduling a dedicated support class within the school day was

beneficial to the ELs. Most of the students understood the reasons why they had been placed in the support classes and did not appear to mind the "extra" instruction. In fact, teachers in both groups reported that absenteeism was low and morale was high as evidenced by the consistent student attendance.

Aside from a few inappropriately placed students (whose schedules were then changed), the eligibility cut points overall appeared to be academically sound in terms of the students' abilities to navigate the intervention materials successfully. The weekly meeting with the treatment group teachers to discuss the findings from the probes led to discussions about how to re-teach concepts. Some of the strategies to re-teach content included having students create charts of word families, or lists identifying functional shift - showing how the same word can be a noun, then a verb, then a noun again – for example: Plant the plant in the planter. Students also created charts on large paper posted around the room depicting prefixes and suffixes with their meanings, then showing how attaching the morphographs to base words made words different. For example: the base word *care* changes its meaning depending on the suffixes of *–ful* and *–less*: careful/careless; thoughtful/thoughtless; hopeful/hopeless. Teachers in the treatment group reported that the more they taught word parts and helped the students visualize how words work, the more the students were interested in the treatment, suggesting higher motivation.

As for the concern over tracking students, the teachers in both groups heard the students report a greater willingness to take risks with the language because everyone in the class was at the same level of English acquisition. Teachers suggested that the students were more at ease in the support classes because no one was there to laugh at

their mistakes. Overall the opinion of the teachers was that RTI Tier 2 at the secondary level was an appropriate response to help struggling students succeed.

Results: Question 5

Question 5 asked how teachers' understanding of the second language acquisition process impacts their decision to refer ELs for special education services. According to respondents in the pre-study focus group, most teachers did not consider the impact of language development on student academic success, unless they were bilingual specialists or special educators. Reasons for not associating academic progress with language ability, or lack thereof, included inexperience (new teacher), a lack of understanding of the language acquisition process or of students' language needs, and lack of knowledge of language levels. Teachers pointed out that at the high school level, they see themselves as content specialists (English, science, mathematics, physical education), not linguists. As content specialists, they tend to isolate the language acquisition process within the single domain of language learning (for example, English, French, German class), rather than viewing language acquisition within the domain of content areas like science or mathematics. For the EL, every one of their classes uses the language of instruction in the target language – English. Further, teachers often interpret the language levels of ELs based on the spoken word in social situations, which often does not require academic language. Interpreting language levels this way gives a teacher a false sense of what an EL can produce in an academic context.

In this light, teachers feel that the absence of academic ability must be related to a learning disability thus the EL is referred for an investigation through a Student Study Team (SST), a group of educators, administrators, and psychologists who will determine

that student's eligibility for special education services. All of the teachers reported a past experience with an SST. Given the history of academic failure for that student, he or she may then become an inappropriately referred EL for special education services. Following a professional development session covering the language acquisition process as opposed to identification of a language disability, I asked the teachers to be more aware of the ELs' language development throughout the intervention.

In the post-study focus group, teachers in the treatment group reported that their awareness of the language acquisition process had been heightened and they discussed their need to evaluate student language levels when considering whether to recommend further testing of students for possible special education services. When asked if they had identified any students in their support classes who needed to be referred for an SST, all agreed that it was far too early in the year (six weeks) for that kind of determination to occur. They needed more instructional time with the students in the support class in order to evaluate the effects of the intervention.

Summary of Results

In this study of the effects of RTI treatment on underachieving students in vocabulary development there was no significant gain score difference on vocabulary development between the treatment group and the control group. However, Group 1, the treatment group, showed greater gain than Group 2, the control group, by closing the difference between them following the treatment of only 6 weeks. This will be discussed more fully in Chapter V. This study was designed to use morphemes to teach vocabulary to academically struggling ELs, a design that was challenging for the students yet seen as valuable by the teachers for the ELs' overall better understanding of unknown words.

Teachers of support classes learned of the importance of the language acquisition process of English Learners and recognized that vocabulary development is an important part of that process.

In addition, the researcher wanted to explore teacher perceptions of the feasibility of RTI Tier 2 at the high school level. In spite of several possible barriers such as tracking, motivation, sustainability and manipulation of the master schedule, teachers suggested that RTI Tier 2 intervention may be the process that should be used to provide the support struggling students need in order to move toward mastery of complicated texts. Although gains were small, gains were made toward increasing vocabulary development of ELs who are not yet Proficient learners. Results suggest that RTI Tier 2 can be implemented at the secondary level using research-based vocabulary curricula if teachers are provided training and support. Finally, the overarching goal of this investigation was to examine whether the problem of the overrepresentation of English Learners for special education services can be reduced if the teachers have a comprehensive understanding of the language acquisition process. This may be possible by training teachers on the systematic process of language acquisition and on the impact of vocabulary development for English Learners who must understand and be able to use content specific vocabulary at the high school level.

Chapter V

Discussion, Conclusions, and Recommendations

Discussion

The purpose of this study was to examine the effects of Response to Intervention (RTI) on the vocabulary development of secondary school English Learners (ELs) who are at risk for academic failure and referral for special education services. This study asked the question: Would a vocabulary treatment using morphographs help high school students learn how to decode unfamiliar words that are typically found in academic texts? Further, would teachers be less likely to refer ELs for special education services if they understood the language acquisition process and took this process into consideration prior to referring Discussion of the study will focus on each of the five research questions.

Prior to the discussion of the results of the study, an explanation of the system of support for English Learners designed by the administration and teachers at this particular school site is important. Five years prior to this study, the school's academic performance index (API), based on results of statewide testing that measures the academic performance and yearly growth of the schools, was low (530 out of 1,000 points), placing the school in danger of being state monitored. At that time, decisions were made by the administration and a literacy team through the guidance of a non-profit research and service agency to design support classes throughout the school day focused on improving the literacy and mathematics skills of struggling learners. The researcher was a key member of the literacy team which created the support classes that were still in existence during this study. Prior to the beginning of each school year, ELs who scored 3 or lower (out of 5) on the reading section of the CELDT and less than 300 on the reading and

comprehension sections of the CST were identified as needing English language support. These two tests are scored by the state of California in reporting the API. Scores such as these classify students as Basic or below, not Proficient.

In order to help identified students reach proficiency, they are placed in a support class in addition to their general ELA class, where targeted instruction is given to improve their English language skills. Students remain in the support class until they make satisfactory progress in English Language Arts class. At that point, students are moved out of the support class into a different elective class. The decision to keep the support classes "fluid", in other words, have the ability to move students in and out when necessary, was made by the literacy team a few years into the process. The team felt it was important that students should not remain in the support class for the entire year if they improved sufficiently to move ahead. Therefore the support classes' enrollment could fluctuate depending on how students do in their ELA class. Due to course credit issues, most students remain in support classes for a minimum of one school quarter, or nine weeks. However, at the beginning of the school year when determining if students had been placed in support classes correctly, adjustments are made due to placement error.

The study took place at the beginning of the school year. The total number of students in the support classes at the beginning of the study was not the same as the total at the end of the study. Only the scores of those students who participated in both the pre- and post-test were included in the results. It is possible that students who made the greatest gains were taken out of the support class prior to the end of the study resulting in their score results not being reported in the study. This is a limitation of any study

conducted at an actual school site where the researcher must comply with school practices.

Discussion Question 1: Does the RTI Tier 2 treatment group perform better than the intervention group?

Although the treatment group scored 5 points lower than the control group prior to the study, the results indicate that after six weeks of treatment the experimental group attained the same score as the control group on the posttest. In other words, the treatment was so effective that the students in that group were able to catch up with their control group peers by the end of the study. When the researcher controlled for the discrepancy between pretest scores by using the pretest as a covariate, results show that not only did the experimental group make gains, but they caught up with the gains made by the control group. These gains are noteworthy in that this study was conducted over a six week period. Given this short time frame, this treatment was incredibly effective. It is possible that if the treatment were given over an entire semester or school year that gains made by ELs could be statistically significant.

This study identified what was believed to be an effective strategy to increase ELs' vocabulary and implemented the use of powerful practices. The teachers viewed the work as meaningful and important. They expected the students to progress given the treatment. Teachers in the experimental group were willing to examine student performance through the use of weekly probes. Through the probe results, teachers adjusted their teaching so that students were able to have another chance to acquire the skill that was being taught. Students accomplished this goal not only by making gains in their vocabulary development, but also by catching up with their peers in only six weeks

of instruction, suggesting a high probability of benefit to ELs who face significant

challenges every day in every class. An ELs lack of progress produces serious

consequences, including being referred for special education services. The study results

suggest that if ELs are given an effective treatment, their overrepresentation in special

education may be reduced.   Additionally, the benefits of teaching vocabulary using

morphemes for ELs extend beyond the classroom. It is possible that if ELs score higher

on high stakes tests that the school, through the increase of the API, could avoid state

monitoring as well.

When the teachers were first introduced to teaching vocabulary using

morphographs, they were curious about how the students would respond. Their concern

centered on the pedagogy of teaching morphographs. Teachers suspected that the students

would not have studied vocabulary using morphemes prior to the study. At the beginning

of the study when students began to learn to identify the meaning of new or unfamiliar

words through word parts (suffixes, prefixes, roots) combined with systematic practice in

using morphemic and contextual cues that would help them identify similar or related

words or classes of words, teachers in the treatment group had to slow down their

teaching in order to allow more time for the students to become acclimated to using

morphographs. This was an entirely new skill for the students. The teachers persisted

believing that teaching the students to decode unfamiliar words by looking at the parts of

the word would be a lifelong skill.

The study results are promising and suggest that ELs could learn this new skill

and their vocabulary knowledge could increase. Teachers in the control group agreed to

this study on the condition that they would be able to use the morphographs curriculum

once the study was completed. In addition, all five teachers have asked the researcher to return at the end of the school year and post-test all students who were in the initial study in order to measure gains in vocabulary development. At that time, gains will be measured on the CELDT, the CST, and course grades as well.

Linking these results to the main goals of RTI Tier 2 (the use of research-based interventions matched to students' needs that are of varied duration and frequency with continuous monitoring of student progress (National Association of State Directors of Special Education, 2008)) it could be concluded that creating an RTI Tier 2 would be beneficial for academically struggling ELs. The timing for the intervention however would be different from the current view of RTI Tier 2 - instruction that takes place outside of regular class time in small groups of four to six students (Bender & Shores, 2007.) For high school students, support classes outside of the school day proved to be impossible due to factors that occur in teenagers lives' when they are not in school, such as sports, babysitting, or having an after school job. Oftentimes students must take care of younger siblings while parents work at their second or third job. For some students, holding a job after school is their way to help the family meet financial needs. Incorporating this instruction within the school day is a departure from the elementary school model of RTI Tier 2 using small group instruction (Bender & Shores, 2007; Fuchs et al., 2004; Mellard & Johnson, 2008).

Discussion Question 2: To what extent do teachers of ELs use vocabulary intervention in the classroom and understand its importance?

Teachers expressed concern that ELs face difficult and challenging vocabulary in content areas such as biology, mathematics, and English. Teachers reported that poor

word awareness impacted students' abilities to comprehend unfamiliar vocabulary found

in difficult texts. One teacher (treatment group) in particular observed that,

> Most of my students are Spanish speakers. I would assume that they have a lot
> more vocabulary understanding of shared cognates, but their consciousness of their
> own language is so underdeveloped that even when I say "This is like a Spanish
> word, and it looks very much like a Spanish word," they still don't always make the
> connection there.

Prior to the study, teachers routinely taught vocabulary in a variety of ways such as

prediction charts in which students guess at meaning prior to reading, analogies which

require critical thinking, and word mapping which uses concepts to teach key words. The

major findings that emerged from the vocabulary intervention were that teachers believed

that teaching vocabulary using morphemes would help the students decode unfamiliar

words. Prior to the study, one teacher (control group) said,

> If we start with a study program that would emphasize just vocabulary I think it
> would help a lot. I mean that's one thing…that's sort of the first step. You have to
> know the words and then how they all relate together.

After the study, another teacher (treatment group) noted,

> It's an extremely effective method. So I think that if the materials are sequenced
> and if there's motivation there and for the period of time that you're teaching
> there's consistency of attendance and consistency of instruction that without a
> doubt intervention will have an effect.

        While it is possible that a variety of instructional methods could improve

vocabulary skills, the expectation in this study was that using morphemes to teach

vocabulary would yield higher results for ELs, as it did in Carlo and her colleagues

(2004) study using morphology, multiple meanings strategies, and cognates. The findings

from this study strengthen the case for rigorous vocabulary instruction, even though, at

the beginning of the study, teachers in the experimental group reported that students had

difficulty with morphemes because they had never studied vocabulary using that strategy.

If students have difficulty understanding vocabulary in science, mathematics, social

studies, French, or other academic courses, then learning the skill of decoding unknown

words using morphemes would be important as a teacher (treatment group) expressed it,

> We're responding with this intervention that's going to help them as they continue
> through high school. It'll help because …it's something [that they] will transfer to
> other classes. In that case, I think it will help them out.

In accordance with findings from Artiles (2008) suggesting structural inequalities

such as teacher quality, content area teachers need to be trained in the skill of teaching

vocabulary using morphemes if the goal is to enhance educational opportunities for ELs

in general education classes.

Discussion Question 3: What do teachers characterize as successful implementation of a

vocabulary intervention?

Teachers reported an awareness of the language and literacy demands that are

placed on ELs in core content classes when there is little time to focus on additional

instruction for students who are struggling to comprehend difficult texts. One teacher

(control group) described it as,

> When you take a look at the reading [in ELA class], the questions that are being
> asked are way beyond the ability of the contemporary student to be able to
> understand and comprehend what's being asked and then even comprehend the
> answers to those questions.

Another teacher (control group) added,

> But as it [the schedule] sits right now with six-period days, moving around the
> campus, interference being brought into that, emotional things happening between
> classes and so on, plus inconsistency in instructional materials and instructional
> practices with the same population [and] the interference that that brings in, then I
> don't think we're going to have much success. But if it's a very controlled
> environment, I can't see how it wouldn't [help] assuming attendance and
> motivation.

Another teacher (treatment group) described the student population,

> Picture this – a 9ᵗʰ grader who probably thinks he's dumb, still can't [do the work] is still an EL … if you told the student, hey, I'm gonna work with you. … it's gonna take some time, but you know, if you put work into it, it'll help.

One goal of this study was to add to the research of Klingner and colleagues (2006) who sought to determine what factors would differentiate ELs who are facing academic difficulties due to limited proficiency in English from ELs who may have a learning disability. Another teacher (control group) explained that in the general education classroom,

> It's really tough [to identify limited proficiency from a learning disability] in our normal classroom settings if you're not teaching ELD [English Language Development], you just have a regular English class. It seems to me that it would be really difficult for a teacher to identify what the student actually needs. It's kind of like when your car isn't running well. You know, like well there's something wrong with the car, but I can't tell what it is…I think it's really hard for a regular teacher to find that out. Just something's broken. The kid's not getting it.

Vocabulary knowledge affects student achievement yet the challenge that teachers face daily to deliver linguistically appropriate instruction is often not addressed. Not enough of what is known about teaching ELs to become academically literate is practiced in the classroom. When asked if teachers consider that there may be a second language acquisition issue that is causing the student to not be able to learn what the teacher is teaching, the researcher was told, "I would say the majority of the time, no, they don't consider that; don't really have an awareness of it." Another teacher said, "Almost nil, almost nothing." Finally a third teacher volunteered, "And then among the faculty that is experienced, I would say it's still nil." The present study suggests that rigorous professional development on the language acquisition process may successfully help teachers to identify language differences rather than language disability, thereby reducing the disproportionality of ELs referred for special education services.

Discussion Question 4: How do teachers perceive the feasibility of RTI Tier 2 at the

secondary level?

Results suggest that teachers view the feasibility of RTI as not only possible but

also necessary, particularly in schools with low SES, high populations of ELs and

students with disabilities, and low performance scores on state tests. Results of this study

can help identify possible conditions (such as scheduling, classroom space, teachers,

academic credits) found at the secondary level that might influence how RTI would be

implemented. Perhaps more important would be for teachers to have a clearer

understanding of RTIs purpose. Factors that influence the success of RTI must be

examined, including assessment procedures to determine the language proficiency of

ELs, identification of appropriate instructional materials, progress-monitoring of

students, on-going fidelity of teacher practices through targeted professional

development, and refinement of referral procedures (Artiles & Ortiz, 2002; August et al.,

2005; Bender & Shores, 2007; Fuchs & Fuchs, 2005; Klingner & Harry, 2006).,

When appropriate assessments are used to determine the language proficiency of

ELs they are less likely to be inaccurately placed in Tier 2 for specific targeted

instruction in content that is difficult for them or possibly Tier 3 for referral for special

education services. This is important because greater attention needs to be given to

language issues. Instruction in Tier 1 prior to Tier 2 intervention should provide adequate

and frequent opportunities for students to learn. Continual progress-monitoring should

assess student progress while helping to guide the teacher to maintain and monitor

academic gains. Professional development that is on-going ensures that teachers continue

to develop their skills toward becoming experts in pre-referral strategies. The use of pre-referral strategies will reduce the inappropriate referral of ELs for special education services.

Discussion Question 5: In what ways do teachers' understanding of second language acquisition process impact their decision to refer ELs for special education services?

With regard to the referral of EL students for special education services, the results of this study suggest that the teachers became more aware of the impact of language acquisition or other differences that influence ELs' learning. Initially, one teacher (treatment group) identified language acquisition as similar to special education,

> I always picture learning a new language as having a book. I mean when you first get this book it's completely blank. And then someone teaches you basic stuff, basic vocabulary…and then after a while someone sort of teaches that there are words that are cognates, words that exist in Spanish that exist in English. And so more of the words kind of fill in. They still have the book mostly blank. But they're still trying to read it. Right? Their other classes, their life, it's all mostly blank. And they're tryin' to do the most with that. That's how I see also special ed. That they have some understanding of everything, but not total understanding of much. So in that sense in that they're trying to… they're asked to work with an incomplete set of skills. I think that is very similar [to language acquisition]. So part of that is vocabulary.

This practice supports the effects of Artiles, Trent and Kuan's research (1997) who studied the decision making process of professionals who do not adequately understand second language acquisition. It is critical that those who are directly involved with ELs on a daily basis have a thorough understanding of the language acquisition process. Additionally, Klingner and colleagues (2006) suggest that adequate consideration be given to the role that language acquisition may play on the ELs' unexpected underachievement in their classes and underperformance on high stakes tests. While every content teacher in secondary education is not a language teacher, every teacher needs to be able to teach ELs.

Although this exploratory study was only conducted over six weeks, teachers began to understand that paying attention to the levels of language acquisition of ELs was crucial to identifying the kind of support that students need. A teacher (control group) asked,

> What about those students who really do have two different issues? That their language delay is not because of a particular function of the acquisition of English, but is an actual language delay? That's really difficult. And as far as I know there is zero support for that kind of student. I mean it's like special ed…I don't think we have any kind of actual special ed for Spanish speakers.

By focusing on language acquisition, teachers were more likely to wait to refer students for special education services unless that student failed to make progress over time in the general ELA class. One teacher (treatment group) remarked,

> After seeing how the students started to understand [morphemes] based on how I perceive the morphology study, I think it is very successful. I plan to continue the lessons in my class. Students now have a background for analyzing words and breaking them down into morphemes, and ultimately giving them more understanding of words. I have not referred a student for SPED. I would allow students adequate time for learning English before considering a SPED recommendation now, unless the student demonstrated highly unusual learning abilities.

Some researchers (Barrera, 2006; Klingner & Harry, 2006; Klingner et al., 2006; Overton et al, 2004; NCCRES, 2006) have identified practices that could reduce inappropriate referrals. By addressing the wait-to-fail model that currently exists for identifying students with disabilities, greater responsibility may be with the general education teacher through the use of intervention strategies to reduce disproportionality of ELs for special education services.

Conclusions

The purpose of this study was to examine the effects of RTI on the vocabulary development of underperforming ELs who are at risk of being referred for special education services. The study explored several areas: vocabulary development through

the use of morphemes - its importance and success; the feasibility of a model of RTI within the challenging structure of secondary education; and finally, the impact that knowledge of second language acquisition might have on how teachers interpret the academic progress of ELs and refer them for possible special education services when they fail to progress. What can be learned from the results should be considered by schools making decisions for supporting ELs as they move through high school.

First, vocabulary development through the use of morphemes proved to increase EL knowledge of unknown words in a very short period of time. This gain in understanding is critical for the success of English learners if they are expected to reach Proficient in their English language skills. Students were not familiar with learning vocabulary using morphemes but were interested in learning words with this strategy. Prior to the study teachers had not used this strategy in specifically designed support classes.

Second, when teachers understand the language acquisition process they are less likely to refer ELs for special education services. They are more likely to design instruction that follows the acquisition process giving ELs an opportunity to build language skills.

Next, one way to ensure academic success for struggling learners is to consider school reform in two key areas: time and placement. The added hour of support every day within students' schedules resulted in positive effects. English Learners need more time and more instruction than their native speaking peers in order to comprehend difficult texts. This time and instruction cannot be given within the core content classes such as English, mathematics, or science. Extra time and instruction should be given within a

dedicated class time devoted to increasing the ELs' acquisition of English, possibly by

exploring and developing a model of RTI.

　　　　Finally, challenges and barriers most certainly exist when creating a schedule of

intervention. When a class is designed specifically for a specialized group of students,

such as ELs, decision rules for placement of students in support classes should be

carefully explored and tested and then must be maintained for integrity.

<center>Recommendations</center>

　　　　Future Research. Steps must continue to address the overrepresentation of ELs in

special education. Future research should explore the use of Response to Intervention as a

viable option at the secondary level. The qualifications of teachers of ELs are essential.

The question of who qualifies for special education services has never been an easy one.

Future research should continue to investigate the practices that teachers use when

referring ELs for special education services. Additionally, more research is needed on

the instructional implications of teaching vocabulary using morphemes at the secondary

level where students may apply those decoding skills across disciplines and content areas.

Finally, research and discussion of vocabulary typically focus on words rather than on

word meaning. More research is needed in the area of word meaning.

　　　　Professional Practice. The qualifications of teachers of ELs are crucial. Most

teachers are not prepared to teach ELs, particularly at the secondary level. To teach

research-based strategies effectively, teachers need to be thoroughly trained in their use.

The onus of this responsibility begins with single subject teacher preparation programs at

institutes of higher education, particularly in the areas of English Learners and students

with disabilities. Continued training in and practice with strategies should continue

throughout the induction period for new teachers. In addition, schools with high numbers

of ELs should offer site-based training and support.

In conjunction with knowing how to use research-based strategies, teachers also need

to be aware of the process of language acquisition and its impact on second language

learners in the classroom. There is a great need for well-designed targeted professional

development in an on-going basis. Some recommendations for professional practice

would be to:

- Provide on-going instruction for teachers of ELs on the use of morphemes
  to teach vocabulary at the secondary level. Follow-up regularly to ensure
  continued appropriate use of this strategy.

- Involve potential teachers in the development of an appropriate model of
  RTI at the school site and provide input for its purpose.

- Provide instruction on the importance of language and literacy demands of
  secondary ELs.

- Provide insight on what research suggests about language learning and
  vocabulary development.

- Define and outline the critical role of content teachers who need to be
  effective instructors of the specific vocabulary found in their domains.

- Create a system of identifying students so they can be grouped according
  to area of need and monitor student progress in order to adjust
  interventions if needed.

- Instruct teachers in the collaborative process to ensure the maximum effectiveness when sharing roles and students and offer many opportunities for teachers to collaborate.

- Make prevention a priority by investigating the disproportionality of ELs for special education services in order to raise the awareness of the practice.

- Inform general education teachers of the eligibility and identification process for learning disabilities to ensure that ELs are not inappropriately referred for special education services.

Limitations

This study is not without limitations. First, the time frame of the study was short – six weeks. Based on findings in this study, perhaps measuring vocabulary development using morphemes over the period of the school year would yield even greater results. Professional development was limited to four hours. This may not have been adequate time to cover important topics such as language acquisition, RTI, teaching using morphemes, and referral practices. Teachers need more time to learn and practice research-based strategies. In addition, teachers need a support system to maintain fidelity, whether that support is in the form of collaborating with other teachers, having a coach or a literacy team at the school site, gaining release time to attend intensive trainings or a combination of all.

Perhaps the Gates-MacGinitie was not sensitive specifically to morphographs. It is possible that a teacher designed pre- and post-test may have been more sensitive to

morphographs. Also, this study was limited to the use of only one specific intervention – vocabulary using morphemes. More might be learned about the feasibility of RTI within the general education classroom through the use of additional research-based strategies.

The researcher did not give instructions to the teachers and administration about keeping students in the support class for the duration of the study. The researcher was not able to control for the possibility that students would be moved out of the class. The support classes at this school are designed to be fluid for the students; in other words, students can move into and out of the classes based on the extra instruction they might need so they can understand the instruction and assignments in the general ELA class. When researchers are working within a state system with strict guidelines and budgetary constraints results might be different if there were fewer barriers. Conducting research in a school at the will of the school can interfere with results. If students were performing well were left in the support class, the means on gain scores may have been higher. Perhaps the researcher should have tested the students who were moved out of the study prior to the end of the six weeks.

This study might not be replicable in states other than California or in states with low EL populations. This study would benefit from long-term follow-up of the participating students. The extent to which students who graduated out of the support classes progress in their ELA classes was not addressed by this study. This is an important question for future study because if gains were made over six weeks, perhaps gains over an entire school year would be substantial.

Summary

Significant numbers of English learners face consequential challenges at the secondary level. Teachers face significant challenges as well. In order for schools to face these challenges and be effective, steps must be made to ensure that vital issues are addressed. We cannot continue to accept the failure of our English learners to make progress equal to their English speaking peers. Quality instruction from qualified teachers must be a priority. Perhaps a Response to Intervention model for the secondary level offers promise, but is not without challenges. The research base is growing. Further research is needed to help us explore the impact of the language acquisition process on the referral processes for ELs to receive disability services. Finally, what is learned must be practiced so that we can continue to not only understand the challenges that lie ahead, but also be prepared to answer them responsibly.

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APPENDICES

APPENDIX A

Core Features of Response to Intervention

- High quality classroom instruction within the general education classroom;

- Research-based instruction that has been validated;

- Classroom performance based assessments within the general education curriculum;

- Universal screening not only of academics but also in related behaviors such as class attendance, tardiness, truancy, and disciplinary actions;

- Continuous progress monitoring that will immediately identify the students who need intervention;

- Research-based interventions that are implemented when a student's progress indicates a deficit. These interventions are designed to increase the intensity of the student's instructional experience;

- Progress monitoring during interventions determine interventions' effectiveness. Interventions may be modified as needed depending on the student's response to the intervention;

- Fidelity measures that focus on the person delivering the intervention to indicate whether or not the intervention was implemented properly and consistently (Mellard, Byrd, Johnson, Tollefson, & Boesche, 2004).

APPENDIX B

Research Questions / Focus Group Questions

Pre-Study Questions

Research Question #2:	Focus Group Questions:
To what extent do teachers of ELs use vocabulary intervention in the classroom and understand its use?	a) To what extent do you feel that academic vocabulary plays in EL success in classes? On state exams? b) Have you ever thought that a vocabulary intervention for ELs would make a difference for ELs? In what ways? c) Have you delivered this type of intervention? If so, describe it and the results.
Research Question #3:	Focus Group Questions:
What do teachers characterize as successful implementation of a vocabulary intervention?	a) How would you identify successful intervention for struggling students? b) What instructional strategies do you recommend for delivering a vocabulary intervention to ELs? c) What type, if any, challenges would you anticipate if you implemented a vocabulary intervention? d) How confident are you in your ability to deliver effective vocabulary instruction? What might help you gain more confidence? e) Considering the discussions in this focus group, what would you need to know before you could implement a vocabulary intervention? Shouldn't this be in 3?

Research Question #4:	Focus Group Questions:
How do teachers perceive the feasibility of RTI at the secondary level?	a) What is your understanding of the response to intervention model?
	b) In the model of RTI Tier 2, general education teachers implement the intervention outside of the regular classroom time. In your opinion, is this likely to be effective?
	c) What would this intervention look like? When and where might it take place?
	d) What would be some challenges you might expect?
Research Question #5:	Focus Group Questions:
In what ways do teachers' understanding of the second language acquisition process impact their decision to refer ELs for special education services?	a) When you assess ELs' verbal proficiency, how much do you consider their language needs? What about their reading and writing proficiency?
	b) What are some of the characteristics that a language disability and the language acquisition process share?
	c) How much influence, if any, does the language ability of the EL impact your referral of that student for special education services?

Post-Study Questions

Research Question #2:	Focus Group Questions:
To what extent do teachers of ELs use vocabulary intervention in the classroom and understand its importance?	a) Based on the understanding you now have on vocabulary strategies for ELs in small group instruction outside of the regular class time, will any aspect of your teaching change? b) From your observations, did the attitude and behavior of the students with whom you worked change in any way? Did their academic behavior change in any way?
Research Question #3: What do teachers characterize as successful implementation of a vocabulary intervention?	Focus Group Questions: a) In your opinion, how successful was the intervention? b) From your experience with teaching vocabulary to ELs, what recommendations would you give to improve the intervention? c) What characterized the intervention's success? Failure?
Research Question #4: How do teachers perceive the feasibility of RTI Tier 2 at the secondary level?	Focus Group Questions: a) What is your understanding now of the RTI model? b) In your opinion, is RTI likely to be effective? c) What were some of the challenges you faced?
Research Question #5: In what ways do teachers' understanding of the second language acquisition process impact their decision to refer ELs for special education services?	Focus Group Questions: A) Based on what you now know about the second language acquisition process, have you changed your decision rules to refer ELs for special education services? In what ways?

APPENDIX C

Focus Group Topic Guideline

A. Introduction: The moderator (researcher) will provide an overview of the goals of the discussion (Approximately 10 minutes).

This focus group session is an opportunity to freely share your thoughts and ideas about a proposed model of Response to Intervention that is designed to give students academic support at the first sign of failure to learn. This model of RTI might reduce inappropriate referrals of English Learners for special education services.

In keeping with ethical guidelines, the moderator will begin by discussing the purpose of the group. Participants will be encouraged to freely share their own thoughts and ideas. The moderator will make a point of assuring them that their candid responses will have no negative consequences at their school site.

B. Rapport Building Stage: General question to encourage participants to begin sharing and talking.

> Question: Imagine that you are part of a team of teachers selected to speak directly to the CDE about the education of English Learners at this high school. What would you tell them? (Approximately 10 minutes)

C. In-depth Discussion: Main questions (Approximately 60 minutes)

> Question: When you think of your ELs, what are their most educationally significant needs at the secondary level?

> Question: To what extent do you feel that academic vocabulary plays in EL success in classes? On state assessments?

> Question: From your experiences, have you ever thought that a vocabulary intervention for ELs would make a difference for them? In what ways?

> Question: Have you delivered this type of intervention? If so, describe it and the results.

> Question: What instructional strategies do you recommend for delivering vocabulary intervention to English Learners?

> Question: What is your understanding of the response to intervention model?

> Question: In the model of RTI Tier 2, general education teachers implement the intervention outside of the regular classroom time. In your opinion, is this likely to be effective?

Question: What would this intervention look like? When and where might it take place?

Question: What would you anticipate as some of the challenges you might face?

Question: When you assess an EL's verbal proficiency, how do you take into consideration their language needs? What about their reading and writing proficiency?

Question: What are some of the characteristics that a language disability and the language acquisition process share?

Question: How much influence does the language process of ELs impact their referral for special education services?

Follow-up Questions:

How would you identify successful intervention for struggling students?

What types of, if any, challenges would you anticipate with a vocabulary intervention?

Question: How confident are you in your ability to deliver effective vocabulary instruction?

Question: Considering the discussions in this focus group, what would you need to know before you could implement a vocabulary intervention?

D. Closure: The moderator will summarize the impressions or conclusions gathered and the participants will have a chance to clarify, confirm, or elaborate on the information. (Approximately 10 minutes).

Post-study Questions

Question: What is your understanding of the response to intervention model?

Question: In the model of RTI Tier 2, general education teachers implement the intervention outside of the regular classroom time. In your opinion, is this likely to be effective?

Question: What would this intervention look like? When and where might it take place?

Question: What were some of the challenges you faced?

Question: What characterized the intervention's success? Failure?

Question: From your experiences with teaching vocabulary to ELs, what recommendations would you give to improve the intervention?

Question: Based on the understanding you now have, will any aspect of your teaching changed?

Question: From your observations, did the attitude and behavior of the students you worked with change in any way? How?

APPENDIX D

Cover Letter to Teachers

September 2008

Dear Sir or Madam,

My name is Gail Kirby and I am writing to request your consent in a research study that I am conducting as part of my Doctoral degree in Education from the University of San Francisco. I am also a former English Language Development teacher at Mt. Diablo High School.

You are being asked to participate in this study because you teach English learners who are experiencing difficulty in learning academic English vocabulary. The goal of this study is to find out if a vocabulary intervention composed of a group of 12-15 students would increase your students' understanding of English not only in the classroom, but on important tests such as the High School Exit Exam and the California Standards Test as well. The goal of this intervention is to keep English learners from being inappropriately referred for special education services.

If you agree to participate, you will be asked to join me and other participants in a focus group discussion which will be tape recorded that will give you an opportunity to freely share your thoughts and ideas about a proposed model of Response to Intervention that is designed to give student's academic support at the first sign of failure to learn. This model of RTI might reduce inappropriate referrals of English Learners for special education services. I assure you that your candid responses will have no negative consequences on your status as a teacher at MDHS. All responses will be kept confidential and anonymous. Following the focus group discussion, you will receive training in research-based vocabulary strategies that are proven to work best with English learners. The training will take place after school and will last for about 2 hours. There will be approximately two sessions.

Your role in this study will be to participate in two focus group discussions, one pre-intervention and one post-intervention. Further, you will be randomly assigned 12-15 students whom I have identified as needing the intervention. After your training, which I will conduct, you will receive vocabulary materials that you will use for the intervention. The intervention will take place during school five times a week for about 50-55 minutes for 6 weeks during the first quarter. As part of the data gathering, you will record student progress daily. Each week, you will administer an end-of-the-week probe that I will score and then discuss results with you the following week. In addition, I will observe you teaching the intervention every other week in order to maintain fidelity across all teachers. I will administer a pre- and post test to the students using the Gates MacGinitie assessment of vocabulary and comprehension in order to gather information on the gains students make due to this intervention.

Participation in research is voluntary. You are free to decline from the study at any point. Mrs. Hansen, Principal of MDHS is aware of this study, but she is not requiring any teachers to participate. Your participation or non-participation will not affect your standing at the school in any way. There will be no cost to you. If you so request, I will provide you with a copy of the completed study at no cost. There will be no payment to you for participating; however, it is my feeling that the results from this study will be of great assistance to the future implications of what teachers can do to support students in their English vocabulary development.

Thank you for your consent to participate in this study. If you have any questions please feel free to contact me by email or phone at xxx-xxxx or by regular mail at St. Mary's College, School of Education, PO Box 4350, Moraga, CA 94575. Thank you for your time and assistance.

Sincerely,

Gail Kirby

APPENDIX E

INFORMED CONSENT FORM FOR TEACHERS
UNIVERSITY OF SAN FRANCISCO

CONSENT TO BE A RESEARCH SUBJECT

Purpose and Background

Gail Kirby, a graduate student in the School of Education at the University of San Francisco is doing a study on the effect of research-based instructional practices in response to intervention Tier 2 on underachieving students in vocabulary development at the secondary level. The researcher is applying research-based vocabulary strategies to English learners with the goal to reduce inappropriate referrals for special education services and increase state test scores.

You are being asked to participate because you teach English learners experiencing difficulty in learning academic English, the language that is needed to pass the California High School Exit Exam and score proficient on the English Language Arts section of the California Standards Test.

Procedures

If I agree to participate in this study, the following will happen:

1. I will agree to participate in both a pre- and post intervention focus group discussion which will be tape recorded.
2. I will agree to professional development in research-based vocabulary strategies. The professional development will take place after school in two sessions of two hours each.
3. I will agree to instruct a small group of 12-15 students during school for 50-55 minutes for a total of 6 weeks using the materials I am provided and the strategies I have been taught.
3. I will agree to administer a vocabulary test at the end of each week to measure how much progress the students are making due to the intervention.
4. I will agree to keep all results confidential.

Risks and/or Discomfort

1. Participation in research may mean a loss in confidentiality. All records will be kept in a secure location at all times. Only the researcher will have access to this information.
2. Because of the time required for my participation before school starts, I may have to rearrange parts of my schedule so that I am free to participate in this intervention prior to the official school day.

Benefits

> The potential for me include knowing that the students I am teaching in this intervention will be receiving research-based vocabulary instruction. I will benefit from learning research-based vocabulary strategies that I will be able to use in all my classes with all my students. I realize that I am also contributing research to the existing body of knowledge on Response to Intervention at the secondary level. This research may reduce the inappropriate referrals of English learners for special education services. In addition, I may receive a copy of the result of the study upon request.

Cost/Financial Considerations

> There will be no financial costs to me as a result of taking part in this study.

Payment/Reimbursement

> I will not be reimbursed for my participation in this study.

Questions

> If I have further questions about this study, I may call Gail Kirby at (xxx) xxx-xxxx or Dr. xxxxxx xxx, her Chairperson at (xxx) xxx-xxxx.

> If I have any questions or comments about participation in this study, I should first talk with the researcher. If for some reasons I do not wish to do this, I may contact the IRBHS, which is concerned with the protection of volunteers in research projects. I may reach the IRBHS office by calling (415) 422-6091 and leaving a voicemail message, by emailing IRBHS@usfca.edu, or by writing to the IRBHS, Department of Psychology, University of San Francisco, 2130 Fulton Street, San Francisco, CA 94117-1080.

Consent

> PARTICIPATION IN RESEARCH IS VOLUNTARY. I am free to decline to be in this study at any point. My decision as to whether or not I participate in this study is entirely up to me and will have no influence on my standing or status at Mt. Diablo High School or in the district.

My signature below indicates that I agree to participate in this study.

_____

Teacher's Name   Date of Signature

APPENDIX F

Cover Letter to Parent (English)

September 2008

Dear Sir or Madam,

My name is Gail Kirby and I am writing to request your consent in a research study that I am conducting as part of my Doctoral degree in Education from the University of San Francisco. I am also a former English Language Development teacher at Mt. Diablo High School.

Your child is being asked to participate in this study because he/she is an English learner experiencing difficulty in learning academic English vocabulary. The goal of this study is to find out if a vocabulary intervention composed of a small group of 12-15 students would increase your child's understanding of English not only in the classroom, but on important tests such as the High School Exit Exam and the California Standards Test as well. The goal of this intervention is to keep English learners from being referred for special education services.

If you agree to allow your child to participate, he/she will be given a test before the intervention begins that will show me how much English vocabulary your child understands. The intervention will be about 50-55 minutes long five times a week during the regular school day. The intervention will last for 6 weeks during the first quarter of school. The vocabulary intervention will be taught by English teachers at MDHS who have been trained to use research-based strategies for vocabulary development for English learners. Your child will be assessed weekly to monitor his/her progress. When the intervention is over, another test will be given to show me how much your child's English vocabulary improved. All of the information about your child will be confidential.

Participation in research is voluntary. You are free to decline or withdraw your child from the study at any point. Mrs. xxxxxx, Principal of MDHS is aware of this study, but she is not requiring any students to participate. Your child's participation or non-participation will not affect his/her grade in any way. There will be no cost to you. If you so request, I will provide you with a copy of the completed study at no cost. There will be no payment to you or your child for participating; however, it is my feeling that the results from this study will be of great assistance to the future implications of what teachers can do to support students in their English vocabulary development.

Thank you for your consent for your child to participate in this study. If you have any questions please feel free to contact me by email or phone at xxxxxxxxx@hotmail.com

xxx-xxx-xxxx or by regular mail at St. Mary's College, School of Education, PO Box 4350, Moraga, CA 94575. Thank you for your time and assistance.

Sincerely,

Gail Kirby

APPENDIX G

Cover Letter to Parent (Spanish)

28 Septiembre del 2008

Estimado Señor o Señora,

Mi nombre es Gail Kirby y estoy escribiendo esta carta para pedir su consentimiento en una investigación que estoy dirigiendo como parte de mi doctorado de educación en la Universidad de San Francisco. También, yo soy una ex-maestra del desarrollo de inglés en la escuela preparatoria Mt. Diablo.

Su hijo/a está siendo invitado a participar porque es un(a) alumno/a en vías de aprender inglés que está teniendo dificultades aprendiendo el vocabulario académico en inglés. La meta de este estudio es descubrir si una intervención en grupos de 12 a 15 estudiantes sobre la enseñanza del vocabulario mejoraría la comprensión de inglés de su hijo/a no solamente en la clase, pero también en las pruebas importantes como el *Examen de egreso de la escuela preparatoria de California* y las *Pruebas de estándares del estado de California*. La meta de esta intervención es reducir las solicitudes de intervención de los servicios de educación especial para alumnos en vías de aprender inglés.

Si usted da permiso para que su hijo/a pueda participar, él/ella completará una prueba antes de que la intervención comience para que me muestre cuanto vocabulario de inglés su hijo/a entiende. La intervención durará aproximadamente 50-55 minutos, 5 veces cada mañana durante el dia escolar regular. La intervención durará 6 semanas durante el primer cuarto del año escolar. La intervención sobre el vocabulario será enseñada por maestras de inglés a MDHS que han sido entrenadas en el uso de estrategias que están basadas en investigaciones científicas para desarrollar del vocabulario con alumnos en vías de aprender inglés. Su hijo/a será evaluado/a cada semana para medir su progreso. Cuando la intervención haya terminado, otra prueba será dada para mostrarme cuanto ha mejorado el vocabulario de inglés de su hijo/a. Toda la información de su hijo/a será confidencial.

Participación en la investigación es voluntaria. Usted es libre para declinar la participación de su hijo/a en este estudio o para sacar su hijo/a en cualquier punto de la investigación. La directora de MDHS, la Sra. Hansen, está informada de este estudio, pero no está exigiendo que algún estudiante participe. La participación o no participación de su hijo/a no afectará sus calificaciones en cualquier manera. No hay ningún costo para usted. Si usted lo desea, yo le proveeré a usted una copia del estudio completo sin ningún costo para usted. Usted no será pagado/a por la participación de su hijo/a en este estudio; sin embargo, yo siento que los resultados de este estudio serán de mucha ayuda a los maestros en el futuro y les apoyarán cuando estén trabajando con sus estudiantes que necesiten el desarrollo del vocabulario en inglés.

Gracias por su consentimiento de permitir que su hijo/a pueda participar en este estudio. Si tiene alguna pregunta, favor de ponerse en contacto conmigo por teléfono al (xxx) xxx-xxxx,

mandarme un correo electrónico a xxxxx contactarme por correo regular a St. Mary's College, School of Education, PO Box 4350, Moraga, CA 94575. Gracias por su tiempo y asistencia.

Atentamente,

Gail Kirby

APPENDIX H

INFORMED CONSENT FORM FOR PARENTS (ENGLISH)
UNIVERSITY OF SAN FRANCISCO

CONSENT TO BE A RESEARCH SUBJECT
Purpose and Background

Gail Kirby, a graduate student in the School of Education at the University of San Francisco is doing a study on the effect of research-based instructional practices in response to intervention Tier 2 on underachieving students in vocabulary development at the secondary level. The researcher is applying research-based vocabulary strategies to English learners with the goal to reduce inappropriate referrals for special education services and increase state test scores.

Your child is being asked to participate because he/she is an English learner experiencing difficulty in learning academic English, the language that is needed to pass the California High School Exit Exam and score proficient on the English Language Arts section of the California Standards Test.

Procedures

If I agree to allow my child to participate in this study, the following will happen:

1. I will agree to allow my child to participate in a pre and post test of vocabulary development.
2. I will agree to allow my child to be in a small group vocabulary instruction of 12-15 students during school for 50-55 minutes for a total of 6 weeks.
3. I understand that at the end of each week, my child will be given a test to measure how much progress he/she is making because of the intervention.

Risks and/or Discomfort

1. It is possible that some students not in the study may ask your child why he/she is in an intervention class.
2. Participation in research may mean a loss in confidentiality. All records will be kept in a secure location at all times. Only the researcher will have access to this information.
3. Because of the time required for your child's participation during school, he/she may miss having a typical elective class.

Benefits

The potential for me include knowing that my child is receiving research-based vocabulary instruction from trained teachers. The benefits for my child include

small group individualized instruction in research-based vocabulary instruction from trained teachers. This instruction using research-based vocabulary strategies will help my child not only in his/her classes, but also on state examinations such as the High School Exit Exam and the California Standards Test. Moreover, I will be giving teachers an opportunity to use the best strategies for vocabulary development for English learners, strategies that teachers can use in all classes with all students. In addition, I may receive a copy of the result of the study upon request.

Cost/Financial Considerations

There will be no financial costs to me or my child as a result of taking part in this study.

Payment/Reimbursement

I will not be reimbursed for my child's participation in this study.

Questions

If I have further questions about this study, I may call Gail Kirby at (xxx) xxx-xxxx or Dr. xxxxxx xxx, her Chairperson at (xxx) xxx-xxxx.

If I have any questions or comments about participation in this study, I should first talk with the researcher. If for some reasons I do not wish to do this, I may contact the IRBHS, which is concerned with the protection of volunteers in research projects. I may reach the IRBHS office by calling (415) 422-6091 and leaving a voicemail message, by emailing IRBHS@usfca.edu, or by writing to the IRBHS, Department of Psychology, University of San Francisco, 2130 Fulton Street, San Francisco, CA 94117-1080.

Consent

PARTICIPATION IN RESEARCH IS VOLUNTARY. I am free to decline for my child to be in this study, or to withdraw my child at any point. My decision as to whether or not my child participates in this study is entirely up to me and will have no influence on my child's grades or status in school.

My signature below indicates that I agree to allow my child to participate in this study.

_____

Student's Name   Date of Signature

_____

Parent/Guardian Signature   Date of Signature

APPENDIX I
Consent Form for Parents (Spanish)

Formulario de consentimiento informado
Universidad de San Francisco

CONSENTIMIENTO DE SER SUJETO DE INVESTIGACION

Propósito y antecedentes

Gail Kirby, una estudiante graduada en la Escuela de Educación de la Universidad
de San Francisco, está haciendo un estudio sobre el efecto de prácticas Instruccionales
basadas en investigaciones científicas usadas durante Respuesta a la Intervención de la
Etapa 2 del desarrollo del vocabulario de estudiantes secundarios que están por debajo de
las expectativas del nivel de secundaria. La investigadora está usando estrategias que son
apoyadas por investigaciones científicas para enseñar vocabulario a los alumnos en vías
de aprender inglés. La meta de esta investigación es reducir las solicitudes de
intervención de los servicios de educación especial y de mejorar sus calificaciones en las
pruebas del estado.

Su hijo/a está siendo invitado a participar porque es un(a) alumno/a en vías de aprender
inglés qué está teniendo dificultades aprendiendo el inglés académico, el idioma que
necesita para pasar el *Examen de egreso de la escuela preparatoria de California* y para
calificar como proficiente en la sección de artes de lenguaje en inglés de las *Pruebas de
estándares del estado de California*.

Procedimientos

Si doy permiso a mi hijo/a para participar en este estudio. Lo que pasará es lo siguiente:

1. Doy permiso para que mi hijo/a pueda participar en una prueba del desarrollo de
    vocabulario antes y después del estudio.
2. Doy permiso para que mi hijo/a pueda participar en un grupo pequeño de 12 a 15
    estudiantes para recibir instrucción de vocabulario por 50-55 minutos antes de la
    escuela por 6 semanas.
3. Yo entiendo que al fin de cada semana, a mi hijo/a le será dado una prueba para
    medir su progreso como resultado de esta intervención.

Riesgos y/o incomodidades

1. Es posible que algunos estudiantes que no estén en el estudio preguntarán porqué
    su hijo/a está asistiendo a una clase antes que el día escolar comience.
2. Participación en un estudio puede resultar en una pérdida de información privada.
    Todos los archivos serán guardados en un lugar seguro todo el tiempo.
    Solamente la investigadora tendrá acceso a la información.

3. A causa del tiempo requerido para la participación de su hijo/a antes de la escuela, puede ser que él/ella pierda tiempo en una clase electiva tipica.

Beneficios

Los beneficios para mí incluyen el saber que mi hijo/a está recibiendo una instrucción que está basada en investigaciones científicas de vocabulario por parte de maestros entrenados.

Los beneficios para mi hijo/a incluyen recibir una instrucción individualizada en grupos pequeños donde recibirá una instrucción de vocabulario que está basada en investigaciones científicas por parte de maestros entrenados. Esta instrucción que usa estrategias basadas en investigaciones científicas sobre el vocabulario ayudará mi hijo/a no solamente en sus clases, pero también en los exámenes del estado como el *Examen de egreso de la escuela preparatoria de California* y las *Pruebas de estándares del estado de California*. Además, dará a los maestros una oportunidad a usar las mejores estrategias mejores para el desarrollo del vocabulario a los alumnos en vías de aprender inglés. Los maestros pueden usar estas estrategias en todas sus clases con todos los alumnos. Además, tal vez pueda recibir una copia de los resultados del estudio si usted así lo desea.

Precios / consideraciones financieras

no hay ningún costos financieros para mí o mi hijo/a como resultado de participar en este estudio.

Pago / reembolso

Yo no seré reembolsado/a por la participación de mi hijo/a en este estudio.

Preguntas

Si tengo más preguntas sobre este estudio, puedo llamar a Gail Kirby al (xxx) xxx-xxxx o a la Dra. xxxxxx xxx, la presidenta de su comité, al (xxx) xxx-xxxx.

Si tengo preguntas o comentarios sobre la participación en este estudio, debo hablar primero con la investigadora. Si por cualquier razón no quiero hacer esto, puedo ponerme en contacto con el IRBHS que está interesado en la protección de voluntarios en las investigaciones. Puedo establecer contacto con la oficina de IRBHS llamando al (415) 422-6091 y dejando un mensaje de correo de voz, mandando un correo electrónico a IRBHS@usfca.edu o escribiendo al IRBHS, Department of Psychology, University of San Francisco, 2130 Fulton Street, San Francisco, CA 94117-1080.

Consentimiento

PARTICIPACIÓN EN ESTA INVESTIGACIÓN ES VOLUNTARIA. Soy libre para declinar la participación de mi hijo/a en este estudio o para sacar mi hijo/a en cualquier

punto de la investigación. La decisión que mi hijo/a participe o no participe en este estudio es completamente mía y no tendrá influencia en las calificaciones o posición escolar de mi hijo/a.

Mi firma debajo indica que estoy de acuerdo que mi hijo/a pueda participar en este estudio.

_____
Nombre del estudiante   Fecha de firma

_____
Firma del padre/madre o tutor   Fecha de firma

APPENDIX J

Professional Development Series

Session One

- The Language Acquisition Process and Its Impact on English Language Learners

- Does Your English Learner Have a Language Disability? How Do You Know?

- Referral practices: Critical Questions about the Special Education Process and English

  Language Learners

Session Two

- What is Response to Intervention?

- Teaching Vocabulary Using Morphemes