Instructional Reading Level Growth of English-Language Learners over Two Years, According to Initial Word-Reading Ability

Melody Kung

A thesis submitted to the faculty of the University of North Carolina at Chapel Hill in partial fulfillment of the requirements for the degree of Masters' of Arts in the Department of Education (Early Childhood, Special Education, and Literacy).

Chapel Hill
2012

Approved by:

Dr. Jill Fitzgerald

Dr. Harriet Able

Dr. Rebecca New

ABSTRACT

MELODY KUNG: Instructional Reading Level Growth of English-Language Learners over Two Years, According to Initial Word-Reading Ability
(Under the direction of Jill Fitzgerald)

The purpose of the study was to examine the relationship between Initial Word-Reading Ability and Instructional Reading Level growth of young English-language learners (ELLs) over two years. Forty-two ELL first- and second-grade children were followed for two years. At the start of the study, Initial Oral-English Ability and Word-Reading were assessed. Instructional Reading Level was assessed at the beginning, middle, and end of each of two years. Analysis was conducted using hierarchical analyses. The independent variable was Initial Word-Reading Ability, the control variable was Initial Oral-English Ability, and the dependent variable was Instructional Reading Level. The main finding was that Initial Word-Reading Ability was related to Instructional Reading Level growth. Students with lower Initial Word-Reading Ability made less growth in Instructional Reading Level than those with higher Initial Word-Reading Ability.

Keywords: English-language learners, instructional reading level, word reading

Table of Contents

Instructional Reading Level Growth of English-Language Learners over Two Years, According to Initial Word-Reading Ability

What is the relationship between young English-language learners' (ELLs) Initial Word-Reading Ability and two-year Instructional Reading Level growth, controlling for Initial Oral-English Ability? In the present study, the term ELLs will be operationally defined as students who come from homes where the primary language is a language other than English (Kieffer, 2010). Word-reading involves the decoding of letters and words as well as memorization of individual words that can be read on sight, but in the present study, it is operationalized only as sight-word reading.

Rationale

Background

There is an increasing number of ELL students in the United States (US) who do not speak English as their first language (Burns & Helman, 2009). The number of school-aged children who speak a language other than English at home increased from 4.7 to 11.2 million from 1980 to 2009 (U.S. Department of Education, 2011). The changing demographic presents a challenge for teachers in the US. American society puts an emphasis on the ability to read and write in English, and ELL students in the US are having difficulties reading. For example, on a recent national assessment, in fourth-grade reading, 70% of ELLs scored below the basic level, and 7% scored at or above proficient while in eighth-grade reading, the percentages were 71% and 3%, respectively (National Assessment of Educational Progress, 2011). It is important to examine the instructional-reading growth trajectories for young

ELLs to better assist the increasing population of ELL students in developing knowledge and skills in reading in English.

Importance of Early Trajectories for Later Progress

It is evident from studies on monolingual native-English speaking young children that the first few years of elementary school are important for modifying the trajectory of students' reading development (Pianta, Belsky, Vandergrift, Houts, & Morrison, 2008). Students who are not progressing on a typical developmental trajectory in literacy skills during the first few years of elementary school tend to fall behind their peers (Foster & Miller, 2007; Pianta et al., 2008). In fact, some researchers have found that most of the greatest change in the lower-level monolingual reading trajectory occurs by first grade, and there is little change in the velocity of the trajectory after third grade (Pianta et al., 2008).

To date, to my knowledge, no research studies have specifically examined the developmental trajectory of instructional reading level for young ELLs who initially score differently on word-level reading variables (Kieffer, 2008, 2011). Word-reading could be a strong predictor of later reading growth in sub-skills such as comprehension of connected text because comprehension of text builds on the ability to read individual words; comprehension involves reading a string of words and making meaning out of the words. Because there is limited research on the importance of word-reading for ELLs, it is difficult to predict whether there is a relationship between initial word-level reading and growth in instructional reading level. Perhaps the early progress already known for monolinguals is similar for ELLs; as compared to more proficient ELL peers, students who are less proficient in word-reading at the start of the school year may exhibit steeper growth in instructional reading level over the course of the school year and potentially continue on different

instructional reading level trajectories in a following year. The gap between the more proficient ELLs and the less proficient ELLs may increase over time. Research is needed to address the gap in our understanding of literacy growth in ELL populations.

What's Known about Early ELL Reading Trajectories

Findings from a few existing studies provide relevant information for understanding the reading trajectories of ELLs in general, but the studies do not examine trajectories according to initial word-reading ability (Fitzgerald, Amendum, & Guthrie, 2008; Kieffer, 2008, 2011). Reading growth of Latino ELLs has been shown to be similar to that of their monolingual, native English peers (Fitzgerald et al., 2008). In a study of first and second graders, although the Latino ELLs started the study at a lower (but statistically insignificant) level of instructional reading, their growth over two school years was similar to that of monolingual native-English-speaking peers, for both age cohorts. Both ELLs and native-English-speaking students demonstrated steady growth in instructional reading level over two school years, with the ELLs at a lower, but statistically insignificant level.

Initial oral-English proficiency at school entry has been shown to be related to rate of reading growth for ELLs as compared to their monolingual peers (Kieffer, 2008, 2011). In a study of kindergarten through eighth-grade growth (Kieffer, 2011), though the rate of growth for students with initially limited-English proficiency was steeper than for the native-English-speaking peers, the growth was not enough to catch up with the native speakers. In contrast, students who were initially fluent in English were able to catch up with their native-English-speaking peers by the end of first grade and continue on a trajectory similar to that of native speakers.

Socioeconomic status has been shown to be associated with ELL reading growth (Kieffer, 2008, 2011). More specifically, socioeconomic status reduced the effect of initial English proficiency on reading growth. Although initially fluent ELLs experienced reading growth that was comparable to that of native speakers, when socioeconomic status was taken into account, ELLs experienced greater growth than the native speakers of similar SES backgrounds. Although ELLs who initially had limited English proficiency had a slightly faster rate of reading growth than their peers, they could not make up for the achievement gap; however, when socioeconomic status was taken into account, ELLs were able to catch up with their peers.

Taken together, there is modest evidence that both initial English-oral proficiency and SES play a role in the rate of growth and performance level in reading. ELLs who entered school with high oral proficiency in English showed a similar rate of growth and performance level to native-English speakers. ELLs who entered school with lower oral proficiency showed more rapid growth in reading yet lower performance level. However, when SES was taken into account, ELLs who entered school with high oral proficiency in English showed a higher rate of growth and performance level than native-English speakers, and ELLs who entered school with lower proficiency showed more rapid growth and similar performance levels compared to native speakers.

Why Do We Need to Study Young ELL Reading Trajectories Based on their Early Word-Reading Ability?

Word-reading is a predictor of early-reading development for monolingual native-English-speaking children. However, there are few studies that examine the early-reading

development for ELLs. Studies on the native-English-speaking children could be important for shedding light on the reading development of ELLs.

Existing studies on native-English-speaking children have found that variation in word-reading skills explains a portion of the variation in concurrent reading achievement for the native-English-speaking students in kindergarten through third grade (Snow et al., 1998). Research findings on monolingual native-English-speaking children indicate that achieving fluency and automaticity in word-reading is important for later reading development (LaBerge & Samuels, 1974). Students can only devote a limited amount of attention to any given cognitive task and thus if students are unable to decode and recognize words quickly, they are unlikely to be able to pay attention to the comprehension of the words. However, as students become more proficient at decoding and learn more sight-words, they become more fluent in their word-reading, and do not need to spend as much attention to figure out the words and consequently allow them to pay more attention to higher-order processes such as comprehension. In short, of the two types of word reading, one requiring word analysis and the other requiring automatic recognition, the latter has been shown to be more important as a predictor of later reading achievement (LaBerge & Samuels, 1974).

For native-English speaking children, the trajectories for students who scored higher on initial phonics and early text-comprehension skills differed from those of students who initially scored lower on the phonic and early text-comprehension skills (Foster & Miller, 2007). The Matthew effect--a phenomenon that originates from the idea in the Bible that the rich get richer and the poor get poorer (Stanovich, 1986) seems to apply to the reading trajectory for native-English speakers who enter school with different abilities in reading. Students who enter school with stronger early-reading sub-skills experience different

trajectories from those who enter school with little experience with reading. The students with extensive exposure to reading are able to build on what they know and exhibit steeper reading progress, as compared to those who enter school with few prior opportunities to learn how to read; these students not only fail to catch up, but also get further behind.

There currently are no studies that compare young ELLs who start the school year with differing levels of mastery of reading sub-skills. Given this gap in the research base, there is a need to examine the trajectories of reading development for young ELLs who start the school year at differing levels of initial word-reading proficiency.

Significance of the Study

It is important to study the impact of initial word-reading proficiency on the slope and shape of instructional-reading growth because the findings could contribute to the knowledge base and provide guidance for future research as well as implications for reading instruction. If students who start the school year at different levels of word-reading proficiency demonstrate different rates of reading progress, the finding would be similar to what is known for native-English-speaking speakers. And if proficiency in word-reading is important for later reading development, then early-elementary school and even preschool teachers may elect to place more emphasis on word-reading and provide more instruction on this sub-skill, especially emphasizing sight word development. Mid and late-elementary school teachers can use the knowledge of the importance of word-reading to identify students who may need some extra support in reading. The earlier students can be identified as needing additional reading instruction, the earlier they can receive intensified reading instruction that could potentially alter the trajectory of their reading development and have a lasting impact on the students' mastery of reading skills needed to succeed in school and in the workplace.

Hypothesis

There is insufficient evidence from research to make a hypothesis about reading development for young ELLs, so I base my hypothesis on the reading development trajectory for monolingual students. I hypothesize that the reading development for young ELLs who score higher on Initial Word-Reading Ability will follow a similar trajectory as that shown in the three prior studies of higher-performing ELLs and typically-developing monolingual, native-English speakers in first through third grade. In the prior studies, compared to the lower-performing native-English-speaking students, the higher-performing native-English-speaking students have attained greater proficiency in the important indicators of early reading success, such as sight word knowledge and can use those skills as a launching pad for reading success. I also hypothesize that the reading development for young ELLs who initially score lower on Initial Word-Reading Ability would be more similar to that of monolingual native-English-speakers who are lower-performing native-English-speaking, monolingual readers. As discussed previously, the ELLs who score lower on Initial Word-Reading Ability are not yet able to quickly identify words, an important skill since the ability to automatically identify words reduces the amount of attention needed for word-recognition (LaBerge & Samuels, 1974). The less time that is devoted to word-recognition, the more attention can be focused on other processes such as comprehension, predicting, and monitoring, which are higher order abilities. The earlier that automatic word-reading happens, the sooner students will be able to attend to other higher-level processing, and therefore, the greater the likelihood that students will experience instructional reading level growth.

Additional Related Theory for the Study

Implications from Monolingual Reading Development

There is limited research about the early phases of learning to read for ELLs. However, it may be useful to draw upon the research findings and theory (Ehri's theory) for the early phases of learning to read for monolingual, native-English-speaking students, since findings for native-English-speaking students may provide some inklings about what the process looks like for ELLs. Ehri's (1999) phases of word development are used to describe the process of learning to read for native-English speaking children and could help to understand how reading fluency of words is developed for ELLs. According to Ehri, native-English-speaking children develop reading sub-skills in a sequential manner. As seen in the first stage, young children develop phonological awareness and the ability to hear, segment, manipulate phonemes within words and thus, initially for young children, phonological awareness plays an important role in reading development. As the children continue to develop, they begin to acquire different sub-skills. Perhaps the second and third stages of reading development hold the most relevance to the current study because automatic sight word recognition is developed during the second and third stages. In the second stage, children begin to acquire grapheme awareness and morphological and orthographic word patterns and use graphic and syntax cues in the context to decipher unfamiliar words. In the third stage, children build on what they have learned in the previous stages, becoming fluent in reading words and being able to internalize strategies for reading unfamiliar words.

Learning to read for ELLs may be similar to learning to read for native-English-speaking students, yet it may also be more complex. The implications from Ehri's phases of word development for ELLs are that young ELL students who are learning English-as-a-second-language may go through phases of reading development similar to those of

monolingual, native-English speakers. Yet, as I will discuss in the next few sections, ELLs' reading development in English is likely to be different and more complicated, since ELLs also bring other sources of knowledge to the classroom, such as knowledge of their native-language. ELLs may go through the phases of learning to read in English more quickly and successfully if they have already mastered phonological awareness in their native-language, and they may be able to transfer word-recognition in their native-language.

Relationship between Oral Language and Reading

Existing theories and studies on the relation of language and literacy for young native-English speakers as well as on elementary-aged and adolescent and adult ELLs may shed some light on the development of language and reading for young ELLs.

Oral Language and Reading for Native-English-Speaking Children. For monolingual, native-English speakers, language and literacy development is interrelated and skills build on previously learned sub-skills (Chall, 1983). However, even though it appears that children acquire oral language prior to written language, it is erroneous to simply think that literacy occurs through a linear process. Instead of one sub-skill building on another and serving as a prerequisite for another, literacy development occurs through a simultaneous process, where children develop their oral language and literacy sub-skills in conjunction with each other (Teale & Sulzby, 1986). More recent research that examines the trajectories of reading development and early predictors for native-English speakers supports the importance of early oral language development on later reading achievement (Dickinson & Tabors, 2002; National Early Literacy Panel, 2009; Dickinson & Porche, 2011). Dickinson and Porche (2011) review ample scholarly literature that points to early language ability and

subsequent reading ability, indicating that language in preschool predicts reading in later grades.

Oral Language and Reading for ELLs. There are currently no complete models of the relationships of young ELLs' oral-language and new-language reading. However, limited research on the relation of language and literacy for adolescent and adult ELLs provides evidence that native oral-language proficiency and word-reading are intertwined and significantly correlated for high-school aged and adult ELLs (Abu-Rabia, 1997; Bernhardt & Kamil, 1995, 2011). The findings could potentially be relevant to young ELLs as well.

Research suggests that not only do oral language sub-skills in the first language play a role in literacy sub-skills in the second language, but oral language sub-skills in the second language also contribute to literacy achievement in the second language. Bernhardt's (2011) research-based compensatory model of second-language reading for adolescents and adults is perhaps the most thorough account of the relationships between first- and second-language oracy and new-language reading. The model posits that if students have a deficit in knowledge from any one information source, they will rely more heavily from other information sources. In Bernhardt's model, first-language oracy accounts for 20% of the variance in second-language reading and second-language grammatical knowledge accounts for 30% of the variance in second-language reading. The interactive compensatory model includes both bottom-up and top-down models of reading applied to second language learning. Not only do lower-level processes such as word recognition drive conceptual processing of texts, but conceptual processing also drives reading, with word-level features supporting understanding (Stanovich, 1980). Evidence supporting the interactive compensatory model indicates that readers who are not necessarily proficient at reading have

demonstrated that they can comprehend the text even when they have difficulty decoding the words and also that students have engaged in higher-level processing even when higher-level processing takes up more time than it would for word recognition.

Bernhardt's compensatory model is based on adolescent and adult ELLs and my study is based on young ELLs, so the model does not immediately seem applicable. However, there are no similar complete models of young ELLs' early reading development. It is possible that Bernhardt's model would apply to young children's early new language reading, since—just as it is for adolescent and adult ELLs—it is reasonable to predict that both first and second-language oral abilities would also have an influence on young ELL children's second-language reading proficiency. Alternately, given that young ELLs' first-language oral abilities may not be as well-developed as that of older ELLs, they may not contribute as much to the variance in second-language reading performance. Young ELLs read texts with many illustrations and repeated phrases and simpler syntax; in comparison, older ELLs read texts with more text and more complicated syntax. The different features of the texts may make different demands on students' knowledge of and proficiency in vocabulary and syntax.

Native Oral Language and New Language Word-Reading. Taken together, findings from studies that examined the concurrent correlation between native-oral language and English-as-a-second-language word-reading have consistently indicated that the native-oral language does not predict English-as-a-second-language word reading (Ahern, Dixon, Kimura, Okuna, & Gibson, 1980; Durgunoglu, Nagy, & Hancin-Bhatt, 1993; Da Fontura & Siegel, 1995; Abu-Rabia, 1997; Gottardo, Yan, Seigel, & Wade-Woolley, 2001; Quiroga, Lemos-ritten, Mostafapour, Abbott, & Berninger, 2002). Only one study found that there was

a low to moderate correlation between oral language in the native language and English-as-a-second-language word-reading skills (Gholamain & Geva, 1999).

New Oral Language and New Language Word-Reading. Taken together, findings from studies that examined the correlation between English-oral language and English word-reading for non-native-English speakers (ELLs) indicated that proficiency in English-oral language explained a significant but modest amount of variance in ELL students' English word-reading scores (Durgunoglu, Nagy, & Hancin-Bhatt, 1993; Da Fontoura & Siegel, 1995; Geva, Yaghoub-Zadeh, & Schuster, 2000; Arab-Moghaddam & Senechal, 2001; Gottardo, 2002; Quiroga, Lemos-Britten, Mostafapour, Abbott, & Berninger, 2002). Looking more closely at the studies, there were mixed findings for the three studies on Latino students. While one study found that English-oral proficiency was not a significant predictor of English word-reading, another study using the same measure for oral proficiency found that there was a moderate correlation, and the third found a small but significant correlation between oral proficiency and word-reading.

Summary. In sum, based on the limited studies reviewed, it can be inferred that oral-language proficiency in the native language as well as in English-as-a-second-language may play a role in word reading sub-skills in English for young ELLs.

Application to my Study

Studies of cross-language transfer of oracy that involve young children support the notion that part of Bernhardt's complete model of adolescent and adult reading development could apply to my study (Cardenas-Hagan, Carlson, & Pollard-Durodola, 2007; Durgunoglu, 2002). More specifically, Bernhardt's model and the studies that examined the relationship between oral-language and reading and the relationship between oral-language and word-

reading all suggest that oral-language, in both the native- and new-language, is important for word-reading and could be important for growth in instructional-reading level. Therefore, native- and new-oral-language should be taken into account in a study of young ELL reading growth. However, I had a limited sample size, and could not include many control variables. Although a native-Spanish oral measure was available, not all of the ELLs in the present study were native-Spanish speakers, so I could not control for native oral-language. In this study, I controlled solely for initial oral-English level.

Method

Design

The current study draws on an existing database for two cohorts of 42 students in two schools from 2001-2003. The design of the study was a two-year cohort-sequential design**.** Students who started the study as first graders were followed into second grade, and students who started the study as second graders were followed into third grade. Upon entry to school, school officials administered an Oral-English assessment, yielding an Initial Oral-English Ability score for each student. At the beginning of the study, students' Initial Word-Reading Ability was assessed. Finally, students were assessed on Instructional Reading Level at the beginning, middle, and end of each of the two years. Analysis was conducted using a hierarchical linear modeling method.

Schools and Participants

Schools. Students were from two high-poverty, low-performing schools in one state. The communities where both schools were located were urban. One community had just under 45,000 residents, while the other community had just over 540,000 residents. Local

economies also varied. Median income was about $35,000 for one school and $38,000 for the other.

School enrollments for the two schools were similar, around 600 students. The sample for one school appeared to be a little more diverse, with approximately 19% of the students identifying as Caucasian of European descent, 46% as African-American, and 32% as Latino, and the percentages for the other school were 2%, 76%, and 22% respectively. At the time of data collection, the population of English language learners at the two schools had recently experienced growth. Percentages of students who received free or reduced lunch were about the same for the two schools, 82% and 91%.

Participants. The students in the sample for the current study are ELLs. Forty-two ELLs started the study as first or second graders. Forty-one students attended one school, and one student attended a different school. Twenty-five students started the study as first graders and 17 students started the study as second graders. Twenty-one students were male, and the other 21 students were female. Thirty-four (81.0%) students were Latino; the ethnicities of the remaining 8 (19.0%) students were unspecified. Thirty-eight (90.5%) students qualified for free lunch, 2 (4.8%) students paid full price for lunch, and lunch-status was unspecified for the remaining 2 (4.8%) students. All participants in the study were enrolled in English immersion classrooms with pullout-English-as-a-second-language classes approximately two times a week for approximately 30 minutes each session.

Procedures

Data Sources. Two curriculum-aligned reading assessments and one standardized oral-English test were administered. The reading assessments were the *Oral Reading of Successively Difficult Passages* (Bader & Weisendanger, 1994; Barr, Blachowicz &

Wogman-Sadow, 1995; Clay, 1993) and the *Basic Sight Vocabulary* test (Barr et al., 1995). The Initial Oral-English test was the *IDEA Proficiency Test* (Dalton, Tighe, & Ballard, 1991). The content, criterion, and construct validity of the reading assessments have not been evaluated psychometrically, but they have face, ecological, curricular, and population validity since the assessments were similar to early reading assessments used in elementary classrooms and assessed similar reading sub-skills, they were aligned with curriculum objectives, and the sample is representative of the population of ELLs in the United States. In the ensuing "Variables" sub-section, I will first provide a more detailed description the data sources and then explain the variables (and associated reliabilities) created from them.

Variables. From the three data sources, two reading variables were created, Initial Word-Reading Ability and Instructional Reading Level, as well as an overall Oral-English variable.

Basic Sight Vocabulary Test and the Variable, Initial Word-Reading Ability. On the *Basic Sight Vocabulary* test (Barr et al., 1995), students were given progressively more difficult sight word lists to read out loud. However, if the student missed more than two words on a list, he or she was given a lower list to read. Students read to a criterion-correct level provided by the test authors. The raw score was the sum of the number of words read correctly and the number of words on easier lists that were not read. Raw scores could potentially range from 0 to 220 and were then converted to percent correct. The interrater reliability estimate for ratings within five percentage points was .93.

Oral Reading of Successively Difficult Passages (Clay, 1993; Bader & Weisendanger, 1994; Barr, Blachowicz, & Wogman-Sadow, 1995) *and the Variable, Instructional Reading Level*. Students read increasingly difficult passages out loud from the *Bader Reading and*

Language Inventory (Bader & Weisendanger, 1994) while miscues were recorded. The score was calculated based on the highest level of passage that the student read with at least 90% word-reading accuracy. For example, a score of 0 meant that the student was unable to pass the lowest level, and a score of 1 meant that the student was at approximately the end-of-first-grade level. The interrater reliability estimate was .86 for complete agreement and .95 within one level.

IDEA Proficiency Tests and the Variable, Initial Oral English. The oral language assessment, the *IDEA Proficiency Tests* (Dalton, Tighe, & Ballard, 1991), was administered upon entry to school. For the *IDEA Proficiency Tests* (Dalton, Tighe, & Ballard, 1991), students were given stimuli such as pictures and simple questions to answer. The possible range of scores was 1 (non-English speaker) to 6 (fluent). Test authors have found that the split-half and test-retest reliability estimates were .82 and .83, respectively.

Analysis

Analysis was two-level hierarchical linear modeling (HLM) with repeated measures (Instructional Reading Level) (Level 1) nested within students (Level 2). The dependent variable was Instructional Reading Level growth across six time points. The independent variable was Initial Word-Reading score. The control variable was Initial Oral-English Ability.

The analysis was a three-step procedure. First, I estimated an unconditional model, where repeated measures were included in Level 1 and the random intercept and slope were included at Level 2. The purpose of the unconditional model was to determine if initial word-reading levels and reading-growth rate varied among the students. Once I confirmed that there was student-level (Level 2) variance, I conducted a conditional model that included the

Level-2 control variable, Initial Oral-English Ability, to determine the amount of variance explained by that variable. Finally, I conducted the full conditional model that included the Level-2 predictor, Initial Word-Reading Status, and the Level-2 control variable, Initial Oral-English Ability. Both the predictor and control variables were grand mean centered for interpretation.

Results

Preliminary Analyses

Preliminary analyses suggested that, as shown in Table 1, at each of the six time points, there was an increase over previous time points in the average Instructional Reading Level. On average, students started at an Instructional Reading Level of .29, indicating that students had achieved the pre-primer level typically achieved around the beginning of first grade. The sample included students who started the study as first graders and those who started as second graders, so the average initial Instructional Reading Level was at approximately the expected Instructional Reading Level for the first graders and a lower average initial Instructional Reading Level for the second graders. Further examination of the data presented in Table 1 indicated that over the course of two years, the average Instructional Reading Level growth far exceeded two years. The average Instructional Reading Level at Time Point 6 was 5.18, which was approximately the expected Instructional Level for students at the beginning of sixth grade. A level of 5.18 is higher than what would be expected of students who are finishing up second and third grades. And this finding is especially impressive for ELL students.

The rate of mean growth of Instructional Reading Level across the two years was distinctive. The growth across Year 1 was gradual. Instructional Reading Level increased

from an average of .29 to 1.49. At the end of Year 1, on average, the Instructional Reading Level was just slightly lower than would be expected for monolingual children, taking into consideration their grade level. Since there were both first and second graders in the sample, I expected the average Instructional Reading Level to be around 1.5. It was interesting to note that it appeared that on average, students' Instructional Reading Level increased over the summer. And then during Year 2, Instructional Reading Level growth increased more rapidly than in Year 1, from an average of 1.81 to 5.18.

It should be noted that standard deviations at each time point increased, indicating a greater spread of students' scores, that while the averages at each time point increased, there were students whose scores were below and above the average. Or it could be because the N's decreased over time and there were outliers in the smaller sample.

Table 2 indicates the Initial Word-Reading and Initial Oral-English Ability scores. On average, at the start of the study, students only correctly read about 27% of the words on the Initial Word-Reading Ability measure. Students had an average score of 3.67 for Oral-English Ability. The possible range was 1 to 6, and the ELL's scores ranged from 1 to 6. Thus, some students in the study were non-English speakers and others were fluent English speakers, but on average, the students' Oral-English Ability was moderately low.

Table 3 shows the correlations between Initial Word-Reading, Initial Oral-English Ability, and the Instructional Reading Levels at all six time points. Initial Word-Reading and Initial Oral-English Ability have a moderate, positive correlation of .57. Initial Word-Reading and Instructional Reading Level were strongly correlated at the middle and end of Year 1. Though the correlations are still strong through Year 2, the strength of the relationship steadily decreased. This could be due to the type of texts the students were

reading at the later time points. Early in the study, knowing sight words may have been sufficient support for students reading simpler texts, but as the texts became more complex, knowing sight words may not have been enough; there could be other variables besides Initial Word-Reading that are impacting the Instructional Reading Level.

The pattern of correlations for Initial Oral-English Ability and Instructional Reading Level appears similar to the correlations for Initial Word-Reading and Instructional Reading Level. Again, the correlations at all time points were moderate, positive relationships, but they decreased over the two years. It could be implied that oracy plays less of a role in reading as students achieve higher Instructional Reading Levels, and other variables may be impacting the Instructional Reading Level.

Instructional Reading Level Growth

Results from the unconditional model imply that the individual mean Initial Word-Reading (intercept; chi square value = 126.36, $p < .001$) and growth (slope; chi square value = 12.73, $p = .006$) varied significantly among the students. Therefore, conditional models were run to explain the significant variance.

For the first conditional model, the outcome was Instructional Reading Level growth; the Level 2 control variable was Initial Oral-English Ability, with randomly varying intercept and slope. As shown in Table 4, Initial Oral-English Ability was not significantly related to students' initial Instructional Reading Level (intercept) or growth slope. The overall intercept was -.85, which was the predicted mean Instructional Reading Level score at the beginning of Year 1 for a student with average Initial Oral-English Ability, $t(40) = -4.13$, $p < .001$. The overall slope was 0.76, which was the predicted mean Instructional Reading Level growth slope for a student with average Initial Oral-English Ability, $t(40) = 6.42$, $p < .001$.

For the final conditional model, the outcome was Instructional Reading Level growth; the Level 2 predictor variable was Initial Word-Reading Ability, and the control variable was Oral-English Ability, with randomly varying intercepts and slopes for the predictor. As shown in Table 5, neither Initial Oral-English Ability nor Initial Word-Reading Ability significantly predicted Instructional Reading Level intercept. Initial Oral-English Ability was not significantly related to the Instructional Reading Level growth slope. The overall intercept was -0.79, which was the mean predicted Instructional Reading Level score at the beginning of Year 1 for a student with average Initial Oral-English Ability and an average Initial Word-Reading Ability, $t(39) = -3.52$, $p < .002$.

However, regarding the main research question of the study, Initial Word-Reading Ability was significantly related to Instructional Reading Level growth (slope). Essentially, this was a time by Initial Word-Reading interaction. The overall mean predicted Instructional Reading Level slope was 0.71. Students with higher Initial Word-Reading Ability, on average, made faster Instructional Reading Level growth. Specifically, for every one unit of change (increase of one percentile rank) in Initial Word-Reading, there was a .01 increase in Instructional Reading Level slope, $t(39) = 4.00$, $p < .001$. Based on the predicted values from the model in the analysis, the difference in Instructional Reading growth for students with varying Word-Reading Ability was sizable. For every increase of one percentile rank in Initial Word-Reading, there was a .01 increase in Instructional Reading Level slope, meaning that the higher the students' Initial Word-Reading score, the faster the Instructional Reading Level growth. If a student scored at the 50^{th} percentile, the overall slope was .71. If a student scored one percentile point higher (51%tile), the slope increased to.72.

To interpret the significant effect for the time by Initial Word-Reading Ability interaction, Figure 1 was created and shows the relationship between Instructional Reading Level growth and Initial Word-Reading Ability from the final HLM equation. Notably, using typical procedures for following up interactions from HLM, the figure represents the linear relationship from the final HLM equation, and the values along the lines are predicted (not actual) Instructional Reading Level scores based on the HLM equation. Time is plotted on the x-axis, and Instructional Reading Level is plotted on the y-axis. The three lines represent the predicted Instructional Reading Level trajectories of students who scored at the 25^{th}, 50^{th}, and 75^{th} percentile on Initial Word-Reading Ability. From the figure, it is evident that initially, word-reading scores are statistically insignificant with respect to the intercept, as all three initial time points are clustered around the intersection of the axes. However, at the initial time point, with each increase in word-reading ability, on average, students read at higher Instructional Reading Levels. But even so, there was not much spread between students who scored highest on Initial Word-Reading Ability and those who scored the lowest. However, the slope for the students who initially scored at the 75^{th} percentile is much steeper than the slope for the students who initially scored at the 50^{th} percentile, which is in turn steeper than the slope for the students who initially scored at the 25^{th} percentile. It is evident that the gap between the Instructional Reading Levels increases as a function of Initial Word-Reading.

Additional Analyses

Further analyses were conducted to examine whether students with the greatest amount of growth in Instructional Reading Level and those with the lowest amount of growth were characterized by differing demographics. First, I identified the top quintile of

students who made the most Instructional Reading Level growth over two years and the bottom quintile of students who made the least Instructional Reading Growth over two years. To do so, I calculated the mean amount of growth that students in each group made overall, at the beginning of Year 1, as well as at the end of Year 2. Next, I gathered all the existing demographic information, including grade, gender, age, ethnicity, number of prior years at the school, school attended, and socioeconomic status. There was not enough information on other variables such as country of birth, time in the United States, level of mother's education, and oral-Spanish ability (for the Latino students) to be able to make any conclusions. I also calculated the mean amount of growth in the first year and the second year separately for comparison across the two groups. Third, I examined the two groups of students on the variables to see if a pattern emerged. For example, I looked to see if students in the group who showed the least growth in Instructional Reading were younger than those who made the greatest Instructional Reading Growth.

Demographics of Students who made the Highest Amount of Progress on Instructional Reading Level and Students who made the Least Amount of Progress.

The two groups had similar profiles for all variables but one. The only distinguishing factor between the two groups was a difference in the initial grade at the start of the study. A majority of the students in the group that showed greatest increase in Instructional Reading Level were second graders, and a majority of the students in the group that showed the least amount of increase in Instructional Reading Level were first graders. In the following sections, I will explain the relevant details.

Table 6 shows the mean Initial Instructional Reading Level, mean End Instructional Reading Level, mean Increase in Instructional Reading Level across the two years, and the

mean increase in Instructional Reading Level for each of the two years for the students who made the highest and lowest amount of progress. Looking at Column 4, Mean Growth in IRL Overall, and comparing Rows 1 and 4, we see that the higher-performing students made 9.88 years of Instructional Reading Level progress, whereas the lower-performing students made about one-third-year of progress. It is evident that the highest-performing group became exceptional at recognizing words by the end of Year 2, with only a slight advantage over the lowest-performing group at the beginning of Year 1.

From Columns 5 and 6, it is apparent that the highest-performing group's initial slight advantage in sight-word recognition was related to an increase in Instructional Reading Level during both Year 1 and Year 2. While the lowest-performing group was sluggish in their increase in Instructional Reading Level through both Year 1 and Year 2, the highest-performing group experienced a strong spurt in Instructional Reading Level during Year 1 and an incredible spurt during Year 2. In fact, the students in the higher-performing group experienced mean growth in Instructional Reading Level of 10.50, over ten grade levels during Year 2, demonstrating an amazing ability to read words in context.

Overall, as seen in Table 6, the standard deviations for Instructional Reading Level for the lowest-performing students were more alike in the distribution of scores as compared to the highest-performing students, whose scores became more diverse over time. Though the range of scores for the highest-performing students became more spread out, all the students made striking progress.

As seen in Tables 6 and 7 (in the first column, see N's for the two grades), initial grade in school for these students was related to growth in Instructional Reading Level. Of the six students who made the highest amount of growth on Instructional Reading Level,

there were only two students who started the study as first graders, and the rest started out as second graders. In contrast, of the seven students who made the lowest amount of growth, only one was a second grader, and the rest were first graders.

Looking further at Column 4 in Table 6 for Overall IRL growth, in conjunction with the rows for grade-level breakout, although most of the students in the highest-performing group were initially in second grade, the Instructional Reading Level growth for students initially in first grade (11.0 years) did not differ very much from the growth for students initially in second grade (9.65 years), suggesting that growth rate for the higher performers was not clearly tied to grade level differences. Similarly, though most of the students in the lowest-performing group were initially in first grade, the Instructional Reading Level growth for students initially in second grade (.25) did not differ from the growth for students initially in first grade (.35). It appears that for the highest-performers, students who started in first grade actually showed more growth than students who started in second grade. But for the lowest-performers, the younger students had a very slight advantage.

On the other hand, gender, age, number of prior years at the school, school attended, and socioeconomic status were not related to amount of growth students experienced in Instructional Reading Level. As seen in Table 7, there were approximately the same number of females and males in both groups, students in both groups were about the same age, and all students whose ethnicity was reported were Latino. Additionally, students in both groups had been at the school for approximately the same amount of time and all but one student attended the same school. Students were at similar socioeconomic status.

There was insufficient information to determine if country of birth, amount of time spent in the United States, level of mother's education, and oral-Spanish ability was related

to the amount of Instructional Reading Level growth. Regarding country of birth, one student in each group was born in Germany, and the rest was unreported. Regarding amount of time spent in the United States, one student in each group had been in the United States for about a year, and data for the rest of the students were unreported. Only three students in each group had data reported for level of mother's education, but the average of the levels for both groups were about the same, that the mothers had completed some high school coursework. Only one student among the two groups had data for oral-Spanish ability, and data for the rest of the students were unreported.

Instructional Reading Level Growth Pattern for Students who made Higher Progress and those who made Lower Progress. As shown in Table 6, it is interesting to note that compared to the students who made the lowest amount of growth on Instructional Reading Level, students who made the highest amount of growth experienced rapid but steady growth in the first year and then a dramatic increase during the second year on Instructional Reading Level, contributing to the overall dramatic increase in mean Instructional Reading Level for all students and just the subset of students at the end of the study. A typical case in the group of highest-growth students started out with an Instructional Reading Level of 0.5, increased to a level of 2, 3, 4, 8, and finally 11.5 at the end of two years. A typical case in the group of lowest-growth students started with an Instructional Reading Level of 0 and stayed at 0 throughout Year 1 and finally increased to .25 at the end of Year 2. In general, students in the groups experienced the highest growth in Instructional Reading Level in the second year of the study.

Conclusions, Limitations, and Discussion

The main conclusion to be drawn from this study is that the Instructional Reading Level growth pattern was different for young ELLs who started the school year with different levels of Initial Word-Reading Ability. The higher the students' Initial Word-Reading Ability, the more rapid their Instructional Reading Level growth. On the other hand, the lower the students' Initial Word-Reading Ability, the slower their Instructional Reading Level growth. Thus, a slight advantage in Initial Word-Reading Ability gave a much greater advantage in Instructional Reading Level at the end of two years.

Limitations

There are a number of limitations of this study that must be acknowledged. One limitation of the study is that it only included measures on the students' oral-language proficiency in English. Only one of the Latino students in the sample was assessed on oral-language proficiency in Spanish, and thus, the data could not be used in the current study. Also, the study only used Instructional Reading Level as the dependent variable, and it would be helpful to examine students' growth on other measures such as oral reading fluency or comprehension. Additionally, Instructional Reading Level is not a standardized measure but rather a measure aligned with types of assessments used in the classroom and students' growth patterns may not look the same if different measures are used. Moreover, the Instructional Reading Level measure may not have been a sensitive measure for the very lowest-level readers or the highest. Typically, beginning readers learn to recognize letters and their sounds before recognizing words. However, the easiest passages on the Instructional Reading Level begin at the pre-primer level, which consists of whole words in sentences, so students in my study may have made progress and been able to recognize letters and their

sounds and some words but the Instructional Reading Level would not capture those other capabilities.

Support for Hypothesis

In spite of the limitations, the study provides modest support for the first hypothesis, that the reading development for young ELLs who scored higher on Initial Word-Reading Ability would demonstrate a similar reading trajectory that is shown in prior studies of higher-performing ELLs and native-English-speaking students, as did I. As Figure 1 shows, students who scored higher on Initial Word-Reading Ability experienced a similarly steep slope in Instructional Reading Level growth as did higher-performing ELL students in Kieffer's (2011) study over a two-year period. In the present study, at the end of a two-year period, ELLs who had the highest Initial Word-Reading Ability scores had approximately a two-year advantage in Instructional Reading Level over ELLs who had the lowest Initial Word-Reading Ability scores. Similarly, in Kieffer's study, the highest-performing ELLs and native-English-speaking students had a two-year advantage in reading achievement over the lowest-performing ELLs by third grade.

The second hypothesis was also supported. I hypothesized that the reading development for ELL students who scored lower on Initial Word-Reading Ability would demonstrate a similar reading trajectory as that shown by prior studies of lower-performing ELLs. As Figure 1 shows, there was a widening gap between ELLs who scored lowest on the Initial Word-Reading Ability measure and those who scored highest. Similarly, there was a widening gap between the highest-performing ELLs on reading achievement and the lowest-performing ELLs (Kieffer, 2011).

Discussion

It is important to mention the amount of growth the students made, on the whole. It was encouraging but surprising to see that on average, students made almost five years' progress in Instructional Reading Level over two years. A plausible explanation for the rapid progress in Instructional Reading Level is that Instructional Reading Level is a measure aligned with classroom-like means of assessment and not a standardized measure. As well, it is a measure where students read orally, so it does not tap into silent reading comprehension, where students might perform differently.

Students demonstrated an increase in Instructional Reading Level at each time point, and the rate increased during Year 2. Instructional Reading Level increased by almost one year in Year 1 and about three-and-a-half years during Year 2. Follow-up analyses suggested that a plausible explanation for the steep increase in overall mean Instructional Reading Level growth in Year 2 is that the rate of growth in Instructional Reading Level for students who had the highest amount of growth increased steeply and pulled up the overall mean.

Ehri's (1999) theory of word-reading development with monolingual children could possibly explain the different Instructional Reading Growth patterns. The theory posits that when students are learning to read, they progress through four stages, first developing phonological awareness and then grapheme awareness and morphological and orthographic word patterns and use of graphic and syntax cues, and after that, becoming fluent in reading words and internalizing strategies to figure out words. Native-English-speaking students go through the phases in a sequential manner, and the development of sub-skills build on each other. It is possible that it may take students some time to develop the sub-skills in the first two phases, but once they have mastered the sub-skills, reading progress takes off. Ehri's theory would support why there was evidence of an increase in the average Instructional

Reading Level for the ELLs in the first year of present study and also a steeper increase in the second year. It is possible that the ELLs were at different stages, where those who started out with the highest Initial Word-Reading Ability were in the third stage and developing fluency, while those who started out with the lowest Initial Word-Reading Ability were in the second phase and developing grapheme awareness, knowledge of morphological and orthographic word patterns, as well as use of graphic and syntax cues. Also, Ehri's theory would support why students who had the highest amount of growth in Instructional Reading Level increased by leaps and bounds over those who had the least amount of growth. Once students have developed grapheme awareness and knowledge of morphological and orthographic word patterns and gained proficiency in using graphic and syntax cues, they can more easily call upon the knowledge and build upon what they know, and so the students experience fast growth in Instructional Reading Level. On the other hand, the students who are not yet knowledgeable about graphemes, word patterns and graphic and syntax cues are not able to call upon the knowledge and experience slower growth in Instructional Reading Level.

Initial Oral-English had a strong relationship with Initial Word-Reading, a correlation of .57 and a moderate relationship with Instructional Reading Level at the beginning of Year 1, a correlation of .41. The correlations between Initial Oral-English and Instructional Reading Level increased throughout Year 1 and the beginning of Year 2 and then declined through the rest of Year 2. The finding that Initial Oral-English ability and Instructional Reading Level had moderate to strong positive correlations supports Teale and Sulzy's theory that oral language and literacy sub-skills develop in conjunction with each other and replicates some of the static moderately positive correlational findings of studies reported

(Abu-Rabia, 1997; Da Fontoura & Siegel, 1995; Arab-Moghaddam & Senechal, 2001; Gottardo, 2002; Quiroga et al., 2002).

Initial Word-Reading Ability was not significantly correlated with initial Instructional Reading Level. At the start of the study, the ELLs were clustered around the intersection of the axes perhaps because at the start of the school year many of the ELLs had just started learning English. The average Initial Word-Reading Ability score was only about 27% correct. Another possibility is that due to the small sample size, there was little variance in the scores for both variables, which limited the possibility of finding a significant correlation.

Similarly, Initial Oral-English Ability did not significantly predict initial Instructional Reading Level, again perhaps because many of the ELLs were just beginning to learn English. Also, it is possible that due to the small sample size, the variance in the scores for both variables was not large enough to find a significant correlation.

The finding in the present study contradicted previous research findings that Initial Oral-English Ability at school was related to rate of reading growth for ELLs as compared to their monolingual peers (Kieffer, 2008, 2011). In the previous studies, ELL students who were initially fluent in English experienced growth similar to that of native-English-speakers whilst the growth of ELL students who had limited proficiency in English had a different trajectory. In the present study, as shown in Table 5, Oral-English Ability was not statistically significantly related to Instructional Reading Level growth. Once again, the findings in my study may be due to the fact that many of the ELLs were beginning to learn English and overall, the Initial Oral-English Ability scores were low and that because of the small sample size, the scores were clustered closely together.

Implications for Instruction

The findings support the notion that students may need differing intensities of reading instruction depending on their Initial Word-Reading Ability and perhaps also instruction on different sub-skills of reading. Students who initially score lower on word-reading may benefit from additional reading support in word-reading in order to close the later widening gap between those who scored lower and those who scored higher. Perhaps if students are able to increase their proficiency in word-reading early on, they will be able to experience a steeper growth in Instructional Reading.

However, it is also important to keep in mind that the method of teaching word-reading may play a role in assisting students to increase their proficiency in word-reading. Rather than approaching word-reading instruction as an isolated lesson, drilling students on sight words with flashcards, teachers could incorporate word-learning into everyday, literacy-rich reading instruction (Dickinson & DiGisi, 1998). For example, teachers could select words from the dialogic reading texts that they are using during instruction and call attention to the words prior to reading the text, by writing them on the board, defining the words, and using them in a sentence. During the story, teachers could ask students to listen for the words and then point to the words in the story. After reading the story, teachers could post the words on word walls and ask students to use the words when writing and refer to the word walls for the correct spelling of the words. Moreover, since reading achievement builds on proficiencies in oral language and vocabulary meaning and oral language ability in preschool is a predictor of later reading achievement, it is important for preschool and elementary school teachers to incorporate oral language and vocabulary instruction into classroom conversations as well as into reading lessons.

Another factor to keep in mind is the home-school connection. The knowledge that students bring to school prior to formal schooling as well as the home-school connection have an impact on students' later reading achievement (Dickinson & Tabors, 2002; Dickinson & Porche, 2011). Thus, sending home books and other materials that were introduced in the classroom provide students with more word-recognition opportunities.

After examining the overall reading growth trajectories for ELLs in the sample and the trajectories of those who had the highest growth on Instructional Reading Level and those who had the lowest growth, an implication is that perhaps the Initial Word-Reading Ability should play a role in shaping teachers' expectations for the ELLs. Teachers' expectations should not be the same for all students. ELLs who score highest tend to have a rapid increase in Instructional Reading Level in Year 2, so teachers should be patient when instructing higher-achieving ELLs who are beginning to learn English. After all, the findings of the current study provided evidence that higher-achieving ELLs are able to improve in Instructional Reading Level faster than what is expected and attain an Instructional Reading Level above grade level, so they may just need some time to learn how to read in English.

However, ELLs who initially scored lowest on Initial Word-Reading tended to have a slow increase in Instructional Reading Level in Year 2. Dickinson and Tabors (2002) stressed the importance of early reading achievement on later reading achievement, so perhaps teachers should try to incorporate more literacy-rich word-reading instruction for the ELLs, which should benefit both lower-achieving and higher-achieving ELLs. The findings imply that teachers should be more attentive to the differences between higher and lower-achieving students so they can better adapt their instruction to fit the students' needs.

Another implication from the findings is that immersion in an English-immersion classroom could have had an impact on the rapid increase of students' Instructional Reading Level growth since students were required to learn and communicate in English.

Implications for Research

Regarding future research, inclusion of native-oral language measures would provide information about whether there is a relationship between students' oral ability in their native language and their reading development in English. It is important to examine native-oral language especially for young ELLs who may not yet be able to read in their native language.

More longitudinal studies need to be conducted on the reading-development trajectory for ELLs, especially studies that examine the reading trajectory for a greater length of time, beginning in preschool. Longitudinal studies could give a better picture of what ELL reading development looks like in the longer run and whether the difference in the trajectories of students who initially start out with lower word-reading scores and students with higher word-reading scores continues in the same way as it did over the course of two years. Longitudinal studies that begin before first grade and include vocabulary development and other literacy experiences during the early childhood period would give a better picture of the trajectories of early and subsequent reading abilities.

In future studies, it would be helpful to examine growth on other reading variables, in particular, oral reading fluency and reading comprehension, which could provide corroboration for students' reading growth. Oral reading fluency and comprehension measures would be indications of reading growth, providing information about whether students are reading fluently and whether students could understood the words that they are

reading, which becomes increasingly important as students read more difficult texts and move to higher grade levels.

Future studies should examine ELLs of different ethnicities. Whereas a majority of the students in the current study were Latinos, it would be beneficial to distinguish the reading trajectories for students of different ethnic, racial, or linguistic backgrounds. Similarly, future research should examine the reading development of students who are learning a second-language-other-than-English. Trajectories may look different for students who are learning languages that use different alphabets or are in foreign-language-learning settings, where the new language is treated as a subject to be learned during a specified period in the day.

Additionally, socio-economic status is a variable that could be examined as a possible moderator. It would be interesting to see whether socio-economic status moderates the reading trajectories of ELL students. Furthermore, future studies should be conducted on older ELL students since variables that may be important in second-language development for young ELLs may be different than the variables for older ELLs.

Table 1

Instructional Reading Level Means (Standard Deviations) across Beginning, Middle, and End of Years One and Two for Young English-Language Learners

Time																	
Beginning Year 1			Middle Year 1			End Year 1			Beginning Year 2			Middle Year 2			End Year 2		
M	SD	N	M	SD	N	M	SD	N	M	SD	N	M	SD	N	M	SD	N
.26	.75	41	.60	1.21	41	1.21	1.71	36	1.79	2.04	28	3.55	3.69	27	5.24	4.41	28

Note. An Instructional Reading Level score of "0" indicates that a student was unable to pass the lowest reading passage; a score of .50 indicates that the student achieved a primer level usually achieved around the middle of first grade; a score of "1.00" indicates that the student was at approximately the first grade level; etc.

The Ns varied across the time points because not all students in the sample had data on all the variables. HLM only requires data on each independent variable in the study, Initial Word-Reading Ability and Initial Oral-English Ability, to run the analyses, as it is able to estimate Instructional Reading Levels at the different time points if the data is missing.

Table 2

Initial Word-Reading Ability Means (Standard Deviations) and Oral-English Ability Means (Standard Deviations) for Young English-Language Learners

Variable	M (SD)	Actual Range
Initial Word-Reading Ability	20.25(30.44)	0-99
Initial Oral-English Ability	3.71(1.70)	1-6
	N = 42	

Note. Initial Word-Reading Ability scores were calculated using percentages correct. An Oral English score of "1" indicates that a student is a Non-English speaker; a score of "6" indicates a fluent English speaker.

Table 3

Correlations between Initial Word-Reading, Initial Oral-English, and Instructional Reading Level (IRL) at all Six Time Points

		Word-Reading	Initial Oral-English	IRL: Beg Year 1	IRL: Middle Year 1	IRL: End Year 1	IRL: Beg Year 2	IRL: Middle Year 2	IRL: End Year 2
Word-Reading	Correlation								
	Sig. < (2-tailed)								
	N								
Initial Oral-English	Correlation	.57**							
	Sig. < (2-tailed)	.00							
	N	42							
IRL: Beg Year 1	Correlation	.76**	.41**						
	Sig. < (2-tailed)	.00	.01						
	N	41	41						
IRL: Middle Year 1	Correlation	.92**	.55**	.75**					
	Sig. < (2-tailed)	.00	.00	.00					
	N	41	52	40					
IRL: End Year 1	Correlation	.91**	.56**	.66**	.89**				
	Sig. < (2-tailed)	.00	.00	.00	.00				
	N	36	44	36	42				
IRL: Beg Year 2	Correlation	.88**	.58**	.75**	.80**	.89**			
	Sig. < (2-tailed)	.00	.00	.00	.00	.00			
	N	24	29	24	27	28			
IRL: Middle Year 2	Correlation	.85**	.42*	.78**	.84**	.69**	.84**		
	Sig. < (2-tailed)	.00	.03	.00	.00	.00	.00		
	N	22	27	22	25	26	27		
IRL: End Year 2	Correlation	.71**	.29	.57**	.68**	.67**	.77**	.89**	
	Sig. < (2-tailed)	.00	.13	.00	.00	.00	.00	.00	
	N	24	28	24	27	27	28	26	

Note. ** = Correlation is significant at the 0.01 level (2-tailed); *=Correlation is significant at the 0.05 level (2-tailed).

Table 4

HLM Results for First Conditional Model

Intercept	Coefficient	Standard Error	t-ratio	df	p-value
Intercept	-0.85	0.21	-4.13	40	<0.001
Initial Oral-English	0.11	0.12	0.94	40	0.35
Growth Slope	**Coefficient**	**Standard Error**	**t-ratio**	**df**	**p-value**
Slope	0.76	0.12	6.42	40	<0.001
Initial Oral-English	0.11	0.07	1.71	40	0.096

Table 5

HLM Results for Full Conditional Model

Intercept	Coefficient	Standard Error	t-ratio	df	p-value
Intercept	-0.79	0.22	-3.52	39	0.001
Initial Oral-English	0.09	0.16	0.59	39	0.559
Initial Word-Reading	0.00	0.01	0.29	39	0.777
Growth Slope	**Coefficient**	**Standard Error**	**t-ratio**	**df**	**p-value**
Slope	0.71	0.19	7.16	39	<0.001
Initial Oral-English	-0.05	0.07	-0.74	39	0.462
Initial Word-Reading	0.01	0.00	4.00	39	<0.001

Table 6

Instructional Reading Levels (IRL) and Growth for Students who Made the Highest Amount of Progress on IRL and Students who Made the Lowest Amount of Progress on IRL

							Mean Growth in IRL			
	Beg Yr 1		End Yr 2		Overall		During Yr1		During Yr2	
	M(SD)N	range	M(SD)N	range	M(SD)N	range	M(SD)N	range	M(SD)N	range
Lowest Amount of Progress	0(0)7	0	.32(.31)7	0-1	.32(.31)7	0-1	.11(.20)7	0-.5	.29(.22)7	0-.75
1st-into-2nd(n=6)	0(0)5	0	.35(.38)5	0-1	.35(.38)5	0-1	.15(.22)5	0-.5	.30(.27)5	0-.75
2nd-into-3rd(n=1)	0(0)2	0	.25(0)2	.25	.25(0)2	.25	0(0)2	0	.25(0)2	.25
Highest Amount of Progress	.63(.70)6	0-.5	10.50(1.10)6	9.5-11.5	9.88(1.09)6	9-11.5	2.46(1.50)6	.5-4.5	6.92(2.33)6	4.5-11
1st-into-2nd(n=2)	.5(N/A)1	.5	11.5(N/A)1	11.5	11.0(N/A)1	11	2.5(N/A)1	2.5	7.5(N/A)1	7.5
2nd-into-3rd(n=4)	.65(.78)5	0-.5	10.30(1.09)5	9.5-11.5	9.65(1.05)5	9-11.5	2.45(1.68)5	.5-4.5	6.8(2.59)5	4.5-11

Note. An Instructional Reading Level score of "0" indicates that a student was unable to pass the lowest reading passage; a score of .50 indicates that the student achieved a primer level usually achieved around the middle of first grade; a score of "1.00" indicates that the student was at approximately the first grade level; etc.

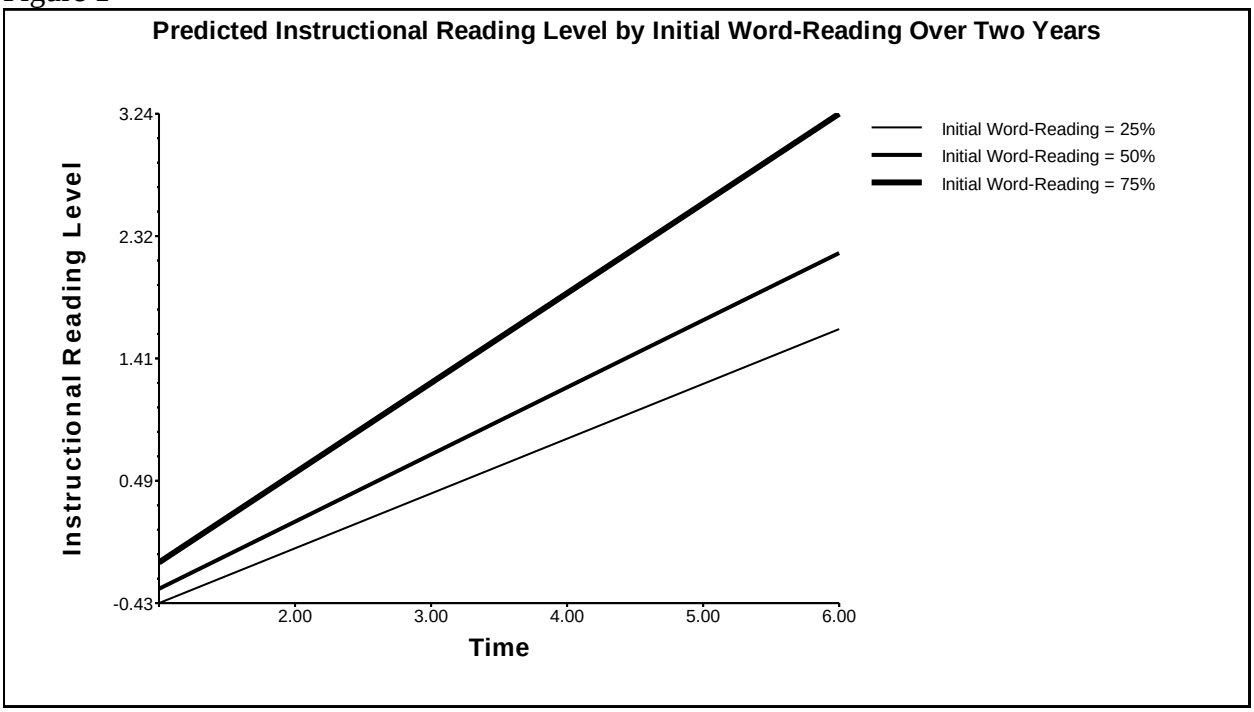
Table 7

Demographic Information for Students who Made the Highest Amount of Growth in Instructional Reading Level (IRL) and Students who Made the Lowest Amount of Growth in IRL

Growth in IRL	Gender		Age	Ethnicity		Yrs at the School		Free/Reduced Lunch		
	Male	Female		Latino	Unspecified			Free	Reduced	Full Price
	N(%)	N(%)	M(SD)N	N(%)	N(%)	M(SD)	range	N(%)	N(%)	N(%)
Lowest Growth Overall	4(57.1)	3(42.9)	7.42(.90)6	6(85.7)	1(14.3)	1.42(1.02)6	0-2.5	6(85.7)	0	1(14.3)
1st-into-2nd(n=6)	3(60)	2(40)	7.10(.89)4	5(100)	0	1.50(.82)4	.5-2.5	5(100)	0	0
2nd-into-3rd(n=1)	1(50)	1(50)	8.08(.59)2	1(50)	1(50)	1.25(1.77))2	0-2.5	1(50)	0	1(50)
Highest Growth Overall	3(50)	3(50)	7.55(.62)6	6(100)	0	1.58(.49)6	1-2.5	6(100)	0	0
1st-into-2nd(n=2)	1(100)	0	7.75(N/A)1	1(100)	0	1.5(N/A)1	1.5	1(100)	0	0
2nd-into-3rd(n=4)	2(40)	3(60)	7.51(.69)5	5(100)	0	1.6(.55)5	1-2.5	5(100)	0	0

Note. There was some missing data for students in the Lowest Growth group.

Figure 1


Predicted Instructional Reading Level by Initial Word-Reading Over Two Years
Instructional Reading Level
3.24
2.32
1.41
0.49
-0.43
2.00
3.00
4.00
5.00
6.00
Time
Initial Word-Reading = 25%
Initial Word-Reading = 50%
Initial Word-Reading = 75%

References

Abu-Rabia, S. (1997). Verbal and working-memory skills of bilingual Hebrew-English speaking children. *International Journal of Psycholinguistics, 13*(1), 25-40.

Ahern, E. H., Dixon, P.W., Kimura, T., Okuna, J.S., & Gibson, V.L. (1980). Phoneme use and the perception of meaning of written stimuli. *Psychologia: An International Journal of Psychology in the Orient, 23*(4), 206-218.

Arab-Moghaddam, N. & Sénéchal, M. (2001). Orthographic and phonological processing skills in reading and spelling in Persian/English bilinguals. *International Journal of Behavioural Development, 25(2),* 140-147.

Bernhardt, E.B. (2011). Understanding advanced second-language reading. New York, NY: Routledge.

Bernhardt, E. B., & Kamil, M. L. (1995). Interpreting relationships between LI and L2 reading: Consolidating the linguistic threshold and the linguistic interdependence hypotheses. *Applied Linguistics*, *16*, 15-34.

Burns, M.K. & Helman, L.A. (2009). Relationship between language skills and acquisition rate of sight words among English language learners. *Literacy Research and Instruction, 48,* 221-232.

Cardenas-Hagan, E., Carlson, C.D., & Pollard-Durodola, S.D. (2007). The cross-linguistic transfer of early literacy skills: The role of initial L1 and L2 skills and language of instruction. *Language, Speech, and Hearing Services in Schools, 38*(3), 249-259.

Chall, J. (1983). Stages of reading development. New York: McGrall-Hill.

Da Fontoura, H.A., & Siegel, L.S. (1995). Reading, syntactic, and working memory skills of bilingual Portuguese-English Canadian children. *Reading and Writing, 7*(1), 139-153.

Dickinson, D.K. & DiGisi, L.L. (1998). The many rewards of a literacy-rich classroom. *Educational Leadership, 55,* 23-26.

Dickinson, D. K. & Porche, M.V. (2011). Relation between language experiences in preschool classrooms and children's kindergarten and fourth-grade language and reading abilities. *Child Development, 82*(3), 870-886.

Dickinson, D.K. & Tabors, P.O. (2002). Fostering language and literacy in classrooms and homes. *Young Children,* 10-18.

Durgunoglu, A.Y. (2002). Cross-linguistic transfer in literacy development and implications for language learners. *Annals of Dyslexia, 52,* 189-204.

Durgunoglu, A.Y., Nagy, W.E., & Hancin-Bhatt, B.J. (1993). Cross-language transfer of phonological awareness. *Journal of Educational Psychology, 85*(3), 453-465.

Ehri, L. (1999). Phases of development in learning to read words. In J. Oakhill & R. Beard (Eds.), *Reading Development and the Teaching of Reading: A Psychological Perspective,* 79-108. Oxford, UK: Blackwell Publishers.

Fitzgerald, J., Amendum, S.J., Guthrie, K.M. (2008) Young Latino students' English-reading growth in all-English classrooms. *Journal of Literacy Research, 40,* 59-74.

Foster, W.A. & Miller, A. (2007). Development of the literacy achievement gap: A longitudinal study of kindergarten through third grade. *Language, Speech, and Hearing Services in Schools, 38*(3), 173-181.

Geva, E., Yaghoub-Zadeh, Z., & Schuster, B. (2000). Understanding individual differences in word recognition skills of ESL children. *Annals of Dyslexia, 50*(1), 121-154.

Gholamain, M., & Geva, E. (1999). Orthographic and cognitive factors in the concurrent development of basic reading skills in English and Persian. *Language Learning, 49*(2), 183-217.

Gottardo, A. (2002). The relationship between language and reading skills in bilingual Spanish-English speakers. *Topics in Language Disorders, 22*(5), 46-70.

Gottardo, A., Yan, B., Seigel, L.S., & Wade-Woolley, L. (2001). Factors related to English reading performance in children with Chinese as a first language: More evidence of cross-language transfer of phonological processing. *Journal of Educational Psychology, 93*(3), 530-542.

Kieffer, M.J. (2008). Catching up or falling behind? Initial English proficiency, concentrated poverty, and the reading growth of language minority learners in the United States. *Journal of Educational Psychology, 100*(4), 851-869.

Kieffer, M.J. (2011). Converging trajectories: Reading growth in language minority learners and their classmates, Kindergarten to grade 8. *American Educational Research Journal, 28*(5), 1187-1225.

LaBerge, D., & Samuels, J. (1974). Towards a theory of automatic information processing in reading. *Cognitive Psychology, 6,* 293-323.

National Assessment of Educational Progress (2011). *The Nation's Report Card.* Retrieved from http://nationsreportcard.gov/reading_2011/ reading_2011_tudareport/.

National Early Literacy Panel. (2009). Developing early literacy: Report of the National

Early Literacy Panel. Jessup, MD: National Institute for Literacy.

Pianta, R.C., Belsky, J., Vandergrift, N., Houts, R., & Morrison, F.J. (2008). Classroom effects on children's achievement trajectories in elementary school. *American Educational Research Journal, 45*(2), 365-397.

Quiroga, T., Lemos-Britten, Z., Mostafapour, E., Abbott, R.D., & Berninger, V.M. (2002). Phonological awareness and beginning reading in Spanish-speaking ESL first graders: Research into practice. *Journal of School Psychology, 40*(1), 85-111.

Snow, C. E., Burns, M. S., & Griffin, P. (1998). *Preventing reading difficulties in young children.* Washington, DC: National Academy Press.

Stanovich, K. E. (1980). Toward an interactive-compensatory model of individual differences in the development of reading fluency. *Reading Research Quarterly, 16,* 32-71.

Stanovich, K. E. (1986). Matthew effects in reading: Some consequences of individual differences in the acquisition of literacy. *Reading Research Quarterly, 21,* 360-407.

Teale, W. H. & Sulzby, E. (1986). Emergent literacy: Writing and reading. Norwood, New Jersey: Ablex.

U.S. Department of Education, Institute of Education Sciences (2011). *National Center for Education Statistics*. Retrieved from http://nces.ed.gov/.