Children's Pre-K Outcomes and Classroom Quality in Georgia's Pre-K Program: Findings from the 2013-2014 Evaluation Study

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Georgia's Pre-K Program Evaluation Project

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Purpose of the Evaluation Study

In 2011, the Georgia legislature funded a series of ongoing studies to evaluate Georgia's Pre-K Program. The first study, conducted in 2011-2012, was designed to examine children's learning outcomes during pre-k, the factors that predict better outcomes, and the quality of children's experiences in Georgia's Pre-K classrooms based on a random sample of 100 classrooms and 509 children within those classrooms. The second study, conducted in 2012-2013, was designed to investigate the effects of participation in Georgia's Pre-K on children's school readiness skills, and whether those effects are similar for different groups of children. This study utilized a regression discontinuity design (RDD) to compare children who had and had not attended the program, and included 1,181 children (611 treated and 570 untreated). The third study, begun in 2013-2014, involves a longitudinal design to follow a sample of children from pre-k through third grade, in order to examine the short- and long-term learning outcomes for children who attended Georgia's Pre-K as well as the quality of their preschool and school experiences. The current report focuses on the results of the first year of this longitudinal study, and also includes comparisons with data from the first study, as appropriate.

The purpose of the 2013–2014 Georgia's Pre-K Program Evaluation was to examine the learning outcomes for children and the quality of their classrooms during pre-k, as the baseline year of the pre-k through third-grade longitudinal study. The primary evaluation questions addressed included:

- What are the learning outcomes for children attending Georgia's Pre-K Program?
- What factors predict better learning outcomes for children?
- What is the quality of children's experiences in Georgia's Pre-K classrooms?

To address these questions, the evaluation study included a random sample of 199 Georgia's Pre-K classrooms and a sample of 1,169 children attending these classrooms. Researchers conducted individual child assessments near the beginning and end of the pre-k year to examine growth in children's skills. The assessment measures covered multiple domains of learning, including language, literacy, math, and general knowledge, and teacher ratings of behavior skills. For 139 Spanish-speaking dual language learners (DLLs) in the sample, parallel assessments were conducted in both English and Spanish. Researchers also conducted observations of classroom practices, including measures of global quality, language and literacy practices, and teacher-child instructional interactions. In addition, information about characteristics of the classrooms, teachers, and children was gathered from teacher and parent surveys and from existing statewide program data. Classroom/teacher characteristics were examined as predictors of the quality of classroom practices, while classroom quality as well as child/family and classroom/teacher characteristics were examined as moderators of children's growth in skills.

Overview of Georgia's Pre-K Program

Georgia's Pre-K Program is a state-funded universal pre-kindergarten program for 4-year-olds. The program serves children from all income levels, with no fees charged to families for program participation. Georgia was one of the first states to offer such a universal program in 1995, serving over 87,000 children during the 2013–2014 program year in a variety of settings across the state, including public school systems, private providers, and blended Head Start/pre-k classrooms. Georgia's Pre-K Program is based on a school-year model with instruction for 180 days/year and 6.5 hours/day[a]. Class sizes are limited to 20–22 children with a lead and assistant teacher, and adult:child ratios of 1:11. Lead teachers are required to have at least a bachelor's degree in early childhood education or a related field (unless previously approved), and assistant teachers are required to have at least a Child Development Associate (CDA) credential. In addition, program guidelines provide minimum salary requirements for lead teachers based on credentials, with funding provided by the state, as well as minimum salary requirements for assistant teachers meeting the credential requirements.

Guidelines for classroom instruction are provided through the *Georgia Early Learning and Development Standards (GELDS)*[i], which are aligned with *Georgia's Performance Standards for Kindergarten*[ii]. The program standards also require Georgia's Pre-K sites to use an approved curriculum; provide written lesson plans which include educational experiences in language and literacy, math, science, social studies, creative arts (music, art, and drama), social and emotional, and health and physical development; implement individual child assessments using the *Georgia's Pre-K Child Assessment—Work Sampling Online*[iii], which is based on the *Work Sampling System*[iv]; offer meals, rest time, and both indoor and outdoor play time; and provide support services or referrals to families as needed. Bright from the Start: Georgia Department of Early Care and Learning (DECAL) oversees the program, and staff provide consultation, technical assistance, and monitoring visits throughout the year. (See 2013–2014 Georgia's Pre-K Program Operating Guidelines[v] for further information.)

Methods

Data were gathered from a random sample of classrooms and children within classrooms to examine child outcomes and classroom quality in Georgia's Pre-K Program. At the beginning (fall) and end (spring) of the program year, researchers conducted individual assessments of children's language, literacy, math, and general knowledge skills and gathered teacher ratings of behavior skills. Researchers also conducted classroom observations using measures of global quality, the language and literacy environment, and teacher-child instructional interactions. Program characteristics and teacher and child demographic data were obtained from teacher and parent surveys and existing statewide data collected by DECAL.

[a] Prior to 2011-2012, Georgia's Pre-K Program provided 180 instruction days per year, but budget restrictions led to a reduction to 160 days in 2011-2012. In 2012–2013, the program year was increased to 170 days and in 2013–2014, it was returned to 180 days.

Participants

Classrooms

The study included a sample of 199 Georgia's Pre-K classrooms, selected randomly from the 3,829 classrooms operating in August 2013. In addition, data from a previous sample of Georgia's Pre-K classrooms (2011–2012) were compared to the current sample (2013–2014) to examine whether the pattern of results was similar over time. The previous study used a similar sampling procedure as the current study, with a random sample of 100 classrooms selected from the statewide program.

Information about classroom and teacher characteristics for the current study sample was obtained from DECAL data and teacher survey data (see Table 1 and Table 2). Of the pre-k classrooms in the study sample, about half (49%) were located in public school systems and half (51%) in private sites. The average class size was 21 children, with half boys and half girls. On average, 11% of children in participating classrooms had limited English language proficiency. Almost two-thirds (64%) of the teachers had a bachelor's degree and about one-third (34%) had a master's degree or higher. Teachers reported having an average of 11 years of teaching experience. The majority (82%) were Georgia PSC Certified or Certified Temporary.

Analyses were conducted to compare teacher credentials for the randomly-selected classrooms in the study sample to those not in the sample for the entire population of teachers in Georgia's Pre-K in 2013–2014. Analyses of the two groups revealed that there were no significant differences in qualifications between teachers included in the sample and all other teachers in the program with regard to level of certification status (see Table 2).

Children

The study included a sample of 1,169 children, including 139 Spanish-speaking (DLLs), who were attending the 199 randomly-selected Georgia's Pre-K classrooms during 2013–2014. Parent permission forms were distributed to all children in these classrooms, with an overall agreement rate of 73% (3,136 of 4,270 eligible children). An average of 6 children per classroom were randomly selected for inclusion in the study. In addition, data from a previous cohort of 509 children attending Georgia's Pre-K Program (2011–2012), including 60 Spanish-speaking DLLs, were compared to the current cohort (2013–2014) to examine whether the pattern of results was similar over time. A similar sampling procedure was used in the previous study as in the current study, with children randomly chosen from 100 randomly-selected classrooms across the statewide program.

Information about child and family characteristics for the current study sample was obtained from DECAL data and parent survey data (see Table 3). The average age of participating children (as of September 1) was 4.5 years (SD=0.3, range=4.0–5.8 years). The children in the study sample were about half boys (49%) and half girls (51%). Children were from varied racial backgrounds, with the largest groups being White (53%) and African-American (38%) and the remainder from other or multiracial backgrounds (9%). In addition, almost one-fifth of the children were of Latino ethnicity (15%). More than half (54%) of the children were from low-

income families (as indicated by Category One[a] status), approximately 10% of the children had limited English language proficiency, and 3% had an Individualized Education Program (IEP). Based on individual assessments of children's English language proficiency at the beginning of the program year (see measures below), 8% (91) were categorized as non-English speakers (Level 1), 18% (214) were categorized as limited English speakers (Levels 2 and 3), and 74% (855) were fluent English speakers (Levels 4 and 5).

Analyses were conducted to compare the demographic characteristics of children in the sample with those not in the sample for the entire population of children who attended Georgia's Pre-K in 2013–2014, based on DECAL data (see Table 3). There were no differences between the sample and non-sample children on most demographic characteristics, including proportion by gender, Hispanic ethnicity, family income (Category One or Category Two[a]), Limited Language Proficiency (LLP) status, and IEP status. However, there were racial differences between the two groups, including a higher proportion of White children and a lower proportion of Black/African-American and Asian children in the sample compared to the rest of the population.

Measures and Procedures

Child Assessments

Child outcomes data were gathered in the fall (9/10/13–12/10/13) and spring (3/8/14–5/25/14) of the pre-k program year. The child assessment battery consisted of eight measures appropriate for pre-k children across five primary areas—language, literacy, math, general knowledge, and behavior skills. (See Table 4 for an overview of all measures, including key constructs and scoring.) Individual assessments of children's language and academic skills were conducted on-site at each school or child care center by trained data collectors, and teachers were asked to complete behavior rating scales following each assessment. All children were administered the child assessment measures in English. Parallel assessment procedures were used with the DLL subsample, with a second administration of the same measures in Spanish by a bilingual data collector approximately 2 weeks later.

All of the child assessment measures were available in both English and Spanish versions. Most of the measures used are norm-referenced, so that for most outcomes, standard scores could be used. These scores take into account children's age, so that the standardized mean score of 100 represents the expected performance for an average child at a given age.

[a] Category One represents low-income families, as measured by participation in one or more of the following programs: Supplemental Nutrition Assistance Program (SNAP), Temporary Assistance for Needy Families (TANF), Supplemental Security Income (SSI), Georgia's Childcare and Parent Services (CAPS), Medicaid, or in public schools, free or reduced-price meals. Category Two represents families who are not low-income, as measured by non-participants in these programs.

Language and literacy skills were assessed with five measures. The Naming Letters task[vi] measures children's ability to recognize and name all 26 letters of the alphabet. Four subtests from the Woodcock-Johnson III Tests of Achievement[vii] (WJ III) / Batería III Woodcock-Muñoz Pruebas de Aprovechamiento[viii] (Bat III) also were used. The Letter-Word Identification subtest measures basic pre-reading and reading skills, including letter and word recognition and identification skills. The Picture Vocabulary subtest measures vocabulary skills, including aspects of both receptive and expressive language. The Sound Awareness subtest measures phonological awareness skills, including rhyming. The Word Attack subtest measures phonemic awareness skills, including knowledge of letter sounds and sound combinations.

Math skills were assessed with two measures. The Counting Task[ix] measures children's ability to count using one-to-one correspondence and the Applied Problems subtest of the WJ III / Bat III measures math problem-solving skills including simple comparisons, counting, addition, and subtraction.

General knowledge was assessed with the Social Awareness Scale[x] which measures whether the child knows and is able to communicate basic self-knowledge (full name, age, birthday).

Behavior skills were assessed with two subscales of the Social Skills Improvement System[xi] (SSiS) completed by teachers. The Social Skills subscale rates behaviors that promote positive interactions while discouraging negative interactions. The Problem Behaviors subscale rates behaviors that interfere with social behavior performance or acquisition.

In addition, the preLAS 2000[xii] was used to measure oral language proficiency in English for all children as well as in Spanish for the DLL subsample. Scores on this measure were used as covariates in the analyses in order to examine whether differences in children's growth on the various outcome measures were related to their level of language proficiency (1=Non-English/Spanish speaker, 2–3=Limited English/Spanish speaker, 4–5=Fluent English/Spanish speaker).

Classroom Observations

Observations of classroom practices were conducted in the 199 randomly-selected pre-k classrooms. Three aspects of classroom practices were measured—global classroom quality, teacher-child interactions, and the language and literacy environment—based on widely-used measures of early education. (See Table 5 for an overview of classroom observation measures, including subscales and scoring.)

Global classroom quality was assessed using the Early Childhood Environment Rating Scale-Revised[xiii] (ECERS-R), an observational rating scale that measures the developmental appropriateness of classroom practices, including the activities and materials provided, the interactions among teachers and children, the physical environment, and the daily organization of the program. The measure includes seven subscales with 43 items, from which a total score is

calculated. The ECERS-R and its predecessor, the ECERS, have demonstrated good interrater reliability (total scale r = .92) and predictive validity[xiii, xiv].

Teacher-child instructional interactions were assessed using the Classroom Assessment Scoring System[xv] (CLASS). The CLASS measures teachers' interactions with children in the areas of social and emotional functioning, classroom organization and management, and curriculum implementation to support cognitive and language development. The CLASS includes 10 dimensions organized into three domains, with separate scores calculated for each domain. The scale has demonstrated good interrater reliability (mean agreement within one point=87.1%, range=78.8%–96.9%).

The quality of the language and literacy environment was assessed using the Early Language and Literacy Classroom Observation Pre-K Tool[xvi] (ELLCO). The ELLCO measures the extent to which classrooms provide support for language and literacy development, as well as more general educational practices. The ELLCO includes two subscales, consisting of 19 items organized into five sections. Psychometric data available from the previous version (the ELLCO Toolkit) demonstrated good interrater reliability (mean agreement within one point=81%-90%) and moderate to good internal consistency (Cronbach's alpha=.66-.90)[xvii].

Observations of classroom practices were conducted on two different days during the second half of the program year (1/28/14–4/25/14). The CLASS measure was completed on one day, and both the ECERS-R and ELLCO were completed together approximately two weeks later. Observations typically lasted about 3 hours for the CLASS measure and about 5 hours for the ECERS-R and ELLCO. Data collectors had to meet established reliability criteria for each measure prior to gathering data (e.g., 85% agreement within one point, including subscale thresholds). Inter-rater reliability data were collected for 20% of the observations for each measure and intra-class correlations indicated that reliability was adequate[xviii] (ECERS-R total score=.75, CLASS Emotional Support=.78, CLASS Classroom Organization=.68, CLASS Instructional Support=.43, ELLCO General Classroom Environment=.70, ELLCO Language and Literacy=.59). (Intra-class correlations of .40–.59 are considered in the fair range, .60–.74 good, and .75–1.0 excellent.)

Parent and Teacher Surveys

Parents completed demographic surveys about their family and household. Information about parent education was used in the current study, coded as a three-level variable (1=less than high school, 2=high school to less than bachelor's degree, 3=bachelor's degree or above). Parent surveys were distributed to families along with the permission forms and returned to teachers. Parent surveys were received from 91% (1,067/1,169) of participating families. Teachers completed online surveys about characteristics of the classroom and their background, including classroom composition (number of boys and girls in class), length of teaching experience, degrees earned, and a measure of beliefs about developmentally appropriate teaching practices. Teachers were asked to complete the online surveys via email requests sent during the spring semester, with a completion rate of 95% (189/199).

DECAL Data

Existing data gathered by DECAL from required submissions by Georgia's Pre-K Program sites provided additional information about characteristics of the children, classrooms, and teachers in the program, including child demographic characteristics, program type, and teacher certification status and credentials. The current study includes data from the 2013–2014 program year, gathered at 4 points (or roster cycles) during the year (September 2013, November 2013, January 2014, and March 2014). In addition, data are also included for comparison related to a study from the 2011–2012 program year (September 2011, November 2011, January 2012, March 2012).

Analysis Approach

Sample Comparisons

Comparisons between those in the sample and not in the sample were conducted to examine the representativeness of the randomly-selected sample using available population data on teacher and child characteristics from DECAL. Chi-square tests were conducted to test whether teacher credentials or child and family characteristics (gender, ethnicity, race, limited English language proficiency status, IEP status, Category One vs Two income status) differed between those in the sample and not in the sample based on the overall Georgia's Pre-K Program population. T-tests were conducted to test continuous variables and chi-square tests were conducted to test categorical variables. Significance testing was conducted only when there was a sufficient sample size (n>5) for a given variable.

Child Outcomes

To investigate whether significant levels of growth occurred in children's outcomes during the pre-k year, along with potential moderators of growth, a series of hierarchical linear model (HLM) regressions were estimated, with separate models for each outcome measure. The first set tested for significant changes over time in overall growth; the second set tested various child/family characteristics and teacher/classroom characteristics as moderators of children's rates of growth; and the third set tested various aspects of classroom quality as moderators of children's rates of growth. For the DLL subsample, similar analyses were conducted to examine children's overall growth in language and academic skills in both English and Spanish. Finally, an additional series of analyses included a previous cohort of children who had attended Georgia's Pre-K during 2011–2012 in order to test for any changes over time in the patterns of results both for the full sample and the DLL subsample.

Fall and spring scores in pre-k were included as the dependent variables using a repeated measures approach. Children were nested within classrooms, and a time variable (0, 1 for the two time points in fall and spring pre-k) was used as the predictor to test children's growth over time. These models included the following covariates: child's age at the initial fall pre-k assessment (for non-normed assessment measures only), child gender (F=0, M=1), child race

(Non-White=0, White=1), child ethnicity (Non-Latino=0, Latino=1), child IEP status (No=0, Yes=1), children's assessed English/Spanish language proficiency level based on preLAS scores (1–5), family income (Category Two=0, Category One=1), parent education level (1=below high school, 2=high school graduate/some college education, 3=bachelor's degree or above), program type (private setting=0, public school system=1), lead teacher Georgia PSC certification (not certified=0, certified=1), class size, and classroom percentage of children with limited English language proficiency. PreLAS English language proficiency scores were included for English outcome measures and Spanish language proficiency scores for Spanish outcome measures. The child ethnicity variable was excluded from analyses for the DLL subsample because almost all of the children were Latino; therefore, including this variable in the analyses would have caused a multi-collinearity problem. All continuous model covariates were centered; reference cell coding was used for language proficiency with level 1 as the reference group and parent education level with level 1 as the reference group.

The first set of models in the series tested growth over time. The second set of models tested moderators of growth over time by adding the interactions of time with each of the child/family characteristics. A third set of models tested whether the quality of classroom practices moderated children's rates of growth by adding the interactions of time and each of the quality measures (ECERS-R Total; CLASS Emotional Support, Classroom Organization, and Instructional Support; and ELLCO General Classroom Environment and Language and Literacy) to the previous models, with a separate model for each quality measure.

In addition, a separate series of HLM analyses was conducted to investigate whether the patterns of results differed between the 2013–2014 and 2011–2012 samples. The parent education level variable was excluded from these analyses because these data were not available for the earlier cohort. The analyses in this series built on the initial models with the additions of a dichotomous variable representing cohort (2011–2012=0, 2013–2014=1) and the interactions between cohort and all model predictors. This first set of analyses tested whether growth rates differed between the two cohorts. The next two sets of analyses tested whether there were any differences in moderator effects between the two cohorts. The ELLCO was excluded from these analyses because these data were not available for the earlier cohort.

Due to the number of statistical tests performed to investigate differences between various subgroups, the Benjamini-Hochberg procedure[xix] (B-H procedure) was implemented as a false discovery rate correction to adjust for multiple testing. Only results that were found to be statistically significant after the multiple testing adjustment were discussed.

Classroom Quality

The quality of various aspects of teaching practices was examined descriptively for a sample of Georgia's Pre-K classrooms during the 2013–2014 program year: global quality (ECERS-R Total), teacher-child interactions (CLASS Emotional Support, Classroom Organization, Instructional Support), and the language and literacy environment and general educational

practices (ELLCO Language and Literacy and General Classroom Environment). In addition, various characteristics were examined as potential predictors of the quality of classroom practices: 1) program characteristics—public school system vs private program, 2) lead teacher characteristics—experience teaching pre-k, Georgia PSC certification, beliefs about teaching practices, and 3) classroom characteristics—class size, percentage of children with limited English language proficiency. A series of HLM analyses, clustering teachers within sites, was used to examine the associations between the various predictors and classroom quality measures. Each individual classroom quality score was examined separately.

The first set of analyses included the three sets of predictor variables, based on DECAL data and teacher survey data: program type (private setting=0, public school system=1); lead teacher characteristics—years of experience teaching pre-k, beliefs about teaching score, Georgia PSC certification status (not certified=0, certified=1); and classroom characteristics—proportion of children with limited English language proficiency and class size. All continuous model covariates were centered before analysis. A supplementary set of analyses added the interaction of program type with each of the predictor variables to test whether there were any differences between private and public school settings in these associations with classroom quality.

In addition, a separate series of HLM analyses was conducted to investigate whether the patterns of results differed between the 2013–2014 and 2011–2012 samples with regard to the level and predictors of quality. ELLCO scores were excluded from these analyses because these data were not available for the earlier cohort. The analyses in this series built on the previous models with the additions of a dichotomous variable representing cohort (2011–2012=0, 2013–2014=1) and the interactions between cohort and all model predictors.

Results

Children's Growth over Time

Full Sample

Children who attended Georgia's Pre-K Program made significant gains on almost all measures during their pre-k year. In general, children's scores tended to be at or slightly below the population mean at the beginning of the year and slightly above the mean by the end of the year. They demonstrated significant growth across all domains of learning, including: Language/literacy skills (Naming Letters Task, WJ III Letter-Word Identification, WJ III Sound Awareness, WJ III Word Attack), Math skills (Counting Task, WJ III Applied Problems), General knowledge (Social Awareness Task), and Behavior skills (SSiS Social Skills). Many of these skills were measured using standard scores (WJ III Letter-Word Identification, WJ III Sound Awareness, WJ III Word Attack, WJ III Applied Problems, SSiS Social Skills). Growth on these measures indicates that children progressed at an even greater rate during the time they participated in Georgia's Pre-K Program than would be expected for normal developmental growth. However, without a comparison group, it is not possible to establish a clear causal link

between outcomes and program participation. Two areas that showed no changes over this time period were WJ III Picture Vocabulary and SSiS Problem Behaviors, both of which had scores around the population mean at both time points. (See Table 6, Table 7, and Table 8.)

Comparisons between the 2013–2014 sample and the 2011–2012 sample revealed a few differences in the rates of growth between the two program years. Children in the more recent cohort (2013–2014) made greater gains on the Naming Letters Task and the Counting Task compared to the earlier cohort (2011–2012). In contrast, children in the more recent cohort made relatively fewer gains on WJ III Applied Problems, although both groups showed positive growth. There also were significant differences in the outcomes on SSiS Problem behaviors; teachers rated children in the more recent cohort as showing no changes over the pre-k year, whereas teachers rated children in the earlier cohort as showing decreases.

DLL Subsample

Growth in language and academic skills in both English and Spanish was examined for the subsample of Spanish-speaking DLLs who attended Georgia's Pre-K Program. Children in the DLL subsample made significant gains during their pre-k year for all skills measured in English. These included: Language/literacy skills (Naming Letters Task, WJ III Letter-Word Identification, WJ III Picture Vocabulary, WJ III Sound Awareness, WJ III Word Attack), Math skills (Counting Task, WJ III Applied Problems), and General knowledge (Social Awareness Task). In general, their skills tended to be slightly below the mean at the beginning of the year and close to the mean by the end of the year. (See Table 9, Table 10, and Table 11.)

Children in the DLL subsample also showed significant gains for most skills measured in Spanish, including all domains of learning: Language/literacy skills (Naming Letters Task, Bat III Sound Awareness, Bat III Word Attack), Math skills (Counting Task, Bat III Applied Problems), and General knowledge (Social Awareness Task). (See Table 9, Table 12, and Table 13.) As described previously, growth on these standardized measures indicates that children progressed at an even greater rate during the time they participated in Georgia's Pre-K Program than would be expected for normal developmental growth. Children's scores in Spanish tended to be 1–2 standard deviations below the population mean, on average, at the beginning of the year, and still remained well below the mean at the end of the year. For two areas of Language/literacy skills (Bat III Letter-Word Identification, Bat III Picture Vocabulary), children showed significant decreases in their scores in Spanish during pre-k, suggesting that they were making less progress than expected in their home language for normal developmental growth.

Comparisons between the DLL subsamples for the 2013–2014 cohort and the 2011–2012 cohort revealed almost no differences in the rates of growth between the two program years. For skills measured in English, children in the more recent cohort (2013–2014) made greater gains on the Counting Task than the earlier cohort (2011–2012). For skills measured in Spanish, children in the more recent cohort showed lower gains on Bat III Sound Awareness than children in the earlier cohort. There were no differences between the two cohorts in the rates of growth for any of the other outcome measures.

Moderators of Children's Growth

Child/Family Characteristics

For the full sample, a number of child and family characteristics were examined as potential moderators of children's rates of growth in skills during their pre-k year. These included child gender, race, ethnicity, IEP status, and English language proficiency; family income; and parent education. (See Table 14 and Table 15.)

Across the various outcome measures, the most consistent factor predicting differences in children's rates of growth during pre-k was their level of English language proficiency. Children who had lower English proficiency levels made even greater gains than their peers on many measures. In the area of Language/literacy skills, children at the lowest English proficiency level made greater gains than children at the highest proficiency level (Level 1>Level 5) on WJ III Letter-Word Identification; children at the lowest proficiency level also scored lower upon entry to pre-k and at the end of pre-k (see Figure 1). On WJ III Picture Vocabulary, children at the lowest English proficiency level made greater gains than children at higher proficiency levels (Level 1>Levels 2,3,4,5); further, children at the lowest proficiency level scored lower than children at higher proficiency levels at both time points (see Figure 2). For the Naming Letters Task, although there was a significant overall moderating effect of English proficiency in the direction of greater growth for children at lower levels compared to those at higher levels, these differences were not evident in the individual comparisons. In contrast to other areas of Language/literacy skills, for WJ III Sound Awareness, there was a significant overall moderating effect of English proficiency in the direction of greater growth for children at higher levels compared to those at lower levels; however, none of the individual comparisons of growth rates were significant. For Math skills, children at lower proficiency levels made greater gains than children at higher proficiency levels (Level 1>Levels 2,3,4>Level 5) on WJ III Applied Problems, with children at lower proficiency levels generally scoring lower than children at higher levels at both time points (see Figure 3). In the areas of General knowledge (Social Awareness Task) and Behavior skills (SSiS Social Skills), there were significant overall moderating effects of English proficiency in the direction of greater growth for children at lower levels compared to those at higher levels; however, none of the individual comparisons of growth rates were significant. For other skills (WJ III Word Attack, Counting Task, SSiS Problem Behaviors), children's growth during Georgia's Pre-K was similar regardless of their level of English language proficiency.

For other child and family background characteristics, there were no consistent patterns across outcome measures. In most cases, however, children who entered the program with lower skills made greater gains. There were a few differences in the rates of growth related to family background characteristics. Compared to children from higher-income (Category Two) families, children from lower-income (Category One) families made greater gains on the Counting Task; although their scores were lower at entry into pre-k, these differences between the groups were not significant by the end of pre-k (see Figure 4). Children whose parents had lower levels of education (less than high school to less than a bachelor's degree) made greater gains on the

Naming Letters Task than those whose parents had higher levels of education (at or above a bachelor's degree); at both the beginning and end of pre-k, children whose parents had lower levels of education scored lower (see Figure 5). On WJ III Picture Vocabulary, children whose parents had the lowest or the highest levels of education made greater gains than those with the mid-level (less than high school, bachelor's or above > high school/some college); children with parents at the lowest level of education also scored lower than children at higher levels at both time points (see Figure 6).

There also were a few differences related to other child characteristics. Latino children made greater gains than non-Latino children on the Social Awareness Task; although scores were lower for Latino children at entry into pre-k, there were no differences between the groups by the end of pre-k (see Figure 7). On the Naming Letters Task, White children made greater gains than non-White children; scores were lower at both time points for White children (see Figure 8).

Comparisons between the 2013–2014 cohort and the 2011–2012 cohort indicated that there were few differences in the child/family moderators between the two samples. There was a stronger positive effect of family income associated with greater growth on WJ III Sound Awareness in the 2013–2014 sample than the 2011–2012 sample, although there were positive effects for both samples. However, it should be noted that there was a slight change in the definition of Category One income between the two samples (excluding the PeachCare program which could include low to moderate income families in the later sample), so that the more recent sample may have included a slightly lower income group overall. A difference also was found between the two years in the direction of growth rates by race; in the earlier cohort, non-White children exhibited greater growth on WJ III Word Attack than White children, while the reverse was true for the more recent cohort.

Classroom/Teacher Characteristics

Several classroom and teacher characteristics also were examined as potential moderators of children's rates of growth in skills during their pre-k year for the full sample. These included program type (public school system vs private program), teacher Georgia PSC certification status, class size, and the percentage of children in the classroom with limited English language proficiency. (See Table 14 and Table 15.)

There were a few differences on the basis of these classroom/teacher characteristics across the various outcome measures, but no consistent patterns. Children who attended public school programs made greater gains on the Naming Letters Task than children who attended private programs; children in public programs scored lower at entry into pre-k, but there were no significant differences in scores between the two groups by the end of pre-k (see Figure 9). Children in public school programs also made greater gains than children in private programs on WJ III Letter-Word Identification, although scores were not significantly different between the two groups at either time point (see Figure 10). Similarly, children in public school programs made greater gains than children in private programs on WJ III Word Attack,

although there were no differences in scores between the two groups at either time point (see Figure 11). Children attending Georgia's Pre-K classrooms with a smaller class size made greater gains on the Naming Letters Task (see Figure 12). Children in classrooms with a higher proportion of children with limited English language proficiency made greater gains on WJ III Picture Vocabulary (see Figure 13). Finally, children in classrooms with teachers who were Georgia PSC certified were rated by their teachers as making lower gains on SSiS Social Skills (see Figure 14).

Comparisons between the 2013–2014 cohort and the 2011–2012 cohort revealed one difference with regard to classroom/teacher moderators. The moderating effect of teacher certification on SSiS Social Skills found in the more recent cohort (2013–2014) was not significant in the earlier cohort.

Classroom Quality Moderators

Various aspects of classroom quality were examined as potential moderators of children's rates of growth in skills during their pre-k year for the full sample, after adjusting for other child, family, teacher, and classroom characteristics. The influence of each measure of quality was examined separately: 1) global quality, based on the ECERS-R Total score; 2) teacher-child instructional interactions, based on CLASS Emotional Support, Classroom Organization, and Instructional Support, and 3) the language and literacy environment along with general educational practices, based on the ELLCO Language and Literacy and General Classroom Environment scales. (See Table 16, Table 17, Table 18, Table 19, Table 20, and Table 21.)

There were a few differences in children's rates of skill growth based on the quality of classroom practices, but no clear patterns. There were no associations for most skills in the areas of Language/literacy (Naming Letters Task, WJ III Letter-Word Identification, WJ III Picture Vocabulary, WJ III Sound Awareness), Math skills (Counting Task, WJ III Applied Problems), and Social skills (SSiS Social Skills). Children made greater gains on the Social Awareness Task in classrooms that scored higher on CLASS Instructional Support. Children made greater gains on WJ III Word Attack in classrooms that scored higher on ELLCO Language and Literacy, but made fewer gains in classrooms that scored higher on CLASS Emotional Support. Children were rated by their teachers as showing greater decreases in SSiS Problem Behaviors in classrooms that scored higher on the ECERS-R Total, but rated as showing greater increases in SSiS Problem Behaviors in classrooms that scored higher in CLASS Instructional Support. There were no differences in children's outcomes on the basis of CLASS Classroom Organization or ELLCO General Classroom Environment scores.

Comparisons between the 2013–2014 cohort and the 2011–2012 cohort indicated that there were no differences between the samples in terms of any classroom quality moderating effects.

Quality of Classroom Practices in Georgia's Pre-K

Overall, classroom practices for the random sample of 199 Georgia's Pre-K classrooms were in the medium to high quality range across the different aspects of quality that were measured, with few to no classrooms scoring in the low quality range for most aspects of quality that were measured. The global quality of classroom practices was generally in the medium quality range, as measured by the ECERS-R, with a mean Total score of 3.7. (See Table 22.) Average scores were in the medium quality range on almost all of the subscales as well, including Space and furnishings, Language-reasoning, Activities, Interaction, Program structure, and Parents and staff. The one exception was Personal care routines, which had a mean score in the low quality range. Most (80%) of the classrooms scored in the medium quality range (3.0–4.9) overall, with some (17%) in the low quality range (1.0–2.9) and few (3%) in the high quality range (5.0–7.0). (See Figure 15.)

The quality of classroom practices related to teacher-child interactions, as measured by the CLASS, varied across the different domains of social and emotional functioning, classroom organization and management, and curriculum implementation to support cognitive and language development. Classroom practices were stronger in Emotional Support (5.7) and Classroom Organization (5.5), with average scores in the middle to high quality range, than in Instructional Support (2.5), with an average score in the low to middle range. (See Table 23.) Average scores on the individual dimensions within each domain generally were in the same range as the overall domain scores, although there was some variability among individual classrooms. Most (72%) classrooms scored in the high range (5.5–7.0) on Emotional Support, with the remainder (28%) scoring in the middle range (2.5–5.4). (See Figure 16.) A similar pattern was found for Classroom Organization, with most (61%) classrooms scoring in the high range (5.5–7.0) and the remainder (39%) scoring in the middle range (2.5–5.4). (See Figure 17.) In contrast, about half (48%) of the classrooms scored in the low range (1–2.4) on Instructional Support and about half (51%) scored in the middle range (2.5–5.4). (See Figure 18.)

Georgia's Pre-K classrooms scored in the basic to strong range on both general educational practices and the language and literacy environment, as measured by the ELLCO. Average scores were similar for both aspects of classroom practices—General Classroom Environment (3.5) and Language and Literacy (3.4). (See Table 24.) Average scores on each of the individual sections of the ELLCO also were in the basic to strong range. The majority of classrooms scored in the basic (43%; 2.5–3.4) or strong (42%; 3.5–4.4) range on General Classroom Environment, with a few scoring in the exemplary (7%; 4.5–5.0) or inadequate (8%; 1.5–2.4) range, and none in the deficient (1.0–1.4) range. (See Figure 19.) A similar pattern was seen for the Language and Literacy subscale, with the majority of classrooms scoring in the basic (46%) or strong (40%) range, a few scoring in the exemplary (6%) or inadequate (8%) range, and none in the deficient range. (See Figure 20.)

Comparisons of the Georgia's Pre-K 2013–2014 sample to the 2011–2012 sample indicated that there were no differences on any of the aspects of classroom practices measured, including global quality (ECERS-R Total), social and emotional functioning (CLASS Emotional Support),

classroom organization and management (CLASS Classroom Organization), or curriculum implementation to support cognitive and language development (CLASS Instructional Support). (The ELLCO was not gathered for the 2011–2012 sample.)

Predictors of Classroom Quality

Potential predictors of the various classroom quality measures were examined, including: 1) program type—public school system vs private program; 2) lead teacher characteristics—experience teaching pre-k, Georgia PSC certification, beliefs about teaching practices; and 3) classroom characteristics—class size, percentage of children with limited English language proficiency. (See Table 25 and Table 26.)

Most teacher and classroom characteristics examined were not predictive of the quality of classroom practices. The most consistent predictor of classroom quality was beliefs about teaching practices. Teachers who scored higher on a measure of developmentally appropriate beliefs about teaching practices had classrooms that were rated higher on a variety of different aspects of teaching practices. These included both measures of broader aspects of global quality (ECERS-R Total) and general educational practices (ELLCO General Classroom Environment), and measures of more specific aspects of social and emotional functioning (CLASS Emotional Support) and classroom organization and management (CLASS Classroom Organization).

In addition, Georgia's Pre-K programs in private sites were rated higher than programs in public school systems on two measures of quality which examined broader aspects of teaching practices—global quality (ECERS-R Total) and general educational practices (ELLCO General Classroom Environment). A supplementary set of analyses examined whether there were any interactions between program type and the various predictors. Only one association was found for teacher experience; greater experience teaching pre-k and the quality of the language and literacy environment (ELLCO Language and Literacy) were more positively associated in private sites and more negatively associated in public school settings, although these associations were non-significant in both cases.

Comparisons of the predictors of classroom quality for the 2013–2014 sample and the 2011–2012 sample revealed few differences. Program type and teacher beliefs were significant predictors of the ECERS-R Total score for the 2013–2014 sample, but not the 2011–2012 sample. There were no differences between the two samples with regard to the predictors for other measures of classroom practices.

Conclusions

Based on a sample of over 1,100 children who attended Georgia's Pre-K Program during 2013–2014, significant gains in learning outcomes were found across all domains of language and literacy skills, math skills, general knowledge, and behavior skills during their pre-k year. For many of the outcomes that used standard scores, growth on these measures indicated that children were progressing at an even greater rate than expected for normal developmental growth. One of the most consistent predictors of children's growth in skills was their level of English proficiency, with generally greater gains seen for children with lower levels of English proficiency. For a subsample of Spanish-speaking DLLs, children made gains on all skills measured in English and on many skills measured in Spanish. Even though the primary language of instruction in these classrooms was likely English, children continued to make gains in many skills in their home language as well.

There were no consistent differences in the rates of skill growth on the basis of other child/family background characteristics (family income and parent education; children's ethnicity, race, gender, and IEP status); in most of these cases, however, children who entered the program with lower skills made greater gains. Similarly, there were few differences in children's rates of growth on the basis of classroom and teacher characteristics (private vs public school settings, teacher certification, class size, percentage of children with limited English language proficiency) or the quality of classroom practices (global quality, teacher-child interactions, language and literacy environment), with no consistent patterns across outcome measures. Moreover, when these results were compared to a previous cohort of children who attended Georgia's Pre-K during 2011–2012, there was little difference in the pattern of results, with no differences in the overall outcomes and few differences in terms of moderating factors.

When teaching practices were examined for the randomly-selected sample of 199 Georgia's Pre-K classrooms attended by children in the 2013–2014 cohort, the overall quality was in the medium to high range across most of the different aspects that were measured. In general, few to no classrooms scored in the low quality range for most aspects of quality that were measured, including global quality (ECERS-R Total), teacher-child interactions around social and emotional functioning and classroom organization and management (CLASS Emotional Support and Classroom Organization), and the language and literacy and general educational environment (ELLCO General Classroom Environment and Language and Literacy). The one exception was in the area of curriculum implementation to support children's language and cognitive development (CLASS Instructional Support), where scores were in the low to middle range. This pattern, however, of relatively lower scores on CLASS Instructional Support is similar to that found in other studies of early childhood programs[xx, xxi, xxii]. The most consistent predictor of classroom quality was a measure of teachers' beliefs about developmentally appropriate teaching practices, where higher scores were associated with higher ratings of quality for both broad and specific measures. When the 2013–2014 sample and an earlier 2011–2012 sample of classrooms were compared, the pattern of results was quite similar, with no differences in overall quality and few differences in predictors.

In sum, these results suggest that children who attend Georgia's Pre-K Program are participating in a good quality educational experience, resulting in positive outcomes across all domains of learning. Further, these results seem to be maintained over time, based on the comparisons with the earlier sample. As a universal program, Georgia's Pre-K accepts applications from all age-eligible 4-year-olds in the state. There has been some recent evidence that two years of preschool may be more beneficial for children's development than one year[xxiii, xxiv, xxv, xxvi.]. Given these findings, it may be beneficial to consider expanding the program to provide these educational benefits to a wider population, such as by increasing the available slots or by adding 3-year-olds to the program.

Table 1. Characteristics of 2013–2014 Sample Classrooms and Teachers

Characteristic	n	Mean	Range
Classroom Characteristics[a]			
Class size	189	21.2	14-23
Proportion of boys	189	50.1%	18.2%–81.8%
Percent children with limited English language proficiency[b]	199	11.2%	0.0%–100.0%
Teacher Characteristics			
Years of experience teaching pre-k	184	5.8	0.1–23
Years of experience teaching birth-kindergarten	182	7.7	0.4–25
Years of experience at this location	184	5.1	0.1–21
Total years of teaching experience	179	11.1	0.8–37.7
	n	%	
Teacher Highest Degree Earned	184		
PhD/EdD	1	0.5%	
EdS	9	4.9%	
MA/MS	52	28.3%	
BA/BS	118	64.1%	
AA/AAS	4	2.2%	
Program Type[c]	190		
Public school system	93	49.0%	
Private site	97	51.0%	

[a] Source of data: Teacher survey.

[b] Other languages spoken: African languages, Arabic, Bulgarian, Chinese, French, German, Haitian, Hindi, Indic languages, Italian, Japanese, Korean, Romanian, Spanish, Turkmen, Ukrainian, Urdu, Vietnamese.

[c] Source of data: Bright from the Start: Georgia Department of Early Care and Learning (DECAL).

Table 2. Credentials of Lead Teachers in Georgia's Pre-K Program 2013–2014 by Sample and Non-Sample Groups

	Non-Sample n=4,257		Sample n=198[a]	
Certification Status[bc]	%	n	%	n
Certified[d]				
Georgia PSC Certified	76.6	3,262	80.8	160
Certified Temporary (out of state)	0.5	20	1.0	2
Four-Year Credential[e]	19.0	808	14.7	29
Two-Year Credential				
Associate Technical Degree	1.5	62	2.0	4
Associate of Science/Arts	0.9	40	1.0	2
Montessori Diploma	0.2	8	0.0	0
Insufficient	1.3	57	0.5	1

[a] These data were not available for one teacher.
[b] Source of data: Bright from the Start: Georgia Department of Early Care and Learning (DECAL).
[c] Chi-square analyses conducted to test whether teacher credentials differed between the study sample and those not in the sample based on the entire program population found no significant differences on these variables.
[d] Certified teachers hold a bachelor's degree or higher and have completed a state-approved educator program.
[e] Teachers at the four-year credential level hold a bachelor's degree or higher but lack completion of a state-approved educator program.

Table 3. Characteristics of Children in Georgia's Pre-K Program 2013–2014 by Sample and Non-Sample Groups

	Non-Sample n=86,214[a]		Sample n=1,169	
Characteristic[b,c]	%	n	%	n
Child's age on 9/1 of program year	4.5	86,214	4.5	1,169
Gender				
Male	50.6	43,627	48.6	568
Female	49.4	42,587	51.4	601
Ethnicity				
Hispanic/Latino	15.6	13,444	14.5	170
Race[d]				
White	48.2	41,574	52.7	616
Black/African American	41.5	35,767	38.3	448
Multi-racial	3.7	3,172	4.7	55
Asian	3.6	3,136	2.5	29
Native American/Alaskan Native	2.5	2,116	1.6	19
Native Hawaiian/Pacific Islander	0.5	449	0.2	2
Income[e]				
Category One	55.5	47,862	54.4	636
Category Two	44.5	38,352	45.6	533
Limited English language proficiency	10.5	9,078	9.9	116
Individualized Education Program	3.7	3,185	2.9	34
Parent education[f,g]				
Level 1	--	--	10.6	120
Level 2	--	--	62.6	709
Level 3	--	--	26.8	303

[a] The population total includes children enrolled in Georgia's Pre-K Program at any time in 2013–2014 based on roster data.
[b] Source of data: Bright from the Start: Georgia Department of Early Care and Learning (DECAL) for all characteristics except parent education, which was obtained from parent surveys..
[c] Chi-square analyses found no significant differences between the sample and non-sample on gender, ethnicity, family income, limited English language proficiency, and IEP status, based on population data.
[d] There were significant differences between sample and non-sample in racial composition, including a higher proportion of White children [$\chi^2(1)= 9.06$, $p <.01$] and a lower proportion of Black/African-American [$\chi^2(1)= 4.62$, $p <.05$] and Asian [$\chi^2(1)= 4.10$, $p <.05$] children in the sample.
[e] Category One represents participation in one or more of the following programs: SNAP, TANF, SSI, CAPS, Medicaid, free or reduced-price meals.
[f] Level 1=less than high school; Level 2=high school diploma to less than bachelor's degree; Level 3=bachelor's degree or higher.
[g] Data were not reported for 37 children.

Table 4. Child Outcome Measures

Measure	Scoring
Language and Literacy Skills	
Letter knowledge[a]	Total score,
Naming Letters Task	Range=0–26
Letter-word identification	
Woodcock-Johnson III Tests of Achievement Letter-Word Identification (Subtest 1) / Batería III Pruebas de Aprovechamiento Identificación de Letras y Palabras (Prueba 1)	Standard score, Mean=100, SD=15
Vocabulary	
Woodcock-Johnson III Tests of Achievement Picture Vocabulary (Subtest 14) / Batería III Pruebas de Aprovechamiento Vocabulario sobre Dibujos (Prueba 14)	Standard score, Mean=100, SD=15
Phonological awareness	
Woodcock-Johnson III Tests of Achievement Sound Awareness (Subtest 21) / Batería III Pruebas de Aprovechamiento Discernimiento de sonidos (Prueba 21)	Standard score, Mean=100, SD=15
Phonemic awareness	
Woodcock-Johnson III Tests of Achievement Word Attack (Subtest 13) / Batería III Pruebas de Aprovechamiento Análisis de Palabras (Prueba 13)	W score, Range≈360–545
Math Skills	
Math problem-solving	
Woodcock-Johnson III Tests of Achievement Applied Problems (Subest 10) / Batería III Pruebas de Aprovechamiento Problemas Aplicados (Prueba 10)	Standard score, Mean=100, SD=15
Counting	Total score,
Counting Task	Range=0–40
General Knowledge	
Basic self-knowledge	Total score,
Social Awareness Task	Range=0–6
Classroom Behavior	
Social skills[b]	
Social Skills Improvement System (SSiS) Social Skills subscale	Standard score, Mean=100, SD=15
Problem behaviors	
Social Skills Improvement System (SSiS) Problem Behaviors subscale	Standard score, Mean=100, SD=15

[a] These measures are individually administered to children. Both English and Spanish language versions of these measures were used with dual-language learners.

[b] These measures are teacher ratings of individual children's skills.

Table 5. Classroom Quality Measures

Measure[a]	Scales Used in Analysis	Scoring
Global classroom quality		
Early Childhood Environment Rating Scale-Revised (ECERS-R)	Total	Total score range=1.0–7.0 low (1<3); medium (3<5); high (5–7)
Teacher-child instructional interactions		
Classroom Assessment Scoring System (CLASS)	Emotional Support Classroom Organization Instructional Support	Domain score range=1.0–7.0 low (1–2); middle (3–5); high (6–7)
Language and literacy environment		
Early Language and Literacy Classroom Observation Pre-K Tool (ELLCO)	General Classroom Environment Language and Literacy	Subscale score range=1.0–5.0 deficient (1); inadequate (2); basic (3); strong (4); exemplary (5)

[a] All of these are observational measures of classroom practices.

Table 6. Child Outcome Scores for Full Sample

Measure	Fall n	Fall Mean (SD) Range	Spring n	Spring Mean (SD) Range
Language and Literacy				
Letter knowledge (Naming Letters Task[a])	1,160	13.3 (10.0) 0–26	1,055	19.9 (8.0) 0–26
Letter-word identification (WJ III Letter-Word Identification[b,c])	1,156	100.7 (13.8) 60–183	1,051	103.2 (12.7) 61–184
Vocabulary (WJ III Picture Vocabulary[b,c])	1,160	99.9 (13.6) 31–134	1,052	99.8 (11.8) 39–141
Phonological awareness (WJ III Sound Awareness[b,c])	1,137	95.9 (17.4) 58–166	1,044	102.3 (18.8) 56–163
Phonemic awareness (WJ III Word Attack[c,d])	1,159	386.2 (23.5) 364–510	1,052	403.5 (26.7) 364–510
Math				
Math problem-solving (WJ III Applied Problems[b,c])	1,150	102.8 (13.2) 56–143	1,052	103.7 (11.7) 53–141
Counting (Counting Task[e])	1,142	18.0 (11.3) 1–40	1,050	26.7 (11.7) 1–40
General Knowledge				
Basic self-knowledge (Social Awareness Task[f])	1,165	4.3 (1.5) 0–6	1,055	4.9 (1.3) 0–6
Classroom Behavior				
Social skills (SSiS)	1,088	96.4 (16.0) 40–130	949	100.0 (14.9) 50–129
Problem behaviors (SSiS)	1,093	100.8 (15.5) 82–160	953	100.8 (15.3) 82–160

[a] Possible range=0–26.
[b] Indicates standard scores on norm-referenced measure with mean=100, SD=15.
[c] Scores reflect use of updated normative tables (2007).
[d] W scores were used for this measure. Possible range≈360–545.
[e] Possible range=0–40.
[f] Possible range=0–6.

Table 7. Full Sample Child Outcome Regression Results—Language and Literacy

	Naming Letters Task n=1,049		WJ III Letter-Word ID n=1,049		WJ III Picture Vocabulary n=1,050		WJ III Sound Awareness n=1,045		WJ III Word Attack n=1,050	
Effect	Est[a]	(SE)	Est	(SE)	Est	(SE)	Est	(SE)	Est	(SE)
Intercept	8.63***	(1.53)	95.87***	(2.22)	77.73***	(1.58)	75.59***	(2.72)	375.56***	(4.16)
Time	6.44***	(0.21)	2.52***	(0.27)	0.11	(0.25)	6.79***	(0.44)	17.51***	(0.68)
Age	3.66***	(0.78)	--	--	--	--	--	--	--	--
Gender[b]	-0.59	(0.47)	-1.06	(0.69)	1.54**	(0.50)	-0.61	(0.81)	-1.41	(1.27)
Race[c]	-2.12***	(0.52)	-4.57***	(0.76)	1.17*	(0.53)	1.26	(0.93)	-4.97***	(1.43)
Ethnicity[d]	-0.62	(0.87)	0.41	(1.27)	-6.64***	(0.91)	-2.39	(1.52)	-2.15	(2.37)
IEP[e]	-1.47	(1.40)	-3.71	(2.05)	-0.32	(1.49)	-7.17**	(2.49)	-1.67	(3.83)
English Proficiency[f]	***		***		***		***		***	
Level 2	0.52	(1.57)	2.24	(2.31)	12.70***	(1.66)	5.45	(2.75)	-0.36	(4.29)
Level 3	1.75	(1.19)	2.32	(1.74)	15.63***	(1.26)	7.83***	(2.09)	2.73	(3.26)
Level 4	2.99*	(1.15)	4.81**	(1.68)	18.10***	(1.21)	13.09***	(2.03)	6.15	(3.15)
Level 5	6.48***	(1.14)	8.80***	(1.66)	23.00***	(1.20)	23.92***	(2.01)	15.96***	(3.12)
Income[g]	-1.41**	(0.53)	-2.43**	(0.78)	-1.37*	(0.56)	-3.33***	(0.93)	-3.86**	(1.45)
Parent Education	***		***		***		***		***	
Level 2	2.47**	(0.86)	2.95*	(1.26)	4.43***	(0.91)	3.62*	(1.49)	3.23	(2.33)
Level 3	5.51***	(0.99)	8.35***	(1.45)	5.12***	(1.05)	7.10***	(1.71)	11.92***	(2.68)
Provider Type[h]	-0.33	(0.58)	-0.32	(0.84)	-0.32	(0.55)	-1.46	(1.13)	-0.98	(1.62)
Teacher Certified[i]	0.02	(0.76)	-0.80	(1.10)	0.02	(0.72)	3.00*	(1.49)	2.37	(2.13)
Class Size	0.21	(0.19)	0.29	(0.27)	0.07	(0.18)	0.12	(0.36)	0.69	(0.53)
% Limited Eng Prof	0.61	(1.34)	-1.79	(1.94)	-3.04*	(1.28)	-2.05	(2.59)	3.06	(3.73)

[a] Significance levels are *p< .05, **p< .01, ***p< .001.

[b] Female=0, Male=1.

[c] Non-White=0, White = 1.

[d] Non-Latino=0, Latino=1.

[e] No IEP=0, IEP=1.

[f] English Proficiency Level 1 and Parent Education Level 1 were reference cells.

[g] Category Two=0, Category One=1.

[h] Private site=0, Public school site=1.

[i] Teacher not certified=0, Teacher certified=1.

Table 8. Full Sample Child Outcome Regression Results—Math, General Knowledge, and Classroom Behavior

	Math				General Knowledge		Classroom Behavior			
	WJ III Applied Problems n=1,050		Counting Task n=1,048		Social Awareness Task n=1,049		SSiS Social Skills n=1,037		SSiS Problem Behaviors n=1,038	
Effect	Est[a]	(SE)	Est[a]	(SE)	Est[a]	(SE)	Est[a]	(SE)	Est[a]	(SE)
Intercept	81.37***	(1.78)	12.44***	(1.83)	2.98***	(0.20)	87.39***	(2.80)	102.68***	(2.86)
Time	0.76*	(0.30)	8.75***	(0.37)	0.55***	(0.04)	3.55***	(0.43)	0.07	(0.39)
Age	--	--	5.69***	(0.92)	0.33**	(0.10)	--	--	--	--
Gender[b]	0.20	(0.54)	-1.03	(0.55)	-0.12	(0.06)	1.57*	(0.79)	1.11	(0.80)
Race[c]	4.07***	(0.61)	-1.23*	(0.62)	-0.21**	(0.07)	1.21	(0.97)	0.27	(0.98)
Ethnicity[d]	-0.07	(1.01)	-0.50	(1.02)	-0.52***	(0.11)	5.28***	(1.52)	-7.07***	(1.53)
IEP[e]	-4.54**	(1.65)	-2.01	(1.68)	-0.42*	(0.19)	-8.72***	(2.44)	7.82**	(2.45)
English Proficiency[f]	***		***		***		***		***	
Level 2	5.82**	(1.84)	-0.31	(1.87)	0.39	(0.21)	1.96	(2.69)	0.18	(2.71)
Level 3	10.41***	(1.40)	1.39	(1.43)	1.15***	(0.16)	4.67*	(2.04)	-2.43	(2.05)
Level 4	14.38***	(1.35)	2.84	(1.38)	1.32***	(0.15)	7.97***	(1.99)	-4.66	(2.00)
Level 5	20.35***	(1.34)	8.09***	(1.38)	1.77***	(0.15)	12.29***	(1.97)	-6.92**	(1.99)
Income[g]	-1.42*	(0.62)	-1.54*	(0.63)	-0.16*	(0.07)	-1.44	(0.93)	1.84	(0.94)
Parent Education	***		***		***		*		NS	
Level 2	4.01***	(1.00)	2.15	(1.01)	0.45***	(0.11)	1.72	(1.45)	0.28	(1.46)
Level 3	7.36***	(1.15)	4.25*	(1.16)	0.66***	(0.13)	3.92*	(1.67)	-0.80	(1.68)
Provider Type[h]	-0.64	(0.68)	-1.06	(0.71)	0.06	(0.08)	-0.14	(1.40)	-1.57	(1.47)
Teacher Certified[i]	0.82	(0.90)	0.86	(0.94)	-0.24*	(0.10)	-3.59	(1.83)	3.56	(1.94)
Class Size	0.18	(0.22)	0.28	(0.23)	0.04	(0.02)	0.21	(0.44)	-0.37	(0.47)
% Limited Eng Prof	0.66	(1.58)	0.21	(1.64)	0.06	(0.18)	-1.01	(3.15)	2.21	(3.32)

[a] Significance levels are *p< .05, **p< .01, ***p< .001.
[b] Female=0, Male=1.
[c] Non-White=0, White =1.
[d] Non-Latino=0, Latino=1.
[e] No IEP=0, IEP=1.
[f] English Proficiency Level 1 and Parent Education Level 1 were reference cells.
[g] Category Two=0, Category One=1.
[h] Private site=0, Public school site=1.
[i] Teacher not certified=0, Teacher certified=1.

Table 9. Child Outcome Scores for DLL Subsample

	English Outcomes				Spanish Outcomes			
	Fall		Spring		Fall		Spring	
	n	Mean (SD)	n	Mean (SD)	n	Mean (SD)	n	Mean (SD)
Measure		Range		Range		Range		Range
Language and Literacy								
Letter knowledge (Naming Letters Task[a])	132	7.3 (9.3) 2–26	126	15.5 (9.3) 0–26	137	0.9 (3.2) 0–23	125	1.8 (4.4) 0–23
Letter-word identification (WJ III Letter-Word Identification[b,c])	133	91.2 (14.2) 60–133	126	97.8 (12.8) 63–148	136	90.3 (10.7) 69–134	123	86.5 (11.7) 65–137
Vocabulary (WJ III Picture Vocabulary[b,c])	135	77.3 (19.3) 31–120	126	82.4 (13.8) 39–112	137	71.0 (20.2) 22–121	122	66.4 (21.6) 10–111
Phonological awareness (WJ III Sound Awareness[b,c])	129	82.1 (10.9) 61–123	126	85.0 (15.8) 56–142	135	74.1 (9.8) 59–106	122	77.6 (13.9) 50–119
Phonemic awareness (WJ III Word Attack[c,d])	132	374.6 (16.7) 364–468	125	391.3 (24.3) 364–493	132	373.1 (13.0) 360–426	123	381.0 (15.9) 360–447
Math								
Math problem-solving (WJ III Applied Problems[b,c])	131	90.3 (13.7) 59–122	125	96.4 (11.3) 53–127	131	87.1 (12.8) 50–119	122	90.9 (15.0) 38–122
Counting (Counting Task[e])	130	12.4 (8.6) 1–40	125	22.1 (12.0) 1–40	134	7.6 (4.8) 1–40	121	9.8 (5.6) 1–40
General Knowledge								
Basic self-knowledge (Social Awareness Task[f])	136	2.4 (1.4) 0–6	126	3.7 (1.6) 0–6	137	2.5 (1.2) 0–6	123	3.2 (1.3) 0–6

[a] Possible range=0–26.
[b] Indicates standard scores on norm-referenced measure with mean=100, SD=15.
[c] Scores reflect use of updated normative tables (2007).
[d] W scores were used for this measure. Possible range≈360–545.
[e] Possible range=0–40.
[f] Possible range=0–6.

Table 10. DLL Subsample English Child Outcome Regression Results—Language and Literacy

	Naming Letters Task n=107		WJ III Letter-Word ID n=108		WJ III Picture Vocabulary n=108		WJ III Sound Awareness n=107		WJ III Word Attack n=108	
Effect	Est[a]	(SE)	Est	(SE)	Est	(SE)	Est	(SE)	Est	(SE)
Intercept	1.77	(3.66)	90.73***	(5.35)	60.95***	(4.05)	68.79***	(4.23)	368.52***	(8.16)
Time	8.13***	(0.76)	6.59***	(0.91)	5.90***	(1.20)	3.99**	(1.21)	17.08***	(2.02)
Age	3.51	(3.02)	--	--	--	--	--	--	--	--
Gender[b]	0.75	(1.62)	-0.29	(2.45)	2.36	(1.90)	-1.66	(1.94)	3.04	(3.77)
Race[c]	2.54	(2.29)	0.65	(3.50)	1.05	(2.68)	3.62	(2.72)	2.28	(5.34)
IEP[d]	3.64	(4.85)	-0.70	(7.64)	0.79	(6.00)	-8.14	(5.87)	-3.15	(11.74)
English Proficiency[e]	*		*		***		***		NS	
Level 2	6.77	(2.71)	8.33	(4.17)	16.33***	(3.25)	7.55*	(3.27)	3.99	(6.41)
Level 3	2.92	(2.22)	3.09	(3.44)	19.48***	(2.65)	7.73*	(2.68)	3.27	(5.27)
Level 4	7.14	(2.93)	8.34	(4.43)	23.49***	(3.37)	15.68***	(3.46)	14.27*	(6.73)
Level 5	4.25	(2.99)	8.96	(4.40)	29.54***	(3.32)	24.35***	(3.47)	16.14*	(6.69)
Income[f]	2.89	(2.07)	2.81	(3.12)	3.03	(2.38)	3.39	(2.45)	2.65	(4.75)
Parent Education[e]	NS		NS		**		*		NS	
Level 2	1.55	(1.72)	1.78	(2.66)	5.63*	(2.06)	4.86*	(2.08)	0.49	(4.09)
Level 3	3.84	(2.53)	3.36	(3.89)	6.03	(3.01)	5.41	(3.00)	-1.16	(5.94)
Provider Type[g]	4.77	(2.65)	2.45	(3.65)	1.24	(2.55)	-3.23	(2.95)	9.66	(5.44)
Teacher Certified[h]	-4.83	(2.75)	-6.05	(3.74)	-0.71	(2.64)	1.41	(3.02)	-6.94	(5.58)
Class Size	1.41	(0.72)	1.18	(1.03)	0.02	(0.75)	0.01	(0.82)	2.30	(1.55)
% Limited Eng Prof	-7.92	(4.28)	-11.78*	(5.53)	-8.43*	(3.54)	-3.07	(4.57)	-13.65	(8.10)

[a] Significance levels are *p< .05, **p< .01, ***p< .001.

[b] Female=0, Male=1.

[c] Non-White=0, White =1.

[d] No IEP =0, IEP=1.

[e] English Proficiency Level 1 and Parent Education Level 1 were reference cells.

[f] Category Two=0, Category One=1.

[g] Private site=0, Public school site=1.

[h] Teacher not certified=0, Teacher certified=1.

Table 11. DLL Subsample English Child Outcome Regression Results—Math and General Knowledge

	Math				General Knowledge	
	WJ III Applied Problems n=108		Counting Task n=107		Social Awareness Task n=107	
Effect	Est[a]	(SE)	Est	(SE)	Est	(SE)
Intercept	78.21***	(3.92)	8.84*	(3.97)	1.90***	(0.41)
Time	6.84***	(0.99)	9.50***	(1.10)	1.41***	(0.14)
Age	--	--	9.79**	(3.42)	0.56	(0.35)
Gender[b]	0.09	(1.85)	0.34	(1.82)	-0.28	(0.19)
Race[c]	-0.04	(2.59)	-0.33	(2.54)	0.10	(0.26)
IEP[d]	-5.40	(5.82)	0.01	(5.79)	-0.38	(0.60)
English Proficiency[e]	***		*		***	
Level 2	10.21**	(3.15)	2.07	(3.10)	-0.01	(0.32)
Level 3	13.66***	(2.58)	2.57	(2.55)	1.44***	(0.26)
Level 4	18.62***	(3.26)	4.91	(3.24)	1.56***	(0.33)
Level 5	20.04***	(3.21)	9.39*	(3.24)	2.30***	(0.33)
Income[f]	5.05*	(2.32)	2.86	(2.30)	0.30	(0.23)
Parent Education[e]	**		NS		NS	
Level 2	3.20	(2.00)	2.42	(1.98)	0.27	(0.20)
Level 3	10.02**	(2.92)	2.50	(2.88)	0.53	(0.29)
Provider Type[g]	0.06	(2.47)	-3.45	(2.50)	-0.13	(0.25)
Teacher Certified[h]	-3.44	(2.55)	-0.28	(2.59)	-0.53*	(0.26)
Class Size	0.48	(0.74)	0.39	(0.73)	0.00	(0.07)
% Limited Eng Prof	-0.31	(3.44)	0.29	(3.63)	-0.41	(0.35)

[a] Significance levels are *p< .05, **p< .01, ***p< .001.
[b] Female=0, Male=1.
[c] Non-White=0, White =1.
[d] No IEP =0, IEP=1.
[e] English Proficiency Level 1 and Parent Education Level 1 were reference cells.
[f] Category Two=0, Category One=1.
[g] Private site=0, Public school site=1.
[h] Teacher not certified=0, Teacher certified=1.

Table 12. DLL Subsample Spanish Child Outcome Regression Results—Language and Literacy

	Naming Letters Task n=105		Bat III Letter-Word ID n=106		Bat III Picture Vocabulary n=106		Bat III Sound Awareness n=105		Bat III Word Attack n=106	
Effect	Est[a]	(SE)	Est	(SE)	Est	(SE)	Est	(SE)	Est	(SE)
Intercept	1.18	(1.46)	89.13***	(3.88)	45.17***	(5.43)	70.26***	(3.85)	376.02***	(4.71)
Time	1.09**	(0.34)	-2.85**	(1.05)	-4.87***	(0.97)	4.56**	(1.36)	8.29***	(1.58)
Age	1.37	(1.42)	--	--	--	--	--	--	--	--
Gender[b]	-0.18	(0.78)	-1.72	(2.01)	-1.54	(2.85)	-0.75	(2.00)	2.45	(2.46)
Race[c]	-0.16	(1.04)	0.28	(2.73)	8.41*	(3.85)	4.40	(2.70)	-4.78	(3.31)
IEP[d]	0.22	(2.40)	-3.78	(6.05)	-21.98*	(8.61)	-4.31	(5.94)	2.80	(7.33)
Spanish Proficiency[e]	NS		**		***		NS		**	
Level 2	-0.44	(1.57)	2.76	(4.11)	13.51*	(5.85)	0.03	(4.05)	2.92	(4.99)
Level 3	0.97	(1.15)	4.20	(2.88)	14.67**	(4.09)	-2.03	(2.87)	8.70	(3.53)
Level 4	2.00*	(0.98)	8.27**	(2.58)	23.64***	(3.66)	0.50	(2.55)	6.21	(3.13)
Level 5	2.94**	(1.09)	10.31**	(2.81)	35.40***	(3.97)	5.37	(2.78)	13.47***	(3.42)
Income[f]	-1.94*	(0.92)	-2.85	(2.42)	4.56	(3.43)	0.29	(2.42)	-1.11	(2.98)
Parent Education[e]	NS		NS		NS		NS		NS	
Level 2	0.48	(0.82)	1.89	(2.13)	-0.14	(3.02)	0.60	(2.13)	-3.42	(2.61)
Level 3	-0.39	(1.17)	2.38	(3.04)	2.65	(4.33)	5.37	(3.03)	3.61	(3.70)
Provider Type[g]	-0.49	(1.02)	-0.56	(2.73)	0.08	(3.78)	2.34	(2.65)	0.70	(3.25)
Teacher Certified[h]	1.07	(1.06)	-1.37	(2.81)	-3.99	(3.91)	-2.21	(2.74)	-1.93	(3.35)
Class Size	0.00	(0.28)	0.24	(0.74)	0.85	(1.05)	-0.21	(0.72)	1.43	(0.91)
% Limited Span Prof	-1.17	(1.37)	-3.39	(3.81)	9.58	(5.18)	-3.46	(3.54)	-9.78*	(4.41)

[a] Significance levels are *p< .05, **p< .01, ***p< .001.
[b] Female=0, Male=1.
[c] Non-White=0, White=1.
[d] No IEP =0, IEP=1.
[e] Spanish Proficiency Level 1 and Parent Education Level 1 were reference cells.
[f] Category Two=0, Category One=1.
[g] Private site=0, Public school site=1.
[h] Teacher not certified=0, Teacher certified=1.

Table 13. DLL Subsample Spanish Child Outcome Regression Results—Math and General Knowledge

	Math				General Knowledge	
	Bat III Applied Problems n=106		Counting Task n=105		Social Awareness Task n=105	
Effect	Est[a]	(SE)	Est	(SE)	Est	(SE)
Intercept	75.25***	(3.82)	6.26**	(1.90)	1.84***	(0.38)
Time	3.91***	(1.00)	2.04***	(0.44)	0.69***	(0.15)
Age	--	--	2.42	(1.85)	0.85*	(0.34)
Gender[b]	-1.68	(2.02)	-1.43	(1.01)	-0.41*	(0.19)
Race[c]	-0.06	(2.70)	0.94	(1.35)	0.44	(0.26)
IEP[d]	-8.74	(6.01)	0.33	(3.10)	-0.39	(0.55)
Spanish Proficiency[e]	***		***		***	
Level 2	8.00	(4.08)	0.49	(2.04)	0.36	(0.37)
Level 3	12.32***	(2.89)	3.20	(1.49)	0.11	(0.27)
Level 4	15.61***	(2.57)	3.28	(1.27)	0.27	(0.23)
Level 5	21.99***	(2.79)	5.36**	(1.40)	0.86**	(0.26)
Income[f]	2.67	(2.42)	-1.41	(1.20)	-0.02	(0.22)
Parent Education[e]	**		NS		NS	
Level 2	-0.54	(2.13)	1.17	(1.06)	0.40*	(0.19)
Level 3	10.43**	(3.03)	2.47	(1.52)	0.62*	(0.28)
Provider Type[g]	-0.24	(2.66)	-1.47	(1.34)	0.23	(0.29)
Teacher Certified[h]	-1.70	(2.75)	-0.94	(1.39)	-0.23	(0.30)
Class Size	-0.23	(0.73)	0.10	(0.36)	-0.04	(0.07)
% Limited Spanish Proficiency	1.95	(3.57)	2.64	(1.83)	0.45	(0.43)

[a] Significance levels are *p< .05, **p< .01, ***p< .001.
[b] Female=0, Male=1.
[c] Non-White=0, White =1.
[d] No IEP =0, IEP=1.
[e] Spanish Proficiency Level 1 and Parent Education Level 1 were reference cells.
[f] Category Two=0, Category One=1.
[g] Private site=0, Public school site=1.
[h] Teacher not certified=0, Teacher certified=1.

Table 14. Full Sample Child Outcome Moderator Results—Language and Literacy

	Naming Letters Task n=1,049		WJ III Letter-Word ID n=1,049		WJ III Picture Vocabulary n=1,050		WJ III Sound Awareness n=1,045		WJ III Word Attack n=1,050	
Effect	Est[a]	(SE)	Est[a]	(SE)	Est[a]	(SE)	Est[a]	(SE)	Est[a]	(SE)
Intercept	9.18***	(1.65)	94.72***	(2.36)	73.98***	(1.74)	77.85***	(3.05)	378.13***	(4.66)
Time	5.00***	(1.30)	4.62**	(1.66)	7.49***	(1.51)	2.51	(2.79)	11.89**	(4.33)
Age	3.67***	(0.78)	--	--	--	--	--	--	--	--
Gender[b]	-0.54	(0.50)	-0.52	(0.73)	1.44**	(0.54)	-0.53	(0.91)	-0.53	(1.42)
Race[c]	-2.67***	(0.56)	-4.86***	(0.81)	1.33*	(0.58)	1.01	(1.03)	-6.16***	(1.58)
Ethnicity[d]	-0.84	(0.94)	-0.16	(1.35)	-6.69***	(1.00)	-2.37	(1.70)	-1.80	(2.65)
IEP[e]	-1.83	(1.51)	-4.86*	(2.17)	0.52	(1.64)	-3.75	(2.84)	-2.45	(4.28)
English Proficiency[f]	***		***		***		***		***	
Level 2	0.71	(1.70)	4.83*	(2.45)	15.85***	(1.82)	6.48*	(3.12)	0.37	(4.82)
Level 3	1.39	(1.29)	3.83*	(1.86)	18.73***	(1.39)	6.49**	(2.37)	1.60	(3.67)
Level 4	2.57*	(1.25)	5.97***	(1.79)	21.67***	(1.33)	12.14***	(2.30)	3.84	(3.55)
Level 5	6.65***	(1.24)	10.55***	(1.77)	26.85***	(1.32)	22.96***	(2.28)	14.71***	(3.52)
Income[g]	-1.88**	(0.57)	-2.63**	(0.82)	-1.44*	(0.61)	-2.13*	(1.04)	-4.56**	(1.61)
Parent Education	***		***		***		***		***	
Level 2	2.91**	(0.93)	3.13*	(1.34)	5.43***	(1.00)	2.63	(1.69)	4.04	(2.63)
Level 3	6.84***	(1.07)	8.89***	(1.54)	5.44***	(1.15)	6.13**	(1.94)	12.21***	(3.02)
Provider Type[h]	-1.36*	(0.62)	-1.19	(0.88)	-0.18	(0.61)	-2.15	(1.22)	-2.88	(1.77)
Teacher Certified[i]	-0.04	(0.81)	-0.87	(1.15)	-0.52	(0.79)	2.03	(1.60)	2.01	(2.32)
Class Size	0.37	(0.20)	0.39	(0.28)	0.11	(0.20)	0.22	(0.40)	0.58	(0.57)
% Limited Eng Prof	0.36	(1.44)	-2.63	(2.05)	-4.84***	(1.41)	-1.23	(2.81)	2.82	(4.11)
Time x Gender	-0.09	(0.41)	-1.11	(0.53)	0.29	(0.48)	-0.17	(0.88)	-1.85	(1.36)
Time x Race	1.24*	(0.44)	0.69	(0.56)	-0.34	(0.51)	0.50	(0.94)	2.66	(1.46)
Time x Ethnicity	0.43	(0.74)	1.14	(0.95)	0.21	(0.87)	-0.19	(1.59)	-0.90	(2.49)
Time x IEP	0.67	(1.22)	2.55	(1.56)	-1.72	(1.42)	-6.88	(2.69)	1.77	(4.06)
Time x Eng Prof[f]	***		***		***		*		NS	
Time x Level 2	-0.37	(1.37)	-5.35*	(1.75)	-6.29***	(1.59)	-2.62	(2.95)	-1.69	(4.56)
Time x Level 3	0.78	(1.04)	-3.12	(1.33)	-6.21***	(1.20)	2.45	(2.23)	2.06	(3.46)
Time x Level 4	0.97	(0.99)	-2.32	(1.27)	-7.16***	(1.15)	1.69	(2.14)	4.79	(3.32)
Time x Level 5	-0.36	(0.98)	-3.61*	(1.26)	-7.75***	(1.14)	1.70	(2.12)	2.50	(3.27)
Time x Income	1.06	(0.46)	0.44	(0.59)	0.21	(0.54)	-2.59	(0.99)	1.56	(1.53)

[a] Significance levels are *p< .05, **p< .01, ***p< .001.
[b] Female=0, Male=1.
[c] Non-White=0, White=1.
[d] Non-Latino=0, Latino=1.
[e] No IEP=0, IEP=1.
[f] English Proficiency Level 1 and Parent Education Level 1 were reference cells.
[g] Category Two=0, Category One=1.
[h] Private site=0, Public school site=1.
[i] Teacher not certified=0, Teacher certified=1.

Table 14. Full Sample Child Outcome Moderator Results—Language and Literacy

	Naming Letters Task n=1,049		WJ III Letter-Word ID n=1,049		WJ III Picture Vocabulary n=1,050		WJ III Sound Awareness n=1,045		WJ III Word Attack n=1,050	
Effect	Est[a]	(SE)	Est[a]	(SE)	Est[a]	(SE)	Est[a]	(SE)	Est[a]	(SE)
Time x Parent Ed[f]	***		NS		**		NS		NS	
Time x Level 2	-0.80	(0.75)	-0.31	(0.96)	-2.08*	(0.87)	1.94	(1.61)	-1.67	(2.49)
Time x Level 3	-2.65*	(0.85)	-1.02	(1.10)	-0.60	(0.99)	1.79	(1.84)	-0.50	(2.86)
Time x Provider Type	2.18***	(0.46)	1.88*	(0.59)	-0.24	(0.53)	1.42	(0.98)	4.11**	(1.53)
Time x Cert Teacher	0.15	(0.60)	0.17	(0.78)	1.15	(0.70)	2.13	(1.29)	0.82	(2.01)
Time x Class Size	-0.38*	(0.15)	-0.25	(0.19)	-0.08	(0.18)	-0.21	(0.33)	0.28	(0.50)
Time x % Ltd Eng Prof	0.46	(1.06)	1.68	(1.35)	3.83**	(1.22)	-1.49	(2.25)	0.56	(3.51)

[a] Significance levels are *p< .05, **p< .01, ***p< .001.

[f] English Proficiency Level 1 and Parent Education Level 1 were reference cells.

Table 15. Full Sample Child Outcome Moderator Results—Math, General Knowledge, and Classroom Behavior

	Math				General Knowledge		Classroom Behavior			
	WJ III Applied Problems n=1,050		Counting Task n=1,048		Social Awareness Task n=1,049		SSiS Social Skills n=1,037		SSiS Problem Behaviors n=1,038	
Effect	Est[a]	(SE)	Est[a]	(SE)	Est[a]	(SE)	Est[a]	(SE)	Est[a]	(SE)
Intercept	76.80***	(1.99)	12.30***	(2.18)	2.88***	(0.24)	83.95***	(3.04)	102.97***	(3.07)
Time	9.55***	(1.82)	8.73***	(2.38)	0.75**	(0.26)	11.01***	(2.61)	-0.55	(2.39)
Age	--	--	5.66***	(0.92)	0.33**	(0.10)	--	--	--	--
Gender[b]	0.35	(0.61)	-1.28	(0.65)	-0.14	(0.07)	1.38	(0.88)	1.04	(0.87)
Race[c]	4.35***	(0.67)	-1.21	(0.73)	-0.25**	(0.08)	1.29	(1.05)	0.50	(1.05)
Ethnicity[d]	-0.98	(1.13)	-0.98	(1.22)	-0.76***	(0.14)	4.63**	(1.67)	-6.06***	(1.66)
IEP[e]	-4.19*	(1.85)	-1.90	(2.04)	-0.28	(0.22)	-10.75***	(2.67)	7.42**	(2.65)
English Proficiency[f]	***		***		***		***		***	
Level 2	8.57***	(2.07)	1.84	(2.26)	0.43	(0.25)	1.89	(2.97)	2.41	(2.97)
Level 3	13.83***	(1.58)	2.15	(1.73)	1.27***	(0.19)	6.21**	(2.24)	-2.18	(2.22)
Level 4	17.61***	(1.52)	3.90*	(1.68)	1.49***	(0.18)	8.84***	(2.18)	-3.87	(2.16)
Level 5	24.82***	(1.51)	8.84***	(1.67)	2.01***	(0.18)	13.79***	(2.16)	-6.31**	(2.15)
Income[g]	-1.88**	(0.69)	-2.30**	(0.74)	-0.19*	(0.08)	-1.28	(1.02)	1.31	(1.02)
Parent Education	***		***		***		*		NS	
Level 2	5.26***	(1.13)	2.08	(1.22)	0.43**	(0.13)	2.21	(1.61)	-0.74	(1.60)
Level 3	8.31***	(1.29)	4.48**	(1.39)	0.68***	(0.15)	4.80*	(1.86)	-1.64	(1.84)
Provider Type[h]	-0.27	(0.75)	-1.73*	(0.81)	0.07	(0.09)	0.06	(1.45)	-1.86	(1.53)
Teacher Certified[i]	0.59	(0.98)	1.10	(1.06)	-0.24*	(0.11)	-1.47	(1.92)	3.76	(2.01)
Class Size	0.26	(0.24)	0.31	(0.26)	0.02	(0.03)	0.13	(0.46)	-0.26	(0.48)
% Limited Eng Prof	1.31	(1.74)	1.54	(1.89)	0.13	(0.20)	-0.77	(3.29)	3.85	(3.45)
Time x Gender	-0.32	(0.57)	0.53	(0.74)	0.04	(0.08)	0.48	(0.85)	0.08	(0.78)
Time x Race	-0.60	(0.62)	0.00	(0.79)	0.09	(0.09)	-0.20	(0.92)	-0.46	(0.84)
Time x Ethnicity	2.10	(1.05)	1.08	(1.35)	0.51**	(0.15)	1.38	(1.57)	-2.40	(1.45)
Time x IEP	-0.76	(1.73)	-0.31	(2.27)	-0.32	(0.25)	4.75	(2.66)	1.10	(2.45)
Time x Eng Prof[f]	***		NS		***		**		NS	
Time x Level 2	-5.05*	(1.93)	-4.29	(2.52)	-0.06	(0.27)	0.24	(2.78)	-4.79	(2.58)
Time x Level 3	-6.52***	(1.46)	-1.33	(1.92)	-0.25	(0.21)	-3.41	(2.10)	-0.54	(1.93)
Time x Level 4	-6.05***	(1.40)	-1.99	(1.84)	-0.34	(0.20)	-2.11	(2.01)	-1.78	(1.85)
Time x Level 5	-8.75***	(1.38)	-1.35	(1.82)	-0.50	(0.20)	-3.47	(1.99)	-1.44	(1.83)

[a] Significance levels are *p< .05, **p< .01, ***p< .001.
[b] Female=0, Male=1.
[c] Non-White=0, White=1.
[d] Non-Latino=0, Latino=1.
[e] No IEP=0, IEP=1.
[f] English Proficiency Level 1 and Parent Education Level 1 were reference cells.
[g] Category Two=0, Category One=1.
[h] Private site=0, Public school site=1.
[i] Teacher not certified=0, Teacher certified=1.

Table 15. Full Sample Child Outcome Moderator Results—Math, General Knowledge, and Classroom Behavior

	Math				General Knowledge		Classroom Behavior			
	WJ III Applied Problems n=1,050		Counting Task n=1,048		Social Awareness Task n=1,049		SSiS Social Skills n=1,037		SSiS Problem Behaviors n=1,038	
Effect	Est[a]	(SE)	Est[a]	(SE)	Est[a]	(SE)	Est[a]	(SE)	Est[a]	(SE)
Time x Income	1.03	(0.64)	1.64*	(0.83)	0.06	(0.09)	-0.38	(0.95)	1.16	(0.87)
Time x Parent Ed[f]	NS		NS		NS		NS		NS	
Time x Level 2	-2.45*	(1.04)	0.17	(1.36)	0.04	(0.15)	-0.97	(1.51)	2.23	(1.39)
Time x Level 3	-1.81	(1.20)	-0.45	(1.55)	-0.04	(0.17)	-1.77	(1.75)	1.80	(1.61)
Time x Provider Type	-0.81	(0.64)	1.42	(0.83)	-0.02	(0.09)	-0.36	(0.96)	0.73	(0.88)
Time x Cert Teacher	0.45	(0.84)	-0.50	(1.09)	0.00	(0.12)	-4.58**	(1.26)	-0.41	(1.15)
Time x Class Size	-0.19	(0.21)	-0.06	(0.27)	0.05	(0.03)	0.14	(0.30)	-0.25	(0.28)
Time x % Ltd Eng Prof	-1.54	(1.47)	-2.72	(1.90)	-0.14	(0.21)	-0.27	(2.25)	-3.59	(2.07)

[a] Significance levels are *p< .05, **p< .01, ***p< .001.

[f] English Proficiency Level 1 and Parent Education Level 1 were reference cells.

Figure 1. Growth in WJ III Letter-Word Identification by English Proficiency

n=1,049

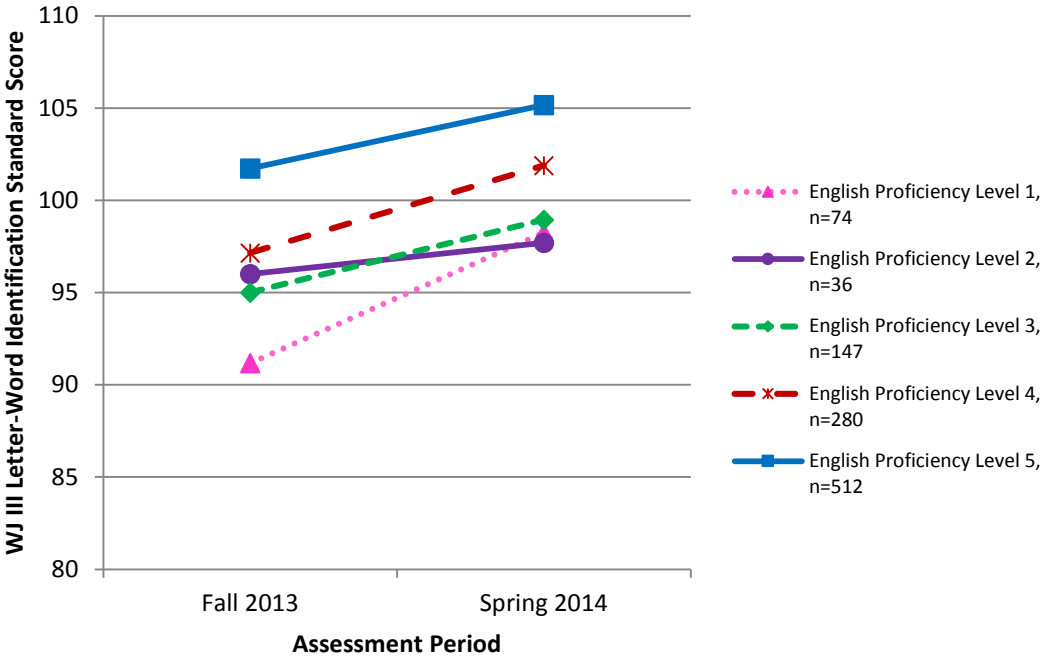

Figure 2. Growth in WJ III Picture Vocabulary by English Proficiency

n=1,050

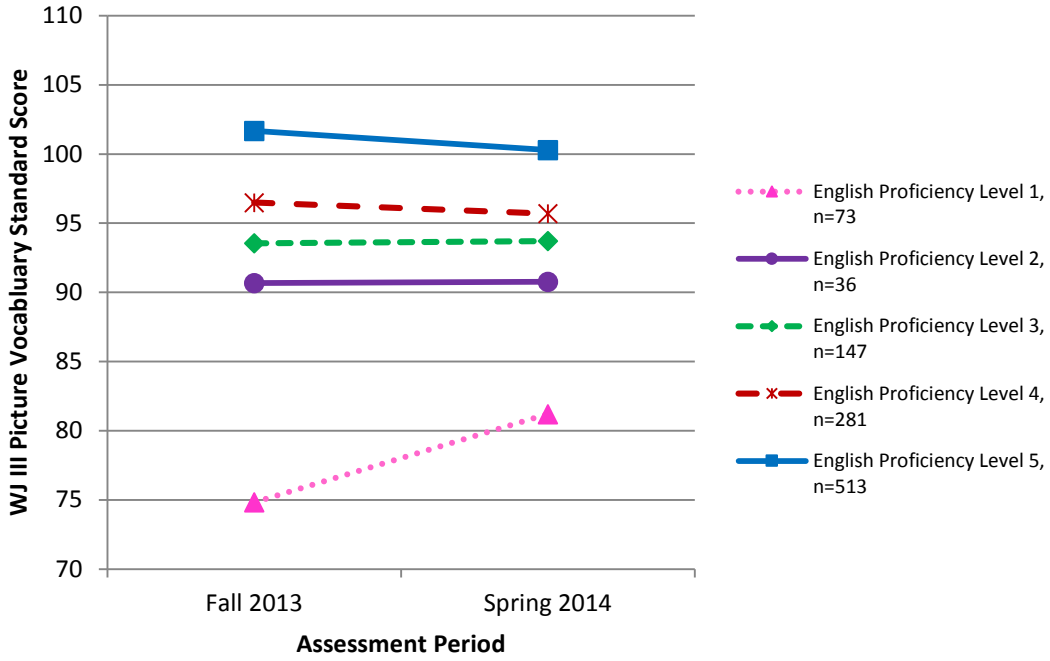

Figure 3. Growth in WJ III Applied Problems by English Proficiency

n=1,050

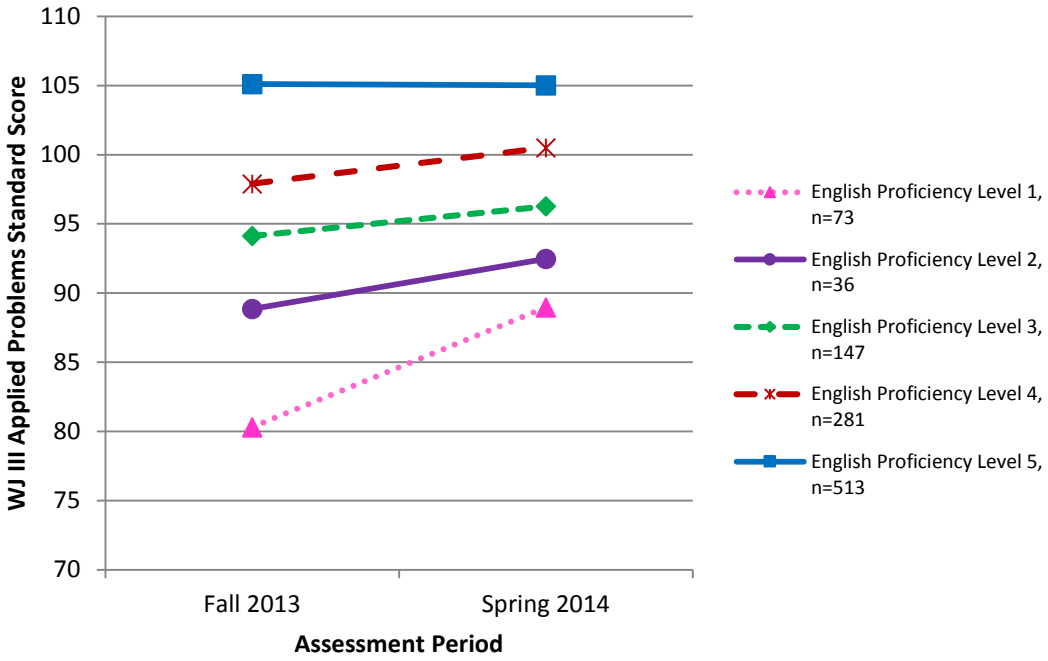

Figure 4. Growth in Counting Task by Income

n=1,048

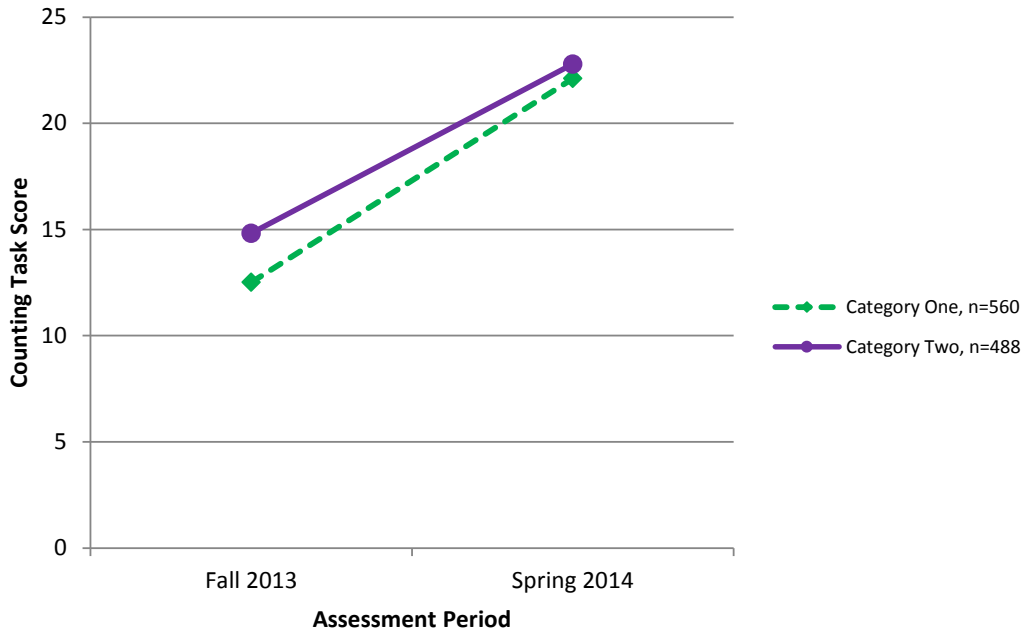

Figure 5. Growth in Naming Letters Task by Parent Education

n=1,049

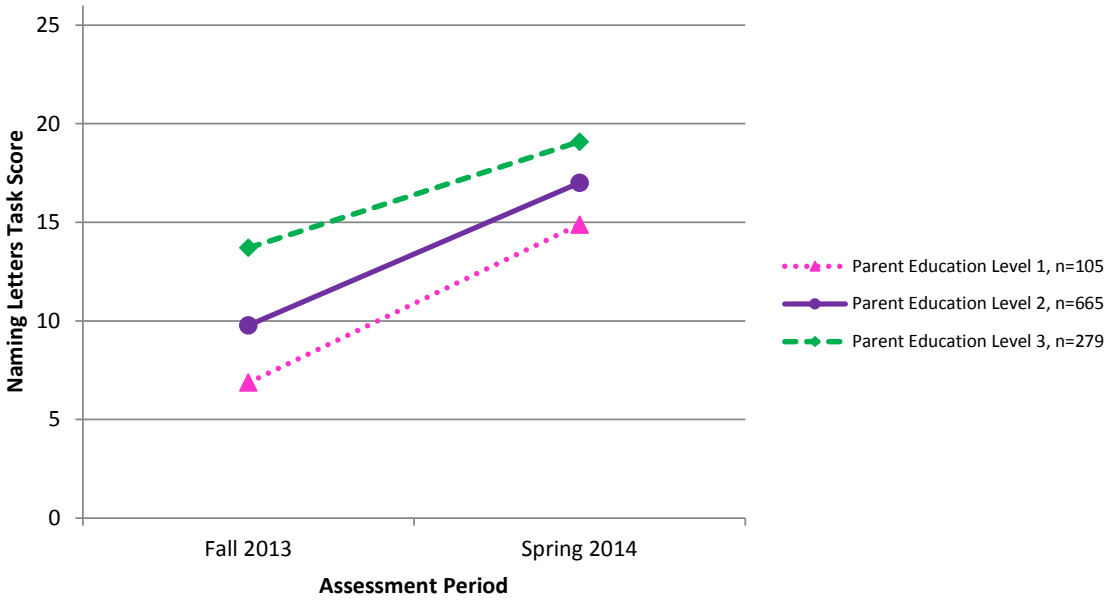

Figure 6. Growth in WJ III Picture Vocabulary by Parent Education

n=1,050

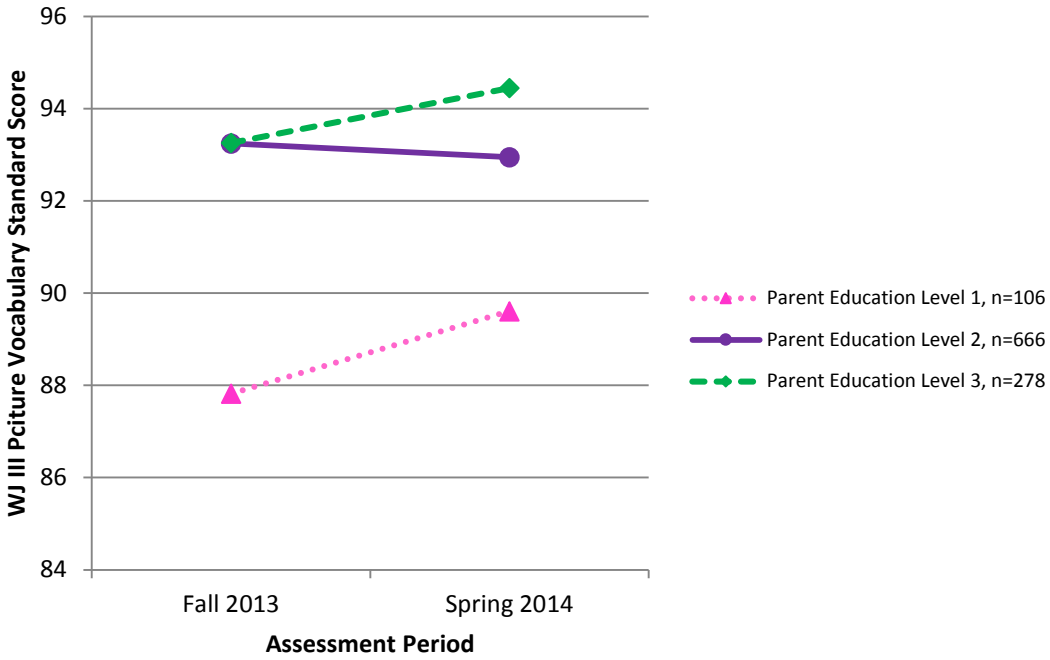

Figure 7. Growth in Social Awareness Task by Ethnicity

n=1,049

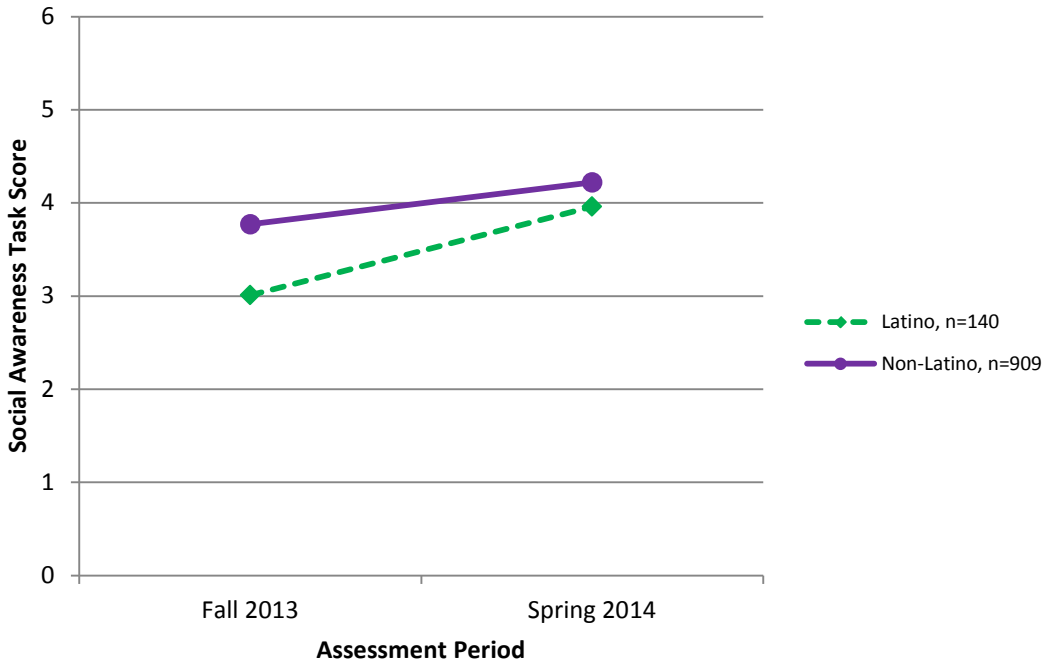

Figure 8. Growth in Naming Letters Task by Race

n=1,049

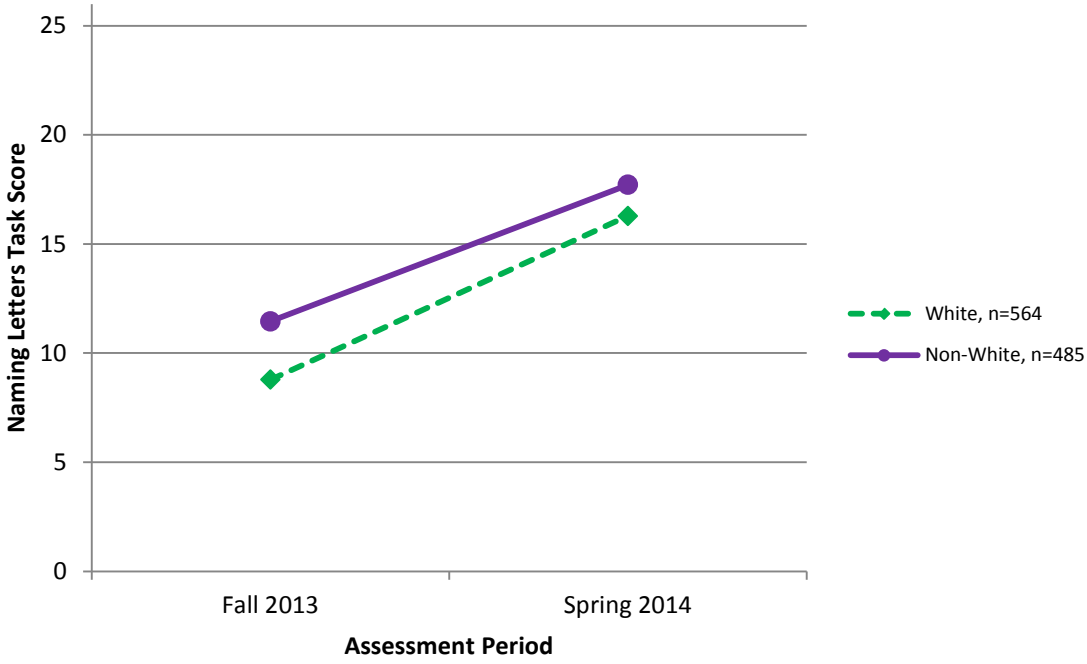

Figure 9. Growth in Naming Letters Task by Program Type

n=1,049

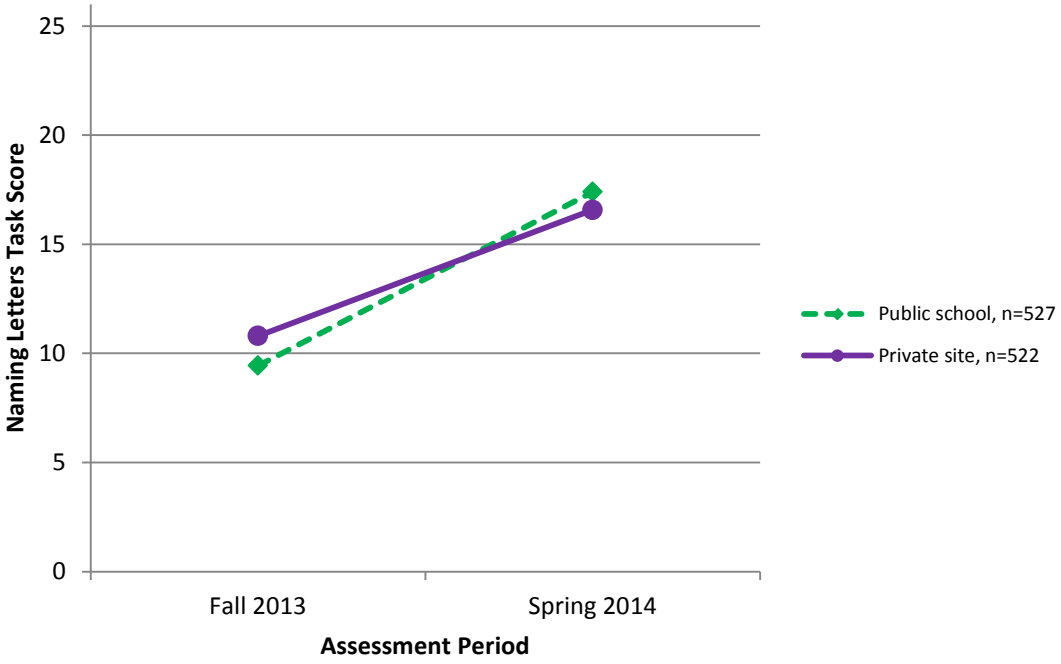

Figure 10. Growth in WJ III Letter-Word Identification by Program Type

n=1,049

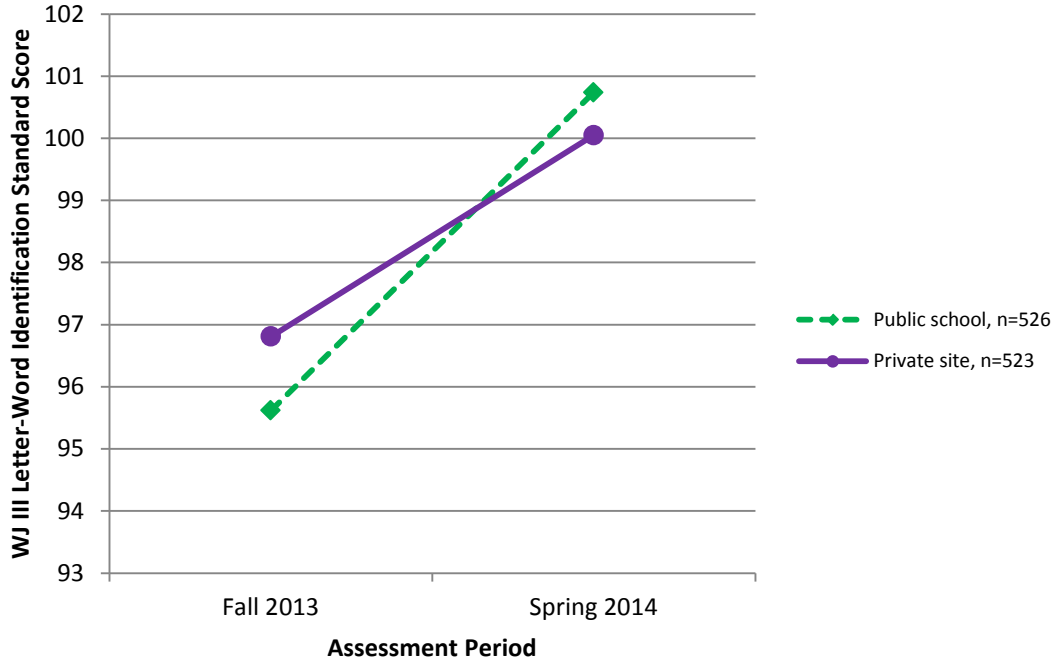

Figure 11. Growth in WJ III Word Attack by Program Type

n=1,050

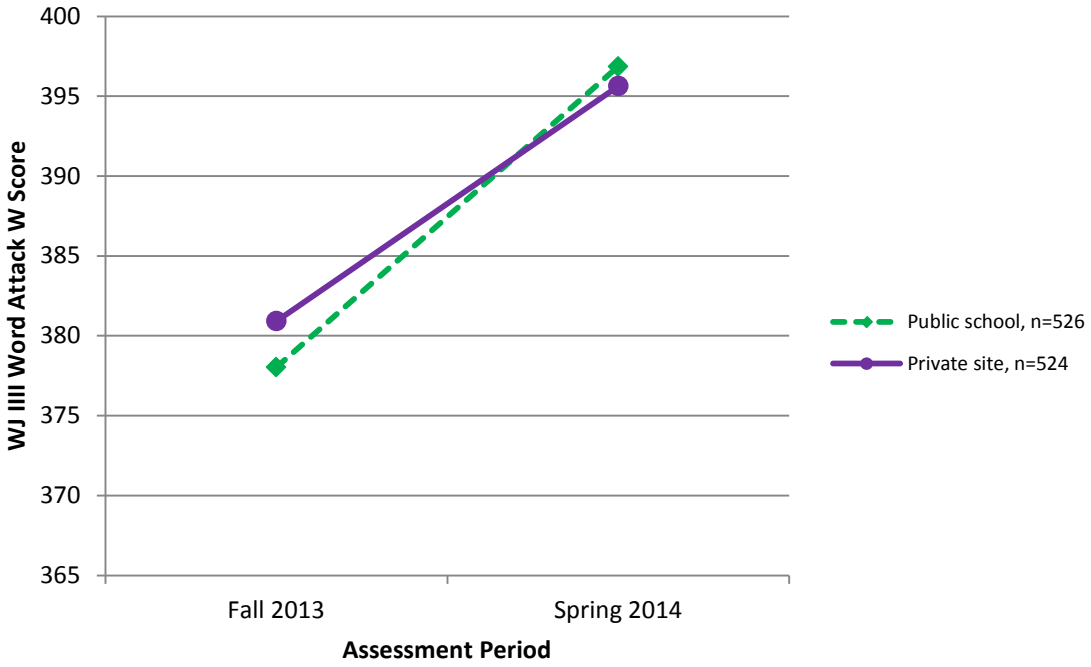

Figure 12. Growth in Naming Letters Task by Class Size

n=1,049

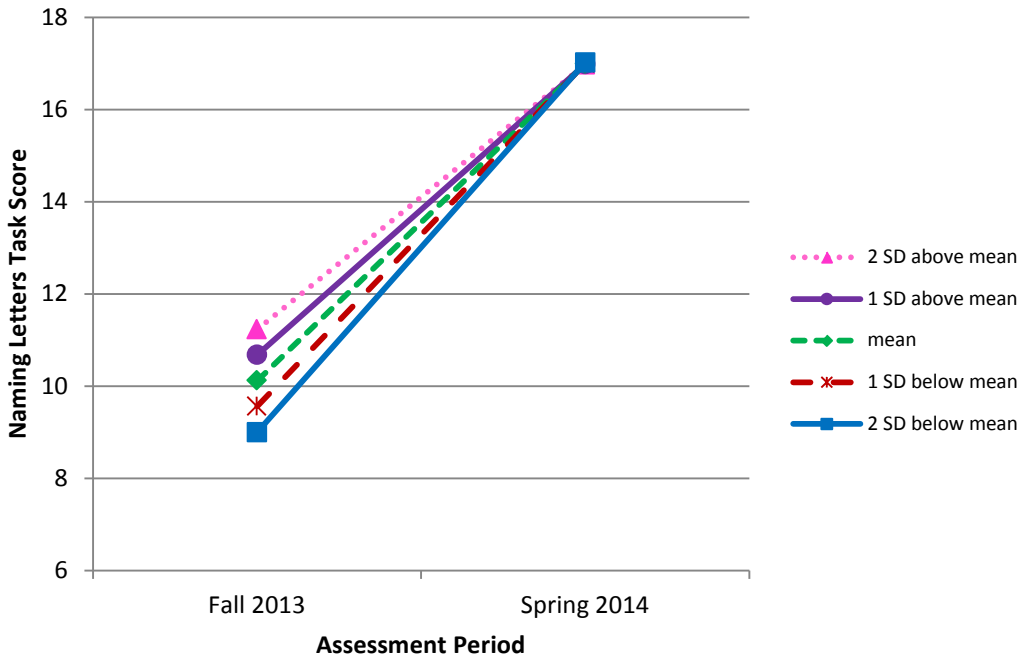

Figure 13. Growth in WJ III Picture Vocabulary by Proportion of Limited English Proficiency

n=1,050

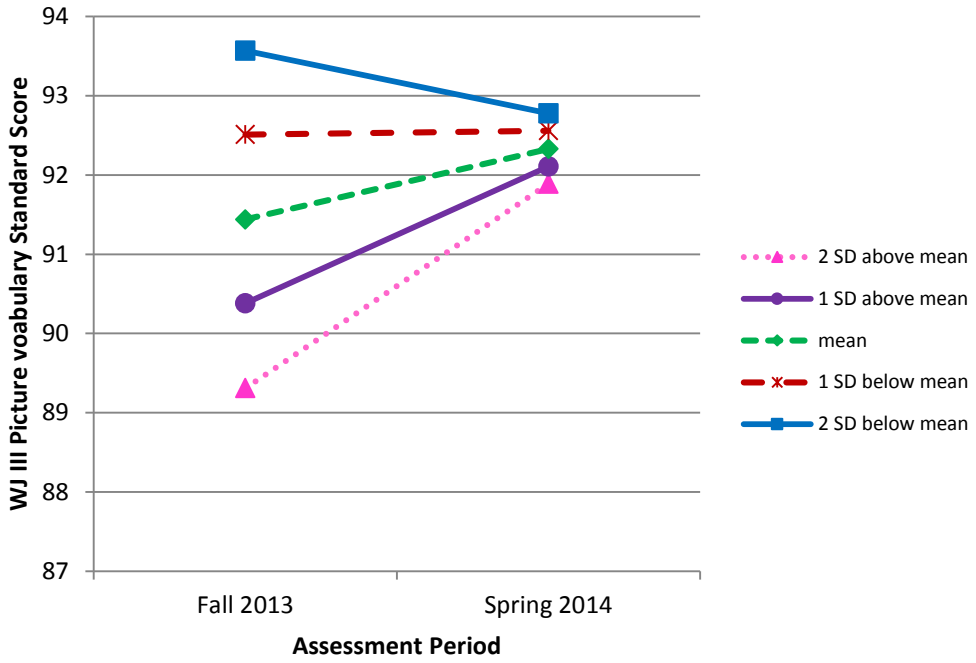

Figure 14. Growth in SSiS Social Skills by Teacher Certification Status

n=1,037

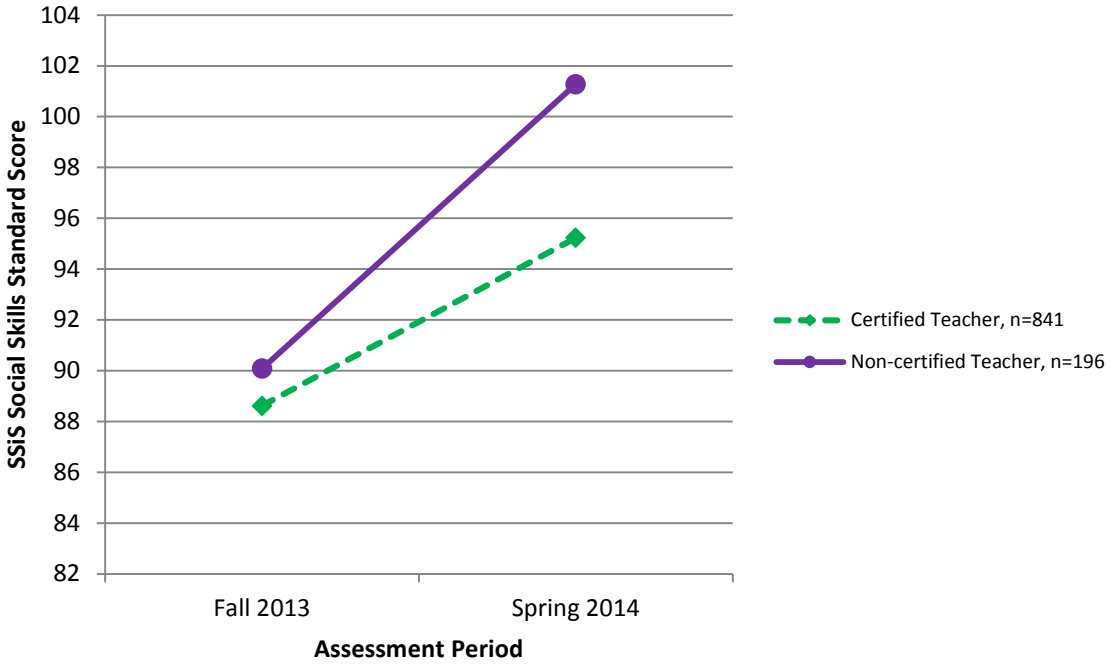

Table 16. Classroom Quality Predictors (ECERS-R) of Child Outcomes–Full Sample–Language and Literacy

	Naming Letters Task n=1,049		WJ III Letter-Word ID n=1,049		WJ III Picture Vocabulary n=1,050		WJ III Sound Awareness n=1,045		WJ III Word Attack n=1,050	
Effect	Est[a]	(SE)	Est	(SE)	Est	(SE)	Est	(SE)	Est	(SE)
Intercept	9.27***	(1.65)	94.75***	(2.36)	74.00***	(1.74)	77.66***	(3.05)	378.11***	(4.67)
Time	4.98***	(1.30)	4.61**	(1.66)	7.47***	(1.51)	2.50	(2.79)	11.90**	(4.33)
Age	3.70***	(0.78)	--	--	--	--	--	--	--	--
Gender[b]	-0.55	(0.50)	-0.53	(0.73)	1.43**	(0.54)	-0.52	(0.91)	-0.52	(1.42)
Race[c]	-2.54***	(0.56)	-4.79***	(0.81)	1.37*	(0.59)	0.85	(1.04)	-6.20***	(1.60)
Ethnicity[d]	-0.87	(0.94)	-0.17	(1.35)	-6.69***	(1.00)	-2.33	(1.70)	-1.80	(2.65)
IEP[e]	-1.78	(1.51)	-4.84*	(2.17)	0.53	(1.64)	-3.80	(2.84)	-2.47	(4.29)
English Proficiency[f]	***		***		***		***		***	
Level 2	0.77	(1.70)	4.86*	(2.45)	15.86***	(1.82)	6.43*	(3.12)	0.34	(4.82)
Level 3	1.43	(1.29)	3.85*	(1.86)	18.73***	(1.39)	6.45**	(2.37)	1.58	(3.68)
Level 4	2.63*	(1.25)	6.00***	(1.79)	21.68***	(1.34)	12.08***	(2.30)	3.80	(3.55)
Level 5	6.73***	(1.24)	10.60***	(1.77)	26.87***	(1.32)	22.86***	(2.28)	14.67***	(3.52)
Income[g]	-1.85**	(0.57)	-2.61**	(0.82)	-1.43*	(0.61)	-2.16*	(1.04)	-4.56**	(1.61)
Parent Education	***		***		***		***		***	
Level 2	2.95**	(0.93)	3.15*	(1.35)	5.44***	(1.00)	2.58	(1.69)	4.03	(2.63)
Level 3	6.93***	(1.07)	8.93***	(1.54)	5.47***	(1.15)	6.03**	(1.94)	12.17***	(3.02)
Provider Type[h]	-1.66**	(0.64)	-1.34	(0.91)	-0.26	(0.63)	-1.68	(1.25)	-2.79	(1.83)
Teacher Certified[i]	-0.19	(0.81)	-0.95	(1.16)	-0.57	(0.80)	2.25	(1.60)	2.07	(2.33)
Class Size	0.35	(0.20)	0.38	(0.28)	0.10	(0.20)	0.26	(0.39)	0.59	(0.57)
% Limited Eng Prof	0.41	(1.44)	-2.60	(2.05)	-4.83***	(1.41)	-1.34	(2.80)	2.81	(4.12)
ECERS-R Total	-0.56	(0.30)	-0.28	(0.43)	-0.15	(0.29)	0.86	(0.59)	0.18	(0.85)
Time x Gender	-0.08	(0.41)	-1.11	(0.53)	0.29	(0.48)	-0.16	(0.88)	-1.86	(1.37)
Time x Race	1.18*	(0.44)	0.64	(0.57)	-0.39	(0.52)	0.46	(0.95)	2.75	(1.48)
Time x Ethnicity	0.44	(0.74)	1.15	(0.95)	0.23	(0.87)	-0.17	(1.60)	-0.92	(2.49)
Time x IEP	0.64	(1.22)	2.53	(1.56)	-1.75	(1.42)	-6.92	(2.69)	1.82	(4.07)
Time x Eng Prof[f]	***		***		***		*		NS	
Time x Level 2	-0.40	(1.37)	-5.37*	(1.75)	-6.30***	(1.59)	-2.61	(2.95)	-1.65	(4.56)
Time x Level 3	0.75	(1.04)	-3.13	(1.33)	-6.22***	(1.20)	2.46	(2.24)	2.10	(3.46)
Time x Level 4	0.93	(1.00)	-2.35	(1.27)	-7.18***	(1.16)	1.67	(2.15)	4.85	(3.32)
Time x Level 5	-0.42	(0.98)	-3.65*	(1.26)	-7.79***	(1.14)	1.69	(2.12)	2.57	(3.28)

[a] Significance levels are *p< .05, **p< .01, ***p< .001.
[b] Female=0, Male=1.
[c] Non-White =0, White =1.
[d] Non-Latino=0, Latino=1.
[e] No IEP=0, IEP=1.
[f] English Proficiency Level 1 and Parent Education Level 1 were reference cells.
[g] Category Two=0, Category One=1.
[h] Private site=0, Public school site=1.
[i] Teacher not certified=0, Teacher certified=1.

Table 16. Classroom Quality Predictors (ECERS-R) of Child Outcomes–Full Sample–Language and Literacy

	Naming Letters Task n=1,049		WJ III Letter-Word ID n=1,049		WJ III Picture Vocabulary n=1,050		WJ III Sound Awareness n=1,045		WJ III Word Attack n=1,050	
Effect	Est[a]	(SE)	Est	(SE)	Est	(SE)	Est	(SE)	Est	(SE)
Time x Income	1.04	(0.46)	0.42	(0.59)	0.20	(0.54)	-2.61	(0.99)	1.59	(1.53)
Time x Parent Ed[f]	***		NS		**		NS		NS	
Time x Level 2	-0.82	(0.75)	-0.32	(0.96)	-2.10*	(0.87)	1.92	(1.61)	-1.64	(2.49)
Time x Level 3	-2.69**	(0.86)	-1.04	(1.10)	-0.62	(1.00)	1.77	(1.84)	-0.44	(2.86)
Time x Provider	2.31***	(0.47)	1.96*	(0.61)	-0.15	(0.55)	1.49	(1.02)	3.94*	(1.58)
Time x Teacher Cert	0.22	(0.61)	0.22	(0.78)	1.20	(0.71)	2.16	(1.30)	0.73	(2.02)
Time x Class Size	-0.37*	(0.15)	-0.24	(0.19)	-0.07	(0.18)	-0.21	(0.33)	0.27	(0.51)
Time x % Ltd Eng Prof	0.45	(1.05)	1.67	(1.35)	3.81**	(1.22)	-1.51	(2.25)	0.57	(3.51)
Time x ECERS-R	0.24	(0.22)	0.15	(0.28)	0.17	(0.26)	0.12	(0.48)	-0.31	(0.74)

[a] Significance levels are *p< .05, **p< .01, ***p< .001.

[f] English Proficiency Level 1 and Parent Education Level 1 were reference cells.

Table 17. Classroom Quality Predictors (ECERS-R) of Child Outcomes–Full Sample–Math, General Knowledge, and Classroom Behavior

	Math				General Knowledge		Classroom Behavior			
	WJ III Applied Problems n=1,050		Counting Task n=1,048		Social Awareness Task n=1,049		SSiS Social Skills n=1,037		SSiS Problem Behaviors n=1,038	
Effect	Est[a]	(SE)	Est	(SE)	Est	(SE)	Est	(SE)	Est	(SE)
Intercept	76.81***	(1.99)	12.36***	(2.18)	2.88***	(0.24)	83.80***	(3.05)	102.86***	(3.08)
Time	9.53***	(1.82)	8.71***	(2.38)	0.75**	(0.26)	11.03***	(2.61)	-0.39	(2.39)
Age	--	--	5.68***	(0.92)	0.34**	(0.10)	--	--	--	--
Gender[b]	0.35	(0.61)	-1.28*	(0.65)	-0.14	(0.07)	1.39	(0.88)	1.07	(0.87)
Race[c]	4.37***	(0.68)	-1.12	(0.73)	-0.25**	(0.08)	1.22	(1.06)	0.39	(1.06)
Ethnicity[d]	-0.99	(1.13)	-1.00	(1.22)	-0.76***	(0.14)	4.65**	(1.67)	-6.03***	(1.66)
IEP[e]	-4.18*	(1.85)	-1.88	(2.04)	-0.28	(0.22)	-10.79***	(2.67)	7.34**	(2.65)
English Proficiency[f]	***		***		***		***		***	
Level 2	8.58***	(2.07)	1.88	(2.26)	0.43	(0.25)	1.86	(2.97)	2.35	(2.97)
Level 3	13.84***	(1.58)	2.17	(1.73)	1.27***	(0.19)	6.18**	(2.24)	-2.21	(2.22)
Level 4	17.62***	(1.52)	3.94*	(1.68)	1.49***	(0.18)	8.81***	(2.18)	-3.92	(2.17)
Level 5	24.84***	(1.51)	8.91***	(1.67)	2.01***	(0.18)	13.74***	(2.17)	-6.41**	(2.15)
Income[g]	-1.87**	(0.69)	-2.28**	(0.74)	-0.19*	(0.08)	-1.29	(1.02)	1.28	(1.02)
Parent Education	***		***		***		*		NS	
Level 2	5.26***	(1.13)	2.11	(1.22)	0.43**	(0.13)	2.20	(1.61)	-0.77	(1.60)
Level 3	8.32***	(1.29)	4.55**	(1.39)	0.68***	(0.15)	4.76*	(1.86)	-1.71	(1.84)
Provider Type[h]	-0.32	(0.77)	-1.95*	(0.84)	0.06	(0.09)	0.35	(1.51)	-1.56	(1.59)
Teacher Certified[i]	0.56	(0.99)	0.99	(1.07)	-0.25*	(0.12)	-1.36	(1.93)	3.90	(2.02)
Class Size	0.26	(0.24)	0.29	(0.26)	0.02	(0.03)	0.15	(0.46)	-0.24	(0.48)
% Limited Eng Prof	1.32	(1.74)	1.58	(1.90)	0.13	(0.20)	-0.83	(3.30)	3.77	(3.46)
ECERS-R Total	-0.09	(0.36)	-0.42	(0.39)	-0.02	(0.04)	0.52	(0.70)	0.53	(0.74)
Time x Gender	-0.32	(0.57)	0.54	(0.74)	0.04	(0.08)	0.48	(0.85)	-0.01	(0.78)
Time x Race	-0.66	(0.62)	-0.09	(0.80)	0.09	(0.09)	-0.17	(0.93)	-0.18	(0.85)
Time x Ethnicity	2.12	(1.05)	1.10	(1.35)	0.51**	(0.15)	1.37	(1.57)	-2.55	(1.44)
Time x IEP	-0.80	(1.73)	-0.33	(2.27)	-0.32	(0.25)	4.78	(2.66)	1.34	(2.44)

[a] Significance levels are *p< .05, **p< .01, ***p< .001.
[b] Female=0, Male=1.
[c] Non-White=0, White =1.
[d] Non-Latino=0, Latino=1.
[e] No IEP=0, IEP=1.
[f] English Proficiency Level 1 and Parent Education Level 1 were reference cells.
[g] Category Two=0, Category One=1.
[h] Private site=0, Public school site=1.
[i] Teacher not certified=0, Teacher certified=1.

Table 17. Classroom Quality Predictors (ECERS-R) of Child Outcomes–Full Sample–Math, General Knowledge, and Classroom Behavior

	Math				General Knowledge		Classroom Behavior			
	WJ III Applied Problems n=1,050		Counting Task n=1,048		Social Awareness Task n=1,049		SSiS Social Skills n=1,037		SSiS Problem Behaviors n=1,038	
Effect	Est[a]	(SE)	Est	(SE)	Est	(SE)	Est	(SE)	Est	(SE)
Time x Eng Prof[f]	***		NS		***		**		NS	
Time x Level 2	-5.08*	(1.93)	-4.32	(2.52)	-0.06	(0.27)	0.28	(2.78)	-4.71	(2.57)
Time x Level 3	-6.54***	(1.47)	-1.35	(1.92)	-0.25	(0.21)	-3.40	(2.10)	-0.46	(1.92)
Time x Level 4	-6.09***	(1.40)	-2.04	(1.84)	-0.34	(0.20)	-2.09	(2.01)	-1.65	(1.84)
Time x Level 5	-8.79***	(1.39)	-1.42	(1.82)	-0.50	(0.20)	-3.44	(1.99)	-1.23	(1.82)
Time x Income	1.01	(0.64)	1.61	(0.83)	0.06	(0.09)	-0.37	(0.95)	1.25	(0.87)
Time x Parent Ed[f]	NS		NS		NS		NS		NS	
Time x Level 2	-2.47*	(1.05)	0.14	(1.36)	0.04	(0.15)	-0.96	(1.52)	2.33	(1.39)
Time x Level 3	-1.85	(1.20)	-0.51	(1.56)	-0.04	(0.17)	-1.75	(1.75)	1.96	(1.60)
Time x Provider	-0.70	(0.66)	1.60	(0.85)	-0.02	(0.10)	-0.44	(0.99)	0.19	(0.91)
Time x Teacher Cert	0.51	(0.85)	-0.40	(1.09)	0.01	(0.12)	-4.62***	(1.27)	-0.75	(1.16)
Time x Class Size	-0.19	(0.21)	-0.05	(0.28)	0.05	(0.03)	0.14	(0.31)	-0.27	(0.28)
Time x % Ltd Eng Prof	-1.56	(1.47)	-2.74	(1.90)	-0.14	(0.21)	-0.24	(2.26)	-3.32	(2.07)
Time x ECERS-R	0.20	(0.31)	0.34	(0.40)	0.00	(0.04)	-0.14	(0.47)	-1.01*	(0.43)

[a] Significance levels are *p< .05, **p< .01, ***p< .001.

[f] English Proficiency Level 1 and Parent Education Level 1 were reference cells.

Table 18. Classroom Quality Predictors (CLASS) of Child Outcomes–Full Sample–Language and Literacy

	Naming Letters Task n=973		WJ III Letter-Word ID n=974		WJ III Picture Vocabulary n=974		WJ III Sound Awareness n=969		WJ III Word Attack n=974	
Effect	Est[a]	(SE)	Est	(SE)	Est	(SE)	Est	(SE)	Est	(SE)
Intercept	9.06***	(1.68)	94.49***	(2.42)	73.81***	(1.76)	78.25***	(3.10)	377.88***	(4.77)
Time	4.77***	(1.34)	4.64**	(1.70)	7.62***	(1.54)	2.42	(2.86)	11.54**	(4.44)
Age	3.72***	(0.80)	--	--	--	--	--	--	--	--
Gender[b]	-0.57	(0.52)	-0.43	(0.76)	1.26*	(0.56)	-0.54	(0.94)	-0.42	(1.48)
Race[c]	-2.72***	(0.58)	-4.89***	(0.84)	1.47*	(0.60)	1.02	(1.07)	-6.60***	(1.65)
Ethnicity[d]	-0.67	(0.94)	-0.05	(1.37)	-6.60***	(1.00)	-2.34	(1.71)	-1.60	(2.68)
IEP[e]	-0.86	(1.58)	-4.38	(2.31)	0.52	(1.72)	-3.35	(2.96)	-0.57	(4.55)
English Proficiency[f]	***		***		***		***		***	
Level 2	0.51	(1.73)	4.84	(2.51)	15.46***	(1.85)	7.26*	(3.16)	-1.01	(4.93)
Level 3	1.48	(1.30)	3.84*	(1.88)	18.75***	(1.39)	6.65**	(2.38)	1.76	(3.72)
Level 4	2.67*	(1.25)	5.72**	(1.81)	21.79***	(1.33)	12.44***	(2.30)	3.90	(3.58)
Level 5	6.82***	(1.25)	10.61***	(1.80)	26.89***	(1.33)	22.62***	(2.29)	15.17***	(3.57)
Income[g]	-1.96***	(0.59)	-2.61**	(0.86)	-1.47*	(0.63)	-2.27*	(1.07)	-4.43**	(1.67)
Parent Education	***		***		***		***		***	
Level 2	3.13**	(0.96)	3.48*	(1.39)	5.75***	(1.03)	2.08	(1.74)	4.61	(2.73)
Level 3	7.37***	(1.10)	9.67***	(1.60)	6.07***	(1.18)	6.19**	(1.99)	12.91***	(3.12)
Provider Type[h]	-1.25	(0.67)	-1.59	(0.97)	0.06	(0.66)	-2.06	(1.32)	-1.98	(1.92)
Teacher Certified[i]	-0.23	(0.83)	-0.79	(1.20)	-0.98	(0.82)	1.96	(1.63)	1.62	(2.38)
Class Size	0.40*	(0.20)	0.48	(0.29)	0.06	(0.20)	0.14	(0.40)	0.77	(0.58)
% Limited Eng Prof	0.23	(1.44)	-2.83	(2.08)	-4.61**	(1.42)	-1.78	(2.80)	1.57	(4.11)
CLASS Emotional Sup	-0.32	(0.52)	-1.22	(0.75)	0.46	(0.51)	-0.17	(1.02)	0.58	(1.49)
CLASS Class Org	0.23	(0.55)	1.33	(0.79)	-0.45	(0.54)	-0.05	(1.08)	-0.94	(1.56)
CLASS Instruction Sup	-0.26	(0.38)	-0.05	(0.55)	-0.54	(0.37)	0.37	(0.75)	0.82	(1.09)
Time x Race	1.47**	(0.46)	0.80	(0.59)	-0.39	(0.53)	0.48	(0.98)	3.00	(1.53)
Time x Ethnicity	0.36	(0.76)	1.35	(0.96)	0.12	(0.88)	-0.47	(1.61)	-0.65	(2.51)
Time x Gender	0.07	(0.43)	-1.17	(0.55)	0.58	(0.50)	0.01	(0.92)	-1.35	(1.42)
Time x IEP	0.00	(1.30)	2.67	(1.65)	-1.06	(1.51)	-5.95	(2.82)	0.50	(4.32)
Time x Eng Prof[f]	***		***		***		**		NS	
Time x Level 2	-0.09	(1.41)	-4.64*	(1.78)	-6.14**	(1.62)	-4.10	(3.01)	-0.85	(4.66)
Time x Level 3	0.82	(1.06)	-3.13	(1.33)	-6.17***	(1.21)	2.43	(2.25)	2.12	(3.50)
Time x Level 4	0.78	(1.01)	-2.28	(1.28)	-7.18***	(1.16)	1.32	(2.16)	4.47	(3.34)
Time x Level 5	-0.51	(1.00)	-3.81*	(1.27)	-7.85***	(1.15)	1.54	(2.14)	1.99	(3.32)

[a] Significance levels are *p< .05, **p< .01, ***p< .001.

[b] Female=0, Male=1.

[c] Non-White=0, White=1.

[d] Non-Latino=0, Latino=1.

[e] No IEP=0, IEP=1.

[f] English Proficiency Level 1 and Parent Education Level 1 were reference cells.

[g] Category Two=0, Category One=1.

[h] Private site=0, Public school site=1.

[i] Teacher not certified=0, Teacher certified=1.

Table 18. Classroom Quality Predictors (CLASS) of Child Outcomes–Full Sample–Language and Literacy

	Naming Letters Task n=973		WJ III Letter-Word ID n=974		WJ III Picture Vocabulary n=974		WJ III Sound Awareness n=969		WJ III Word Attack n=974	
Effect	Est[a]	(SE)	Est	(SE)	Est	(SE)	Est	(SE)	Est	(SE)
Time x Income	1.17*	(0.48)	0.38	(0.61)	0.34	(0.55)	-2.23	(1.02)	1.50	(1.58)
Time x Parent Ed[f]	***		NS		**		NS		NS	
Time x Level 2	-0.59	(0.78)	-0.39	(0.99)	-2.23*	(0.89)	2.14	(1.66)	-2.05	(2.58)
Time x Level 3	-2.52*	(0.89)	-1.04	(1.13)	-0.83	(1.02)	2.07	(1.90)	-0.49	(2.95)
Time x Provider	1.84**	(0.51)	1.78*	(0.65)	-0.11	(0.59)	1.83	(1.08)	3.24	(1.68)
Time x Teacher Cert	0.24	(0.64)	0.20	(0.81)	0.91	(0.73)	1.79	(1.35)	1.54	(2.10)
Time x Class Size	-0.39*	(0.16)	-0.28	(0.20)	-0.07	(0.18)	-0.09	(0.33)	0.25	(0.51)
Time x % Ltd Eng Prof	0.50	(1.08)	1.47	(1.36)	3.66**	(1.23)	-1.77	(2.28)	0.37	(3.56)
Time x CLASS ES	-0.39	(0.39)	0.13	(0.50)	0.04	(0.45)	-0.12	(0.84)	-2.75*	(1.30)
Time x CLASS CO	0.66	(0.42)	-0.24	(0.53)	0.27	(0.48)	0.24	(0.89)	2.05	(1.37)
Time x CLASS IS	-0.21	(0.28)	0.56	(0.36)	-0.22	(0.33)	0.91	(0.60)	1.57	(0.94)

[a] Significance levels are *p< .05, **p< .01, ***p< .001.

[f] English Proficiency Level 1 and Parent Education Level 1 were reference cells.

Table 19. Classroom Quality Predictors (CLASS) of Child Outcomes–Full Sample–Math, General Knowledge, and Classroom Behavior

	Math				General Knowledge		Classroom Behavior			
	WJ III Applied Problems n=974		Counting Task n=972		Social Awareness Task n=973		SSiS Social Skills n=961		SSiS Problem Behaviors n=962	
Effect	Est[a]	(SE)	Est	(SE)	Est	(SE)	Est	(SE)	Est	(SE)
Intercept	77.13***	(2.02)	12.00***	(2.24)	2.87***	(0.24)	84.77***	(3.11)	103.51***	(3.13)
Time	9.11***	(1.86)	8.73***	(2.45)	0.70**	(0.27)	10.32***	(2.60)	-2.12	(2.37)
Age	--	--	5.81***	(0.95)	0.37***	(0.11)	--	--	--	--
Gender[b]	0.31	(0.63)	-1.22	(0.68)	-0.11	(0.08)	1.88*	(0.91)	1.04	(0.90)
Race[c]	4.41***	(0.70)	-0.79	(0.76)	-0.23**	(0.08)	1.18	(1.10)	0.76	(1.10)
Ethnicity[d]	-1.17	(1.13)	-1.12	(1.23)	-0.75***	(0.14)	4.45**	(1.68)	-6.14***	(1.66)
IEP[e]	-4.98*	(1.94)	-0.67	(2.18)	-0.21	(0.23)	-11.42***	(2.82)	7.40**	(2.79)
English Proficiency[f]	***		***		***		***		**	
Level 2	9.23***	(2.10)	2.01	(2.32)	0.38	(0.25)	1.99	(3.02)	2.36	(3.01)
Level 3	13.94***	(1.58)	2.22	(1.75)	1.22***	(0.19)	6.31**	(2.25)	-2.52	(2.23)
Level 4	17.42***	(1.52)	3.97*	(1.70)	1.48***	(0.18)	8.94***	(2.19)	-3.52	(2.17)
Level 5	24.56***	(1.51)	8.80***	(1.69)	2.02***	(0.18)	13.49***	(2.18)	-6.19**	(2.16)
Income[g]	-2.01**	(0.71)	-2.28**	(0.77)	-0.21*	(0.09)	-1.47	(1.05)	1.07	(1.05)
Parent Education	***		***		***		*		NS	
Level 2	4.82***	(1.16)	1.97	(1.27)	0.43**	(0.14)	1.69	(1.66)	-1.22	(1.64)
Level 3	8.43***	(1.32)	4.72**	(1.44)	0.66***	(0.16)	4.57*	(1.90)	-2.06	(1.88)
Provider Type[h]	-0.32	(0.82)	-1.95*	(0.89)	0.06	(0.10)	-0.08	(1.61)	-1.32	(1.68)
Teacher Certified[i]	0.76	(1.01)	1.30	(1.10)	-0.25*	(0.12)	-1.60	(2.00)	3.11	(2.08)
Class Size	0.23	(0.25)	0.35	(0.27)	0.02	(0.03)	0.17	(0.47)	-0.38	(0.49)
% Limited Eng Prof	1.32	(1.74)	1.48	(1.91)	0.14	(0.21)	-1.21	(3.36)	3.96	(3.49)
CLASS Emotional Sup	-0.37	(0.63)	-1.02	(0.69)	0.05	(0.08)	-0.28	(1.26)	1.51	(1.32)
CLASS Class Org	-0.07	(0.66)	0.46	(0.73)	0.02	(0.08)	1.30	(1.32)	-0.49	(1.37)
CLASS Instruction Sup	0.36	(0.46)	0.54	(0.50)	-0.05	(0.05)	-1.66	(0.91)	-1.15	(0.95)
Time x Gender	-0.28	(0.60)	0.50	(0.78)	0.01	(0.09)	-0.09	(0.87)	0.01	(0.79)
Time x Race	-0.75	(0.64)	-0.20	(0.83)	0.10	(0.09)	-0.30	(0.93)	-0.71	(0.85)
Time x Ethnicity	2.43*	(1.05)	1.29	(1.37)	0.51**	(0.15)	1.40	(1.55)	-1.74	(1.42)
Time x IEP	-0.06	(1.84)	-0.49	(2.44)	-0.34	(0.26)	7.10	(2.80)	1.38	(2.57)

[a] Significance levels are *p< .05, **p< .01, ***p< .001.
[b] Female=0, Male=1.
[c] Non-White=0, White=1.
[d] Non-Latino=0, Latino=1.
[e] No IEP=0, IEP=1.
[f] English Proficiency Level 1 and Parent Education Level 1 were reference cells.
[g] Category Two=0, Category One=1.
[h] Private site=0, Public school site=1.
[i] Teacher not certified=0, Teacher certified=1.

Table 19. Classroom Quality Predictors (CLASS) of Child Outcomes–Full Sample–Math, General Knowledge, and Classroom Behavior

	Math				General Knowledge		Classroom Behavior			
	WJ III Applied Problems n=974		Counting Task n=972		Social Awareness Task n=973		SSiS Social Skills n=961		SSiS Problem Behaviors n=962	
Effect	Est[a]	(SE)	Est	(SE)	Est	(SE)	Est	(SE)	Est	(SE)
Time x Eng Prof[f]	***		NS		***		*		NS	
Time x Level 2	-5.22*	(1.97)	-4.33	(2.59)	0.07	(0.28)	0.10	(2.79)	-4.63	(2.57)
Time x Level 3	-6.40***	(1.48)	-1.36	(1.95)	-0.20	(0.21)	-3.35	(2.08)	0.07	(1.90)
Time x Level 4	-5.99***	(1.41)	-2.00	(1.86)	-0.36	(0.20)	-2.30	(1.98)	-2.00	(1.81)
Time x Level 5	-8.55***	(1.40)	-1.54	(1.85)	-0.50	(0.20)	-3.28	(1.97)	-1.32	(1.80)
Time x Income	1.17	(0.67)	1.58	(0.87)	0.10	(0.10)	0.04	(0.96)	0.76	(0.88)
Time x Parent Ed[f]	NS		NS		NS		NS		NS	
Time x Level 2	-2.06	(1.08)	0.58	(1.42)	0.06	(0.15)	-0.32	(1.53)	2.45	(1.39)
Time x Level 3	-1.55	(1.23)	0.00	(1.62)	0.04	(0.18)	-1.19	(1.76)	2.08	(1.60)
Time x Provider	-1.06	(0.71)	0.92	(0.92)	-0.01	(0.10)	-0.08	(1.05)	1.35	(0.96)
Time x Teacher Cert	0.50	(0.88)	-0.49	(1.14)	0.01	(0.13)	-4.44**	(1.29)	0.72	(1.17)
Time x Class Size	-0.18	(0.22)	-0.16	(0.28)	0.06	(0.03)	0.17	(0.30)	-0.27	(0.28)
Time x % Ltd Eng Prof	-1.59	(1.49)	-2.38	(1.94)	-0.18	(0.21)	-0.36	(2.24)	-2.81	(2.04)
Time x CLASS ES	-0.68	(0.55)	-0.50	(0.71)	-0.14	(0.08)	0.91	(0.82)	-0.96	(0.75)
Time x CLASS CO	0.18	(0.58)	0.61	(0.76)	0.01	(0.08)	-1.50	(0.88)	-1.13	(0.80)
Time x CLASS IS	0.43	(0.39)	-0.65	(0.51)	0.14*	(0.06)	1.03	(0.58)	1.92***	(0.53)

[a] Significance levels are *p< .05, **p< .01, ***p< .001.

[f] English Proficiency Level 1 and Parent Education Level 1 were reference cells.

Table 20. Classroom Quality Predictors (ELLCO) of Child Outcomes–Full Sample–Language and Literacy

	Naming Letters Task n=1,043		WJ III Letter-Word ID n=1,043		WJ III Picture Vocabulary n=1,044		WJ III Sound Awareness n=1,039		WJ III Word Attack n=1,044	
Effect	Est[a]	(SE)	Est	(SE)	Est	(SE)	Est	(SE)	Est	(SE)
Intercept	9.46***	(1.66)	94.90***	(2.37)	73.79***	(1.74)	78.09***	(3.05)	378.09***	(4.68)
Time	4.93***	(1.31)	4.84**	(1.67)	7.80***	(1.51)	2.36	(2.81)	13.13**	(4.33)
Age	3.66***	(0.78)	--	--	--	--	--	--	--	--
Gender[b]	-0.50	(0.51)	-0.45	(0.73)	1.48**	(0.55)	-0.70	(0.91)	-0.46	(1.42)
Race[c]	-2.50***	(0.57)	-4.72***	(0.82)	1.44*	(0.59)	0.85	(1.04)	-6.00***	(1.60)
Ethnicity[d]	-0.83	(0.94)	-0.19	(1.35)	-6.70***	(1.00)	-2.46	(1.70)	-1.84	(2.65)
IEP[e]	-1.89	(1.51)	-4.98*	(2.17)	0.59	(1.64)	-4.04	(2.84)	-2.48	(4.29)
English Proficiency[f]	***		***		***		***		***	
Level 2	0.59	(1.70)	4.77	(2.45)	15.80***	(1.82)	6.61*	(3.11)	0.39	(4.82)
Level 3	1.40	(1.29)	3.94*	(1.86)	18.84***	(1.39)	6.53**	(2.37)	1.74	(3.68)
Level 4	2.47*	(1.25)	5.87**	(1.79)	21.67***	(1.33)	12.23***	(2.29)	3.82	(3.55)
Level 5	6.56***	(1.24)	10.44***	(1.77)	26.88***	(1.32)	22.73***	(2.27)	14.74***	(3.52)
Income[g]	-1.96***	(0.57)	-2.69**	(0.83)	-1.33*	(0.61)	-2.33*	(1.04)	-4.55**	(1.62)
Parent Education	***		***		***		***		***	
Level 2	2.91**	(0.93)	3.15*	(1.34)	5.48***	(1.00)	2.66	(1.69)	4.10	(2.63)
Level 3	6.94***	(1.07)	8.97***	(1.54)	5.53***	(1.15)	6.03**	(1.94)	12.26***	(3.02)
Provider Type[h]	-1.62*	(0.63)	-1.38	(0.89)	-0.14	(0.61)	-2.01	(1.22)	-2.98	(1.79)
Teacher Certified[i]	-0.24	(0.81)	-1.03	(1.16)	-0.54	(0.80)	2.10	(1.58)	1.89	(2.32)
Class Size	0.34	(0.20)	0.38	(0.28)	0.11	(0.20)	0.29	(0.39)	0.58	(0.57)
% Limited Eng Prof	-0.04	(1.46)	-3.00	(2.07)	-4.76**	(1.43)	-1.57	(2.81)	2.53	(4.15)
ELLCO Gen Class Env	-1.01*	(0.51)	-0.85	(0.73)	0.17	(0.50)	-0.33	(0.99)	-0.57	(1.45)
ELLCO Lang and Lit	0.59	(0.49)	0.68	(0.70)	-0.43	(0.48)	1.57	(0.95)	0.61	(1.40)
Time x Gender	-0.08	(0.41)	-1.09	(0.53)	0.34	(0.48)	-0.11	(0.89)	-1.80	(1.36)
Time x Race	1.10*	(0.45)	0.48	(0.57)	-0.51	(0.52)	0.19	(0.96)	2.35	(1.48)
Time x Ethnicity	0.40	(0.75)	1.12	(0.95)	0.20	(0.87)	-0.24	(1.59)	-0.90	(2.48)
Time x IEP	0.55	(1.22)	2.31	(1.56)	-1.94	(1.42)	-7.02	(2.70)	1.12	(4.06)
Time x Eng Prof[f]	***		***		***		*		NS	
Time x Level 2	-0.29	(1.37)	-5.30*	(1.75)	-6.25***	(1.58)	-2.41	(2.95)	-1.81	(4.54)
Time x Level 3	0.87	(1.04)	-3.04	(1.33)	-6.21***	(1.20)	2.65	(2.24)	2.10	(3.45)
Time x Level 4	0.96	(1.00)	-2.37	(1.27)	-7.22***	(1.15)	1.73	(2.14)	4.55	(3.30)
Time x Level 5	-0.37	(0.98)	-3.75*	(1.26)	-7.91***	(1.14)	1.60	(2.12)	1.93	(3.26)

[a] Significance levels are *p< .05, **p< .01, ***p< .001.
[b] Female=0, Male=1.
[c] Non-White =0, White =1.
[d] Non-Latino=0, Latino=1.
[e] No IEP=0, IEP=1.
[f] English Proficiency Level 1 and Parent Education Level 1 were reference cells.
[g] Category Two=0, Category One=1.
[h] Private site=0, Public school site=1.
[i] Teacher not certified=0, Teacher certified=1.

Table 20. Classroom Quality Predictors (ELLCO) of Child Outcomes–Full Sample–Language and Literacy

	Naming Letters Task n=1,043		WJ III Letter-Word ID n=1,043		WJ III Picture Vocabulary n=1,044		WJ III Sound Awareness n=1,039		WJ III Word Attack n=1,044	
Effect	Est[a]	(SE)	Est	(SE)	Est	(SE)	Est	(SE)	Est	(SE)
Time x Income	1.07	(0.46)	0.32	(0.59)	0.02	(0.54)	-2.62	(0.99)	0.97	(1.53)
Time x Parent Ed[f]	***		NS		**		NS		NS	
Time x Level 2	-0.78	(0.75)	-0.35	(0.96)	-2.14*	(0.86)	1.87	(1.61)	-1.85	(2.48)
Time x Level 3	-2.71**	(0.86)	-1.10	(1.10)	-0.69	(0.99)	1.65	(1.84)	-0.62	(2.85)
Time x Provider	2.30***	(0.46)	1.90*	(0.60)	-0.31	(0.54)	1.64	(1.00)	3.68*	(1.54)
Time x Teacher Cert	0.24	(0.61)	0.21	(0.78)	1.14	(0.71)	2.40	(1.30)	0.57	(2.02)
Time x Class Size	-0.36	(0.15)	-0.24	(0.19)	-0.09	(0.18)	-0.19	(0.33)	0.22	(0.50)
Time x % Ltd Eng Prof	0.50	(1.07)	1.50	(1.37)	3.60*	(1.23)	-1.09	(2.28)	-0.53	(3.55)
Time x ELLCO GCE	0.23	(0.38)	-0.23	(0.49)	-0.42	(0.44)	1.05	(0.82)	-2.23	(1.26)
Time x ELLCO L & L	0.17	(0.36)	0.73	(0.46)	0.82	(0.42)	-0.29	(0.78)	2.89*	(1.20)

[a] Significance levels are *p< .05, **p< .01, ***p< .001.

[f] English Proficiency Level 1 and Parent Education Level 1 were reference cells.

Table 21. Classroom Quality Predictors (ELLCO) of Child Outcomes–Full Sample–Math, General Knowledge, and Classroom Behavior

	Math				General Knowledge		Classroom Behavior			
	WJ III Applied Problems n=1,044		Counting Task n=1,042		Social Awareness Task n=1,043		SSiS Social Skills n=1,031		SSiS Problem Behaviors n=1,032	
Effect	Est[a]	(SE)	Est	(SE)	Est	(SE)	Est	(SE)	Est	(SE)
Intercept	76.72***	(2.00)	12.64***	(2.19)	2.85***	(0.24)	83.72***	(3.06)	102.81***	(3.09)
Time	9.32***	(1.83)	8.38***	(2.40)	0.79**	(0.26)	11.50***	(2.63)	-0.59	(2.41)
Age	--	--	5.56***	(0.92)	0.34**	(0.10)	--	--	--	--
Gender[b]	0.43	(0.61)	-1.29*	(0.65)	-0.13	(0.07)	1.38	(0.88)	1.04	(0.87)
Race[c]	4.43***	(0.68)	-1.20	(0.74)	-0.26**	(0.08)	1.19	(1.06)	0.39	(1.06)
Ethnicity[d]	-1.00	(1.13)	-1.03	(1.22)	-0.76***	(0.14)	4.55**	(1.67)	-6.03***	(1.66)
IEP[e]	-4.09*	(1.85)	-2.08	(2.04)	-0.27	(0.22)	-10.83***	(2.68)	7.48**	(2.66)
English Proficiency[f]	***		***		***		***		***	
Level 2	8.51***	(2.07)	1.79	(2.26)	0.43	(0.25)	1.99	(2.98)	2.43	(2.97)
Level 3	13.90***	(1.58)	2.16	(1.73)	1.28***	(0.19)	6.35**	(2.25)	-2.27	(2.23)
Level 4	17.60***	(1.52)	3.82*	(1.68)	1.49***	(0.18)	8.83***	(2.18)	-3.78	(2.17)
Level 5	24.76***	(1.51)	8.63***	(1.67)	2.01***	(0.18)	13.73***	(2.17)	-6.33**	(2.16)
Income[g]	-1.85**	(0.69)	-2.47**	(0.75)	-0.18*	(0.08)	-1.27	(1.03)	1.27	(1.03)
Parent Education	***		***		***		*		NS	
Level 2	5.23***	(1.13)	2.09	(1.22)	0.43**	(0.13)	2.24	(1.62)	-0.82	(1.60)
Level 3	8.37***	(1.29)	4.48**	(1.39)	0.68***	(0.16)	4.74*	(1.87)	-1.69	(1.85)
Provider Type[h]	-0.30	(0.76)	-1.88*	(0.83)	0.08	(0.09)	0.28	(1.48)	-1.82	(1.55)
Teacher Certified[i]	0.59	(0.99)	1.01	(1.07)	-0.23*	(0.12)	-1.26	(1.93)	3.99	(2.03)
Class Size	0.24	(0.25)	0.30	(0.27)	0.02	(0.03)	0.19	(0.46)	-0.30	(0.49)
% Limited Eng Prof	1.50	(1.77)	1.18	(1.92)	0.17	(0.21)	-0.72	(3.33)	4.40	(3.49)
ELLCO Gen Class Env	0.29	(0.62)	-0.84	(0.67)	0.09	(0.07)	0.44	(1.20)	1.04	(1.26)
ELLCO Lang & Lit	-0.53	(0.60)	1.04	(0.64)	-0.07	(0.07)	0.67	(1.14)	-1.10	(1.20)
Time x Gender	-0.33	(0.58)	0.54	(0.74)	0.05	(0.08)	0.42	(0.86)	0.10	(0.79)
Time x Race	-0.78	(0.63)	-0.03	(0.81)	0.10	(0.09)	-0.04	(0.94)	-0.18	(0.86)
Time x Ethnicity	2.06	(1.05)	1.06	(1.35)	0.51**	(0.15)	1.36	(1.58)	-2.45	(1.45)
Time x IEP	-0.86	(1.73)	-0.21	(2.28)	-0.34	(0.25)	4.60	(2.67)	1.24	(2.46)

[a] Significance levels are *p< .05, **p< .01, ***p< .001.
[b] Female=0, Male=1.
[c] Non-White=0, White =1.
[d] Non-Latino=0, Latino=1.
[e] No IEP=0, IEP=1.
[f] English Proficiency Level 1 and Parent Education Level 1 were reference cells.
[g] Category Two=0, Category One=1.
[h] Private site=0, Public school site=1.
[i] Teacher not certified=0, Teacher certified=1.

Table 21. Classroom Quality Predictors (ELLCO) of Child Outcomes–Full Sample–Math, General Knowledge, and Classroom Behavior

	Math				General Knowledge		Classroom Behavior			
	WJ III Applied Problems n=1,044		Counting Task n=1,042		Social Awareness Task n=1,043		SSiS Social Skills n=1,031		SSiS Problem Behaviors n=1,032	
Effect	Est[a]	(SE)	Est	(SE)	Est	(SE)	Est	(SE)	Est	(SE)
Time x Eng Prof[f]	***		NS		***		**		NS	
Time x Level 2	-4.88*	(1.93)	-4.22	(2.53)	-0.07	(0.27)	0.12	(2.79)	-4.92	(2.58)
Time x Level 3	-6.44***	(1.47)	-1.22	(1.92)	-0.24	(0.21)	-3.43	(2.11)	-0.55	(1.93)
Time x Level 4	-6.04***	(1.40)	-1.85	(1.84)	-0.36	(0.20)	-2.14	(2.02)	-1.82	(1.85)
Time x Level 5	-8.72***	(1.39)	-1.26	(1.82)	-0.51	(0.20)	-3.48	(1.99)	-1.31	(1.83)
Time x Income	1.08	(0.65)	1.77*	(0.84)	0.04	(0.09)	-0.46	(0.96)	1.31	(0.88)
Time x Parent Ed[f]	NS		NS		NS		NS		NS	
Time x Level 2	-2.43*	(1.05)	0.21	(1.36)	0.04	(0.15)	-0.95	(1.52)	2.33	(1.39)
Time x Level 3	-1.92	(1.20)	-0.43	(1.56)	-0.03	(0.17)	-1.71	(1.75)	1.96	(1.61)
Time x Provider	-0.59	(0.65)	1.60	(0.84)	-0.04	(0.09)	-0.61	(0.98)	0.66	(0.90)
Time x Teacher Cert	0.64	(0.85)	-0.38	(1.10)	-0.02	(0.12)	-4.98**	(1.28)	-0.72	(1.17)
Time x Class Size	-0.16	(0.21)	-0.04	(0.28)	0.05	(0.03)	0.14	(0.31)	-0.25	(0.28)
Time x % Ltd Eng Prof	-1.26	(1.50)	-2.40	(1.93)	-0.21	(0.21)	-0.91	(2.28)	-3.70	(2.09)
Time x ELLCO GCE	0.73	(0.53)	0.76	(0.69)	-0.14	(0.08)	-1.51	(0.79)	-0.59	(0.72)
Time x ELLCO L & L	-0.13	(0.51)	-0.74	(0.65)	0.14	(0.07)	0.93	(0.74)	-0.24	(0.68)

[a] Significance levels are *p< .05, **p< .01, ***p< .001.

[f] English Proficiency Level 1 and Parent Education Level 1 were reference cells.

Table 22. Early Childhood Environment Rating Scale-Revised (ECERS-R) Scores

ECERS-R Total / Subscale	n=199	Mean	(SD)	Range[a]
Total Score		3.7	(0.7)	2.0–5.5
Space and furnishings		3.7	(0.8)	1.9–6.1
Personal care routines		2.2	(0.9)	1.0–6.2
Language-reasoning[b]		4.5	(1.2)	1.5–6.3
Activities		3.3	(0.7)	1.8–5.2
Interaction		4.6	(1.7)	1.0–7.0
Program structure		3.4	(1.1)	1.0–7.0
Parents and staff		4.7	(0.9)	1.8–6.7

[a] Total and subscale scores could range from 1.0–7.0.
[b] The n for this subscale was 198.

Figure 15. ECERS-R Total Scores

n=199

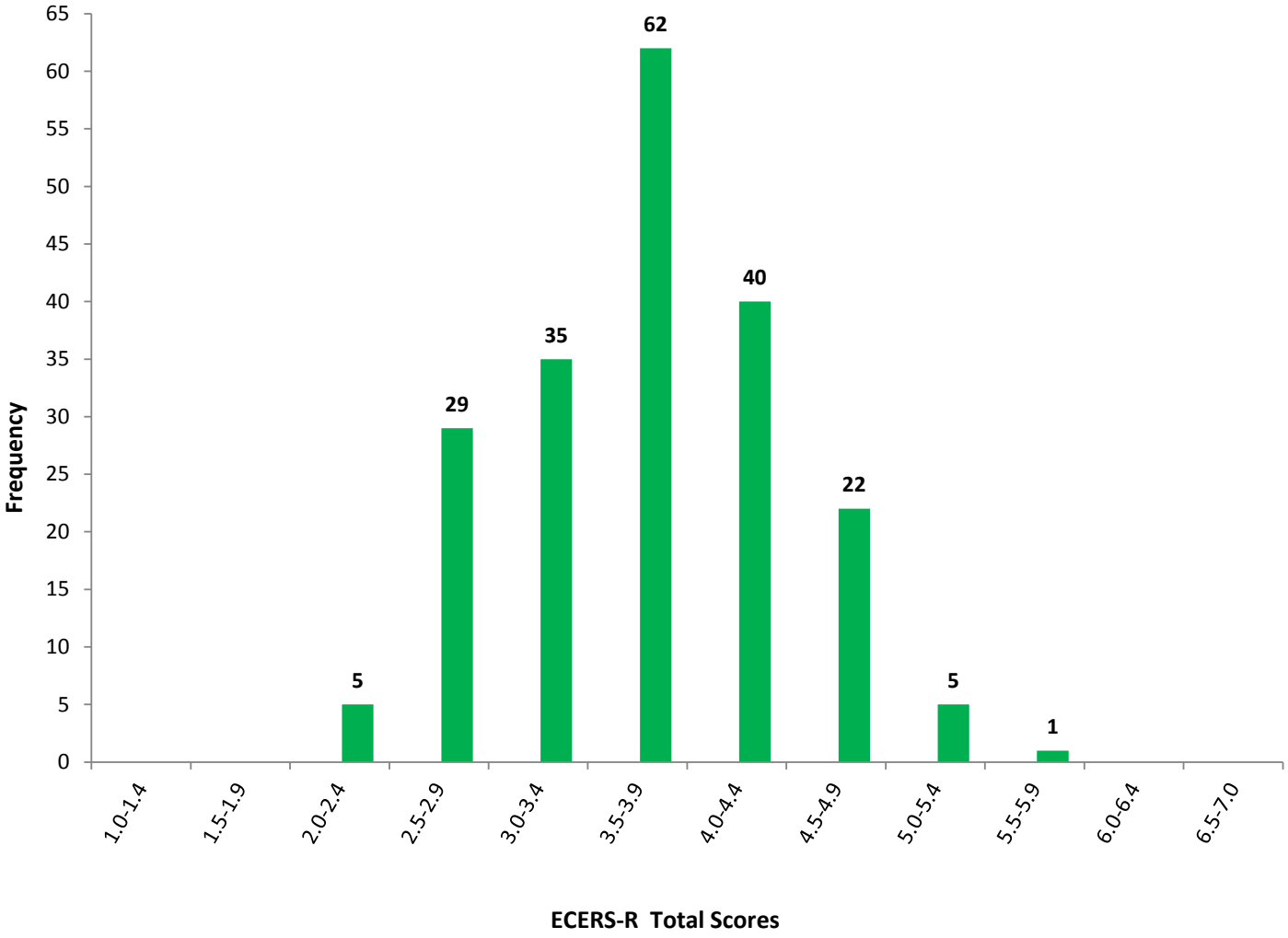

Table 23. Classroom Assessment Scoring System (CLASS) Scores

CLASS Domain / Dimension	n=184	Mean	(SD)	Range[a]
Emotional Support		5.7	(0.7)	3.6–6.9
Positive climate		5.9	(0.9)	3.0–7.0
Negative climate[b]		1.2	(0.4)	1.0–3.4
Teacher sensitivity		5.6	(1.0)	2.2–7.0
Regard for student perspectives		4.7	(1.0)	1.6–6.8
Classroom Organization		5.5	(0.7)	3.1–6.9
Behavior management		5.9	(0.9)	2.8–7.0
Productivity		5.9	(0.7)	3.4–7.0
Instructional learning formats		4.8	(0.9)	2.0–6.8
Instructional Support		2.5	(0.8)	1.1–5.9
Concept development		2.5	(0.8)	1.0–5.6
Quality of feedback		2.5	(0.9)	1.0–6.0
Language modeling		2.6	(0.8)	1.0–6.2

[a] Domain scores could range from 1.0–7.0; Dimension scores could range from 1–7.

[b] Scoring is reversed for the Negative climate dimension before it is included in the calculation of the Emotional Support domain score.

Figure 16. CLASS Emotional Support Scores

n=184

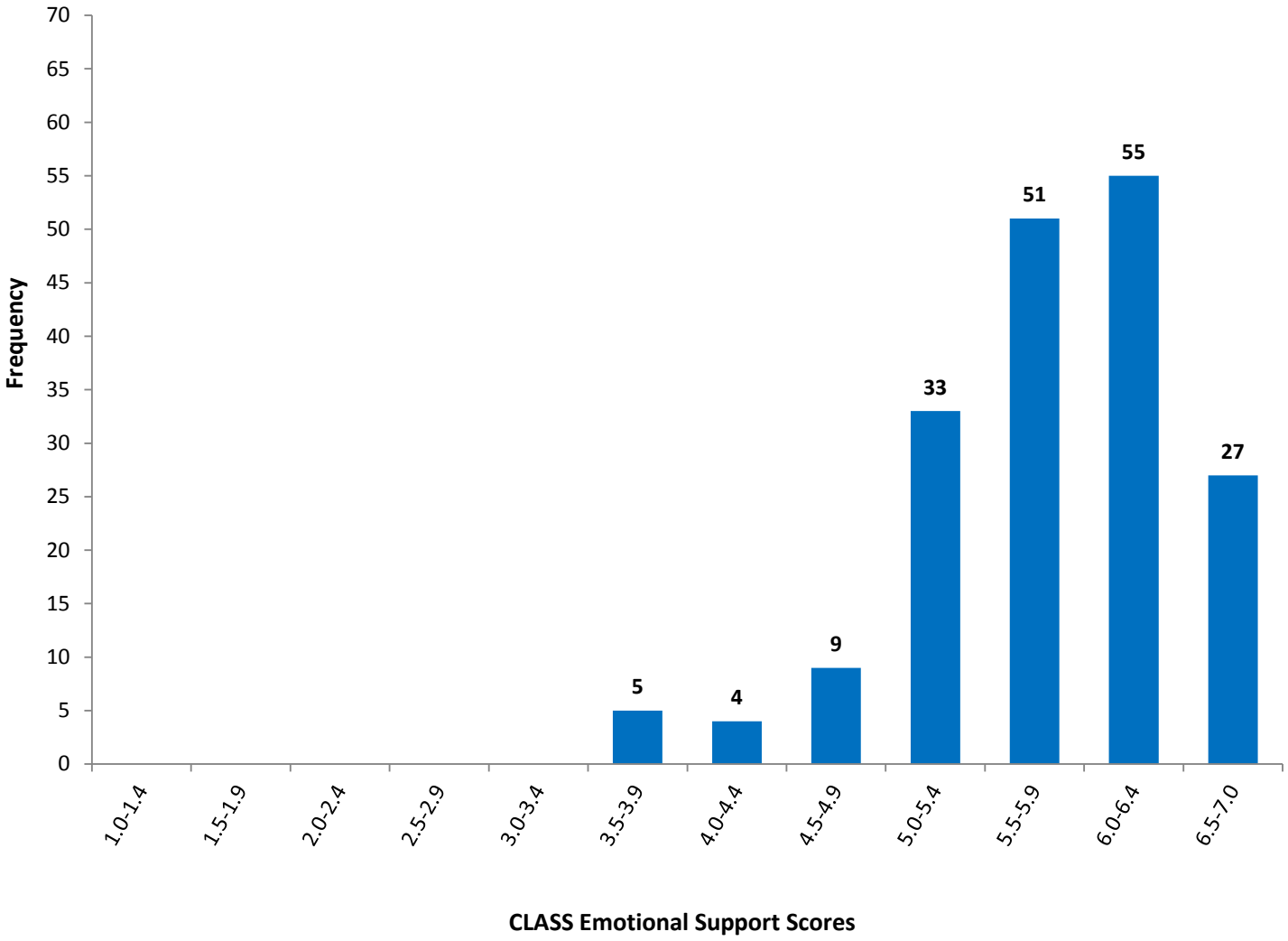

Figure 17. CLASS Classroom Organization Scores

n=184

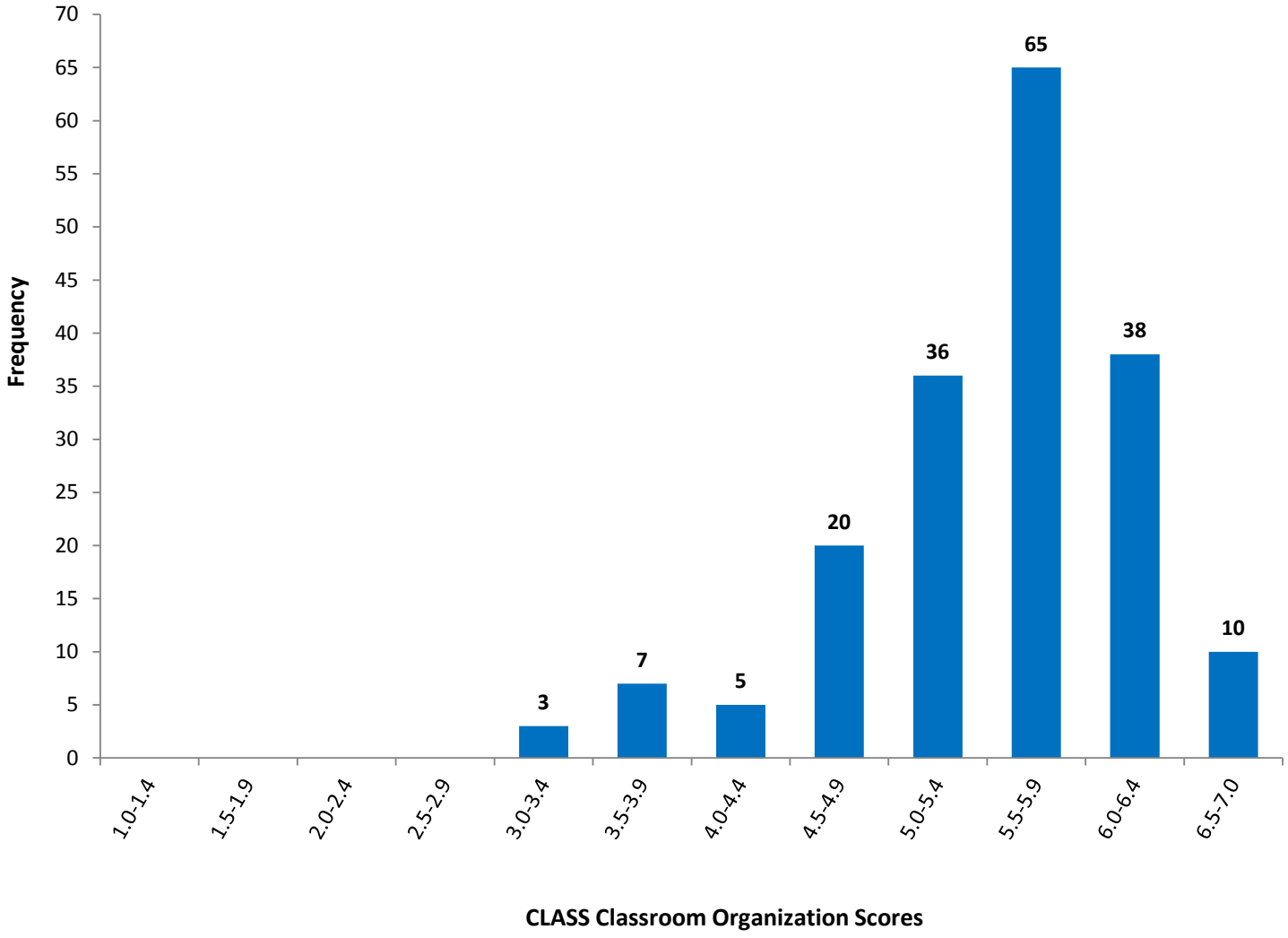

Figure 18. CLASS Instructional Support Scores

n=184

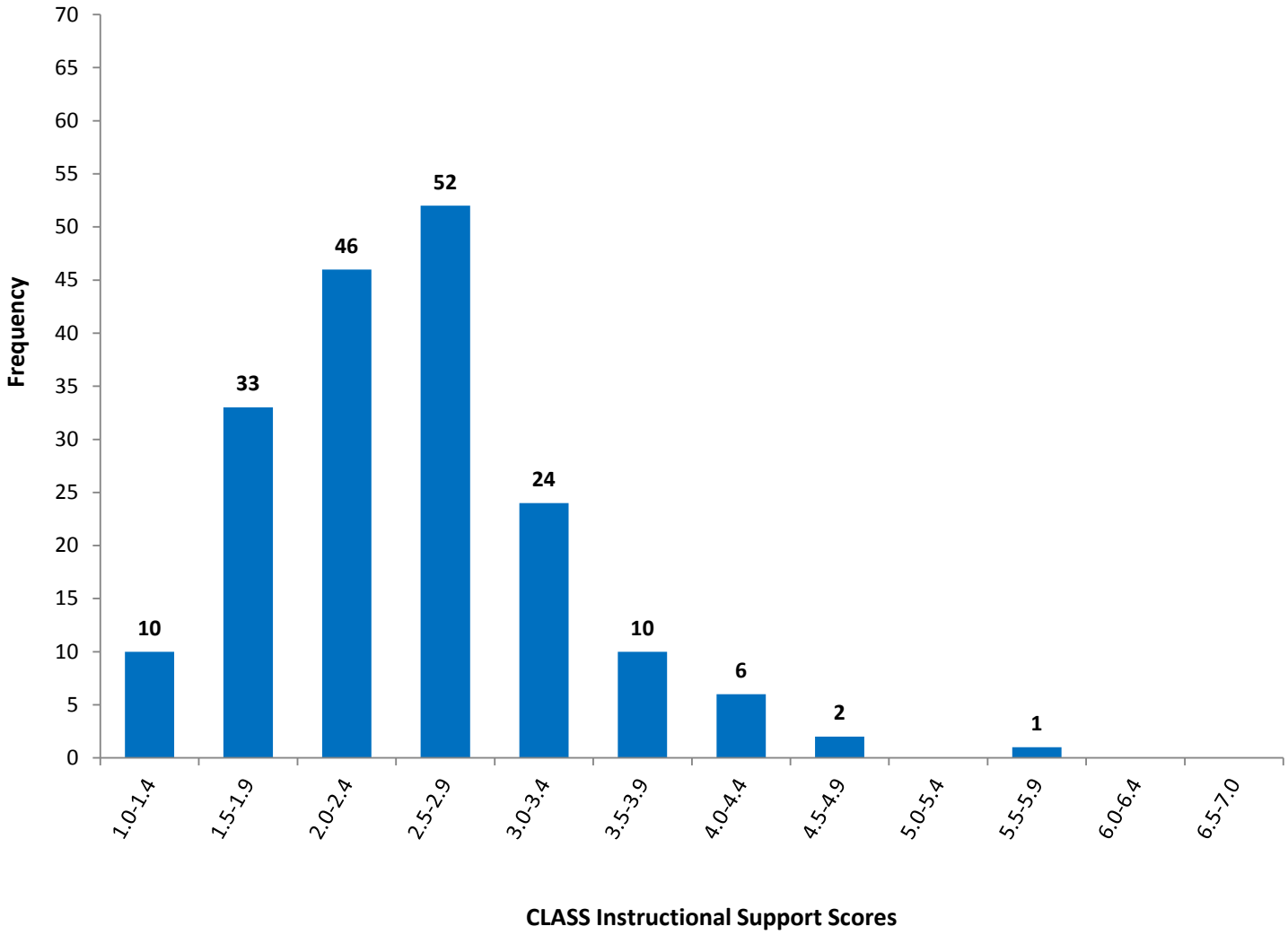

Table 24. Early Language and Literacy Classroom Observation (ELLCO) Scores

ELLCO Subscale/Section	n=198	Mean	(SD)	Range[a]
General Classroom Environment		3.5	(0.7)	1.9–5.0
Classroom structure[b]		3.7	(0.7)	1.8–5.0
Curriculum		3.2	(0.7)	1.3–5.0
Language and Literacy		3.4	(0.6)	1.9–4.9
Language environment		3.3	(0.8)	1.3–5.0
Books and book reading		3.5	(0.6)	2.2–5.0
Print and early writing		3.3	(0.8)	1.0–5.0

[a] Scores could range from 1.0–5.0.
[b] The n for this section was 197.

Figure 19. ELLCO General Classroom Environment

n=198

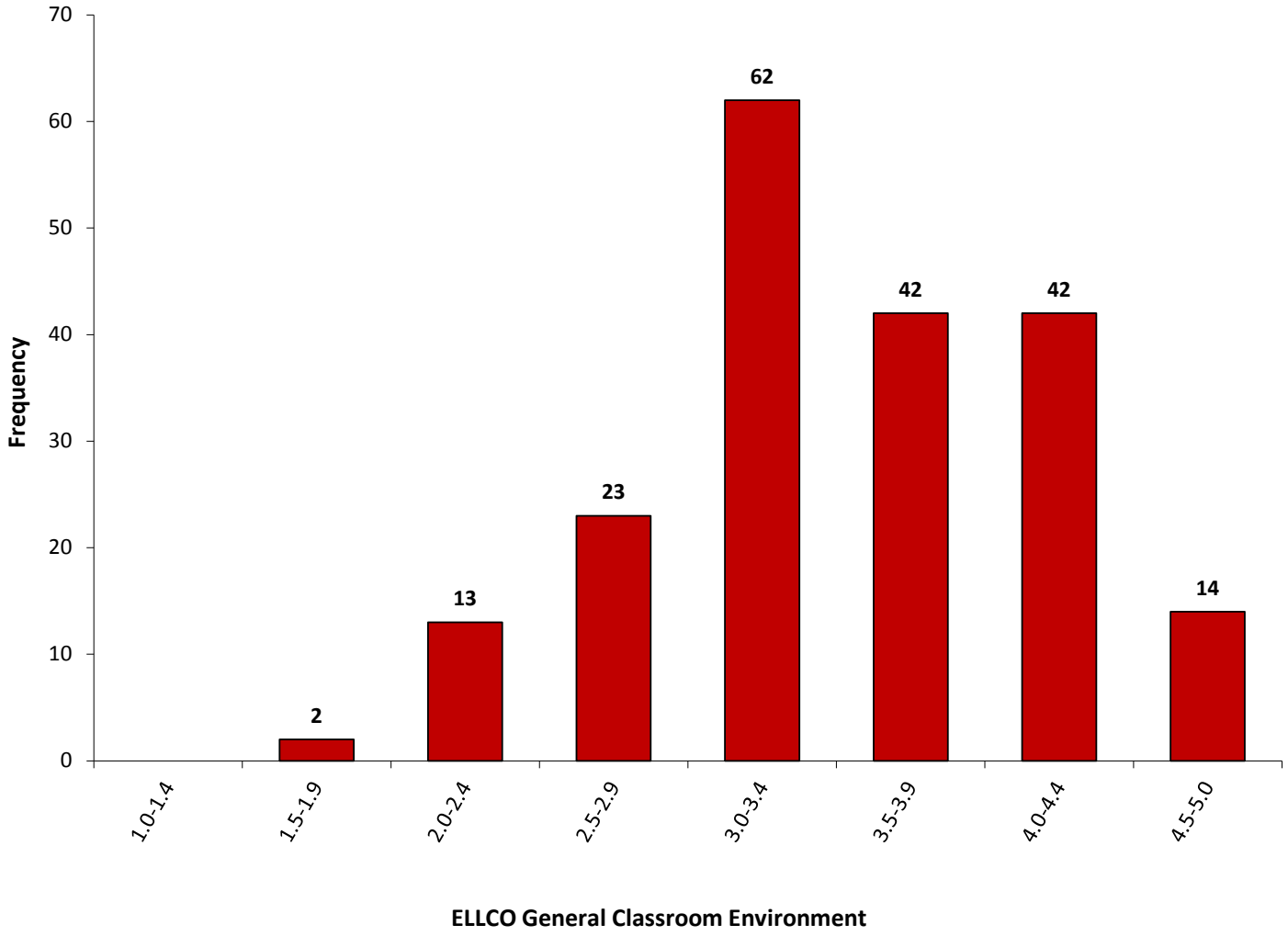

Figure 20. ELLCO Language and Literacy

n=198

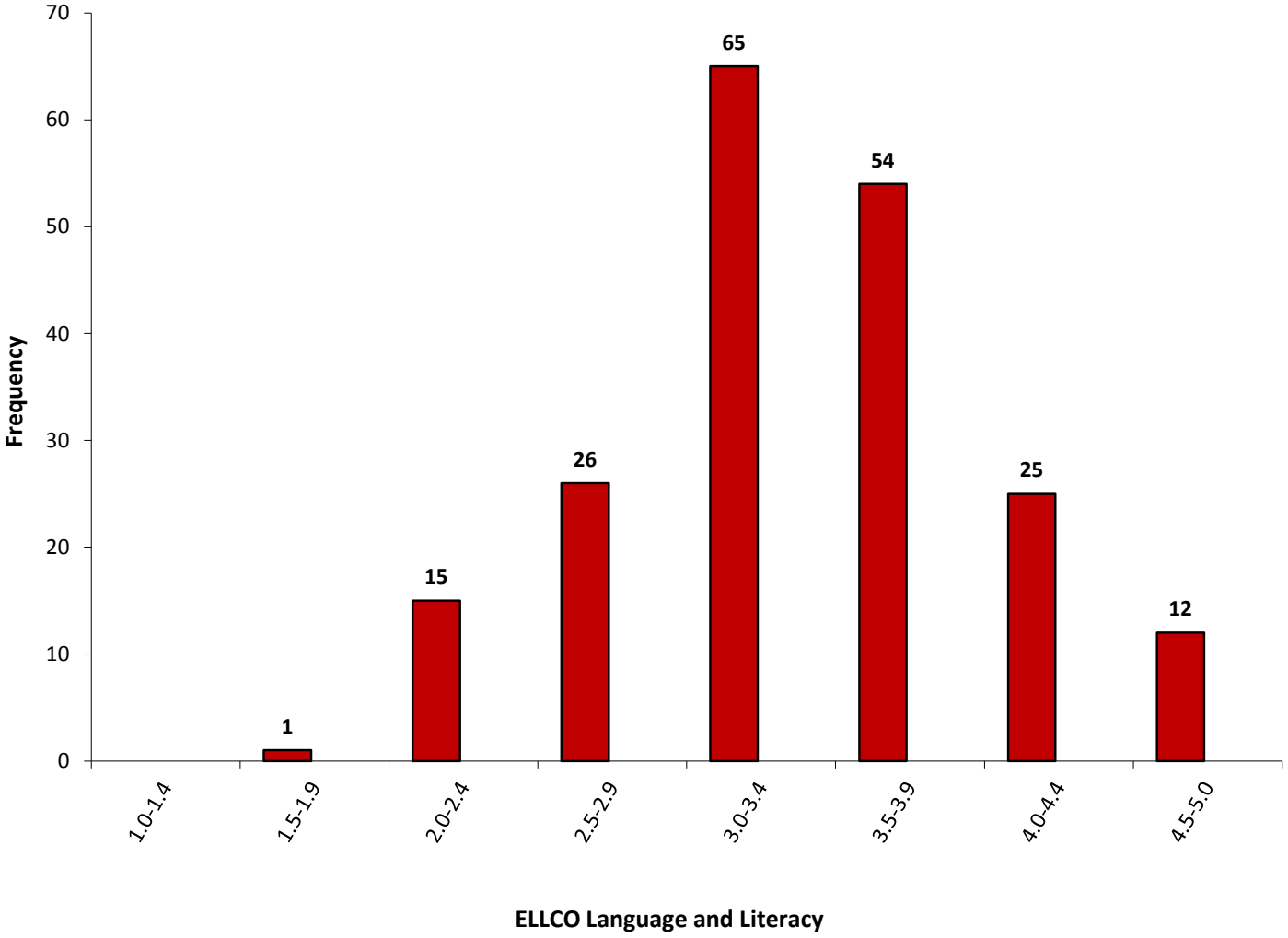

Table 25. Results of Classroom Quality Predictors Regression—ECERS-R and ELLCO

	ECERS-R Total n=188		ELLCO General Classroom Environment n=187		ELLCO Language and Literacy n=187	
Effect	Est[a]	(SE)	Est	(SE)	Est	(SE)
Intercept	3.98***	(0.11)	3.70***	(0.11)	3.46***	(0.12)
Provider Type[b]	-0.36***	(0.10)	-0.21*	(0.10)	-0.11	(0.11)
Experience Teaching Pre-K	-0.01	(0.01)	0.00	(0.01)	0.00	(0.01)
Teacher Beliefs Score	0.56***	(0.14)	0.38**	(0.14)	0.18	(0.14)
Teacher Certified[c]	-0.13	(0.13)	-0.09	(0.13)	0.00	(0.14)
% Limited English Proficiency	0.02	(0.23)	-0.20	(0.24)	0.10	(0.24)
Class Size	-0.03	(0.03)	-0.02	(0.03)	-0.04	(0.03)

Table 26. Results of Classroom Quality Predictors Regression—CLASS

	CLASS Emotional Support n=173		CLASS Classroom Organization n=173		CLASS Instructional Support n=173	
Effect	Est	(SE)	Est	(SE)	Est	(SE)
Intercept	5.65***	(0.12)	5.43***	(0.13)	2.58***	(0.14)
Provider Type	-0.20	(0.11)	0.14	(0.12)	-0.03	(0.13)
Experience Teaching Pre-K	-0.01	(0.01)	-0.02	(0.01)	0.00	(0.01)
Teacher Beliefs Score	0.54***	(0.15)	0.47**	(0.16)	0.23	(0.18)
Teacher Certified	0.21	(0.14)	0.03	(0.15)	-0.05	(0.17)
% Limited English Proficiency	0.25	(0.24)	0.16	(0.26)	0.22	(0.28)
Class Size	-0.02	(0.03)	-0.05	(0.04)	-0.03	(0.04)

[a] Significance levels are *p< .05, **p< .01, ***p< .001.

[b] Private site=0, Public school site=1.

[c] Teacher not certified=0, Teacher certified=1.

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