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Educational Trajectories of Latino English Language Learner Students in Dual-Language Programs

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Abstract

The purpose of this research is to examine the language proficiency and reading achievement trajectories of 2201 fourth- through eighth-grade English Learner (EL) students who differed by English language proficiency and were enrolled in a dual language program. Results showed that: 1) students achieved average in Spanish reading achievement and at similar levels in English as their English mainstream EL peers; 2) students in the four English language proficiency groups varied significantly in all outcome measures in English and Spanish (FEP>Advanced>Intermediate>Beginner) by upper, but not K/1 entry, grades; and 3) examining students' trajectories shows the importance of Bilingual, not just English, proficiency at school entry and the impact of Spanish reading on English reading in grades 3 and 5-8.

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English language learners (ELs) are currently the fastest growing population in the U.S. (Clewell, Cosentino de Cohen, & Murray, 2007), with the number of ELs expected to increase another 50% by 2025 (Passel, 2007). Hispanic children represent the largest number of children who speak English with difficulty and are the fastest growing group. Nationally, the academic performance of EL and Hispanic students continues to be considerably below majority norms (e.g., Aud et al., 2011; California Department of Education, 2010; Fry, 2007; Genesee & Lindholm-Leary, 2011; Hemphill & Vanneman, 2010), and national studies of the Hispanic-White achievement gap shows that it remains unchanged after two decades (Aud et al., 2011; Hemphill & Vanneman, 2010). In addition, Olsen (2010) reports that half to three-quarters of secondary ELs are long-term ELs, despite being educated in English for 8+ years in US schools.

In general, most research on English language learners has been more narrowly focused on which educational programs and interventions best meet the needs of these students (Genesee, Lindholm-Leary, Saunders & Christian, 2006; Lindholm-Leary & Genesee 2010). More recently, this research has concentrated on dual language programs, which are designed to provide a high quality educational experience for EL students and to promote higher levels of academic achievement and English language proficiency (Genesee & Lindholm-Leary, 2013; Genesee, Lindholm-Leary, Saunders & Christian, 2006). While research on these programs shows that they can promote bilingualism, biliteracy and achievement in ELs, there has been insufficient analysis of distinct groups of EL participants (Genesee & Lindholm-Leary, 2012; Genesee, Lindholm-Leary, Saunders & Christian, 2006; Lindholm-Leary & Howard, 2008), despite the requirement to examine

subpopulations of students for the No Child Left Behind Act (No Child Left Behind [NCLB], 2002).

Research demonstrates that ELs may experience a number of risk factors that have been identified as negatively associated with educational success, such as poverty, home environments where parental literacy skills are limited, and learning disabilities (Abedi & Gándara, 2006; Aud et al, 2011; Genesee et al., 2010; Genesee, Lindholm-Leary, Saunders & Christian, 2006). In addition, they often experience segregated or isolated schooling experiences or schools with high percentages of ELs, minority populations, and poverty (Aud et al., 2011; Lindholm-Leary & Block, 2010), factors that are often associated with educational underachievement.

Yet, there is a dearth of research that provides an understanding of the diversity of Hispanic EL students, how they achieve, and what factors are associated with their educational success or failure. In one of the few studies that examined subgroups of Hispanic ELs, Lindholm-Leary and Hernández (2011) examined Hispanic students who differed in English language proficiency: native English speakers vs. Previous EL but current English proficient students vs. current ELs. They found that the three groups varied in parent education, language proficiency in Spanish, and achievement as measured in Spanish and English. They also found that Fluent English Proficient/Previous ELs were the most Spanish proficient and bilingual, achieved at higher levels in English and Spanish, and closed the achievement gap with native English speakers in English mainstream programs.

The overall purpose of this study was to expand on previous research to better understand the language and achievement trajectories across the grade levels for students

who entered school as EL and developed bilingual and biliteracy competencies in a dual language program. More specifically, this study examines the language proficiency and reading achievement outcomes of fourth- through eighth-grade Hispanic students who entered school as EL and were disaggregated according to current English language proficiency level. Research questions include: 1) Do grades 4-8 students who are currently English proficient vary at school entry (K/1) from students who have lower levels of English proficiency?; 2) Do English, Spanish and Bilingual proficiencies at school entry impact English language proficiency at third and fifth grades? 3) Does Spanish reading achievement (at third and fifth grades) have a significant effect on English reading achievement (at grades 3, and 5-8)?

Methods

Sample

The sample comprised 2201 4th- through 8th-grade students, who had been participating in a dual language program for at least the last four years. Half of the students were males (49%) and half were females (51%). Half (48%) of the students were in grades 4-5, and the remainder (52%) were in grades 6-8. All of the students were Hispanic, native Spanish speakers and had entered school as an English Language Learner (EL).

The great majority of students (89%) were low income, as measured by participation in the federal free/reduced price lunch program. In terms of parent education, about 42% of students had parents who had not completed high school, 28% of parents had a high school diploma, 17% had some college (including vocational training), 9% were college graduates, and 4% had completed graduate school or a professional degree. The parent education levels of these students was far lower than the state average for all

students and for the Early Childhood Educational Longitudinal Study (ECLS), which is a nationally representative sample of kindergarten students in the US (West, Denton, and Reaney 2001); for purposes here, we will only include the ECLS - Hispanic sample (Percentage of parents with high school or less was 70% for current sample, 45% for statewide sample, and 52% of ECLS-K Hispanic sample).

For the purposes of this study, students were classified into one of four groups on the basis of their proficiency in English for their most current grade level. English proficiency was determined by the California English Language Development Test (CELDT), which categorizes students into one of five proficiency groups (Beginning, Early Intermediate, Intermediate, Early Advanced, Advanced). In addition, EL students who have been evaluated as English proficient according to their scores on the CELDT are reclassified as Fluent English Proficient (FEP). Thus, the four groups of students are 1) BEG=Beginning/Early Intermediate (n=154, 7%); 2) INT=Intermediate (n=590, 27%); 3) ADV=Early Advanced/Advanced (n=513, 23%), and 4) FEP (n=944, 43%).

Background characteristics of the students in each of the four English language proficiency groups that might impact variations in English language proficiency scores are presented in Table 1; with the percentage of students in each English language proficiency group who were economically disadvantaged and whose parents had a high school or less education vs. college graduate. As this table shows, there were statistically significant relationships between English language proficiency group and both of the background factors, with BEG and INT students more likely to be economically disadvantaged, have parents with a high school diploma or less, and less likely to have a parent who was a college graduate than ADV or FEP. Thus, the students in these groups who all started as

Spanish-speaking EL students differed not only in their English language proficiency outcomes but also in their student background characteristics.

Insert Table 1 about here

Program

These students were currently enrolled in a dual language program at one of 23 public elementary or middle schools in 16 school districts in 10 counties located in California. These schools represented considerable diversity in that they included rural, urban and suburban schools and they included a fairly high percentage of economically disadvantaged students as measured by participation in the federal free/reduced price lunch program. Only one school had fewer than 20% low-income students, 14 schools had 40-65% low-income students, and eight schools had at least 70% low-income students.

Students had participated in one of two dual language models, 90:10 or 50:50, with Spanish as the target language. In the 90:10 program, instruction was in Spanish 90% of the time during Kindergarten and first grade, 80% of the time in second grade, 70% of the time in third grade, 60% of the time in fourth grade, and 50% afterward, with English instruction during the remainder of the time. Initial literacy instruction was in Spanish for all students; formal literacy instruction in English began in grade 2 or 3. Some students participated in a 50:50 dual language program in Spanish and English, in which students receive half of their instruction in each language across all grade levels and students learn to read first in their primary language and at about second grade, they add on formal reading in the second language. Students in the middle school received one or two courses

taught through Spanish, language arts and/or a content course for which they received regular course credit. About 78% of students had participated in a 90:10 program and 22% in a 50:50 program. Students were fairly equally distributed by grade level in 90:10 (47% grades 4-5) and 50:50 (53% grades 4-5) programs. However, students who participated in 50:50 programs were significantly more likely than students in 90:10 programs to attend a low-income school, with at least 70% low-income students (48% vs. 35%).

Students were included in the study only if they had been in the same DL program and had achievement data for at least the past four years. Students were not excluded from the study if they were identified for special education.

Measures

Student achievement was assessed by examining the scale scores on the English Language Arts subtest of the California Standards Test (CST), a criterion-referenced state assessment in English. The CST yields scale scores and five performance levels (Far Below Basic, Below Basic, Basic, Proficient - at grade level, Advanced).

Students were also administered the Aprenda, a norm-referenced standardized achievement test that assesses reading and other content area achievement in Spanish. This assessment provides Normal Curve Equivalent (NCE), along with other, scores.

Students' language proficiency in English was assessed using the California English Language Development Test (CELDT), which is a criterion-referenced test that was developed by the State of California to fulfill the legal requirements of initially and annually testing English learners. The CELDT covers four skill areas (listening, speaking, reading, writing) and provides five performance levels (Beginning, Early Intermediate,

Intermediate, Early Advanced, Advanced) and vertical scale scores. Test score data and background information were obtained from school personnel.

Language proficiency in Spanish was measured using the FLOSEM or LAS at the kindergarten or first grade level for entering students. Students who scored as fluent in either scale (FLOSEM=20+; LAS=level 4) were given a score of 2 and those who were not fluent received a score of 1. Bilingual language proficiency at kindergarten or first grade entry was designated as follows: 1) Low in both (Beginning or Early Intermediate on the CELDT and Spanish proficiency score of 1); 2) Low in Spanish, Moderate/High in English (CELDT levels = 3-5 and Score of 1 in Spanish); 3) Low in English, Moderate/High in Spanish (CELDT levels =1-2 and Score of 2 in Spanish); and 4) High in both (CELDT levels = 3-5 and Score of 2 in Spanish).

Results

English Language Proficiency

Students' proficiency in English was examined using the California English Language Development Test (CELDT). Table 2 presents the percentage of students at each level of the CELDT according to their current grade level. As Table 2 indicates, the percentage of students who were at different English proficiency levels varied by grade level. Thus, as students moved up the grade levels, more students were proficient in English. Across the grade levels there was a higher percentage of students who reached the Early Advanced or Advanced levels and were reclassified as FEP (from 42% in grade 4 to 84-86% in grades 7-8). By seventh and eighth grades, these students were as likely to be proficient in English as their peers in the state who were mostly enrolled in English mainstream programs (84-86% in current study vs. 81-84% state average).

Insert Table 2 about here

In addition, despite the fact that students in the 90:10 program received considerably less instruction through English over the years compared to their 50:50 peers, 90:10 students were as likely to be proficient in English (ADV or FEP) compared to students in the 50:50 program (66% vs. 68%), and 90:10 students were as likely to be *reclassified as FEP* compared to 50:50 students (42% vs. 45%).

However, Table 2 also indicates that a very small percentage of students were at the Beginning level (2% overall) or Early Intermediate (5% overall) levels, and these percentages also decreased across the grade levels (combining Beginning and Early Intermediate, from 13% in grades 4-5 to 2-4% in grades 7-8). Nonetheless, after five or more years of instruction, one might expect that no child would still be in the lowest two categories and that after 6-8 years of instruction, fewer children would still be at Intermediate. Thus, the next analyses explore language proficiency differences between students at the four English proficiency levels.

The next set of analyses examine whether students varied significantly in their English, Spanish, and Bilingual language proficiency scores at program entry (beginning of kindergarten or first grade). It is important to remember that all of these students were identified as English language learners at school entry (Spanish speakers with sufficient English proficiency at school entry are designated as Initially Fluent English Proficient and were not included in this study).

Table 3 presents the percentage of students at each Spanish, English and Bilingual proficiency level at program entry (Grade K or 1) for each of the language proficiency groups. As Table 3 shows, students currently at ADV and FEP English proficiency levels were significantly more likely to start school with higher levels of proficiency in Spanish, followed by INT, and lastly by BEG students (72-73% vs. 55% vs. 36%). In terms of English proficiency, Table 3 indicates that there were students who started kindergarten or first grade at the Beginning and Early Intermediate levels in each of the four proficiency groups, though it was clearly more likely for the BEG and INT groups to score at Beginner or Early Intermediate levels than the ADV or FEP groups (78% vs. 54% vs. 34-39%). Furthermore, a quarter of ADV and FEP students were Intermediate at kindergarten/first grade entry. Not surprisingly, there was a significant relationship between current level of English proficiency and level of English proficiency at kindergarten or first grade entry.

Finally, Table 3 also provides a glimpse of the significant relationship between level of bilingualism at school entry and current English proficiency group. As the table indicates, the BEG group was the most likely to be low in both languages, followed by the INT group. Also, FEPs were by far the most likely to be proficient (proficient in Spanish and at least intermediate in English) in both languages at school entry and least likely to be low in both. Finally, in looking at the two middle groups of Bilinguals, being high in English/low in Spanish does not appear to be more advantageous than high in Spanish/low in English for their current level of English proficiency; rather high Spanish is more likely to be associated with higher levels of English proficiency currently (30% of FEP and 35% of ADV were High Span/Low English vs. 17% of FEP and 26% of ADV were High English/Low Spanish at program entry).

Insert Table 3 about here

As the above analyses indicate, some ADV and FEP students were able to begin school at apparently similar English language levels (Beginning/Early Intermediate or Intermediate) as their peers who started at those levels but stayed at the BEG or INT levels. Thus, we turn to scale scores to determine whether students at the same CELDT level varied significantly at kinder/first entry and then later at third and then fifth grades (see Table 4). The first set of analyses examines whether the K/1 CELDT scale scores at the K/1 starting proficiency levels (Beg/Early Intermediate vs. Intermediate vs. Early Adv/Adv) varied at entry to kindergarten/first grade for students at the different English language proficiency levels. A 3 (K/1 levels) x 3 (language proficiency groups: INT, ADV, FEP) ANOVA at each of the three grade levels indicated that: 1) CELDT entry level is significant at all grades but diminishes in importance across the grades as seen in the partial eta squared (from .661 to .149 to .028); 2) language proficiency group is a significant main effect at all grades but increases in significance across the grades as shown in the change in partial eta squared (from .019 to .148 to .292); also in grades 3 and 5, FEP students score highest followed by ADV students and lastly by INT students. These findings would suggest that entering ELs in dual language programs can potentially begin even at lower levels of English proficiency in English and still achieve more advanced levels of English proficiency later on since their entry level no longer differentiates the groups by the third and fifth grade levels.

Insert Table 4 about here

Table 4 also shows the impact of entering bilingual proficiency on students' English proficiency scores at grades K/1, 3, and 5. As indicated previously, Bilingual proficiency was designated as Low (low in both languages), Medium Bil-E (Intermediate or higher in English and low in Spanish), Medium Bil-S (low in English and high in Spanish), and High (Intermediate or higher in English and high in Spanish). At each grade level, Bilingual level was a significant main effect, especially at school entry, though its influence diminished across the grade levels as indicated by decreasing partial eta squared (from .593 to .331 to .129).

Reading Achievement in Spanish

Finally, the above analyses were based on assessment measures in English that are correlated with the student language proficiency groups. Thus, because these students are native Spanish speakers and being instructed through Spanish for at least part of their instructional day, it is also important to examine whether these group differences are evident in analyses of reading achievement measured in Spanish. Students were assessed with the Aprenda, a norm-referenced achievement test, and the scores were normal curve equivalents (NCEs) with a mean of 50. Table 5 displays the mean NCE scores across the grade levels for each language proficiency group.

In examining reading achievement in Spanish, students achieved slightly above average across the grade levels (Mean NCE = from 58.9, Mean percentile = 65). Spanish reading achievement was analyzed to determine whether there was a significant difference

across the four proficiency groups. Results indicated that language proficiency group was a highly significant main effect at the most current grade level [$F(3,1188) = 86.8$, $p < .001$, partial eta^2 = .180, power = 1.0]. According to Scheffé post-hoc comparisons, each pair of language proficiency groups scored significantly different, except for ADV with INT [M for NCEs (percentiles) is as follows for FEP, ADV, INT, BEG: 66.0 (77) vs. 54.4 (57) vs. 50.0 (50) vs. 41.6 (34)]. Thus, these results also show that the most highly proficient English speakers score the highest in reading achievement in Spanish. In contrast, those students who have the lowest language proficiency in English have the lowest reading achievement as measured in their primary language of Spanish.

A one-way MANOVA that looked at Spanish reading achievement for third through sixth grades by language proficiency group revealed a significant multivariate main effect for language proficiency group, Wilks' $\lambda = .619$, F (8, 165) = 10.15, p <. 001, partial eta squared = .199, power = 1.0.

Insert Table 5 about here

Reading Achievement in English

Student reading achievement in English was examined using the California Standards Test (proficient = score of 350). Across all proficiency groups (n=2197), the overall mean (M=337) was higher than the state average for ELs (M=315), similar to the state average for EL and FEP students (M=339), though the state average included FEP students from all language and ethnic groups, many of whom had higher levels of education than the Hispanic parents here). Also, the overall mean was a little higher than

the average for Latino students (M=330) though many of the Latino students in the state average are native English speakers, but did not reach the mean for *all* students (M=360). However, FEP students (M=368) closed the achievement gap, scoring close to the average for English monolingual students (M=371).

As with the previous sets of analyses for language proficiency, English reading achievement was analyzed to determine whether there was a significant difference across the four proficiency groups. Results indicated that language proficiency group was a highly significant main effect at the most current grade level [$F(3,2193) = 430.70$, $p < .001$, partial eta^2 = .371, power = 1.0]. According to Scheffé post-hoc comparisons, FEPs outscored ADV who outscored INT who outscored BEG (M = 367.6 vs. 332.7 vs. 307.3 vs. 275.7).

A one-way MANOVA that examined student achievement for third through eighth grades (combining sixth, seventh, and eighth grades into one category) for language proficiency group revealed a significant multivariate main effect for language proficiency group, Wilks' $\lambda = .554$, F (12, 1979.76) = 22.47, p <. 001, partial eta squared = .178, power = 1.0. Table 6 provides the mean scale scores across the grade levels for each language proficiency group [Grade 3: $F(3,315) = 40.7$, $p < .001$, partial eta^2 = .279, power = 1.0; Grade 4: $F(3,315) = 71.9$, $p < .001$, partial eta^2 = .406, power = 1.0; Grade 5: $F(3,315) = 91.9$, $p < .001$, partial eta^2 = .467, power = 1.0; Grades 6-8: $F(3,315) = 65.6$, $p < .001$, partial eta^2 = .384, power = 1.0]. As we saw with language proficiency above, with each increasing grade level, the difference between groups increased. Thus, while Scheffé post-hoc comparisons yielded only differences favoring FEPs versus others in grade 2, by the

time the students were in the upper grades, most groups were significantly distinct from each other group in their English reading scores.

Because the MANOVA results were based on a much smaller sample, ANOVAs were conducted to determine whether scores from the larger cross-sectional sample varied from the MANOVA results. The only significant differences were at third and fourth grades for INT, ADV, and FEP students. At grades 5 and 6-8, there were no significant differences between the larger sample used for the cross-sectional analyses and the smaller sample utilized with the longitudinal analyses.

Insert Table 6 about here

The last set of analyses examined the impact of Spanish reading achievement at grade 3 on English reading achievement at grades 3 and 5, and then the impact of Spanish reading achievement at grade 5 on English reading achievement at grades 5 and 6-8 for the four English language proficiency groups. This is an important set of analyses given the theoretical assumptions in dual language programs that content learning in one language impacts content learning in the other language. Since all of the students in this sample learned to read first in Spanish and then in English, the analyses examine the impact of Spanish reading on English reading outcomes. Spanish reading achievement included both the Standards Test in Spanish (STS) and the Aprenda and was coded as follows: 1) Low (STS scores of 1-2; Aprenda NCE of 1-55); 2) Mid (STS score of 3; Aprenda NCE of 56-67); and 3) High (STS scores of 4-5; Aprenda NCE of 68-99).

Table 7 presents the means (and standard deviations) for English reading at grades 3 and 5 according to the Spanish reading achievement levels at grade 3 (Low, Mid, High; Low deleted for two-way ANOVA since there were few students at Low) and a simple one-way ANOVA for Spanish reading at the bottom of the table. Table 8 displays similar data, except for examining English reading at grades 5 and 6-8 according to reading achievement at grade 5. The results are similar for both tables. That is, language proficiency group and Spanish reading achievement level were highly significant main effects, with no significant interaction. Scheffé post-hoc comparisons indicated that FEP and ADV scored significantly higher than INT and BEG, and that students who scored HIGH in Spanish reading scored higher than those who scored MID in Spanish reading. In the one-way ANOVA, analyses showed that students HIGH in Spanish reading scored significantly higher than those at MID levels who scored higher than those at LOW Spanish reading levels. Thus, Spanish reading level has a significant impact on English reading level overall and for each English language proficiency group.

Insert Tables 7-8 about here

Discussion

The current results show that the EL students who have participated in a dual language program overall make excellent gains over time and that the great majority of students are proficient in English, approach grade level scores in English reading, and achieve slightly above grade level in Spanish reading by the end of elementary school. Also by the end of elementary school, the dual language students are as likely to be

proficient in English as their EL peers in the state, and to achieve at similar levels as their Hispanic peers in English reading. These results are consistent with other studies of dual language programs showing that ELs achieve comparably to their peers in English mainstream programs while also achieving at grade level in Spanish reading (for reviews, see Genesee et al, 2006; Lindholm-Leary, 2016; Lindholm-Leary & Genesee, 2010; Lindholm-Leary & Hernández, 2011; Lindholm-Leary & Howard, 2008).

Furthermore, students in the 90:10 program were as likely to be proficient in English as students in the 50:50 dual language program, who were as likely to be proficient as EL peers in English mainstream instruction (state average). These are important findings since they demonstrate that the students are not disadvantaged by having spent a considerable amount (at least half) of their instructional day in Spanish. Thus, the results show that the amount of instructional time in English is not associated with the level of English proficiency; that is, students who received all or most of their instruction through English (mainstream EL peers in the state) were not more likely to be proficient in English compared to those who received half their day in Spanish (50:50 model) or those who received from 10-40% of their day in English (90:10 model) at early grade levels. Again, this finding corroborates previous reviews of research showing that greater amounts of instruction through English are not necessarily associated with higher levels of proficiency in English or higher reading achievement in English (for reviews, see Lindholm-Leary, 2016; Lindholm-Leary & Borsato, 2006; Lindholm-Leary & Genesee, 2010).

The major contribution of this article, though, was in demonstrating the variability within the sample of Spanish-speaking students who began school as ELs, and who are normally addressed as a homogeneous group within the research literature and often within

the classroom. However, by investigating the current English language proficiency of the fourth through eighth graders and examining whether there were differences in the students' background characteristics and also looking back at their progression from program entry in kindergarten or first grade, we are able to address some important issues about this disaggregated group of students.

The fourth- through eighth-grade students were categorized into one of four language proficiency categories based on their current English language proficiency score (Beginner/Early Intermediate, Intermediate, Early Advanced/Advanced, or reclassified as Fluent English Proficient – FEP). Results showed that in each of the three outcome measures (English language proficiency, English reading achievement, Spanish reading achievement), language proficiency group had a significant impact on the outcome measure, with FEP students outscoring Early Advanced/Advanced, who outscored Intermediate, who outscored Beginner/Early Intermediate students. However, the students did not only differ significantly in these outcome measures, but they also varied significantly in their background characteristics. That is, Beginner/Early Intermediate students were most likely to be economically disadvantaged, to have parents who had a high school diploma or less, to have special education services and least likely to have a parent who was a college graduate. In addition, students within each increasing proficiency level had greater economic and parent education advantages and less likelihood of being identified for special education. These outcome and student background differences suggest that these students are not at all homogeneous, but are quite distinct, though they started school as primarily economically disadvantaged Spanish-speaking ELs.

To better understand these students, we looked at scores at or near program entry in

kindergarten or first grade. While there was clearly a range of scores from lower to higher in each of the four proficiency groups at program entry (e.g., 16% of FEP and 24% of Early Advanced/Advanced students began kindergarten at the Beginning level in English language proficiency), overall the starting scale score varied significantly by language proficiency group. The FEP students tended to score much higher, and the Beginner/Early Intermediate much lower, than the other groups, and that was just as true for reading achievement in English and Spanish. Furthermore, while one might expect that the Beginner/Early Intermediate group scored lower in English but was stronger in Spanish, and that the FEP group was the strongest in English but weaker in Spanish, that was not the case. In fact, the highest achievers in English were also the highest achievers in Spanish, and the lowest achievers in Spanish were the lowest achievers in English. Thus, these findings again lend credence to the research showing the strong relationship in reading achievement across the two languages for students instructed through both languages (August & Shanahan, 2010; Genesee & Geva, 2006; Lindholm-Leary & Genesee, 2010). In addition, the significantly greater performance in English language proficiency, English reading, and Spanish reading of the most bilingual subgroup (FEPs) demonstrates the importance of providing language arts instruction through both languages.

The findings from this study also suggest that students need to be identified earlier for interventions in language and literacy development. While these research findings do not point to the content of such interventions, they do suggest that some students, like the Beginner/Early Intermediate students, begin at much lower levels in language development and may need some intervention at kindergarten or first grade, or even earlier in preschool. This suggestion is strengthened by the findings here that the kindergarten scores were not

as divergent as the third grade scores. In addition, we saw that some students who developed into Early Advanced/Advanced or FEP students had started school with English language proficiency scores at the Beginning, Early Intermediate, or Intermediate level and were able to make exceptional gains across the grades. Thus, one might expect that interventions aimed at improving oral and academic language development at the kindergarten and first grade levels might improve the trajectories of these students at later grade levels.

Also, it is important to point out that these data were examined with respect to English language proficiency, but that does not mean that interventions must be conducted in English. In fact, given the strong outcomes of the Early Advanced/Advanced and FEP students, who had the strongest Spanish reading achievement, one could argue that the interventions should be provided in the students' primary language. In addition, other research has shown that the FEP students tend to have not only the strongest reading scores but also the strongest Spanish oral language proficiency and bilingual proficiency (Lindholm-Leary & Hernández, 2011; Lindholm-Leary & Howard, 2008). Thus, in a dual language program where the students are instructed through two languages, one could argue that such interventions might be most effective in the student's primary language. Corroboration for this suggestion comes from researchers who have examined biliteracy and reported that language and literacy skills in the primary language play an important role in the second language (e.g., August & Shanahan, 2010; Genesee & Riches, 2006; Proctor et al. 2005, 2006). Furthermore, armed with research on the skills that appear to transfer from one language to another and on instructional approaches or strategies that may be most beneficial for promoting language and literacy in a second language (e.g.,

August & Shanahan, 2010; Genesee & Riches, 2006; Saunders & Goldenberg, 2010), interventions could be highly productive in the student's primary language.

In conclusion, this research is important in that it provides descriptive information about Spanish-speaking EL students' trajectories across the grade levels in English language proficiency, and English and Spanish reading achievement. However, there are limitations to this research as well. First, despite the fairly large sample of students, there was not always full longitudinal outcome or background data on many students. As a consequence, the sample sizes were limited for some of the analyses that examined outcomes back to kindergarten or first grade. Second, we had to rely on language proficiency in a second language to classify the students rather than using language proficiency in their primary language. There was simply not sufficient or reliable data on students' Spanish language development to use their primary language as the means to categorize them. One could argue that English language proficiency turned out to be a good variable to use for classifying the students since they needed to develop English proficiency, but perhaps further research could address this issue in more detail. Finally, there was no adequate comparison sample of Spanish-speaking students in mainstream English instruction. Instead, we had to rely on the statewide average of Hispanic students, which included both native English speakers and EL students of all SES levels. Also, it would have been helpful to examine a comparison sample of FEP students in English mainstream programs, but the statewide data of FEP students included all ethnic and SES groups, which rendered that group untenable. It is hoped that this research provides some impetus to better understand the heterogeneous groups of EL students who enter our schools.

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Table 1.
Background characteristics of students in each English language proficiency group

	% Econ* Disadvan	%Par Ed** HS or less	College Grad
BEG	94%	78%	6%
INT	94%	80%	7%
ADV	90%	72%	12%
FEP	84%	62%	17%

* (χ^2 (1180) = 22.7, $p < .001$; **(χ^2(1337) = 42.0, $p < .001$

Table 2.
Level of Language Proficiency in English by Grade Level

	Grade 4 n=1196	5 n=788	6 n=478	7 n=243	8 n=112	Total n=2201
RFEP*	101 (19%)	201 (39%)	191 (43%)	219 (61%)	232 (68%)	944 (43%)
Advanced*	19 (4%)	10 (2%)	17 (4%)	18 (5%)	9 (3%)	73 (3%)
Early Advanced*	101 (19%)	112 (22%)	99 (22%)	65 (18%)	51 (15%)	428 (19%)
Intermediate	251 (46%)	163 (31%)	103 (23%)	42 (12%)	41 (12%)	600 (27%)
Early Intermediate	50 (9%)	24 (5%)	22 (5%)	10 (3%)	5 (2%)	111 (5%)
Beginning	20 (4%)	10 (2%)	9 (2%)	5 (1%)	1 (0%)	45 (2%)
English Proficient*	221 (42%)	323 (63%)	307 (69%)	302 (84%)	304 (86%)	1510 (65%)

Table 3.
Comparing Spanish, English, and Bilingual language proficiency outcomes of students in each English language proficiency group at beginning of school entry - kindergarten or first grade (n=311, 574, 234)

	BEG Begin/Early Intermediate	INT Intermediate	ADV Early Adv/ Advanced	FEP
SPANISH*				
Low Proficiency	**64%**	**45%**	28%	27%
High Proficiency	36%	**55%**	**72%**	**73%**
ENGLISH**				
Beg/Early Int	**78%**	**54%**	**39%**	**34%**
Intermediate	18%	**30%**	**28%**	**25%**
Early Adv/Adv	4%	16%	**33%**	**41%**
BILINGUAL***				
Low in Both	**75%**	**40%**	23%	15%
Low Span, Hi Eng		21%	26%	17%
Low Eng, Hi Span	25%	27%	**35%**	**30%**
High in Both		11%	16%	**39%**

* χ^2 (3, 311) = 14.9, $p < .01$; ** χ^2 (3, 574) = 55.8, $p < .001$; χ^2 (9, 234) = 43.5, $p < .001$

Table 4.
English Language Proficiency Outcomes at Grades K/1, 3, and 5 for students in each English language proficiency group for Level of English or Bilingual Proficiency at K/1st

	Kinder/First*	3rd Grade**	5th Grade***
ENGLISH PROFICIENCY LEVEL			
Beg/Early Int Level x Group	310.03 (80.9)	453.4 (46.5)	535.5 (35.2)
BEG (n=36, 38, 13)	307.2 (70.3)	407.2 (39.7)	458.6 (40.5)
INT (n=78, 78, 39)	308.2 (85.6)	436.4 (40.8)	505.6 (28.2)
ADV (n=47, 51, 33)	284.0 (80.8)	458.1 (53.8)	539.1 (34.6)
FEP (n=78, 81, 54)	327.5 (74.4)	466.9 (41.9)	554.9 (23.9)
Intermediate Level x Group	434.2 (19.1)	486.5 (38.7)	542.5 (32.9)
BEG (n=7, 9, 5)	---	431.4 (26.4)	---
INT (n=36, 38, 13)	427.8 (19.5)	464.4 (34.9)	511.1 (17.9)
ADV (n=36, 38, 13)	434.7 (18.0)	487.3 (37.6)	537.3 (26.8)
FEP (n=36, 38, 13)	438.4 (18.5)	502.9 (33.9)	571.2 (21.1)
Early Adv/Adv Level x Group	494.0 (27.1)	502.0 (42.1)	549.3 (34.5)
BEG (n=2, 2, 1)	---	---	---
INT (n=23, 24, 13)	485.5 (24.9)	463.6 (36.9)	519.9 (15.3)
ADV (n=42, 43, 30)	493.3 (23.3)	491.2 (31.6)	555.5 (25.8)
FEP (n=98, 74, 22)	496.3 (28.9)	520.7 (38.5)	558.1 (43.6)
BILINGUAL LEVEL			
Low Bilingual (Low in both)	316.8 (78.5)	458.3 (46.5)	528.8 (37.9)
Medium Bil-E (Eng high, Span low)	457.9 (43.9)	506.9 (29.7)	543.7 (29.9)
Medium Bil-S (Span high, Eng low)	296.9 (77.7)	446.6 (49.5)	529.9 (36.7)
High Bilingual (High in both)	464.1 (40.2)	515.7 (38.6)	573.7 (50.8)

*K/1: CELDT level at K/1 main effect: $F(2, 496) = 482.76$, $p < .001$, partial $eta^2 = .661$, power = 1.0; Language proficiency group Main Effect: $F(2, 496) = 4.77$, $p < .01$; partial $eta^2 = .019$, power =.793;. FEP > Int Interaction: $F(4, 496) = 2.69$, $p < .01$.

** Grade 3: CELDT level at 3rd main effect: $F(2, 480) = 42.02$, $p < .001$, partial $eta^2 = .149$, power = 1.0; Language proficiency group Main Effect: $F(2, 480) = 41.8$, $p < .001$; partial $eta^2 = .148$, power = 1.0; FEP > ADV > INT. Interaction not significant.

***Grade 5: CELDT level at 5th main effect: $F(2,237) = 3.37$, partial $eta^2 = .028$, power = .632; Language proficiency group Main Effect: $F(2, 237) = 48.82$, $p < .001$; partial $eta^2 = .292$, power = 1.0; FEP > ADV > INT. Interaction not significant.

Bilingual Proficiency Level:

* $F(3, 230) = 111.78$, $p < .001$; partial $eta^2 = .593$, power =1.0; High, Med Bil-E > Med Bil-S, Low

** $F(3, 220) = 36.29$, $p < .001$; partial $eta^2 = .331$, power = 1.0; High > Med Bil-S, Low; Med Bil-E > Med Bil-S

*** $F(3, 89) = 4.39$, $p < .01$; partial $eta^2 = .129$, power =.860; High > Med Bil-S, Low

Table 5.
MANOVA - Mean NCE (Percentile) Spanish Reading NCE Scores by Language Proficiency Level

	3	4	5	6
BEG				
Cross-Sectional (n=42, 46, 29, 10)	49.8 (48)	40.6 (32)	43.7 (37)	39.2 (30)
INT				
Longitudinal (n=29)	58.1 (64)	54.6 (58)	54.1 (57)	49.1 (48)
Cross-Sectional (n=118, 177, 115, 55)	59.2 (66)	52.9 (54)	50.5 (50)	46.9 (48)
ADV				
Longitudinal (n=44)	65.5 (76)	55.6 (60)	59.5 (67)	59.1 (66)
Cross-Sectional (n=129, 158, 133, 102)	65.1 (76)	58.7 (65)	55.9 (60)	47.6 (45)
FEP				
Longitudinal (n=95)	75.7 (88)	71.6 (84)	72.3 (85)	73.6 (86)
Cross-Sectional (n=221, 321, 344, 290)	74.8 (87)	69.1 (81)	68.8 (80)	66.9 (78)

Table 6.
Mean (SD) English Reading/Language Arts Scale Scores by English Language Proficiency Level

MANOVA Longitudinal ANOVA Cross-Sectional	Grade 3	 4	 5	 6/7/8
BEG				
Cross-Sectional (n=84, 81, 43, 19)	252.3 (30.4)	285.4 (35.8)	283.5 (45.1)	280.8 (40.6)
INT				
Longitudinal (n=50)	258.5 (22.7)	294.8 (24.8)	296.3 (24.8)	306.4 (31.5)
Cross-Sectional (n=299, 332, 187, 87)	271.1* (32.6)	305.4 (41.2)	300.6 (36.1)	300.1 (32.3)
ADV				
Longitudinal (n=110)	276.3 (32.3)	308.0 (30.7)	306.9 (30.8)	322.7 (36.3)
Cross-Sectional (n=278, 322, 243, 171)	294.2** (37.6)	322.0** (40.2)	314.8 (37.4)	320.7 (35.1)
FEP				
Longitudinal (n=247)	316.1 (42.6)	355.1 (39.4)	357.9 (38.2)	365.0 (39.6)
Cross-Sectional (n=454, 613, 542, 491)	327.3** (43.7)	361.9* (41.3)	362.2 (39.1)	362.8 (40.6)
State Average for all students*	345.7	374.2	365.2	363
State Average for Hispanics*	327.3	365.5	349.0	345
State Average for EL/FEP**	324.9	355.0	348.3	344.3
State Average for EL	307.4	327.5	314.6	301.9

Includes native English speakers;
** includes non-Hispanic and economically advantaged FEPs

Table 7.

English Reading Achievement At Grades 3 and 5 According to Spanish Reading at Grade 3 by English Language Proficiency Group

Current Group	**Spanish Reading Achievement** At **Grade 3**	**English Read Grade 3** Mean (SD)	**English Read Grade 5** Mean (SD)
BEG		**267.8 (31.8)**	**290.9 (56.8)**
	Span Read Mid (n=26, 7)	267.2 (31.2)	---
	Span Read High (n=11, 6)	269.1 (34.8)	---
INT		**279.2 (32.7)**	**341.8 (44.9)**
	Span Read Mid (n=82, 21)	271.7 (32.9)	301.5 (34.8)
	Span Read High (n=80, 26)	286.9 (30.9)	357.9 (37.9)
ADV		**301.4 (35.1)**	**341.8 (44.9)**
	Span Read Mid (n=68, 38)	281.7 (28.7)	301.5 (34.8)
	Span Read High (n=99, 45)	314.9 (32.7)	357.9 (37.9)
FEP		**335.6 (43.2)**	**341.8 (44.9)**
	Span Read Mid (n=51, 41)	309.2 (38.5)	301.5 (34.8)
	Span Read High (n=238, 173)	341.2 (42.1)	357.9 (37.9)
ALL		**301.8 (47.3)**	**339.8 (47.1)**
	Span Read Low (n=110, 53)	258.2 (29.3)	313.1 (52.2)
	Span Read Medium (n=227, 107)	282.6 (36.0)	318.7 (43.4)
	Span Read High (n=428, 250)	323.1 (44.2)	354.6 (41.5)

English Reading Grade 3 for current group and Spanish reading level: $F(7, 356) = 34.8$, $p < .001$; partial $eta^2 = .411$, power = 1.0; Interaction not significant.

Current Group Main Effect: $F(3, 356) = 46.1$, $p < .001$; partial $eta^2 = .284$, power = 1.0; FEP and ADV > all other groups.

Spanish Reading Level Main Effect: $F(1, 356) = 7.7$, $p < .01$; partial $eta^2 = .022$, power = 0.792; High > Mid.

English Reading Grade 3 for Spanish reading level:

Spanish Reading Level Main Effect: $F(2, 762) = 152.10$, $p < .001$; partial $eta^2 = .285$, power = 1.0; High > Mid > Low.

English Reading Grade 5: $F(7, 654) = 56.1$, $p < .001$; partial $eta^2 = .378$, power = 1.0; Interaction not significant.

Current Group Main Effect: $F(3, 654) = 52.5$, $p < .001$; partial $eta^2 = .196$, power = 1.0; FEP and ADV > all other groups.

Spanish Reading Level Main Effect: $F(1, 654) = 25.3$, $p < .001$; partial $eta^2 = .038$, power = 0.999; High > Medium.

English Reading Grade 5 for Spanish reading level:

Spanish Reading Level Main Effect: $F(2, 407) = 37.01$, $p < .001$; partial $eta^2 = .154$, power = 1.0; High > Mid, Low.

Table 8.
English Reading Achievement At Grades 5 and 6/7/8 According to Spanish Reading at Grade 5 by English Language Proficiency Group

Current Group	**Spanish Reading Achievement** At **Grade 5**	**English Read Grade 5** Mean (SD)	**English Read Grades 6-8** Mean (SD)
BEG		**288.0 (48.5)**	---
	Span Read Low (n=20, --)	281.0 (47.9)	---
	Span Read Medium (n=8, --)	303.5 (34.8)	---
INT		**303.9 (37.1)**	**302.8 (34.5)**
	Span Read Low (n=63, 21)	282.1 (31.5)	284.0 (30.9)
	Span Read Medium (n=56, 18)	317.1 (35.9)	315.0 (33.6)
	Span Read High (n=29, 10)	325.7 (24.2)	320.3 (24.9)
ADV		**319.2 (37.7)**	**329.7 (35.0)**
	Span Read Low (n=36, 27)	297.3 (46.6)	305.6 (24.4)
	Span Read Medium (n=68, 39)	316.5 (31.2)	330.3 (32.3)
	Span Read High (n=58, 28)	335.9 (30.7)	352.1 (33.0)
FEP		**366.9 (36.6)**	**367.6 (35.7)**
	Span Read Low (n=26, 11)	328.9 (39.7)	312.4 (31.1)
	Span Read Medium (n=103, 59)	349.0 (29.1)	351.0 (35.9)
	Span Read High (n=242, 172)	378.6 (33.2)	376.8 (30.0)
ALL		**339.3 (36.4)**	**348.8 (43.6)**
	Span Read Low (n=145, 63)	294.1 (42.9)	297.6 (32.0)
	Span Read Medium (n=235, 119)	330.4 (36.4)	337.8 (37.5)
	Span Read High (n=335, 212)	365.1 (39.2)	370.2 (33.8)

English Reading Grade 5: $F(11, 703) = 64.6$, $p < .001$; partial $eta^2 = .503$, power = 1.0; No significant interaction.
Current Group Main Effect: $F(3, 703) = 58.9$, $p < .001$; partial $eta^2 = .201$, power = 1.0; FEP > ADV > INT > BEG.
Spanish Reading Level Main Effect: $F(2, 703) = 27.9$, $p < .001$; partial $eta^2 = .074$, power = 1.0; High > Medium > Low.
English Reading Grade 5 Spanish reading level:
Spanish Reading Level Main Effect: $F(2, 712) = 175.38$, $p < .001$; partial $eta^2 = .330$, power = 1.0; High > Mid > Low.

English Reading Grades 6/7/8: $F(8, 376) = 41.75$, $p < .001$; partial $eta^2 = .470$, power = 1.0; No significant interaction.
Current Group Main Effect: $F(2, 376) = 23.5$, $p < .001$; partial $eta^2 = .111$, power = 1.0; FEP > ADV > INT.
Spanish Reading Level Main Effect: $F(2, 376) = 35.1$, $p < .001$; partial $eta^2 = .157$, power = 1.0; High > Medium > Low.
English Reading Grades 6/7/8 for Spanish reading level:
Spanish Reading Level Main Effect: $F(2, 391) = 115.03$, $p < .001$; partial $eta^2 = .370$, power = 1.0; High > Mid > Low.