Title
The Effects of English Language Learner Classification on Students' Educational Experience and Later Academic Achievement

Author
Shin, Nami

Publication Date
2015

Peer reviewed|Thesis/dissertation

UNIVERSITY OF CALIFORNIA

Los Angeles

The Effects of English Language Learner Classification on Students' Educational Experience and Later Academic Achievement

A dissertation submitted in partial satisfaction of the requirements for the degree Doctor of Philosophy in Education

by

Nami Shin

2015

ABSTRACT OF THE DISSERTATION

The Effects of English Language Learner Classification
on Students' Educational Experience and Later Academic Achievement

by

Nami Shin
Doctor of Philosophy in Education
University of California, Los Angeles, 2015
Professor Noreen M. Webb, Chair

English Language Learner (ELL) students are the fastest growing student population within the United States. In spite of federal and state laws and regulations that require states and local districts to provide ELLs with support services, prior research has indicated that ELL students are in general lagging behind non-ELL students in academic achievement. An unanswered question is whether and how the initial designation of students as ELL (apart from their actual skill level) may influence their later academic progress and experiences. The main purpose of this study, then, was to examine the effects of initial ELL classification (while controlling for their actual skill level) on students' academic experiences and later academic achievement. In particular, it compared outcomes for high-scoring ELL students (just below the cutoff for being classified as Initially Fluent English Speaking, IFEP) and students just above the cutoff who were classified as IFEP. This study also investigated whether students' particular

profiles of proficiency at the time of the initial classification (speaking, listening) influenced their academic experiences and achievement, as well as the experiences and achievement of students who retained their ELL status over a long term despite having initial scores placing them near the cutoff for being classified as IFEP.

This study used student-level longitudinal data (Kindergarten through tenth grade) from a very large school district in southern California. The sample consisted of 13,335 students who were near the cutoff score of the initial CELDT (administered in Kindergarten) for distinguishing ELL from Initially Fluent English Proficient (IFEP) students. Outcomes examined included standardized test scores, course grades, and whether students enrolled in gate-keeper courses (e.g., Algebra) in the normative year (e.g., 8th grade).

Regression discontinuity analyses showed that for students who were near the cutoff score for ELL and IFEP classification, being initially classified as ELLs was not a disadvantage. ELLs outperformed IFEPs in English Language Arts and Mathematics in early elementary grades; this difference disappeared in later grades, and the two groups showed equivalent performance. The patterns of differences and similarities between ELLs and IFEPs did not depend on whether students were more skilled in listening or speaking.

Among students who were initially near the cutoff for being classified as ELL, students who retained their ELL classification for a long term (at least five years) showed lower academic performance and developed English proficiency more slowly than students who were reclassified as IFEP in early years (before five years.) On average, students retaining their ELL classification for a long term tended to have lower initial CELDT scores, lower parent education levels, lower attendance rates in school, a higher proportion of students who were male, and a higher proportion of students who were designated as needing special education services.

The dissertation of Nami Shin is approved.

Michael Seltzer

Alison Bailey

Meredith Phillips

Noreen M. Webb, Committee Chair

University of California, Los Angeles

2015

To my family

Table of Contents

List of Tables

List of Figures

ACKNOWLEDGEMENTS

I would like to express my deepest gratitude to my advisor, Dr. Noreen Webb, for her excellent guidance, mentorship, support, patience, and providing me with a valuable opportunity to explore this amazing journey of learning. I would also like to thank my committee members, Drs. Michael Seltzer, Meredith Phillips, and Alison Bailey, for the guidance and wisdom that they have given me.

Nothing would be possible without my parents, Kisang Shin and Youngjae Chung. They are my most enthusiastic cheerleaders. My dad, a teacher, a professor, and a scholar who has been in education for more than four decades, has inspired and encouraged me to pursue this academic journey ever since I was a little girl. Without my mom's loving care, help, and positive energy she has given me, I would not have been able to overcome difficulties in this journey and finish my dissertation. I would like to also thank my sister and brother, Duri Shin and Iroo Shin, for supporting and encouraging me with their best wishes.

I would never have been able to finish my dissertation without my husband, Kyumin Shim. He is an amazing husband, my cheerleader, and my best friend. Thanks to his constant and unwavering support, understanding, patience, and love, I was able to finish my dissertation. He is also a wonderful and attentive father. Without his willingness to take care of Yuna and Yubi by himself whenever I needed extra time, this dissertation would have taken even longer to complete. I am grateful to my husband not just because he has encouraged me to make my career a priority in our lives, but because he has shared this entire amazing journey with me.

I also thank my daughter Yuna and my son Yubi, who were both born while I was a Ph.D. student. Even though Yuna is just a four-year old who just started Transitional Kindergarten and Yubi is an one-year old toddler who has just started walking, they were very patient when I was

not able to be next to them writing my dissertation. Then, they always welcomed me with sweet smiles and tight hugs. That gave me a power and a strong motivation to work harder when I had to be away from them to work. I am grateful to them for being a bundle of joy and laughter and for teaching me how to balance life and work.

In addition, I thank all my friends who encouraged me in the process of writing my dissertation. Special thanks go to Hyeyoung Yun, Patricia Carroll, and Jongyeon Ee, who were often next to me during this period. It would have been a lonely lab without the morning coffees, thoughts, and discussions that I shared with Hyeyoung. Patty kept me company as we went through the same steps as doctoral students, and our countless discussions on English Language Learners must have been reflected on this study in many ways. The lunch breaks and discussions that I had with Jongyeon in MS building refreshed my brain and helped me accelerate at the end of this journey.

Finally, I would like to thank the district for allowing me to explore their data and make this study possible. I have learned so much by examining English Language Learners in the district. I hope my findings will be helpful for the district, its teachers and students.

VITA

Nami Shin
Email: nami0623@gmail.com

Education

University of California, Los Angeles
Ph. D. Candidate, Education, Social Research Methodology Division, September 2015

California State University, Los Angeles
M.A., Education with an emphasis in Research and Evaluation, June 2010
M.A., TESOL (Teaching English to Speakers of Other Languages), June 2010

Ewha Womans University (Seoul, Korea)
M.Ed., English Education, February 2007

Ewha Womans University (Seoul, Korea)
B.A., English Education, February 2004

Wilson College (Chambersburg, PA)
Exchange Student, August 2002 - May 2003

Research Experience

Senior Statistician
UCLA Center for Research on Evaluation, Standards & Student Testing (CRESST), September 2015 to Present

Graduate Student Researcher, *Smarter Balanced Assessment Consortium*
UCLA Center for Research on Evaluation, Standards & Student Testing (CRESST), March 2015 to Present

Graduate Student Researcher, *Evaluation of Magnet Schools Assistance Program (MSAP)*
UCLA Center for Research on Evaluation, Standards & Student Testing (CRESST), January 2013 to June 2014

Graduate Student Researcher, *Evaluation of Mobilizing for Innovative Computer Science Teaching and Learning (MOBILIZE)*
UCLA Center for Research on Evaluation, Standards & Student Testing (CRESST), September 2013 to June 2014

Graduate Student Researcher, *Improving Mathematics Achievement Through Active Student Participation in Mathematics Classrooms* (PIs: Professors Noreen Webb and Megan Franke)
Graduate School of Education and Information Studies, University of California, Los Angeles, June 2010 to June 2013

Graduate Student Researcher, *Preparing for WASC (Western Association of Schools and Colleges) evaluation of California State University, Los Angeles* (Supervisor: Professor Anne Hafner)
California State University, Los Angeles, December 2008 to August 2010

Publications

Ing, M., Webb, N. M., Franke, M. L., Turrou, A. C., Wong, J., **Shin, N**., & Hernandez, C. (2015). Student participation in elementary mathematics classrooms: The missing link between teacher practices and student achievement? *Educational Studies in Mathematics, 90*(1).

Webb, N. M., Franke, M. L., Ing, M., Wong, J., Fernandez, C.H., **Shin, N**., & Turrou, A. C. (2014). Engaging with others' mathematical ideas: Interrelationships among student participation, teachers' instructional practices, and learning. *International Journal of Educational Research, 63*, 79-93.

Conference Presentations (Selected)

Shin, N. (2015, April). *The Effects of English Language Learner Classification on Students' Educational Experience and Later Academic Achievement*. Paper presented at the annual meeting of the National Council on Measurement in Education , Chicago, IL.

Shin, N. (2014, April). *The Effects of Afterschool Program on English Language Learners' Academic Achievement: Hierarchical Linear Modeling Approach*. Paper presented at the annual meeting of the American Educational Research Association, Philadelphia, PA.

Shin, N., Ing, M.M., & Webb, M.N., Franke, L.M., Turrou, A.G., Wong, J., & Hernandez, C. (2014, April). *Measuring Classroom Contexts That Support Student Participation and Learning: Applications of Social Network Analysis.* Paper presented at the annual meeting of the American Educational Research Association, Philadelphia, PA.

Shin, N. (2012, April). *Generalizability Analyses of Postsecondary Students' Needs Analysis Survey of Academic Language Skills.* Paper presented at the annual meeting of the American Educational Research Association, Vancouver, British Columbia, Canada. (Oral Presentation)

Honors & Awards

Dissertation Year Fellowship (2014-2015), University of California, Los Angeles
Graduate Division Fellowship (2010-2014), University of California, Los Angeles
Ewha Alumni Scholarship (December 2001), Ewha Womans University (Seoul, Korea)
Dean's List (2002-2003), Wilson College (Chambersburg, PA)
The James Applegate Academic Award (April 2003), Wilson College (Chambersburg, PA)

Chapter 1. Introduction

English Language Learner (ELL) students are the fastest growing student population within the United States. The number of ELLs in public schools in the U.S was approximately 4.4 million (9.2%) in 2012-13 while the number was 4.1 million (8.7%) in 2002-03 (Kena et al., 2015). In the western states, the proportion of ELLs is even higher. In California, for example, ELL students made up 29 percent of public school enrollment as of 2011. Under federal and state laws and regulations, states and local districts should identify ELLs and provide them with language support services to assist them in their academic performance. In spite of this policy, ELL students are in general lagging behind non-ELL students in academic achievement (Abedi & Gandara, 2006). In 2011, for instance, the gap between ELL and non-ELL students on the NAEP reading assessment was 36 points at the 4^{th} grade level and 44 points at the 8^{th}-grade level (Aud et al., 2013). How to explain this gap is not well understood. Furthermore, studies often divide students into two categories, ELLs and non-ELLs, but these two groups consist of many subgroups. In particular, little is known about the educational experiences of students who are classified differently according to English Language proficiency, nor how their educational experiences relate to their educational outcomes. This study seeks to fill that gap by examining and comparing the educational experiences and academic outcomes over time for specific subgroups of students according to their classification by English Language proficiency.

ELLs are identified by a Home Language Survey (HLS) and an English Language Proficiency (ELP) assessment (the California English Language Development Test, CELDT, in California). The HLS identifies potential ELLs, students who speak languages other than English at home, who should then take the ELP test. If students meet the criteria for English proficiency, they are classified as Initially Fluent English Proficient (IFEP). If they do not meet the criteria,

they are classified as English Language Learner (ELL). On the other hand, students who speak English at home (according to their parents' responses on the HLS) do not take the ELP test and are referred to as English-only (EO) speaking students or Non-English Language Learners (Non-ELLs).

Research comparing ELL and non-ELL students typically considers these groups as very broad categories. Non-ELL students include both EO students who are native English speakers and IFEP students who speak languages other than English at home and meet the cut-off scores on English proficiency tests (who are often bilingual or multilingual). It is important to separate out IFEPs from EOs because IFEPs represent a significant proportion of the students in U.S. classrooms and they differ from EOs in many ways (e.g. culturally and linguistically). However, little research has focused on IFEPs. This study examined this group of students.

As is the case for non-ELLs, ELL students consist of multiple subgroups. Half of the students who were designated as ELLs in elementary school are reclassified by secondary school, and half stay as ELLs over a longer term (Grissom, 2004; Olsen, 2010; Salazar, 2007; Thompson, 2012). The latter students are typically designated as Long-term English Learner (LTEL). The former students will be referred to as non-long-term ELLs (non-LTELs) in this study. The definition of LTEL varies by districts and states, but it usually refers to a sub-group of ELLs who stay as ELLs for more than five to seven years. Studies on LTEL students have shown that this group of students is particularly at academic and linguistic risk (Callahan, 2005; Olsen, 2010; Thompson, 2012; Yang, Urrabazo & Murray, 2001). Consequently, it is important to distinguish between these subgroups of ELL students. This study, therefore, will focus on three subgroups of students: IFEP, non-long-term ELLs (non-LTELs), and long-term ELL (termed LTEL in this study).

Comparisons of groups of students in previous research may be overly broad in another respect: the particular language areas (speaking, listening, writing, and reading) in which students may be more or less proficient. Some studies have investigated time taken to attain academic English proficiency (Cook, Boals, Wilmes, & Santos, 2007; Hakuta, Butler, & Witt, 2000), or to be reclassified in general (Parrish et al., 2006) and by different levels of overall CELDT scores (Thompson, 2012). Other studies have looked at the relationship between the age of entry into the school system and time taken to achieve English proficiency (Conger, 2009). However, little research has compared students with different profiles of CELDT scores. Students with the same overall designation (in terms of the ELL classification and level) may differ in terms of the specific areas of proficiency or lack of proficiency. The specific profile of a student's proficiency may be an important determinant of their educational experiences and attainment. Therefore, the current study investigated whether there is any difference in academic performance among students with different profiles of CELDT scores with the same overall score.

It is not known to what extent gaps in academic achievement between different subgroups of students according to English Language proficiency might be explained by differences in students' academic experiences that result from their ELL identification and classification. There is some indication that IFEP and ELL students may have access to different kinds of educational services: IFEPs are assigned to the same mainstream classes as English Only (EO) students but are not eligible for language support service, while ELLs are entitled to take additional or supplemental language support classes but have limited access to high-level courses such as honors and Advanced Placement (AP) courses in the secondary schools (Callahan, 2005; Harklau, 1994). Furthermore, there are indications that LTELs and non-LTELs

might have different opportunities to learn. Some studies on LTEL students in California have indicated that 12% of LTELs may have been assigned to mainstream classes with no special services for their entire schooling career (Olsen, 2010). The exact nature of the difference in educational opportunities afforded these three groups of students (non-LTELs, LTELs, and IFEPs) is unclear. Moreover, whether and how differences in educational opportunities translate into differences in academic achievement is not known. Therefore, to fill this gap in knowledge, the current study explores the effects of initial ELL classification on students' later educational experience and academic achievement.

Chapter 2. Review of Literature

Educational Policy and Language Services for ELLs

Several laws require school districts and schools to provide ELLs who have limited proficiency in English with adequate instruction. Under Title VI of the Civil Rights Act (1964), school districts should take affirmative steps to avoid discrimination against ELLs. The milestone court case Lau v. Nichols (1974) held schools accountable for identifying students with limited English proficiency and providing language support service. Castañeda v. Pickard (1981) established three criteria to assess the adequacy of a district's program for ELLs: theoretical foundation, effective implementation with sufficient resources, and evaluated effectiveness in improving ELLs' language proficiency. In addition, the No Child Left Behind Act (NCLB, 2001), the most recent reauthorization of the Elementary and Secondary Act of 1965, mandates that states measure ELL students' level of English proficiency in four domains: reading, writing, listening, and speaking (and comprehension) (Title III) and assess these students' academic performance (Title I).

In accordance with these laws, districts and schools provide ELLs with language support services. The most common services offered include English Language Development (ELD) / English as Second Language (ESL) coursework, Structured English Immersion (SEI), and sheltered and/or specially designed academic instruction in English (SDAIE) content-area (e.g., math, science, social science) courses. ELD is a component of all program options for ELLs, and it is separate from but complementary to English-language arts instructions. The purpose of ELD is to accelerate English language learning strategically by developing listening, speaking, reading and writing with contextualized instruction. The SEI program is designed to provide ELD courses and grade-level core content instruction that is adequately differentiated and scaffolded in English, and primary language support is also available for clarification throughout the day. In SDAIE

and sheltered content-area courses, the same content is covered as in corresponding mainstream courses, but instructional methods are tailored for ELLs' linguistic needs (Chamot & O'Malley, 1996; Enchevarria & Graves, 1998). These ELD services are the direct impact of the initial ELL classification on ELLs, and it is the major difference between ELLs' and IFEPs' educational experience.

ELL identification and classification system

NCLB defines ELLs (or Limited English Proficient, LEP) as students: a) who are aged 3 through 21; b) who are enrolled or preparing to enroll in an elementary school or secondary school; c) who were not born in the United States or whose native language is a language other than English; d) who are Native American or Alaska Native, or are native residents of the outlying areas; or e) who comes from an environment where a language other than English has had a significant impact on the individual's level of English language proficiency; f) who are migratory, whose native language is a language other than English, and who come from an environment where a language other than English is dominant; g) whose difficulties in speaking, reading, writing, or understanding the English language may be sufficient to deny the individual the ability to meet the state's proficient level of achievement on state assessments and the ability to successfully achieve in classrooms where the language of instruction is English or the opportunity to participate fully in society (NCLB, 2002, Title IX #25).

The definition above mainly uses two sources of information: a Home Language Survey (HLS) and a test of English proficiency. Based on the definition, states and districts create and use different kinds of measures to identify ELLs. As a result, the current ELL identification and classification system varies by states and districts (Abedi, 2008a; Mahoney & MacSwan, 2005; Parrish et al., 2006; Ragan & Lesaux, 2006). Linquanti (2001) reviewed the methods of

identifying, classifying, and serving language-minority students and also identified problems with the classification system: the lack of understanding by policymakers, educators, and the general public on the complex nature of what ELLs should satisfy to be reclassified as Reclassified Fluent English Proficient (RFEP) students; inadequacy of reclassification policies and procedures; and inappropriate methods used to calculate reclassification rates from ELLs to RFEPs.

States and districts use different sources for identification and reclassification (Bailey & Kelly, 2013; Wolf, Kao, Herman, et al., 2008) and have different weighting applied to the speaking, listening, reading, and writing of their ELP assessments and the cut-off points to reclassify ELLs (Abedi, 2008b, Ramsey & O'Day, 2010). Wolf, Kao, Griffin, et al. (2008) found that different sources were utilized for identification and reclassification across states. In terms of the initial identification of ELLs, most of the states (46 out of 49 states and the District of Columbia) use a Home Language Survey (HLS), and 34 states administer a single common ELP assessment while 16 states let districts choose their own assessment from a given list. The variation in the number and the phrasing of HLS items across states raises issues of equity (Bailey & Kelly, 2013). States vary even more regarding reclassification. Nine states employ all of the four criteria used by California: ELP test scores, academic achievement test scores, teacher evaluation, and parent opinion. On the other hand, 46 states use ELP test scores, 28 use academic achievement test scores, 21 use teacher evaluation, and 15 include parent consultation. As a result, the proportion of language minority students who are identified as ELLs varies across states (Ragan & Lesaux, 2006). This suggests that the same student may be classified as an ELL in one state but not in another state. Furthermore, the result of reclassification for the same

student can vary even across districts within California because districts can set their own cut-points on the CST (California Department of Education, 2013; Parrish et al., 2006).

In the following sections, I describe the ELL initial classification and reclassification procedures, concentrating on California procedures as data from a very large school district in southern California were analyzed in this study (California Department of Education, 2013).

Initial classification

A Home Language Survey (HLS) is the first filter that identifies potential ELLs. The purpose of the HLS is to differentiate students who should be further assessed with an English proficiency test from those who need not be tested. Upon first enrollment in a public school, parents complete a HLS. If they indicate that a language other than English is spoken at home, students are identified as possible ELLs and should take a subsequent English proficiency test. On the other hand, if they report that English is their home language, they are excluded from administration of the English proficiency test and are classified as English Only (EO) students. State law (EC sections 313 and 60810) and federal law (Titles I and III of the Elementary and Secondary Education Act [ESEA]) require that local education agencies administer a state test of English Language Proficiency and develop Annual Measurable Achievement Objectives (AMAOs) for newly enrolled students whose primary language is not English as an initial assessment and for students who are ELLs as an annual assessment. For California's public school students, this test is the California English Language Development Test (CELDT, California Department of Education, 2013). The CELDT consists of four domains -- Speaking, Listening, Reading, and Writing-- and it produces an overall proficiency score and level as well as separate scores and levels in each domain. The levels are beginning (Level 1), early intermediate (Level 2), intermediate (Level 3), early advanced (Level 4), and advanced (Level 5).

The initial CELDT administration identifies students' English proficiency and determines whether they should be classified as ELLs. If students' overall proficiency level falls below early advanced, and any one of their domain scores falls below intermediate, they are classified as ELLs. On the other hand, if students score above early advanced overall and above intermediate in each domain, they are classified as Initially Fluent English Proficient (IFEP) students. For Transitional Kindergarten and Grade one students, the domain scores for Reading and Writing are not required to be at the Intermediate level.

Reclassification

Under current state law (EC Section 313), identified ELLs must participate in the annual administration of the CELDT until they are reclassified as RFEP. To be reclassified as English Proficient, ELLs must meet several criteria in California. The first criterion is to score an overall proficiency level of Early Advanced and all domain levels of Intermediate or above in the CELDT. In addition to CELDT scores, students should satisfy criteria in terms of teacher evaluation of curriculum mastery, parental opinion and consultation, and a measure of basic skills in English such as the California Standards Test in English Language Arts (CST ELA). Students in the basic range (the third of five levels of performance: far below, below, basic, proficient, and advanced) are considered to be prepared for reclassification, and districts can select a cut point in this range.

The district that this study examined follows the procedures of identification and classification as suggested by the CDE above. ELLs are evaluated annually for reclassification until they are reclassified. However, ELLs at grades Kindergarten through one are not usually considered for reclassification in the majority of California districts.

Gaps in achievement among sub-groups according to students' classification (EO, IFEP, non-LTELs, LTEL)

ELLs vs. Non-ELLs

ELL students have lagged behind non-ELLs in all content areas. There have been significant achievement gaps between the performance of ELLs and non-ELLs on standardized tests (Abedi, 2002; Abedi & Lord, 2001; Abedi et al., 1998; Aguilar, 2010; Flores, Batalova, & Fix, 2012; Hemphill & Vanneman, 2011; Young et al., 2008). For example, Flores, Batalova, and Fix (2012) tracked ever-ELL (students who have ever been classified as ELLs) and non-ELL students in Texas from the first grade and through high school graduation and analyzed their academic performance. On average, ELLs lagged non-ELLs in both reading and math during their entire school career. In the comparison of the percentage of students who met the standard of proficiency recommended by the state in each grade, there was a difference of 18 percentage points in math and 20 percentage points in reading between ELLs and non-ELLs.

However, Saunders & Marcelletti (2013) maintain that the significant gap in academic achievement between ELLs and non-ELLs can be attributed to the fact that studies examining the gap often exclude RFEPs from ELLs. Using California standardized achievement data, they compare ELLs, RFEPs, IELLs (all initially identified English Learners: ELLs and RFEPs), and EOs in terms of their academic achievement. The results reveal that focusing on current ELLs without including RFEPs underestimates IELLs and overestimates the achievement gap between IELLs and EOs. In addition, they argue that excluding RFEPs makes it less likely to detect progress when there is actually improvement in achievement over time.

Non-LTELs

Prior research on RFEP students was focused primarily on the reclassification of ELLs (Gandara & Merino, 1993; Grissom, 2004; Linquanti, 2001). More recent research on RFEP students has paid attention to their academic performance. Studies on RFEPs' performance present mixed results. Some studies report that RFEPs often continue to underperform compared to non-ELLs even after reclassification (Martiniello, 2009), while others show that RFEPs outperform ELLs and perform as well as EOs (Kim & Herman, 2010; Saunders & Marcelletti, 2013; Hill, 2012; Hill, Weston, & Hayes, 2014; EdSource, 2008; Gandara & Rumberger, 2006). The results seem to depend on when ELLs are reclassified. De Jong (2004) compared 38 fourth-grade students and 56 eighth-grade students from a single district who had exited from a language support program and found that the fourth-grade students performed similarly to non-ELLs while the eighth-graders underperformed non-ELLs. This might imply that instructional language becomes more complex in higher grade levels and students' academic language proficiency is more important in academic success as well.

Three studies investigated the direct relationship between reclassification and students' achievement (Flores, Painter, & Pachon, 2009; Robinson, 2011; Thompson, 2012). Following one cohort of students in LAUSD from 6th grade until graduation, Flores, Painter, and Pachon (2009) examined the relationship between reclassification and academic outcomes. The outcome variables included 8th grade SAT reading comprehension scores and math scores, 9th grade retention, taking a high school Advanced Placement (AP) course, passing the California exit exam (CAHSEE), and dropping out of high school. The results showed that reclassification at any point in middle school had a positive impact on students' likelihood of staying in the 8th grade, passing the California exit exam (CAHSEE), and taking an Advanced Placement (AP)

course in high school or staying in high school. Furthermore, students reclassified at some point were less likely to fail or drop out of high school and more likely to take AP courses than students initially English proficient (IFEPs and EOs).

On the other hand, the other two studies (Robinson, 2011; Thompson, 2012) report different results from Flores, Painter, and Pachon's (2009) study. In contrast to Flores, Painter, and Pachon's (2009) study that used ordinary least squares (OLS) regression, Robinson (2011) and Thompson (2012) used binding score regression discontinuity design with instrumental variables (RD-IV) as well as OLS regression to examine the impact of reclassification on students' later achievement. Robinson (2011) tracked multiple cohorts of students from 3rd through 11th grades and examined the relationship between reclassification and students' academic outcomes such as CST-ELA scores, course-taking, and attendance. He compared the results from analyses using an OLS and those using RD-IV. The OLS estimates were significant and consistent with prior research suggesting reclassification has a positive impact on students' achievement (cf. Callahan, 2005; Flores, Painter, & Pachon, 2009). However, the binding-score RD-IV analyses demonstrated no effect of reclassification on students' achievement at the elementary and middle school level but showed a negative effect at the high school level.

Thompson's (2012) study showed similar results to Robinson's (2011). She followed four cohorts of students from 5th to 8th grade and examined the effects of the number of years after reclassification on students' standardized test scores in English Language Arts (ELA) and math as well as their enrollment in Algebra 1 or a higher level course at eighth grade. The results revealed that reclassification does not have significant positive or negative impact on middle school students' achievement. Students who are likely to have higher achievement are also likely to be reclassified. Both of the two studies demonstrated that significant differences in academic

outcomes between RFEPs and ELLs were displayed using OLS, but they were not detected when RD-IV was employed. In summary, the findings from the literature are mixed in terms of RFEPs' academic performance.

Long-term ELLs (LTELs) vs. non-LTELs

A sub-group of ELLs that should be paid attention to is LTELs. The majority of secondary school ELLs belong to this group, and they are particularly at academic and linguistic risk (Callahan, 2005; Olsen, 2010; Thompson, 2012; Yang, Urrabazo & Murray, 2001). There is not an agreed-upon definition of LTELs across states and districts, but the term usually refers to students who stay as ELLs for five to seven years. In the district that I examined in this study, LTELs are defined as ELLs in sixth through twelfth grades who have not been reclassified after five full years or more in U.S. schools. According to Olsen (2010), LTELs generally struggle academically and have distinct language issues. More specifically, they are able to function well in both their home language and in English but have weak academic language and significant gaps in reading and writing skills. Furthermore, the majority of LTELs are "stuck" at Intermediate levels of English proficiency or below, and some of them reach higher levels of English proficiency but cannot be reclassified due to insufficient achievement in academic language.

A few studies examined LTELs' academic performance. Using data from a large urban school district, Yang, Urrabrazo, and Murray (2001) explored the effects of multiple years (more than seven years) in Bilingual education (BE) or English as a Second Language (ESL) programs on secondary ELL students' English acquisition and academic achievement. The findings revealed that the majority of continuing ELLs (LTELs) are US born, and BE/ESP programs have positive impact on students' English proficiency growth in the beginning but secondary ELLs

reach a ceiling of intermediate level. Furthermore, continuing ELLs' general academic performance does not improve since they are stuck in BE/ESL programs where they have limited opportunity to learn higher order thinking skills. Based on their classroom observations and school visits, Yang et al. argue that this might be attributable to inappropriate assignment of continuing LEP students in beginning ESL courses and remedial language courses, unreasonable exit policies, and the lack of rigorous content coverage in ESL courses.

Other studies on LTELs report similar stories that LTELs lagged significantly behind other students (Callahan, 2005; Flores, Batalova, & Fix, 2012). Callahan (2005) investigated the effects of track placement (the proportion of classes on a student's transcript that met college entry requirements) and English proficiency on secondary ELLs' academic achievement considering students' previous schooling and length of time enrolled in U.S. schools. The sample consisted of students from a high school in California, and three groups of ELLs were compared in the study: recent immigrants with a low amount of prior schooling, recent immigrants with a high amount of prior schooling, and LTELs. Students were compared in terms of grade point average (GPA), number of credits, standardized language and mathematics test scores, and both SAT9 and California High School Exit Exam (CAHSEE) scores. The findings revealed that track placement was a significant predictor for non-language-based academic outcomes while English proficiency level was significant only in predicting performance on two language-based academic achievement measures: SAT9 reading and CAHSEE language arts. Among the three ELL groups, recent immigrants with a high amount of previous schooling generally performed better than LTELs, even though LTELs had been exposed to English instruction for a much longer period of time. This emphasizes the greater importance of academic preparation and previous schooling than English-language proficiency in certain areas.

Reasons why ELLs underperform

Overall, the findings of the studies mentioned above report ELLs' underperformance compared to non-ELLs. This gap in academic achievement may be attributable to several factors: a) the challenge of acquiring English proficiency and academic knowledge at the same time (Abedi & Gandara, 2006); b) different internal factor structures of many standardized tests for ELLs than for non-ELLs (Abedi, 2002; Young et al., 2008); c) parent education level and poverty (Abedi, Leon, & Mirocha, 2003); d) difficulty in second language acquisition (Hakuta, Butler, & Witt, 2000; Moore & Redd, 2002); and e) unequal schooling conditions (Abedi, Herman, Courtney, Leon, & Kao, 2004; Gandara, Rumberger, Mawell-Jolly, & Callahan, 2003).

What hasn't been done

Most of the previous studies on ELLs' academic performance compared ELLs and non-ELLs or compared sub-groups of ELLs only. Among four different groups of students created by the ELL classification system (EOs, IFEPs, ELLs, and RFEPs), IFEPs have often been excluded from research in education. Little research has focused on this group of students, who are often considered the same as EOs (Young et al., 2010). None of the previous studies tracked IFEPs over time and examined their academic performance. In addition, there are few studies that distinguish LTELs, non-LTELs, and IFEPs and follow these groups over time. Flores, Batalova and Fix (2012) compared "quick-exiters" (non-LTELs) and LTELs in terms of their academic trajectory, but their study did not provide refined details beyond whether LTELs met the given standard in math and reading. In addition, IFEPs were not separated out from EOs in the study. Callahan, Wilkinson, and Muller (2010) followed language minority students for four years and compared students with a high propensity of being placed in ESL services and those with a low propensity in terms of their college preparatory enrollment in core subjects, GPA, and math test

scores. In this study, language minority students with a low propensity of being placed in ESL may include IFEPs and RFEPs, however, the distinctions between two groups of students were not clearly made.

Unlike most prior research, the current study distinguishes IFEPs, non-LTELs, and LTELs and compare their academic trajectories. Furthermore, this study tracks students from their initial ELL classification until they reach high school in contrast to many other studies that followed students from the point of reclassification or for a shorter period of time (e.g. during elementary schools or during secondary schools). More specifically, this study differs from the previous studies in that it focuses on students who are near the cut-off for IFEP (almost IFEPs vs. barely IFEPs).

Educational experiences of different sub-groups by the ELL classification

Enrollment in core subjects such as math, science, and social science can be used as a measure of the rigor of students' course taking. Students enrolled in more advanced math and science coursework have more access to academic content and eventually perform better than students enrolled in less advanced courses (Schneider, Swanson, & Riegle-Crumb, 1998). Furthermore, students enrolled in a wider range of social science coursework, especially more AP and honors classes, can achieve greater academic rigor (Jenness, 1990; Thornton, 1994). However, ELLs are often enrolled in lower level coursework (Wang & Goldschmidt, 1999).

Experiences of ELLs

ELLs are often physically separated from non-ELLs in taking English Language Development (ELD) classes (at particularly secondary schools) (Katz, 1999). At secondary schools, ELD courses often replace or supplement mainstream English language art classes and often other core subjects as well (Valdes, 1998). Gándara et al. (2003) found that the majority of

the courses did not satisfy college-preparatory requirements, while most courses taken by EOs did. As a result, these ELD courses have been referred to as a "dead-end path" for ELLs (Gutierrez, 2005; Valdes, 1998). Moreover, better-performing ELLs become reclassified quickly, and the ELD courses are concentrated with the lowest performing ELLs (Abedi, 2004; Gándara et al., 2003; Gutierrez, 2005; Valdes, 2001).

ESL courses are supposed to help ELLs acquire English proficiency and ultimately assist them in their academic achievement. However, findings of the previous studies on ELLs' educational experiences as well as academic outcomes make the effectiveness of ESL courses questionable. There are a few studies that examined the effects of ESL instruction (Callahan, 2005; Callahan, Wilkinson, Muller, & Frisco, 2009; Callahan, Wilkinson, & Muller, 2010). Callahan et al. (2010) explored the effects of ESL placement on language minority students' academic achievement and course taking. The results showed that ESL was more effective for students with a high propensity for ESL placement (who tend to be recent immigrants, relatively low self-reported English language proficiency and standardized reading test scores) than for students with a low propensity for ESL placement (who tend to be long-term ELLs, Generation 1.5 or 2 immigrants, relatively high self-reported English language proficiency, and longer tenure in U.S. schools). Students with a high propensity for ESL placement showed positive outcomes in math from ESL instruction (but not in science or social science). In contrast, there were largely negative effects of ESL instruction on the outcomes of students with a low propensity for ESL placement. This implies that students who have a low propensity for ELS placement may not be benefiting from ESL services. Callahan et al. argue that these results point to possible problematic school processes either in placement or in the opportunities provided to ESL students. However, the majority (59%) of secondary school ELLs are LTELs (Callahan,

2005; Freeman, Freeman, & Mercuri, 2002; Linquanti, 2001; Olsen, 2010; Ruiz-de-Velasco, 1999). Whether LTELs are less likely than other ELL students to benefit from language services, and if so, why, is not known.

RFEPs' experiences

As research on RFEPs' academic outcomes shows, RFEPs' experiences are also mixed. The studies on the effects of reclassification mentioned earlier (Flores, Painter, & Pachon, 2009; Robinson, 2011; Thompson, 2012) show mixed results in terms of the impact of reclassification on students' course-taking experiences and academic achievement. Flores, Painter, and Pachon (2009) used regression analysis to examine the impact of reclassification on students and found that reclassification had positive effects on students' likelihood of taking an Advanced Placement (AP) course in high school, and staying in high school. In contrast, Robinson (2011) employed a binding-score RD approach to investigate the effects of reclassification on students and found that reclassification affected neither enrollment opportunities nor successful completion of such courses in ELA, math, science, or overall college preparatory credits. He argued that the findings imply that reclassification alone does not always open doors to A-G coursework; rather, students selected to be reclassified are also likely to satisfy more A-G requirements. Using a binding-score RD approach, Thompson (2012) revealed findings similar to those of Robinson (2011) and reported no impact of reclassification on the likelihood of taking Algebra 1 or a higher level course at eighth grade.

In summary, most research has compared ELLs vs. non-ELLs, and some studies have distinguished non-LTELs from long-term ELLs. However, to date, there is little research about IFEPs, nor is there much research differentiating IFEPs from non-ELLs in terms of their educational experiences and academic performance longitudinally. More specifically, no studies

have compared ELLs who are near the cut-off for IFEP (almost-IFEPs) and IFEPs who are just above the cut-off (barely-IFEPs) in terms of their educational experiences. The comparison of these two groups' regarding their education experiences would give us a precise picture about whether or not assigning students at this particular level of English proficiency to ELL status is beneficial for students. The analysis can also be viewed as a means of evaluating the current cutoff scores for IFEPs. Furthermore, there are no studies examining ELLs based on their initial CELDT profiles and following them over time. It is crucial to distinguish the three groups of students (IFEPs, non-LTELs, and LTELs) as their needs are different. In addition, it is important to differentiate them by their different profiles of the initial CELDT scores; doing so will reveal which language skills are most significant for students' academic success.

LTELs' experiences

Some research has examined LTELs' academic experiences (Menken & Kleyn, 2010; Olsen, 2010). Based on the survey data completed by district staff on students grade 6-12, Olsen (2010) provided potential factors that contribute to LTELs' status: "receiving no language development program at all; being given elementary school curricula and materials that weren't designed to meet English Learner needs; enrollment in weak language development program models and poorly implemented English Learner programs; histories of inconsistent programs; provision of narrowed curricula and only partial access to the full curriculum; social segregation and linguistic isolation; and cycles of transnational moves" (p. 2). The results of the survey also revealed how LTELs are currently served in secondary schools. First, only four of forty districts reported having designated programs or formal approaches for LTELs, and the majority of districts provided no program for this group of students in secondary schools and placed them into mainstream classrooms. Second, eight districts indicated that LTELs are placed in separate

ESL programs that are usually designed for newcomer ELLs. Third, LTELs' teachers have limited preparation, support, or strategies to address their needs. Fourth, LTELs are inadequately served in intervention and reading support classes. Finally, LTELs' schedule often consists of English ELD, intervention and support classes, and math. LTELs are unable to earn the English credits for college preparation as the ELD classes often do not receive university approved A-G credits.

In summary, the prior research on LTELs provides rather limited information on their experiences; moreover, many of the studies are based on district-level data. In addition, previous studies have mainly focused on LTELs' experiences and outcomes at the secondary schools. Therefore, by tracking LTELs from the beginning of their classification until high school and differentiating them according to their initial CELDT score profiles, the current study adds more details about their academic trajectory.

The current study

The current study examined these three groups' (IFEPs, non-LTELs, and LTELs) and their sub-groups' (based on the initial CELDT score profiles) educational experiences and academic outcomes. Using regression discontinuity designs, the study examined students near the cut-off scores for IFEP and explored the impact of the initial classification on IFEPs' and ELLs' experiences and achievement. An analysis of the relationship between students' initial classification and their later academic outcomes provides information about the effects of the initial classification criteria.

Focusing on almost-IFEP students who were initially tested in two CELDT domains (Listening and Speaking) in 2007, this study examines the differences in the impact of different CELDT sub-domains (Listening and Speaking) on students' academic performance. There are

several ways in which students might fail to meet the cut-off for IFEP status. For example, some students might fail to be IFEPs due to their low score in Speaking while satisfying the cutoff scores of the other sub-domain. Other students might be classified as ELLs because they score too low in Listening while meeting the cutoff scores of Speaking. This study investigates how the particular profile of CELDT sub-domain scores (Listening and Speaking) that students receive in the initial classification impact their future academic experience and performance. It will be helpful for practitioners and policy-makers to know whether there are sub-domains that are most difficult for almost-IFEP students (those who are just below the cut-off for IFEP and, consequently, are classified as ELLs).

Finally, this study compares LTELs and non-LTELs in terms of their student characteristics, academic outcomes, and educational experiences. First, this study compares LTELs and non-LTELs in terms of student characteristics in the baseline year and in the fifth year since the initial classification to examine how LTELs and non-LTELs are different and similar. Second, this study explores how LTELs and non-LTELs satisfied two of the reclassification criteria: CELDT and CST ELA. In addition, it explores the two groups' academic performance and educational experiences. Based on the findings, more tailored, proactive policies, curricula, and instruction can be provided to ELLs who are likely to be LTELs in the future. In addition, exploring LTELs' experiences during the post-LTEL period would tell us more about what this group of students are experiencing and what prevents them from being reclassified. These findings will be helpful for policy makers, administrators, and teachers in making decisions about how to improve student performance.

This study addresses the following research questions:

Question 1: What are the causal effects of being classified as IFEP versus being classified as ELL on students' educational experiences and later achievement outcomes for students who are near the classification cut-off?

Question 2: There are several ways in which students might fail to meet the cut-off for IFEP status. How does the particular profile of CELDT sub-domain scores (Listening and Speaking) that students receive when their IFEP vs. ELL status is determined impact their future academic performance?

a) Which sub-domain of CELDT tests contributes most for almost-IFEP students to be classified as ELLs?
b) Which sub-domain of CELDT tests is the best predictor of almost-IFEP students' future academic performance?
c) Which sub-group (based on the different profiles of sub-domain scores) is more likely to be reclassified earlier?

Question 3: What are LTELs' profiles? What are their academic outcomes and experiences?

a) How similar are LTELs and non-LTELs in terms of student characteristics?
b) How do LTELs and non-LTELs compare in terms of the two of the reclassification criteria: CELDT and CST ELA?
c) How do LTELs and non-LTELs compare in terms of academic performance, and educational experiences?

Chapter 3. Methods

Data

This study used data from a very large school district in southern California. As Table 3.1 describes, I followed two cohorts of students who were initially identified as ELLs or IFEP in Kindergarten in 2002-2003 or 2006-2007. I tracked these groups of students until 2012-2013. I focused on students who entered Kindergarten in the district since most of the ELL students are initially identified in this grade (Hill, 2012). Cohort 1 consisted of students who entered Kindergarten in 2002-2003 and became tenth graders in 2012-13, and they were examined in Research Questions 1 and 3. Cohort 2 included students who entered Kindergarten in 2006-2007 and became sixth graders in 2012-13, and they were the sample of Research Question 2. Listening and Speaking, two of the sub-domains in the CELDT, were combined together and administered to students in 2002-2003 through 2005-2006 (Cohorts 1), while the two sub-domains were separately tested starting in 2006-2007 up to the present (Cohorts 2). Of all students who entered Kindergarten in 2002-2003 and 2006-2007, I limited the sample to students who took the CELDT. In addition, the sample was limited to students who reported speaking Spanish at home. I included Cohort 2 in order to examine the impact of having different profiles in the initial CELDT performance.

Table 3.1. Grade Levels of Each Cohort in 2002-2003 through 2012-13

	2002-2003	**03-04**	**04-05**	**05-06**	**06-07**	**07-08**	**08-09**	**09-10**	**10-11**	**11-12**	**12-13**
Cohort 1	K	1	2	3	4	5	6	7	8	9	10
Cohort 2					K	1	2	3	4	5	6

The variables in this study consist of student-level. Student-level variables include students' demographic variables (e.g., gender, ethnicity, and parents' education level), basic enrollment information (e.g., grade level, enrollment in courses and programs such as Special

Education, number of present/absent days), variables related to students' language proficiency (e.g., CELDT scores, ELL status, placement on language support services), and students' academic performance (e.g., CST ELA and Math scores, English and Math course grades).

The outcome variables in this study include students' annual CELDT scores (overall and each sub-domain scores) since the initial classification, California Standards Test English Language Arts (CST ELA) and Math scores in Grades 2 through 10, and English and Math course grades in Grades 6 through 10.

Overview of Methods

Using student-level longitudinal data, this study plans to explore the impact of ELL classification on students' educational experiences and later academic outcomes in two main ways: 1) by comparing barely-IFEPs vs. almost-IFEPs and 2) by examining LTELs. Each of the examinations will be done in two ways: comparison between sub-groups for each year and overall pattern of change over time. For the analyses, this study will mainly use three different kinds of methods: regression discontinuity designs, logistic regression, and descriptive analyses. The following section will describe each method and how it was employed in this study.

Regression Discontinuity Designs

To investigate the impact of the initial ELL classification on students who are near the cutoff for ELL, I will use the conceptual framework of Rubin's causal model (RCM) (Holland, 1986; Rubin, 1978; Imbens & Rubin, 2007). In the RCM framework, each individual *i* will have two potential outcomes (Y_{i0}, Y_{i1}) in an experiment setting with two conditions, a treatment and a control condition. Y_{i0} is the potential outcome for individual *i* in the control condition, while Y_{i1} is the potential outcome for individual *i* in the treatment. The difference between these two states

(Y_{i1} - Y_{i0}) is defined as the causal effect. I define the impact of the initial ELL classification as the difference between two potential outcomes—one outcome when students are classified as ELLs (and receive subsequent services (i.e., ESL coursework) and the other when they are not classified as ELLs (and are, consequently, assigned to the same mainstream classes as EOs and are not receiving any language support services). As the assignment to ELL depends on a cutoff score on CELDT scores, it is ideal for examining the impact of the initial ELL classification using regression discontinuity (RD) designs where assignment is based solely on a cutoff score (Trochim, 1984).

RD designs can provide unbiased estimates of treatment effects when the selection mechanism into treatment or control condition is known (Cook et al., 2008; Shadish & Cook, 2009). They assign individuals to a treatment or a control condition based on a cutoff score on a continuous variable (referred to as the *assignment variable, rating score, running variable*, or *forcing variable*). Individuals that fall on one side of the cutoff receive treatment and those on the other side are assigned to the control condition. Then, a regression is fit to predict outcome from the assignment variable (minus the cutoff) and a treatment dummy variable. If there is a discontinuity (a change in slope or intercept) at the cutoff in the regression line, an effect is assumed to exist.

A causal interpretation in RD can be supported when the following assumptions hold (Battistin & Rettore, 2002; Hahn, Todd, & van der Klaauw, 2001; Imbens & Lemieux, 2008). First, treatment assignment (Z_i) is independent of the potential outcomes conditional on the assignment variable X_i at the cutoff X_c ($(Y_{i1}, Y_{i0}) \perp Z_i | X_i = X_c$). Second, the relationship between an assignment variable and the outcome of interest is continuous at the cut off without the treatment (Han et al, 2001; Imbens & Lemieux, 2008). These two assumptions are only valid

when a cutoff value is exogenously determined, and the assignment variable is not manipulated (Bloom, 2009). That is, the cutoff value is decided before students take a test and the test is scored, and the assignment to treatment or control conditions is solely based on students' scores, and it is not influenced by other manipulations.

Another important condition for the causal interpretation is that a cutoff point on the assignment variable must be used only for the treatment assignment of interest, and not for any other purposes. If the cutoff score of the assignment variable is used for a service other than the treatment of interest, the effects of the treatment would be confounded with the effects of the other service, and the estimate of the treatment effects would be biased. For example, if the cutoff scores for IFEP are used not only for classifying students as ELLs but also for eligibility for another academic program, it would be hard to separate out the effects of the ELL classification from the effects of the other program.

These assumptions are satisfied in this study. The cutoff scores for IFEP are predetermined before students take the CELDT test, and a student's classification as an ELL is determined only based on their CELDT scores. The results of the classification are not changed by teachers, parents, or any other administrators. In addition, the cutoff point of the CELDT scores is used only for determining the ELL classification.

The existing literature of RD typically distinguishes two types of RD designs: the sharp design and the fuzzy design (Imbens & Lemieux, 2008; Jacob, Zhu, Somers, & Bloom, 2012). In the sharp design, all subjects are assigned into treatment or control condition. On the other hand, some subjects do not receive treatment or control condition in the fuzzy design, which is analogous to situations in a randomized experiment when subjects in treatment group do not receive the treatment and/or when subjects in control group receive the treatment. In the current

study, all of CELDT test takers are classified either as ELL or as IFEP based on their CELDT scores. Therefore, the sharp RD design will be applied.

Logistic Regression Model

To estimate the likelihood of being an LTEL and to estimate the likelihood of taking Algebra 1 by Grade 8, I employed logistic regression models. When an outcome variable is a binary response variable (0 = failure or 1 = success), the mean of the outcome (0 and 1) equals the proportion of outcomes that equal 1. A regression model can be specified using a logistic transformation (logit) of the probability of success (y=1) as an outcome (Agresti & Finlay, 2009):

$$\log \frac{P(y=1)}{1-P(y=1)} = \text{logit}\,[P\,(y=1)] = \alpha + \beta x \qquad (3)$$

where the parameter β indicates whether the curve increases or decreases as x increases. If β is positive, P (y =1) goes up as x increases. If β is negative, P (y = 1) goes down as x increases.

In the current study, the probability of becoming an LTEL will be P (y = 1), and related factors will be included in the equation as explanatory variables to see whether they have significant impact on ELLs' becoming an LTEL. In addition, a logistic regression model will be used to examine the effects of Almost-IFEP students' initial CELDT score profiles on their reclassification. In the analysis, P (y = 1) will be the probability of being reclassified by the sixth year since the initial classification.

Chapter 4. Results of Research Question 1: The Causal Effects of the Initial Classification on Students' Educational Experiences and Later Achievement Outcomes

Research Question 1: What are the causal effects of being classified as IFEP versus being classified as ELL on students' educational experiences and later achievement outcomes for students who are near the classification cut-off?

Data

This study used data from the Los Angeles Unified School District. I followed students who were initially identified as English Language Learner (ELL) or Initially Fluent English Proficient (IFEP) in Kindergarten in 2002-2003 until they reached Grade 10 in 2012-2013. Of all 35,846 Kindergarten students initially classified in the academic year of 2002-2003 (2003, henceforth), I limited the sample to students who reported speaking Spanish at home and who were close to the cutoff score of the initial CELDT (505): students at Level 3 (Intermediate) (0 to 47 points below the cutoff) and Level 4 (Early Advanced) (0 to 43 points above the cutoff). This left a sample of 13,335 students, which consisted of 10,065 ELLs and 3,270 IFEPs. Throughout the study, the term "ELLs" refers to students who were initially identified as ELLs in Kindergarten, even if they might have been reclassified and become RFEPs in later years. The term "IFEPs" indicates those who were initially identified as IFEPs in Kindergarten. ELLs might have been reclassified and become RFEPs in the later years. This is to distinguish ELLs from IFEPs, groupings which are the result of the initial classification, as the purpose of this study is to examine the impact of the *initial* ELL classification on students' later achievement and experiences.

Table 4.1 below shows the number of students by initial (IFEP vs. ELL) and annual (IFEP, Still-ELL, and RFEP) classification in Kindergarten through Grade 10. The total number of students decreased over years, and less than a half of the initial students remained in the district by Grade 10. Compared to the number of students in the baseline (n = 13,335; 3,270 IFEPs and 10,065 ELLs), there were 5,589 students left in Grade 10, consisting of 1,369 IFEPs and 4,220 ELLs. The attrition rate was similar (about 60%) to the attrition among overall students, only ELL students, and only IFEP students. This high attrition rate may limit the generalizability of the estimated effects of the initial ELL classification.

Table 4.1. Number of students by the initial and annual classification in Grades K through 10

			Initial Classification		Division of ELLs based on Annual Classification	
Year	Grade	Total	IFEP	ELL	Still-ELLs	RFEP
03	K	13,335	3,270	10,065	--	--
04	1	12,699	3,109	9,590	--	--
05[a]	2	11,696	2,879	8,817	8,603 (97.6%)	214 (2.4%)
06	3	10,687	2,660	8,027	7,202 (89.7%)	825 (10.28%)
07	4	9,920	2,469	7,451	5,086 (68.3%)	2,365 (31.7%)
08	5	9,375	2,321	7,054	3,302 (46.8%)	3,752 (53.2%)
09	6	8,486	2,076	6,410	1,800 (28.1%)	4,610 (71.9%)
10	7	8,175	2,000	6,175	1,186 (19.2%)	4,989 (80.8%)
11	8	7,945	1,941	6,004	909 (15.1%)	5,095 (84.9%)
12	9	7,116	1,723	5,393	675 (12.5%)	4,718 (87.5%)
13	10	5,589	1,369	4,220	329 (7.8%)	3,891 (92.2%)

[a]Reclassification started in Grade 2.

Table 4.2 summarizes the number and percent of Still-ELL students by language support programs in Grades K through 10. In Kindergarten, 65% of ELL students were not assigned to any of the programs yet. However, starting in Grade 1, the majority of students were enrolled in one of the programs. In Grades 1 through 3, more than 90% of students were enrolled in SEI or ESL. In secondary grades (Grades 6 through 10), the proportion of Still-ELLs in Preparation for Redesignation Program increased significantly. A student who was PRP had completed all the ESL coursework and could no longer get credit for those courses, and they were placed in

regular, grade-appropriate English classes and remained with the designation of PRP until they were reclassified. In Grades 8 through 10, the majority of Still-ELLs were in the program.

Table 4.2. Number (and percent) of Still-ELLs in language support programs in each grade (Grades K through 10)

Grade	SEI/ESL	PRP	Dual Lang	Parent withdrawn	None	Total
K	3,290 (32.7)	--	227 (2.3)	5 (0.1)	6,543 (65.0)	10,065
1	8,798 (92.0)	23 (0.2)	408 (4.3)	23 (0.2)	311 (3.3)	9,563
2	8,122 (94.4)	79 (0.9)	328 (3.8)	36 (0.4)	38 (0.4)	8,603
3	6,636 (92.1)	439 (6.1)	43 (0.6)	28 (0.4)	56 (0.8)	7,202
4	4,129 (81.2)	843 (16.6)	37 (0.7)	18 (0.4)	61 (1.2)	5,086
5	2,282 (69.1)	953 (28.9)	14 (0.4)	10 (0.3)	43 (1.3)	3,302
6	885 (49.2)	669 (37.2)	4 (0.2)	31 (1.7)	212 (11.8)	1,800
7	510 (43.0)	612 (51.6)	1 (0.8)	37 (3.1)	26(2.2)	1,186
8	146 (16.1)	732 (80.5)	0 (0)	26 (2.9)	4 (0.4)	909
9	33 (4.9)	602 (89.2)	0 (0)	14 (2.1)	26 (3.9)	675
10	5 (1.5)	306 (93.0)	0 (0)	5 (1.5)	13 (4.0)	329

Note. SEI = Structured English Immersion, ESL = English as Second Language, PRP = Preparation for Redesignation Program, Dual Lang = Dual language program, None = Students were not assigned to any of these programs.

Table 4.3 displays the distribution of the analytic sample's initial CELDT scores and corresponding distance from the cutoff. The initial CELDT scale scores refer to students' overall CELDT scores. When the sample took the CELDT, Listening and Speaking were combined into one domain, and that composite score was the overall score. The range of the CELDT scores within each level was similar between Level 3 (43 points) and Level 4 (47 points). Overall, the number of students at each point tended to decrease toward the upper bound of the overall score range, but there were a large number of students around the cutoff.

Table 4.3. Initial CELDT scale scores/ proficiency levels (2003)

Classification	Proficiency Levels	Initial CELDT Scale Scores	CELDT Score from cutoff	Number of Students
ELL	Intermediate	458	-47	788 (5.91%)
		461	-44	750 (5.62%)
		464	-41	769 (5.77%)
		467	-38	754 (5.65%)
		470	-35	804 (6.03%)
		474	-31	850 (6.37%)
		477	-28	843 (6.32%)
		481	-24	813 (6.10%)
		485	-20	824 (6.18%)
		489	-16	732 (5.49%)
		493	-12	783 (5.87%)
		497	-8	683 (5.12%)
		502	-3	672 (5.04%)
IFEP	Early Advanced	506	1	607 (4.55%)
		510	5	564 (4.23%)
		515	10	507 (3.80%)
		520	15	452 (3.39%)
		526	21	384 (2.88%)
		533	28	286 (2.14%)
		540	35	275 (2.06%)
		548	43	195 (1.46%)
Total				13,335 (100%)

The variables in this study consist of student-level variables including students' demographic variables (e.g., gender, parents' education level, if a student received free/reduced priced lunch), basic enrollment information (e.g., number of absent days, being designated as a student who is eligible for Special Education), variables related to students' language proficiency (e.g., CELDT scores, ELL status, placement in language support services). The outcome variables in this study include the California Standards Test of English Language Arts (CST-ELA) and Math (CST-Math) scores in Grade 2 through Grade 10. The CSTs are criterion-referenced tests that assess the California content standards in ELA, mathematics, science, and history-social science. The tests were administered annually between 2001 and 2013. In addition to the standardized test scores, I also used major English and Math course marks in Grade 6

through Grade 10 as outcomes. The descriptive statistics of the variables for each outcome are shown in Appendix A.

Table 4.4 presents descriptive statistics of baseline (Kindergarten)'s student characteristics for the sample and compares the statistics between ELLs and IFEPs. On average, ELLs had a slightly smaller proportion of female students, a larger proportion of students who received Free/Reduced-Priced Lunch (FRPL), and a larger proportion of students who were designated as special education compared to IFEPs.

Table 4.4. Descriptive Statistics for the all sample in Kindergarten

	ALL		ELL		IFEP		Difference between ELL and IFEP
	n = 13,335		*n* = 10,065		*n* = 3,270		
Variable	*n*[a]	*Mean (SD)*	*n*[a]	*Mean (SD)*	*n*[a]	*Mean (SD)*	*t*/z/x^2
Female	13,140	.49	9,928	.48	3,212	.51	2.49*
FRPL	13,140	.84	9,928	.85	3,212	.79	-8.03***
Special Education	13,335	.01	10,065	.02	3,270	.01	-4.83***
Parent Education Level	7,994		6,029		1,965		
Not high school graduate		.44		.45		.40	45.96***
High school graduate		.33		.33		.31	
Some college and above		.23		.22		.29	
Number of Absent Days	12,057	5.85 (6.09)	9,128	5.83 (6.09)	2,929	5.93 (6.10)	0.83
Initial CELDT	13,335	488.24 (22.41)	10,065	477.89 (13.32)	3,270	520.09 (12.53)	159.69***

Note. FRPL = Received free/reduced priced lunch (Yes/No); Special Education = Designated as Special Education (Yes/No); Sum of Absent Days = Sum of absent days in 2004 (Sum of absent days in 2003 was not available.); Initial CELDT = California English Language Development Test (CELDT) overall scores in Kindergarten (2002-2003 in which Kindergarten students were tested in a combined domain of speaking and listening); [a] Number of cases with valid information; *t* statistics are for *number of absent days* and *initial CELDT*; *z* statistic is for *female*, *FRPL*, and *Special Education*; x^2 statistic is for *parent education level*;*** $p < 0.001$, ** $p < 0.01$, * $p < 0.05$, † $p < 0.10$

The variable about parent education level had the highest percentage of missing information (40%) while other variables had 10% or a much smaller percentage. Analysis suggests that students missing information on parent education level did not differ in significant ways from those with information for the variable. For the regression discontinuity analyses in this study, I used two different samples: 1) students who had non-missing data in all the covariates and valid information for each outcome (Non-consistent sample) 2) students who had all nine years' (Grades 2 through 10) CST-ELA scores and non-missing data in all the covariates (Consistent sample). The descriptive statistics for the non-consistent, and consistent samples as well as the sample including all available cases are attached in Appendix A. I focus on the results of the non-consistent sample in the main text as the sample looks more like the sample with all available cases (n = 13,335). I show the results of the consistent sample in Appendix B.

Method

Rubin's causal model & Regression Discontinuity Designs

To investigate the impact of the initial ELL classification status (that is, classification status in Kindergarten) on students who were near the cutoff for ELL, I apply the conceptual framework of Rubin's causal model (RCM) (Holland, 1986; Rubin, 1978; Imbens & Rubin, 2007). In the RCM framework, each individual *i* will have two potential outcomes (Y_{i0}, Y_{i1}) in an experiment setting with two conditions, a treatment and a control condition. Y_{i0} is the potential outcome for individual *i* in the control condition, while Y_{i1} is the potential outcome for individual *i* in the treatment. The difference between these two states ($Y_{i1} - Y_{i0}$) is defined as the causal effect. I define the impact of the initial ELL classification as the difference between two potential outcomes—one outcome when students are classified as ELLs (and receive subsequent services (i.e., ESL coursework) and the other when they are not classified as ELLs (and are, consequently, assigned to the same mainstream classes as EOs and are not receiving any language support services). As the assignment to ELL depends on a cutoff score on CELDT scores, the ideal method for examining the impact of the initial ELL classification is regression discontinuity (RD) designs where assignment is based solely on a cutoff score (Trochim, 1984).

RD designs can provide unbiased estimates of treatment effects when the selection mechanism into treatment or control condition is known (Cook et al., 2008; Shadish & Cook, 2009). This method assigns individuals to a treatment or a control condition based on a cutoff score on a continuous variable (referred to as the *assignment variable*, *rating score*, *running variable*, or *forcing variable*). Individuals that fall on one side of the cutoff receive treatment and those on the other side are assigned to the control condition. Then, a regression is fit to predict outcome from the assignment variable (minus the cutoff) and a treatment dummy variable. If

there is a discontinuity (a change in slope or intercept) at the cutoff in the regression line, an effect is assumed to exist.

A causal interpretation in RD can be supported when the following assumptions hold (Battistin & Rettore, 2002; Hahn, Todd, & van der Klaauw, 2001; Imbens & Lemieux, 2008). First, treatment assignment (Z_i) is independent of the potential outcomes conditional on the assignment variable X_i at the cutoff X_c ($(Y_{i1}, Y_{i0}) \perp Z_i|X_i = X_c$). Second, the relationship between an assignment variable and the outcome of interest is continuous at the cutoff without the treatment (Han et al., 2001; Imbens & Lemieux, 2008; Porter, 2003). These two assumptions are only valid when a cutoff value is exogenously determined and the assignment variable is not manipulated (Bloom, 2009). That is, the cutoff value is decided before students take a test and before the test is scored, and the assignment to treatment or control conditions is solely based on students' scores, and it is not influenced by other manipulations.

Another important condition for the causal interpretation is that a cutoff point on the assignment variable must be used only for the treatment assignment of interest, and not for any other purposes. If the cutoff score of the assignment variable is used for a service other than the treatment of interest, the effects of the treatment would be confounded with the effects of the other service, and the estimate of the treatment effects would be biased. For example, if the cutoff scores for IFEP are used not only for classifying students as ELLs but also for eligibility for another academic program, it would be hard to separate out the effects of the ELL classification from the effects of the other program.

These assumptions are satisfied in this study. First, the cutoff scores for IFEP are predetermined before students take the CELDT test, and a student's classification as an ELL is determined solely on his/her CELDT scores. The results of the classification are not changed by

teachers, parents, or any other administrators. Figure 4.1 shows a histogram of the initial CELDT score for the analytic sample. Around the cutoff score (0), there is no abrupt variation in the density of the initial CELDT score. This demonstrates that the manipulation of scores is not likely. Second, the cutoff point of the CELDT scores is used only for determining the ELL classification. The initial CELDT scores are not used for any other kinds of academic or nonacademic programs.

The RD also requires that no variables that might influence the outcome (other than the assignment variable) be discontinuous at the cutoff score. Therefore, the covariates in the study were examined to see if there was any discontinuity at the cutoff score. Figures 4.2 through 4.5 present bar graphs showing means of the covariates by the initial CELDT score that was centered around the cutoff score for IFEP. Visual inspection of the data suggests there are no discontinuities at the cutoff score for these variables.

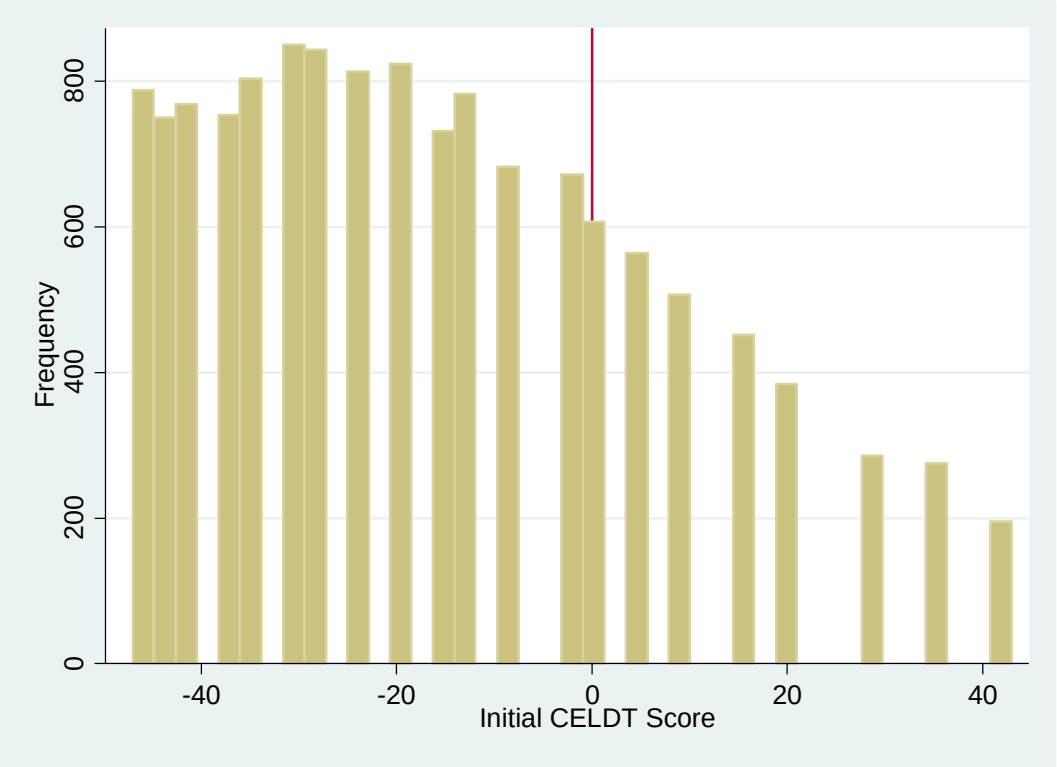


Figure 4.1. Histogram of initial CELDT score

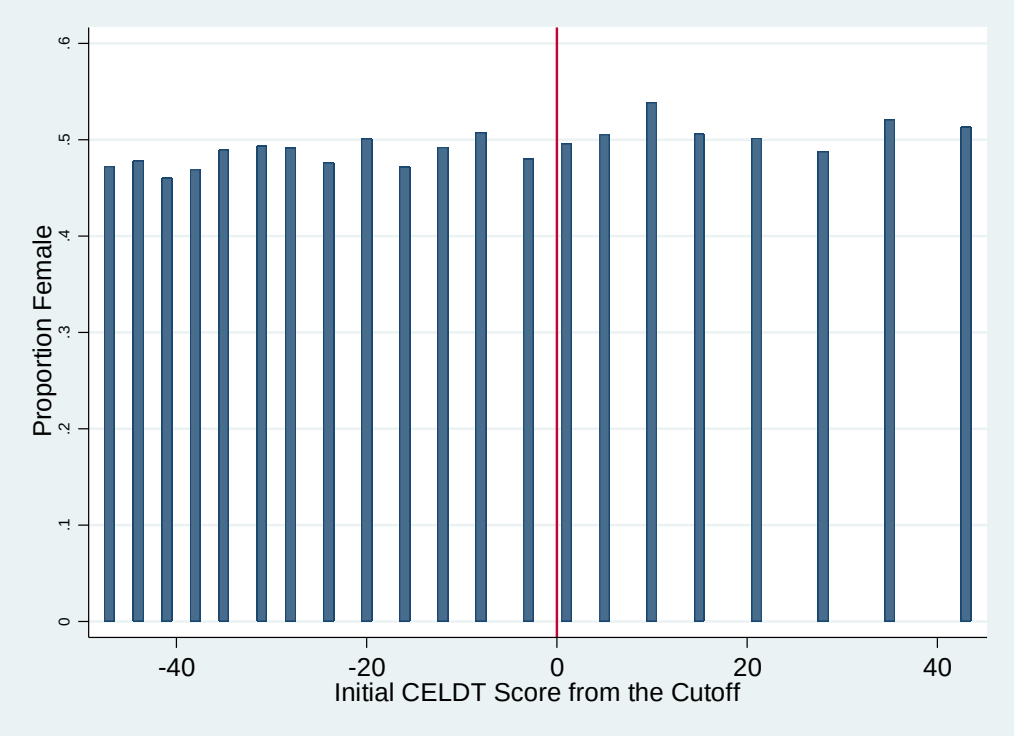


Figure 4.2. Female proportion by the initial CELDT score from the cutoff

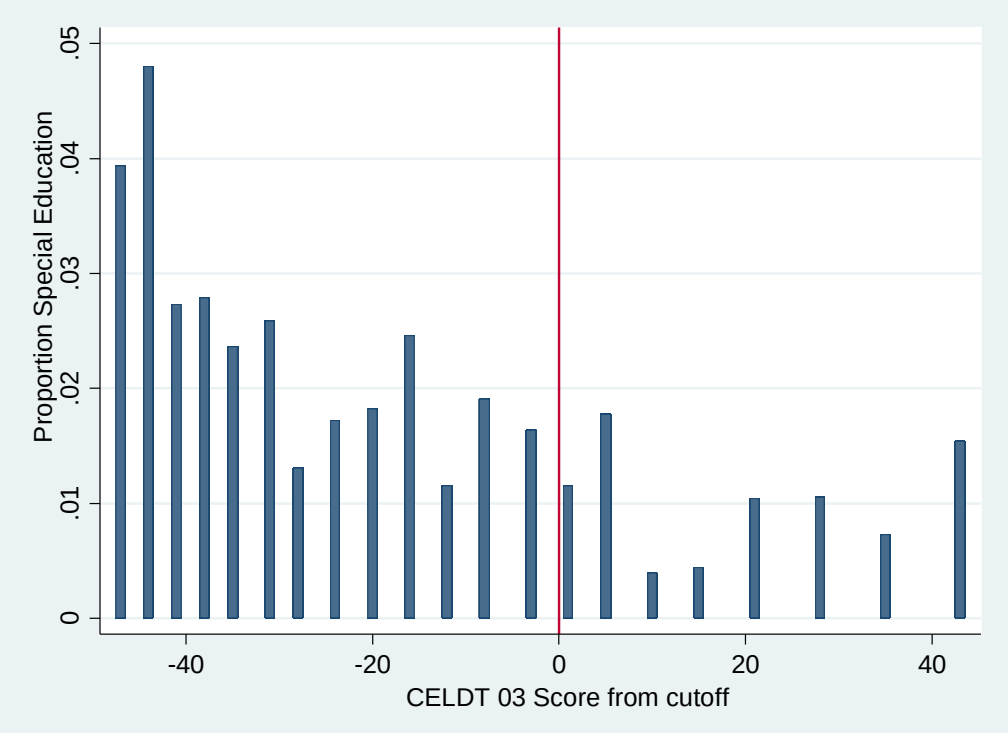


Figure 4.3. Proportion of students being designated as special education by the initial CELDT score from the cutoff

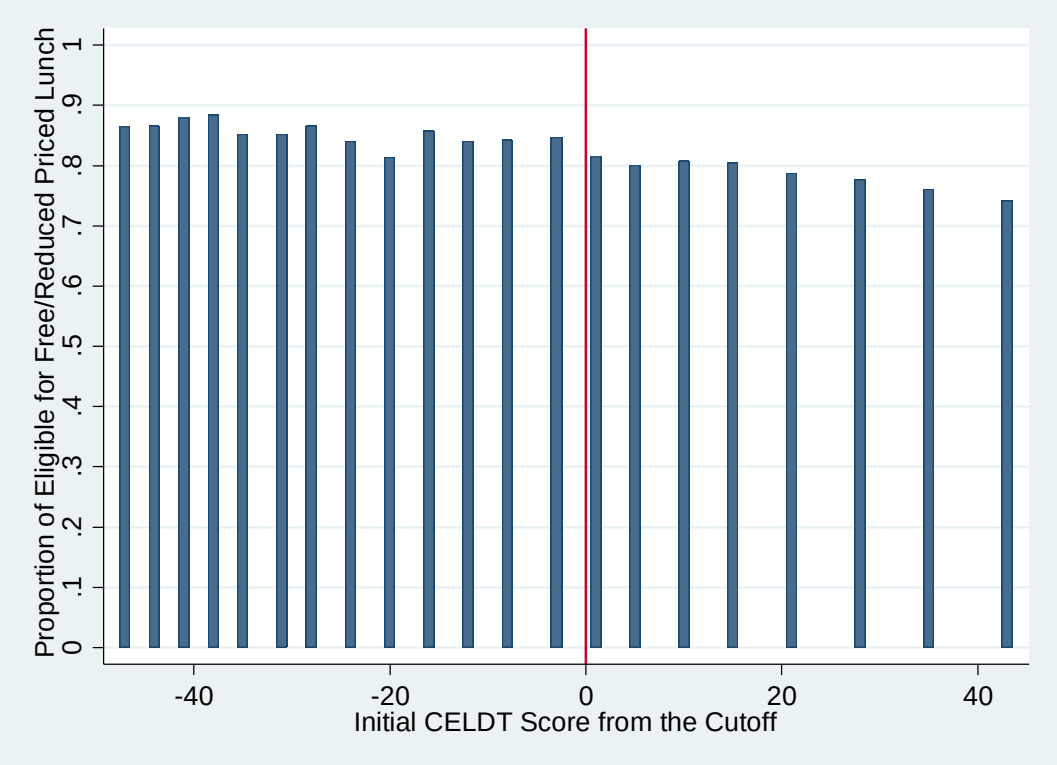


Figure 4.4. Proportion of students eligible for free/reduced priced lunch by the initial CELDT score from the cutoff

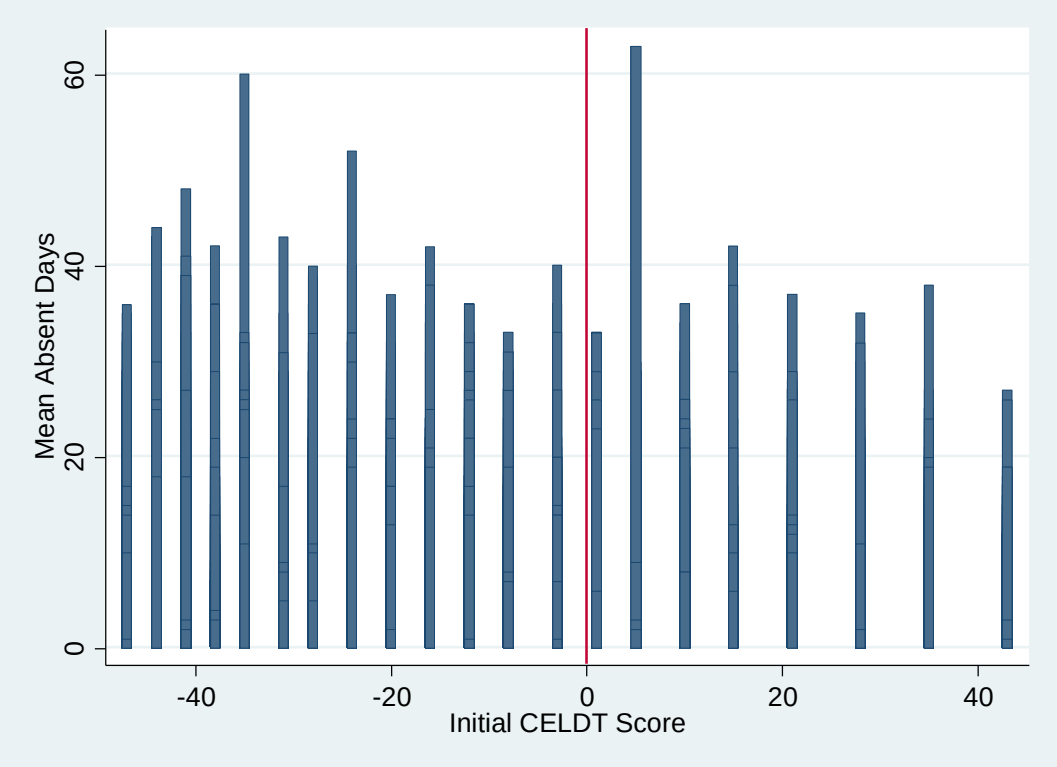


Figure 4.5. Mean number of absent days the initial CELDT score from the cutoff

The existing literature of RD typically distinguishes two types of RD designs: the sharp design and the fuzzy design (Imbens & Lemieux, 2008; Jacob, Zhu, Somers, & Bloom, 2012). In the sharp design, all subjects are assigned into a treatment or control condition. On the other hand, in the fuzzy design some subjects do not receive treatment or control condition, which is analogous to situations in a randomized experiment when subjects in treatment group do not receive the treatment and/or when subjects in control group receive the treatment. In the current study, all of CELDT test takers were classified either as ELL or as IFEP based on their CELDT scores. Therefore, the sharp RD design was applied.

Model Specifications

A variety of analytic techniques were used to identify the correct response function for each outcome: a graphical analysis, parametric regressions, and nonparametric procedures using local linear kernel regression (Hahn, Todd, & van der Klaauw, 2001). The parametric approach

assumes that I can control for the other covariates of outcomes that vary across students using a sufficiently flexible polynomial function of the assignment variable, the initial CELDT score (Ludwig & Miller, 2007).

A series of regressions were run to obtain parametric estimates of the treatment effect. The model below was written to examine the causal relationship of the initial classification on students' later achievement outcomes.

Let $CELDT_i$ represents each student's initial CELDT score, and the initial ELL classification is a deterministic function of the student's initial CELDT score,

$$ELL_i = 1\ (CELDT_i \leq CELDT_{cutoff}) \quad (1)$$

where $CELDT_{cutoff} = 505$.

The main estimating equation to estimate the outcome Y for student *i* is written as:

$$Y_i = \beta X_i + \beta_1(ELL_i) + m(CELDT_i - CELDT_{cutoff}) + \varepsilon_i, \quad (2)$$

where X is a vector of student-level control variables in baseline (Kindergarten) including gender, parent education level, whether the student received free or reduced-price lunch status, whether the student was designated as eligible for special education, and the number of absent days in Grade 1 (The information for Kindergarten was not available). The baseline student characteristics were used as covariates as the goal of the analyses was to examine the effect of initial ELL classification on later student outcomes. ELL_i is a dichotomous indicator variable such that $ELL_i = 1$ for treatment (being classified as an ELL) and $ELL_i = 0$ for no treatment (being classified as an IFEP). The coefficient β_1 refers to the discontinuity estimate, indicating the difference in the outcome between students who are just below the cut-off score for IFEP (almost-IFEPs) and students just above the cut-off score (barely-IFEPs). $m\ (CELDT_i - CELDT_{cutoff})$ is an unknown smooth function of the continuous assignment variable (the initial

CELDT score centered around the cutoff score). The effect that I sought to identify was the one relevant for students near the CELDT cutoff. The alternative specifications for m ($CELDT_i$ - $CELDT_{cutoff}$) include polynomials and interaction terms, and the slopes were allowed to be different. All models were overfit first by including more polynomial and interaction terms than needed to avoid biased estimates although being less efficient (Trochim, 1984). The order of the polynomial approximation to the m ($CELDT_i$ - $CELDT_{cutoff}$) function was decided based on the statistical significance of the higher order and interaction terms.

Nonparametric analyses were also conducted to deal with misspecified functional forms. In the nonparametric RD approach (Hahn, Todd, and Vander Klaauw, 2001), the estimates relax assumptions about the form of the relationship between the assignment variable and the outcome (Cleveland & Delvin, 1988). In this approach, local linear regressions are used to estimate the left and right limits of the discontinuity, and the difference between the two is the treatment impact.

$$Y_i = \beta_0 + \beta_1(CELDT_i - CELDT_{cutoff}) + \beta_2 (ELL_i) + \beta_3(ELL_i)(CELDT_i - CELDT_{cutoff}) + \varepsilon_i, \quad (3)$$

A kernel-weighted linear regression was estimated using data points to the left of the CELDT cutoff (below the cutoff), and another was estimated using data points to the right of the CELDT cutoff (above the cutoff). The difference between the left and right limits of these regressions at the CELDT cutoff was the estimate for the treatment impact (β_2).

In the RD design, it is important to choose a right bandwidth as the design is identified only at the discontinuity. Therefore, I sought to find the right balance between staying as local to the CELDT cutoff and having enough data points to yield informative estimates. Here I present the results for three bandwidths as there is no widely agreed-upon method for selection of optimal bandwidths in the nonparametric RD context (Ludwig and Miller, 2007). I also present

the results of three bandwidths- a quarter, a half, and the whole range of initial CELDT scores at Level 3: 12, 24, and 48 scores below and above the cutoff, respectively.

Logistic Regression

In order to compare ELLs' and IFEPs' educational experiences, I examined their course enrollment and grades. However, these data only had the information up to Grade 10 at which point not many students had taken advanced courses such as Advanced Placement or Honors classes. Therefore, as a measure of students' educational experiences, I examined if there was a difference between ELLs and IFEPs in terms of the likelihood of taking Algebra 1 in Grade 7 or Grade 8, which is often considered as an indication that a student is "on-track."

To estimate the relationship between being an ELL and the likelihood of taking Algebra 1 in Grade 7 or 8, I employed logistic regression models. The probability of taking Algebra 1 at Grade 7 or 8 was outcome P (Y= 1), and students' language classification (ELL or IFEP) and other related covariates were included in the equation as explanatory variables to see whether they had a significant impact on students' enrollment in Algebra 1. The covariates included a student's initial CELDT score, if he or she received free/reduced price lunch in Kindergarten, if he or she was designated as eligible for special education in Kindergarten, gender, and parent education level. The equation of the model is shown below.

$$Y_i = \log (p_i/1\text{-}p_i) = \beta_0 + \beta_1(ELL)_i + \sum_p \beta p(X)i + \varepsilon_{ij}, \qquad \varepsilon_{ij} \sim N(0, \sigma^2) \qquad (4)$$

Results

Regression Discontinuity Estimates

As I mentioned earlier, I ran the regression discontinuity analyses using two different samples: the non-consistent sample including all available cases for each outcome and the

consistent sample including only cases that had all nine years' CST-ELA scores. As the non-consistent sample is more similar as the sample including all cases in terms of the descriptive statistics (Appendix A), I focus the results of the non-consistent sample in the main context. The conclusions remain the same between the two samples in terms of CST-ELA and CST-Math scores. However, the results were different in terms of English and Math course grades. Therefore, I present the results from both samples for those outcomes.

Tables 4.5, 4.6, and 4.7 present the estimates of initial ELL classification effects on the outcomes. Since all of these tables are formatted similarly, I will begin by describing Table 4.6 in some detail. First, each row presents results for a different year. The rows highlighted in grey indicate the estimates of parametric and nonparametric models for the outcomes were significant. For example, the row for Grade 2 in Table 4.5 is highlighted in grey. Overall, the parametric and nonparametric estimates were significant indicating there was a discontinuity found at the cutoff in terms of Grade 2's CST-ELA score. Each column presents a different model specification. In general, there are three different kinds of estimates: the coefficients for ELL vs. IFEP from 1) Ordinary Least Square (OLS) regression models, 2) nonparametric models, and 3) parametric models. The first column gives the differences that are based on the OLS regression, which controls for covariates including gender, parent education level, free/reduced-price lunch status in Kindergarten, special education status in Kindergarten, and number of absent days in Grade 1. In columns 5 through 10, I present estimates from parametric models that control for first-, second-, and third-order polynomials of the assignment variable. In addition to the original analytic sample (bandwidth 48 below and above the cutoff score), the polynomial models were fit to two truncated samples (12 and 24 points below and above the cutoff, respectively) in order to reduce the role of outliners in determining the right functional form. In case the functional

form assumptions made in the parametric analyses were violated, nonparametric analyses were conducted as well, and Columns 2 through 4 display the estimates.

Table 4.5 presents estimated differences between ELLs and IFEPs on the CST-ELA in Grade 2 through Grade 10. The OLS results in Column 1 show that there were significant differences between ELLs and IFEPs on average in all years' CST-ELA scores, even after controlling for the covariates. ELLs consistently underperformed compared to IFEPs on the CST-ELA.

In contrast to the negative estimates of the OLS, most estimates of RD parametric and non-parametric models were positive, suggesting that ELLs performed better than IFEPs or at least the two groups around the cutoff showed equivalent performance. In earlier years (Grades 2 and 3), both parametric and nonparametric models indicated that there were significant discontinuities at the cutoff. The significant and positive estimates indicate ELLs outperformed IFEPs. On the other hand, the estimates for the outcomes in Grades 4 through 10 were not statistically significant and consistent between parametric and nonparametric models. The estimates of both nonparametric and parametric models were not significant for Grade 6's CST-ELA scores, while the estimates were slightly different between two models for the rest of outcomes. In terms of the outcomes in Grades 4, 5, 9, and 10, the results of nonparametric models suggested significant discontinuity at the cutoff while none of parametric models did. In Grade 8, the parametric estimates in bandwidth 48 were generally significant while the estimates of nonparametric models and parametric models with bandwidth 24 were not. Therefore, I conclude that there was no discontinuity in the outcomes of Grades 4 through 10, and this indicates that ELLs and IFEPs performed similarly at the cutoff in the grade levels. In summary, the regression discontinuity results show that students who were initially classified as ELL had

higher CST-ELA scores than students who were initially classified as IFEP at the cutoff in the early two grade levels, but the discontinuity disappeared in the later grades.

Figures 4.6 and 4.7 provide a visual inspection of the estimates in CST-ELA score in Grade 2 and Grade 3, respectively. The solid black line shows the nonparametric estimates for *m* ($CELDT_i$ - $CELDT_{cutoff}$) and using a bandwidth of 48, the solid red line shows parametric estimates from the quadratic model, and the dotted line shows the CST-ELA scaled score mean at each point of the initial CELDT score. The dashed line shows the 95% confidence intervals of the means from the parametric model. In both Figures 4.6 and 4.7, the left side's (ELLs) limit to the cutoff was higher than the right side's (IFEPs) limit to the cutoff, and there was a discontinuity at the cutoff in CST-ELA scores.

Table 4.5. Regression discontinuity estimates of the effect of initial English language learner classification on CST-ELA scores

Grade	OLS difference	Nonparametric estimator			Parametric Estimator					
		Bandwidth			Bandwidth					
		12	24	48	24			48		
					Linear	Quadratic	Cubic	Linear	Quadratic	Cubic
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
2	**-20.93*** **	**9.70***	**7.15***	**5.39***	5.64	5.59	**8.55†**	**5.78***	**4.98†**	**9.08****
	(1.48)	**(4.56)**	**(3.11)**	**(2.26)**	(3.67)	(3.67)	**(4.94)**	**(2.49)**	**(2.66)**	**(3.32)**
3	**-19.65*** **	**7.84†**	**9.21****	**5.98****	**6.49†**	**6.48†**	6.24	3.40	2.87	**8.42****
	(1.40)	**(4.30)**	**(2.91)**	**(2.08)**	**(3.48)**	**(3.48)**	(4.67)	(2.35)	(2.51)	**(3.13)**
4	**-18.82*** **	5.91	**7.82***	**5.34***	3.95	3.99	3.95	1.84	.83	5.41
	(1.54)	(4.76)	**(3.28)**	**(2.42)**	(3.80)	(3.80)	(5.10)	(2.59)	(2.77)	(3.45)
5	**-16.34*** **	5.74	5.05	**4.19***	2.86	2.78	1.55	2.80	2.34	4.05
	(1.28)	(4.07)	(2.78)	**(2.00)**	(3.21)	(3.22)	(4.32)	(2.15)	(2.29)	(2.86)
6	**-18.29*** **	5.18	4.46	2.83	.90	.85	.02	.83	-.63	2.11
	(1.45)	(4.54)	(3.09)	(2.22)	(3.46)	(3.46)	(4.65)	(2.42)	(2.60)	(3.23)
7	**-20.38*** **	**10.76***	6.10	3.20	.83	.81	2.82	1.54	.86	2.82
	(1.63)	**(5.35)**	(3.65)	(2.61)	(4.04)	(4.04)	(5.42)	(2.74)	(2.93)	(3.65)
8	**-19.01*** **	6.35	6.38	5.11	5.22	5.19	6.95	**6.27***	4.52	**6.93†**
	(1.73)	(5.55)	(3.79)	(2.73)	(4.31)	(4.31)	(5.77)	**(2.90)**	(3.11)	**(3.87)**
9	**-17.07*** **	**12.60***	**8.13***	**5.81***	2.41	2.33	6.53	3.90	3.30	4.50
	(1.77)	**(5.47)**	**(3.73)**	**(2.71)**	(4.28)	(4.28)	(5.72)	(2.96)	(3.18)	(3.93)
10	**-16.15*** **	**11.13†**	**7.54†**	2.93	1.03	.97	6.22	-.48	-.66	1.20
	(1.83)	**(5.68)**	**(3.88)**	(2.82)	(4.52)	(4.53)	(6.05)	(3.07)	(3.29)	(4.09)

*** $p < 0.001$, ** $p < 0.01$, * $p < 0.05$, † $p < 0.10$

Standard errors are in the parenthesis.

The rows highlighted in grey are the outcomes for which both parametric and nonparametric estimates were significant.

The nonparametric RD uses Nichol's (2011) Stata *rd* code.

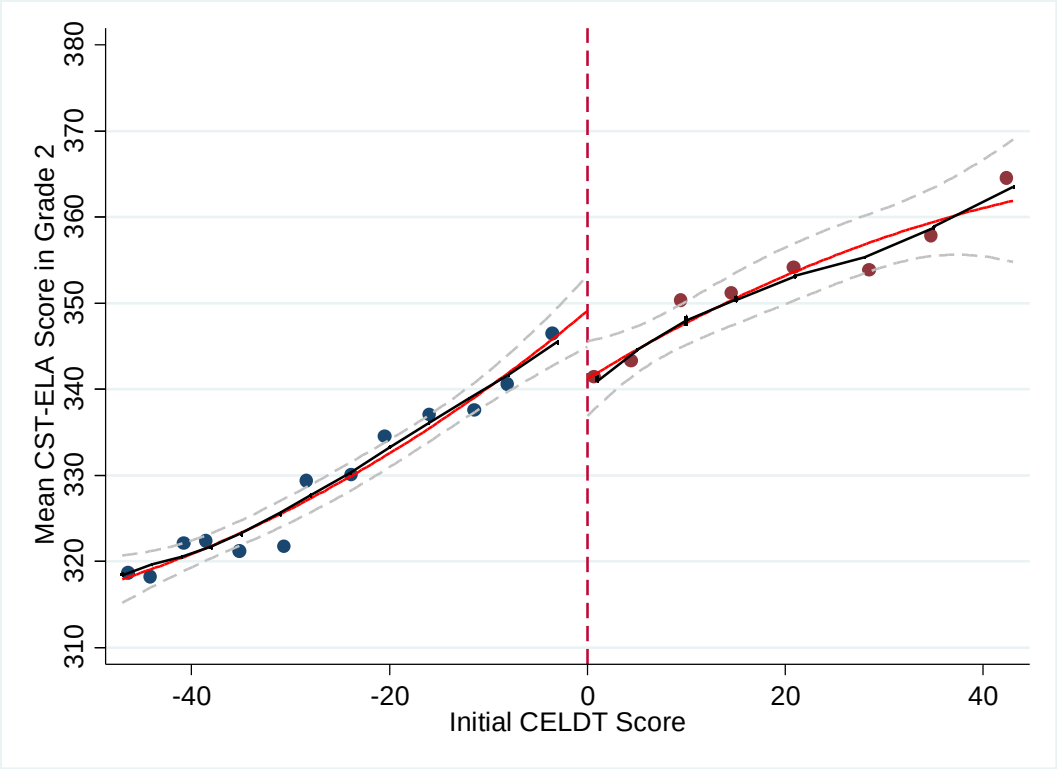


Figure 4.6. Regression discontinuity in CST-ELA scores in Grade 2

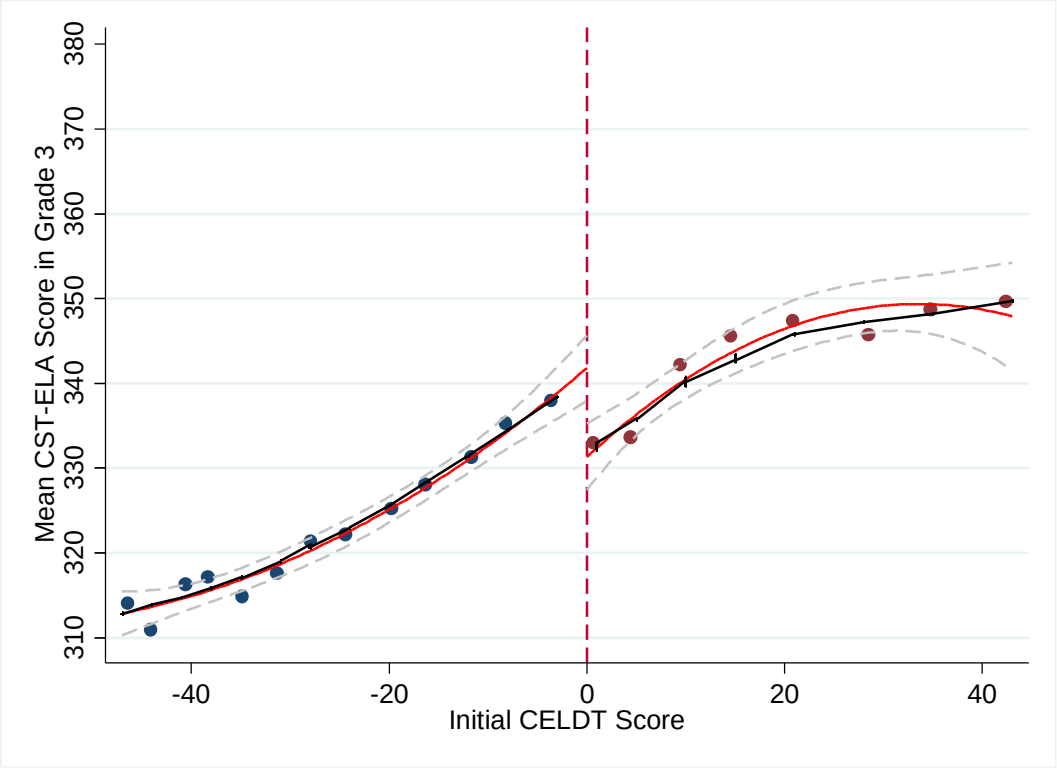


Figure 4.7. Regression discontinuity in CST-ELA scores in Grade 3

Table 4.6 describes the estimates of the initial classification on CST-Math scores, which were similar to the results of CST-ELA scores overall. The OLS estimates were all negative indicating that ELLs had significantly lower scores on average than IFEPs throughout all the years.

The estimates of most parametric and nonparametric models in Table 4.6 were positive and consistent within an outcome. In Grade 2, all estimates across parametric and nonparametric models were significant and positive, indicating that there was a discontinuity at the cutoff favoring ELLs. In Grade 3, one parametric estimate and all of nonparametric estimates were significant, which suggested a discontinuity at the cutoff. In Grades 4 and 5, only nonparametric estimates were significant while none of parametric estimates were. No models showed significant estimates in the later grades (Grades 6 through 10). In summary, there were discontinuities at the cutoff in Grades 2 and 3, but the discontinuities disappeared later on.

Figures 4.8 and 4.9 demonstrate the discontinuities at the cutoff in Grades 2 and 3, respectively. In both figures, ELLs who were at the left side of the cutoff had a higher mean than IFEPs who were at the right side of the cutoff. Just like the CST-ELA results, ELLs performed significantly better than IFEPs at the cutoff in the early grades (Grades 2 and 3).

Table 4.6. Regression discontinuity estimates of the effect of initial English language learner classification on CST-MATH scores

Grade	OLS Difference	Nonparametric estimator			Parametric Estimator					
		Bandwidth			Bandwidth					
		12	24	48	24			48		
					Linear	Quadratic	Cubic	Linear	Quadratic	Cubic
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
2	**-23.79*** **	**15.55***	**14.84****	**10.20****	**14.39****	**14.37****	**16.90***	**9.58****	**10.33****	**17.12*****
	(2.10)	**(6.44)**	**(4.40)**	**(3.21)**	**(5.26)**	**(5.26)**	**(7.08)**	**(3.54)**	**(3.78)**	**(4.72)**
3	**-24.53*** **	**13.89***	**9.67***	**6.15†**	8.24	8.18	7.12	4.04	4.71	**11.27***
	(2.17)	**(6.69)**	**(4.55)**	**(3.28)**	(5.46)	(5.46)	(7.33)	(3.67)	(3.92)	**(4.89)**
4	**-18.98*** **	9.16	**9.13***	**6.88***	2.43	2.42	3.28	1.50	-.24	6.48
	(1.99)	(6.28)	**(4.26)**	**(3.06)**	(5.11)	(5.11)	(6.85)	(3.37)	(3.61)	(4.49)
5	**-23.22*** **	**14.92†**	**9.68†**	**7.04†**	4.24	3.94	4.29	3.20	2.78	7.41
	(2.42)	**(7.77)**	**(5.25)**	**(3.74)**	(6.12)	(6.12)	(8.22)	(4.08)	(4.35)	(5.44)
6	**-21.72*** **	2.11	3.71	3.65	1.82	1.81	-1.39	3.62	2.40	5.04
	(2.04)	(6.53)	(4.44)	(3.19)	(5.13)	(5.13)	(6.89)	(3.42)	(3.66)	(4.56)
7	**-19.00*** **	4.75	6.27	5.21†	.66	.61	-1.29	1.35	1.92	5.16
	(1.99)	(6.38)	(4.34)	(3.12)	(4.96)	(4.96)	(6.64)	(3.35)	(3.59)	(4.47)
8	**-17.80*** **	6.44	5.08	2.81	4.09	4.06	-.69	2.55	2.29	4.36
	(2.14)	(6.78)	(4.62)	(3.34)	(5.48)	(5.48)	(7.35)	(3.62)	(3.89)	(4.83)
9	**-11.64*** **	10.19	4.76	2.06	-1.44	-1.57	6.62	.62	-1.18	1.00
	(1.99)	(6.46)	(4.34)	(3.11)	(5.07)	(5.07)	(6.77)	(3.34)	(3.59)	(4.44)
10	**-13.96*** **	10.25	6.46	2.11	4.88	4.68	9.78	-.56	1.89	5.73
	(2.22)	(7.00)	(4.77)	(3.48)	(5.57)	(5.57)	(7.45)	(3.74)	(4.00)	(4.97)

*** $p < 0.001$, ** $p < 0.01$, * $p < 0.05$, † $p < 0.10$

Standard errors are in the parenthesis.

The rows highlighted in grey are the outcomes for which both parametric and nonparametric estimates were significant.

The nonparametric RD uses Nichol's (2011) Stata *rd* code.

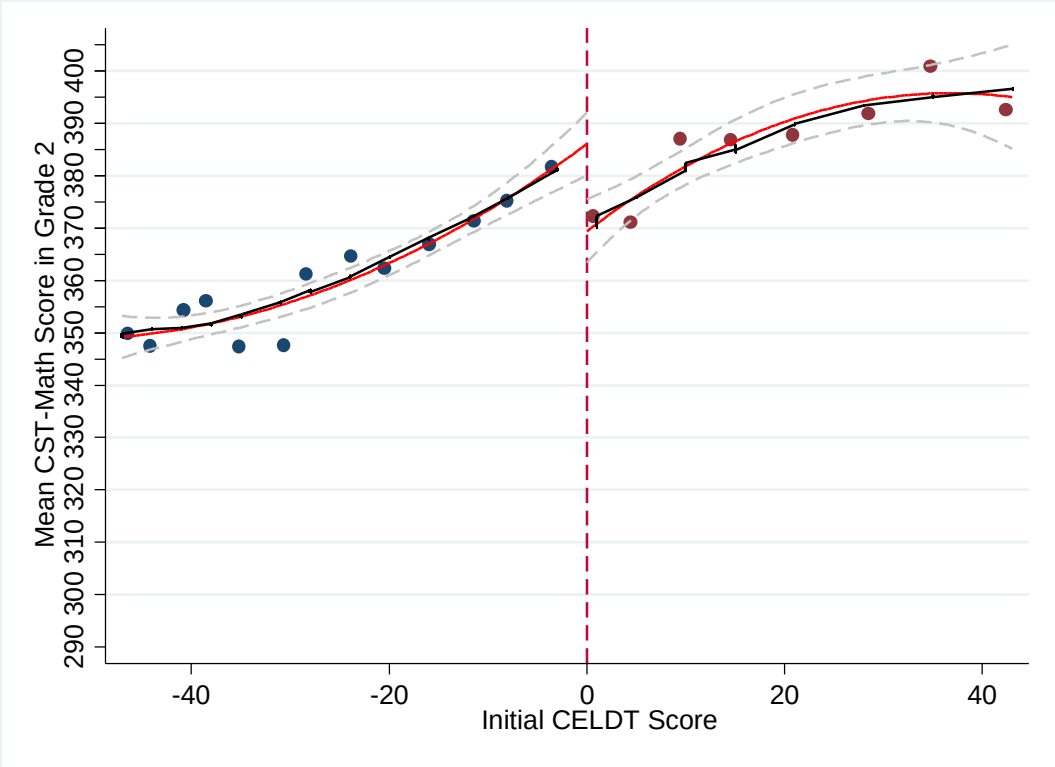


Figure 4.8. Regression discontinuity in CST-Math scores in Grade 2

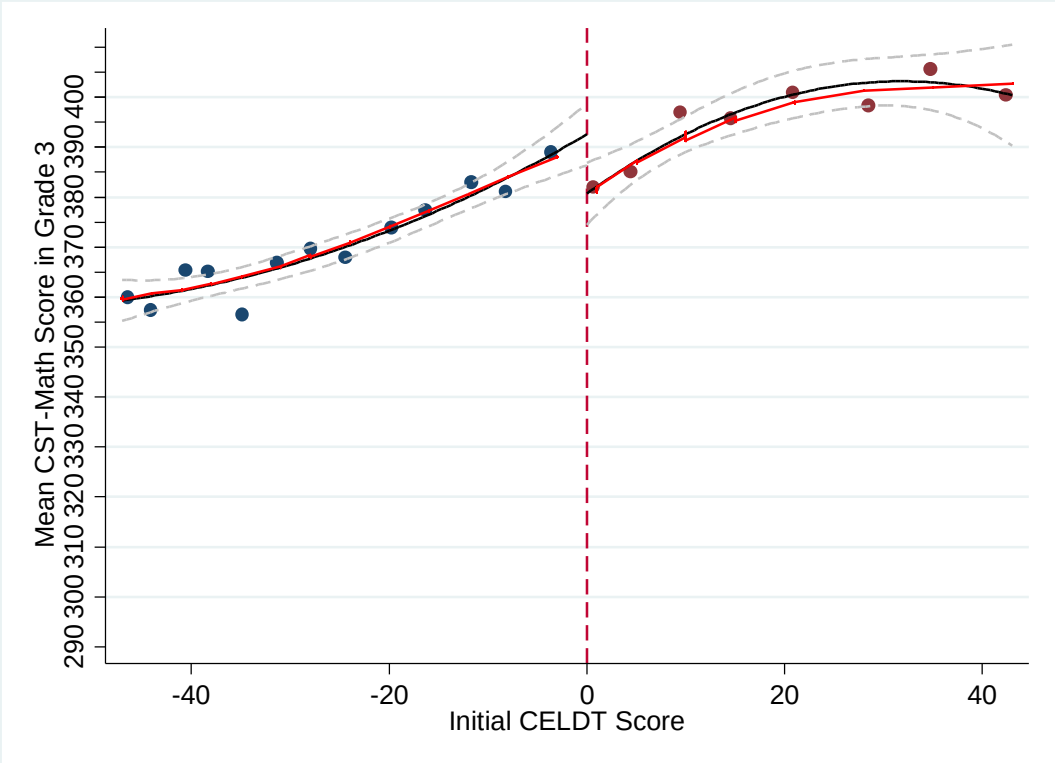


Figure 4.9. Regression discontinuity in CST-Math scores in Grade 3

Table 4.7 presents the estimates on English and Math course grades in the middle and high school years (Grades 6 through 10). The results of OLS models (Column 1) showed that ELLs on average had lower course grades than IFEPs in all English and Math courses except English 6 (Grade 6), Geometry (Grade 9), and Algebra 2 (Grade 10). No difference was found between ELLs and IFEPs in the three outcomes.

The nonparametric and parametric estimates were consistent in general. For the outcomes of English 6, English 9, and Math 6, no estimates were significant. Only one estimate was significant in terms of the outcomes of English 8, Math 7, Algebra 1, and Algebra 2. Two estimates were significant for English 7 and English 10. In case of Geometry, most of parametric estimates were significant while none of nonparametric estimates were. In conclusion, there was no discontinuity found in terms of English and Math course grades, suggesting that ELLs and IFEPs performed similarly in these outcomes.

As mentioned earlier, the analyses of the course grades using the consistent sample provided a quite different picture from the non-consistent sample (Table 4.6). Therefore, I present the results of the analyses using the consistent sample in Table 4.7. In terms of the OLS estimates, the results remained the same except Algebra 1. While ELLs showed a significant lower performance than IFEPs among the non-consistent sample, the two groups did not show a difference among the consistent sample. In addition, both parametric and nonparametric RD estimates of the consistent sample were in general statistically significant and positive in English 6, English 7, English 8, Math 6, and Math 7. The results suggest that ELLs outperformed IFEPs in these outcomes. In general, the consistent sample seems to have similar demographic characteristics as the non-consistent sample (Appendix A). However, the consistent sample tend to perform better in these outcomes, have more female students, and have higher attendance rates

than the non-consistent sample. It is unclear whether these differences between the two samples resulted in the different estimates, and further information is needed to examine how the two groups are similar or different.

In summary, discontinuities at the cutoff were observed in Grades 2 and 3's CST-ELA and Math scores, which indicate that ELLs outperformed IFEPs at the cutoff. In the later years, the gap between ELLs and IFEPs at the cutoff disappeared, and the two groups performed similarly. The results imply that the setting of being classified as ELLs was more beneficial than being unclassified (classified as IFEPs) for fostering English language arts and Math achievement for the students at the initial CELDT cutoff in the early grades.

Table 4.7. Regression discontinuity estimates of the effect of initial English language learner classification on course grades

Grade	Courses	OLS difference	Nonparametric estimator			Parametric Estimator					
			12	24	48	24			48		
						Linear	Quadratic	Cubic	Linear	Quadratic	Cubic
		(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
6	English 6	-.03	0.07	0.09	0.06	.08	.08	.00	.04	.04	.08
		(.03)	(0.11)	(0.08)	(0.06)	(.08)	(.08)	(.11)	(.06)	(.06)	(.08)
7	English 7	**-.09***	0.14	**0.16†**	0.08	.16	.15	.14	.11†	.10	**.15†**
		(.04)	(0.12)	**(0.08)**	(0.06)	(.09)	(.09)	(.12)	(.06)	(.07)	**(.08)**
8	English 8	**-.12****	0.19	0.14	0.05	.23	.22	.23	.09	.11	**.17***
		(.04)	(0.12)	(0.08)	(0.06)	(.09)	(.09)	(.13)	(.06)	(.07)	**(.08)**
9	English 9	**-.09***	0.06	0.07	0.04	.05	.05	-.01	.04	.05	.04
		(.04)	(0.14)	(0.09)	(0.07)	(.10)	(.10)	(.14)	(.07)	(.08)	(.09)
10	English 10	**-.12****	0.27	**0.22***	**0.14***	.12	.12	.14	.11	.06	.09
		(.04)	(0.14	**(0.10)**	**(0.07)**	(.11)	(.11)	(.14)	(.07)	(.08)	(.10)
6	Math 6	**-.11****	0.10	0.11	0.10†	.09	.09	.11	.10	.10	.13
		(.04)	(0.12)	(0.08)	(0.06)	(.09)	(.09)	(.12)	(.06)	(.07)	(.08)
7	Math 7	**-.08†**	0.14	0.11	0.10	.16	.16	.08	.08	.11	**.18***
		(.04)	(0.13)	(0.09)	(0.06)	(.10)	(.10)	(.13)	(.07)	(.07)	**(.09)**
8	Algebra 1	**-.15****	0.16	**0.17†**	0.11	.17	.17	.07	.01	.05	.10
		(.05)	(0.15)	**(0.10)**	(0.07)	(.12)	(.12)	(.15)	(.08)	(.08)	(.11)
9	Geometry	-.06	0.16	0.19	0.09	**.40***	**.40***	**.52***	.14	.18	**.36***
		(.07)	(0.24)	(0.17)	(0.12)	**(.18)**	**(.18)**	**(.23)**	(.12)	(.13)	**(.17)**
10	Algebra 2	-.05	**0.43†**	0.20	0.12	.27	.27	.39	.19	.17	**.37***
		(.07)	**(0.23)**	(0.15)	(0.11)	(.18)	(.18)	(.24)	(.12)	(.13)	**(.17)**

*** $p < 0.001$, ** $p < 0.01$, * $p < 0.05$, † $p < 0.10$

Standard errors are in the parenthesis; The rows highlighted in grey are the outcomes for which both parametric and nonparametric estimates were significant; The nonparametric RD uses Nichol's (2011) Stata *rd* code.

Table 4.8. Regression discontinuity estimates of the effect of initial English language learner classification on course grades (Using the consistent sample)

Grade	Courses	OLS difference	Nonparametric estimator			Parametric Estimator					
			12	24	48	24			48		
						Linear	Quadratic	Cubic	Linear	Quadratic	Cubic
		(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
6	English 6	-0.01	**0.22†**	**0.20***	0.11	**0.19†**	**0.19†**	0.13	0.08	0.10	**0.18***
		(0.04)	**(0.13)**	**(0.09)**	(0.07)	**(0.10)**	**(0.10)**	(0.13)	(0.07)	(0.07)	**(0.09)**
7	English 7	-0.09*	**0.35***	**0.24***	**0.14†**	0.16	0.16	0.21	0.12	0.11	**0.17†**
		(0.04)	**(0.14)**	**(0.10)**	**(0.07)**	(0.10)	(0.10)	(0.14)	(0.07)	(0.08)	**(0.10)**
8	English 8	-0.12**	**0.29***	**0.18†**	0.08	**0.27***	**0.27***	**0.29***	0.06	0.09	**0.19†**
		(0.04)	**(0.14)**	**(0.10)**	(0.07)	**(0.11)**	**(0.11)**	**(0.14)**	(0.07)	(0.08)	**(0.10)**
9	English 9	-0.11*	0.07	0.07	0.02	0.08	0.08	0.12	0.02	0.07	0.05
		(0.04)	(0.14)	(0.09)	(0.07)	(0.11)	(0.11)	(0.14)	(0.07)	(0.08)	(0.10)
10	English 10	-0.09†	0.19	**0.19†**	0.12	0.18	0.18	**0.26†**	0.09	0.08	0.10
		(0.04)	(0.15)	**(0.10)**	(0.07)	(0.11)	(0.11)	**(0.15)**	(0.08)	(0.08)	(0.10)
6	Math 6	-0.10*	**0.29***	**0.23***	**0.13†**	0.16	0.15	**0.26†**	0.07	0.10	**0.17†**
		(0.04)	**(0.14)**	**(0.10)**	**(0.07)**	(0.11)	(0.11)	**(0.14)**	(0.07)	(0.08)	**(0.10)**
7	Math 7	-0.09†	0.24	**0.18†**	0.07	**0.22†**	**0.22†**	0.24	0.02	0.08	0.17
		(0.05)	(0.16)	**(0.11)**	(0.08)	**(0.12)**	**(0.12)**	(0.16)	(0.08)	(0.09)	(0.11)
8	Algebra 1	-0.09	0.26	**0.25***	**0.17†**	**0.27***	**0.27***	0.20	0.06	0.12	0.18
		(0.05)	(0.17)	**(0.12)**	**(0.09)**	**(0.13)**	**(0.13)**	(0.18)	(0.09)	(0.10)	(0.12)
9	Geometry	-0.08	0.10	0.16	0.09	**0.31***	**0.31***	**0.42†**	0.05	0.10	**0.30†**
		(0.07)	(0.24)	(0.17)	(0.12)	**(0.18)**	**(0.18)**	**(0.24)**	(0.13)	(0.13)	**(0.17)**
10	Algebra 2	-0.03	0.24	0.12	0.08	0.30	0.30	0.41	0.16	0.14	**0.34***
		(0.07)	(0.24)	(0.16)	(0.11)	(0.19)	(0.19)	(0.25)	(0.13)	(0.14)	**(0.17)**

*** $p < 0.001$, ** $p < 0.01$, * $p < 0.05$, † $p < 0.10$

Standard errors are in the parenthesis; The rows highlighted in grey are the outcomes for which both parametric and nonparametric estimates were significant; The nonparametric RD uses Nichol's (2011) Stata *rd* code.

Educational Experiences

To compare ELLs and IFEPs in terms of being "on track" for graduation, I examined their taking Algebra 1 at Grade 7 or 8. Table 4.9 shows the number of students, by language group, who took Algebra 1 at Grade 7 or 8. A slightly higher proportion of IFEPs (76.4%) took Algebra 1 at Grade 7 or 8 than ELLs (73%). However, there was not a big difference between ELLs and IFEPs. Table 4.10 reports regression coefficients for a logistic regression model investigating the relationship between various predictors on the likelihood of being enrolled in Algebra 1 at Grade 7 or 8. The estimates represent differences in the estimated log-odds of taking Algebra 1 at Grade 7 or 8, and corresponding odds-ratios are also presented. According to these estimates, initially being classified as an ELL had a null impact on taking Algebra 1 at Grade 7 or 8, controlling for a student's initial CELDT score as well as other baseline student characteristic covariates. For ELLs over IFEPs, holding other predictors constant, the odds of taking Algebra 1 at Grade 7 or 8 was .99, indicating that students who were initially classified as ELLs had the same probability of taking Algebra 1 at Grade 7 or 8 as those who were initially classified as IFEPs. Meanwhile, whether or not being designated as special education in Kindergarten had significant impact on the likelihood of being enrolled in Algebra 1 at those grade levels. Holding the other variables constant, students designated as special education had 47% lower odds of being enrolled in Algebra 1 at Grade 7 or 8 compared to students who were not designated as special education. A student's sum of absent days in Grade 1 was also a significant predictor of his or her enrollment in Algebra 1 at the right grade level. Holding the other covariates constant, one absent day from school in Grade 1 resulted in 2% decrease in the odds of taking Algebra 1 at Grade 7 or 8.

Table 4.9. Number (and percent) of students who took Algebra 1 at Grade 7 or 8 by ELL and IFEP

	Algebra 1 at Grade 7 or 8		
	No	Yes	Total
ELL	1,670 (27.0)	4,527 (73.0)	6,197 (100)
IFEP	474 (23.6)	1,536 (76.4)	2,010 (100)

Table 4.10. Results of Logistic Regression predicting taking Algebra 1 at Grade 7 or 8

Predictors	b (se)	Odds ratios
ELL	-.02 (.13)	.99
Initial CELDT Score	.01* (.002)	1.01
Free/Reduced-priced Lunch (FRPL)	.06 (.09)	1.06
Parent education: High school graduate	.04 (.07)	1.04
Parent education: Some college above	.01 (.08)	1.01
Female	.08 (.06)	1.08
Special Education	-.64* (.25)	.53
Sum of absent days	-.02*** (.01)	.98

Note. ELL = Whether or not initially being classified as English Language Learner (in Kindergarten) (Yes/No); FRPL = Received free/reduced priced lunch in Kindergarten (Yes/No); Parent Education: High school graduate = Whether a student's parents' highest education level is high school graduate (Yes/No), Some college above = Whether a student's parents' highest education level is some college or above (Yes/No); Special Education = Designated as Special Education in Kindergarten (Yes/No); Sum of absent days = Sum of absent days in Grade 1 (The information in Kindergarten was not available)
*** $p < 0.001$, ** $p < 0.01$, * $p < 0.05$, † $p < 0.10$

Discussion and Implications

The findings showed a positive effect of the initial ELL classification on students in the early grades and a null effect in the later grades. This suggests that the initial ELL classification had immediate effect on students' both English language arts and math achievement in their earlier grades: almost-IFEPs (who were actually classified as ELLs) seemed to benefit from being initially classified as ELLs. Even though the estimates were consistently positive indicating ELLs performed higher than IFEPs at the threshold, these estimates became statistically non-significant in the middle and earlier high school years, and there was no strong evidence of a classification effect. In a similar vein, the findings also showed that there was no difference between ELLs and IFEPs in the likelihood of taking Algebra 1 at Grade 7 or 8. This

finding provides different evidence from prior research, which had implied that ELL status might hinder a student from having more and better access to education resources, and that reclassification would provide greater benefit in terms of academic performance.

The assumption would be the null effect of the initial classification as the purpose of the classification is to support ELLs so that their language proficiency would not hinder their academic learning and performance. This finding of a positive effect on students' ELA and math achievement in early grades suggests that the classification was effective in improving the academic outcomes of students with ELL status so that they did even better than IFEPs at the threshold. A small difference in their initial CELDT scores made some ELLs and others IFEPs. Based on the initial classification, ELLs were labeled as ELLs and purportedly assigned to ELD services while IFEPs did not receive the services but rather, received education in the mainstream setting. Therefore, the ELLs' performance, which was better than the IFEPs performance, may be attributed to the factors associated with the initial classification. The difference in performance between ELLs and IFEPs is not due to the student background characteristics, which were controlled for in the analyses.

In contrast to the positive effect in the earlier years, there was in general null effect of the initial classification on students' achievement in later years. The null effect might imply the ELL classification system and the services that the students received in the earlier grades were effective and supported them well. Without the classification and the services ELLs received, ELLs might have performed worse than IFEPs at the cutoff in the later grades. In that sense, the ELL classification and services can be interpreted as being effective. Or, the null effect could have occurred because many ELLs had been already reclassified and had been receiving the same services as IFEPs. The change from positive to null effects might be related to students'

language status change (ELL to RFEP) and consequent change in eligibility for the language services. The data showed that ELLs did not receive language services once they were reclassified. As Table 1 describes earlier, most ELLs had been reclassified by the end of 6th grade (72%). Once a student became an RFEP, no language services were available to him/her any longer. Along with the withdrawal of the language support services, the discontinuity at the cutoff (the effect of the initial ELL classification) might have disappeared as well.

The null effect on students' achievement in later grades is consistent with findings of previous studies on the effect of reclassification on students' achievement. The results of the current study as well as studies by Robinson (2011) and Thompson (2012) stand in contrast to the findings of the majority of studies on ELLs academic performance, which found that ELLs performed lower than non-ELLs (Abedi, 2002; Abedi & Lord, 2001; Abedi et al., 1998; Aguilar, 2010; Flores, Batalova, & Fix, 2012; Hemphill & Vanneman, 2011; Martiniello, 2009; Young et al., 2008).

One might argue that ELLs should be distinguished from still-ELLs and RFEPs as some of the initial ELLs were reclassified in the later grades, so the outcomes should be compared among still-ELLs, RFEPs, and IFEPs rather than two groups based on the initial classification (IFEPs vs. ELLs). However, ELLs' reclassification is not a direct result of the initial classification. In this study, I focused on the initial classification and asked the question: is there any effect of being *initially* classified as ELL, or not, on later academic outcomes? The results of this study show the extent to which the initial classification had an impact on students' outcomes, regardless of whether or when some ELLs were reclassified and received the same kinds of services and classes as non-ELLs (including IFEPs) received.

The educational experiences of ELLs have often been blamed for ELLs' underperformance (Callahan, 2005; Gandara et al., 2003) with the implication that those experiences are meaningfully different from the educational opportunities given to non-ELLs. However, the current study shows that ELLs performed just as well as IFEPs at the cutoff and even outperformed IFEPs in the early years. In terms of enrollment in Algebra 1 by Grade 8, there was no difference between ELLs and IFEPs at the threshold. The difference in the findings could be attributed to the fact that the current study focused on a limited group of ELLs near the initial classification cutoff while other studies examined all ELLs. Therefore, the results of this study might not be generalizable to ELLs who had an initial language proficiency level lower than the ELLs in this study.

This study contributes to the studies on the ELL classification and ELLs' academic achievement by providing empirical data about the ELL classification system. This study asks a fundamental question about the ELL classification system by comparing students based on their initial classification (ELLs vs. IFEPs) in terms of their later academic outcomes. The findings fill in the gap in the literature of the ELL classification and its impact. Policymakers and the district can draw implications from the findings and reflect them in terms of the creating and evaluation of the new ELL classification and assessment system.

Chapter 5. Results of Research Question 2: The Impact of the Profiles of Initial CELDT Sub-domain Scores on Students' Future Academic Performance (Sub-groups of almost-IFEPs)

In this chapter, I present the results of research question 2: the impact of the profiles of initial CELDT sub-domain scores on students' future academic experience and performance.

a. Which sub-domain of CELDT tests contributes most for almost-IFEP students to be classified as ELLs?
b. Which sub-domain of CELDT tests is the best predictor of almost-IFEP students' future academic performance?
c. Is there a difference in reclassification rates by the different profiles of sub-domain scores?

Data

I followed students who were initially identified as ELLs in Kindergarten in 2006-2007 until they reached Grade 7 in 2012-2013 (Cohort 2 as mentioned in Chapter 3). Of all 26,815 Kindergarten students who were initially classified as ELL in the academic year of 2006-2007, I limit the sample to students who (1) reported speaking Spanish at home and (2) scored Level 3 (Intermediate) in their initial overall CELDT. This left 5,549 ELL students. As the purpose of this study is to examine almost-IFEP students who were right below the cutoff for IFEP and their CELDT profiles, I created a contingency table with the sample's initial CELDT listening and speaking levels. As the overall CELDT levels, each CELDT subdomain has five performance levels: Beginning (Level 1), Early Intermediate (Level 2), Intermediate (Level 3), Early Advanced (Level 4), and Advanced (Level 5). As shown in Table 5.1, most ELLs at the Intermediate overall CELDT level fell in between Early Intermediate (Level 2) and Early Advanced (Level 4) levels in both Listening and Speaking CELDT domains. There were a few

students (n = 81) who scored Beginning (Level 1) and Advanced (Level 5) level in the two domains. I excluded them in this study as that was relevant to only 1% of the students at the Intermediate overall CELDT level. This leaves a sample of 5,468 students who were initially classified as ELLs.

Table 5.1. Initial CELDT listening and speaking levels of students at the intermediate level in overall CELDT scores

		Speaking Level					
		1	**2**	**3**	**4**	**5**	**Total**
Listening Level	**1**	0	0	0	37	11	48
	2	0	0	1,353	464	9	1,826
	3	0	543	2,365	340	0	3,248
	4	17	151	252	0	0	420
	5	4	3	0	0	0	7
Total		21	697	3,70	841	20	5,549

CELDT Levels: 1=Beginning, 2= Early Intermediate, 3-=Intermediate, 4=Early Advanced, 5 = Advanced

To identify students' initial CELDT profiles, I classified the sample (5,549 ELLs) based on their initial CELDT listening and speaking levels. This created seven CELDT profile groups: students who were at (1) listening level 2 and speaking level 3 (**L2 S3**), (2) listening level 3 and speaking level 2 (**L3 S2**), (3) listening level 2 and speaking level 4 (**L2 S4**), (4) listening level 3 and speaking level 3 (**L3 S3**), (5) listening level 4 and speaking level 2 (**L4 S2**), (6) listening level 3 and speaking level 4 (**L3 S4**), and (7) listening level 4 and speaking level 3 (**L4 S3**). Table 5.2 summarizes CELDT profile groups' initial CELDT levels and scores as well as each group's number and percent of students. Each row represents a CELDT profile group, and groups that had similar CELDT overall scores were put next to each other: L2 S3 and L3 S2; L2 S4, L3 S3, and L4 S2; L3 S4 and L4 S3. For example, L2 S3 group (m = 415.00, sd = 6.35) and L3 L2 group (m = 413.09, sd = 5.76) had similar initial CELDT overall scores. The table also

presents each group's CELDT listening and speaking scale scores that were corresponding to the CELDT levels.

Table 5.2. Initial CELDT levels and scores by initial CELDT profile groups

CELDT profile group	Initial CELDT Level		Mean Initial CELDT Scores			
	Listening	Speaking	Listening	Speaking	Overall	Number (%)
L2 S3	2	3	394.44 (9.17)	436.08 (13.51)	415.00 (6.35)	1,353 (24.7%)
L3 S2	3	2	436.35(12.55)	390.78 (9.05)	413.09 (5.76)	543 (9.9%)
L2 S4	2	4	389.55 (12.05)	478.25 (13.17)	433.58 (8.93)	464 (8.5%)
L3 S3	3	3	431.93 (13.57)	430.42 (16.19)	430.92 (11.07)	2,365 (43.3%)
L4 S2	4	2	479.37 (11.22)	385.95 (11.93)	432.23 (7.93)	151 (2.8%)
L3 S4	3	4	423.21 (7.81)	471.24 (6.76)	447.08 (3.59)	340 (6.2%)
L4 S3	4	3	474.86 (6.71)	420.14 (10.35)	447.25 (5.07)	252 (4.6%)
Total						5,468 (100%)

Note. Standard deviation in parentheses

Table 5.3. Characteristics of the analytic sample in the baseline (Kindergarten)

CELDT profile Groups	Number	Proportion of Female	Designated as eligible for free/reduced priced lunch (Yes/No)	Designated as Special Education (Yes/No)	Mean Parents Education Level (*sd*)
L2 S3	1,353 (24.7%)	.49	.77	.03	1.89 (1.01)
L3 S2	543 (9.9%)	.53	.78	.03	1.76 (.93)
t		1.58	0.57	0.24	-2.17*
L2 S4	464 (8.5%)	.55	.80	.02	2.16 (1.14)
L3 S3	2,365 (43.3%)	.50	.79	.03	1.89 (1.03)
L4 S2	151 (2.8%)	.54	.77	.03	1.72 (1.01)
F		2.47	1.29	3.67	0.49
L3 S4	340 (6.2%)	.48	.78	.01	2.11 (1.17)
L4 S3	252 (4.6%)	.55	.82	.04	2.03 (1.14)
t		1.57	1.13	1.91	-0.70
Total	5,468 (100%)	.51	.79	.03	1.92 (1.05)

Note: 1) Parent Education Level: 1 = Not high school graduate, 2 = High school graduate, 3 = Some college, 4 = College graduate, 5= Graduate school/Post graduate 2) The percentages are by column.

Table 5.3 describes the characteristics of the entire group and each CELDT profile group in the baseline (Kindergarten). Overall, the sample consisted of a balance of female and male

students, 79% of them were designated as eligible for free/reduced priced lunch, 3% of them were designated as eligible for special education, and the mean parent education level was a little below 2 (high school graduates). I compared the baseline characteristics among CELDT profile groups within similar initial CELDT overall scores as the group comparison would be conducted in terms of academic performance and reclassification later in this study. The only difference found was that group L2 S3's parent education level (m =1.89, sd = 1.01) was significantly higher compared to L3 L2 (m= 1.76, sd = .93). Except parent education level, the baseline characteristics were statistically similar among CELDT profile groups within similar initial CELDT overall score ranges.

Students' CST-ELA and CST-Math scores in Grades 2 through 6 were used to indicate their academic achievement. In addition, I used the annual language status in Fall (the beginning of an academic year) that provided information about which students had been reclassified.

Method

I employed descriptive statistics to identify CELDT profile groups based on students' initial CELDT listening and speaking levels and explore the characteristics of students with different language skill profiles. To compare different profile groups' academic performance, I conducted Ordinary Least Square (OLS) regressions. In addition, I employed logistic regression models to examine the likelihood of students' being reclassified by their sixth year (Grade 5) since initial classification.

Results

CELDT profiles of students at the Intermediate level of the initial CELDT overall scores

What is the most frequent CELDT profile among students who were at the overall Intermediate level of initial CELDT? As shown in Table 2 earlier, the largest number of students (*n* = 2,365, 43.3%) had the Intermediate level in both listening and speaking domains. A quarter of the students had listening 2 and speaking 3 (L2 S3) (*n* = 1,353, 24.7%). The rest of CELDT profile groups had less than 10% of students, respectively: listening 3 and speaking 2 (9.9%), listening 2 and speaking 4 (8.5%), listening 3 and speaking 4 (6.2%), listening 4 and speaking 3 (4.6%), and listening 4 and speaking 2 (2.8%). The smallest number of students had listening 4 and speaking 2 (*n*= 151, 2.8%).

While many students (43.3%) at the Intermediate level of overall CELDT score had equal proficiency level of listening and speaking, more than a half of the total students had unequal proficiency levels in the two domains. To examine if students tend to be more proficient in one sub-domain than the other, I compared the number of students among groups that had different listening and speaking levels but the similar overall scores. In general, students seemed to be more proficient in speaking than in listening. For example, there were more students in listening 2 and speaking 3 group (L2 S3) (*n* = 1,353, 24.7%) than in listening 3 and speaking 2 (L3 S2) group (*n*=543, 9.9%). Similarly, there were more students in listening 2 and speaking 4 (L2 S4) group (*n* =464, 8.5%) than in listening 4 and speaking 2 (L4 S2) group (*n*= 151, 2.8%). There were also more students in listening 3 and speaking 4 (L3 S4) (*n*=340, 6.2%) compared to students in listening 4 and speaking 3 (L4 S3) (*n*=252, 4.6%). In summary, there were more students who had comparably higher proficiency in speaking than in listening compared to those who had relatively higher proficiency in listening than in speaking. The findings imply that

students tended to be more proficient in speaking than in listening if they did not show equal proficiency in the two domains. Or, this pattern might have been shown because the items in the CELDT listening were more difficult than the ones in the CELDT speaking.

Comparing Academic Performance by CELDT Profile Groups

I compared CELDT profile groups' CST-ELA and CST-Math scores to investigate if the CELDT profiles had impact on students' later academic outcomes. Figures 5.1 and 5.2 compare the trajectories of CST-ELA and CST-Math scores, respectively, by different CELDT profile groups. Each line represents a CELDT profile group's trajectory in terms of mean CST-ELA or CST-Math scores. The groups that were close in terms of initial CELDT overall scores were represented in the same (or same kind of) color but different patterns (solid vs. dash) of lines. In each pair or group, a dashed line represents a group that had comparably higher Listening and lower Speaking levels in their initial CELDT while a solid line represents the group that had comparably lower Listening and higher Speaking levels. In case of the comparison of L2 S4, L3 S3, and L4 S2 groups, the group that had equal levels in both domains (L3 S3) was described in a slightly more bright green than the two other groups (L2 S4 and L4 L2).

In terms of CST-ELA scores, overall, the patterns of the trajectories seemed similar among the profile groups, and the differences among groups tended to be consistent between Grades 2 and Grade 5. In Grade 6, the gap among the groups slightly decreased, and the groups with similar initial CELDT overall scores tended to have almost the same mean CST-ELA scores. Groups with higher initial CELDT overall scores tended to perform better than those with lower scores: L3 S4 group was the highest performing group across the grades, while L3 S2 group was the lowest. Similarly, the trajectories of CST-Math scores were about the same across the CELDT profile groups. Groups with higher initial CELDT overall scores tended to perform

better than those with lower scores: L4 S3 group was the highest performing group across the grades, while L2 S3 group was the lowest.

In comparison among a pair or a group with similar initial CELDT overall scores, a group with comparably higher listening and lower speaking levels (solid line) showed lower CST-ELA performance than the other group(s) that had relatively higher speaking and lower listening levels (dashed line). On the other hand, in terms of CST-Math performance, the group with higher listening and lower speaking levels (dashed line) tended to have higher scores than the others (solid lines). In order to see if these differences were significant and one specific CELDT profile group in a pair did better than the other, I ran Ordinary Least Square (OLS) regressions.

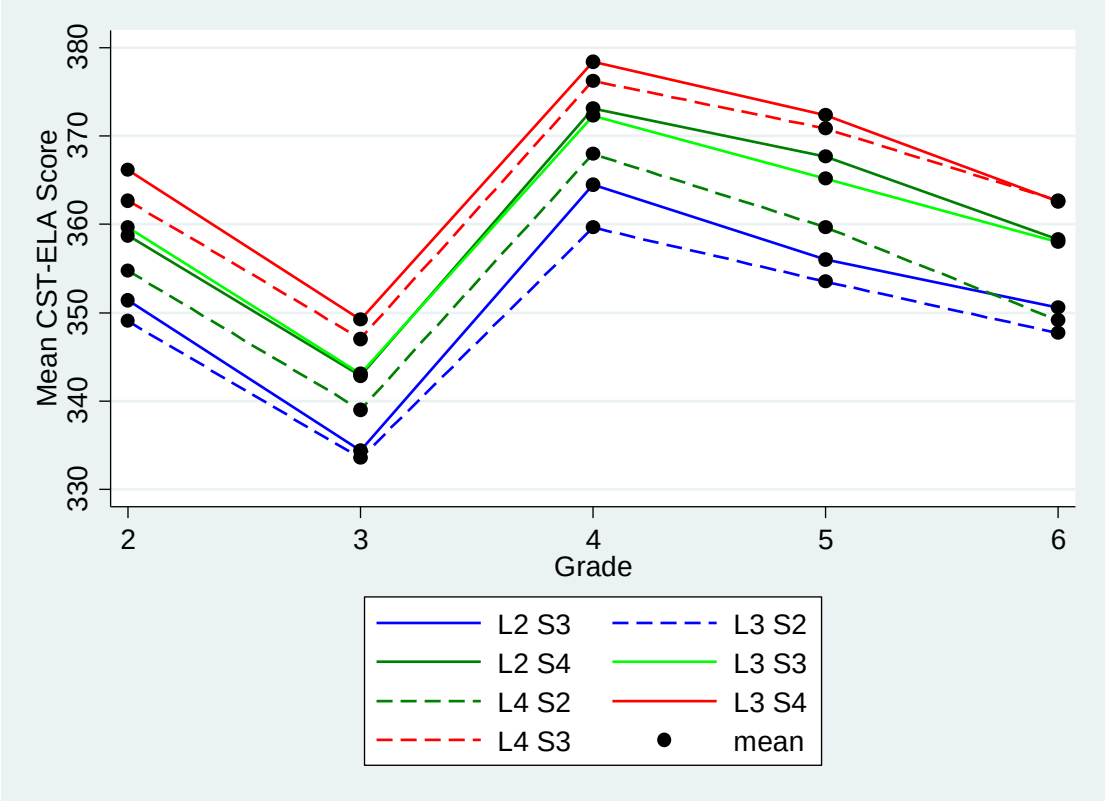


Figure 5.1. Trajectories of CST-ELA scores by CELDT profile groups

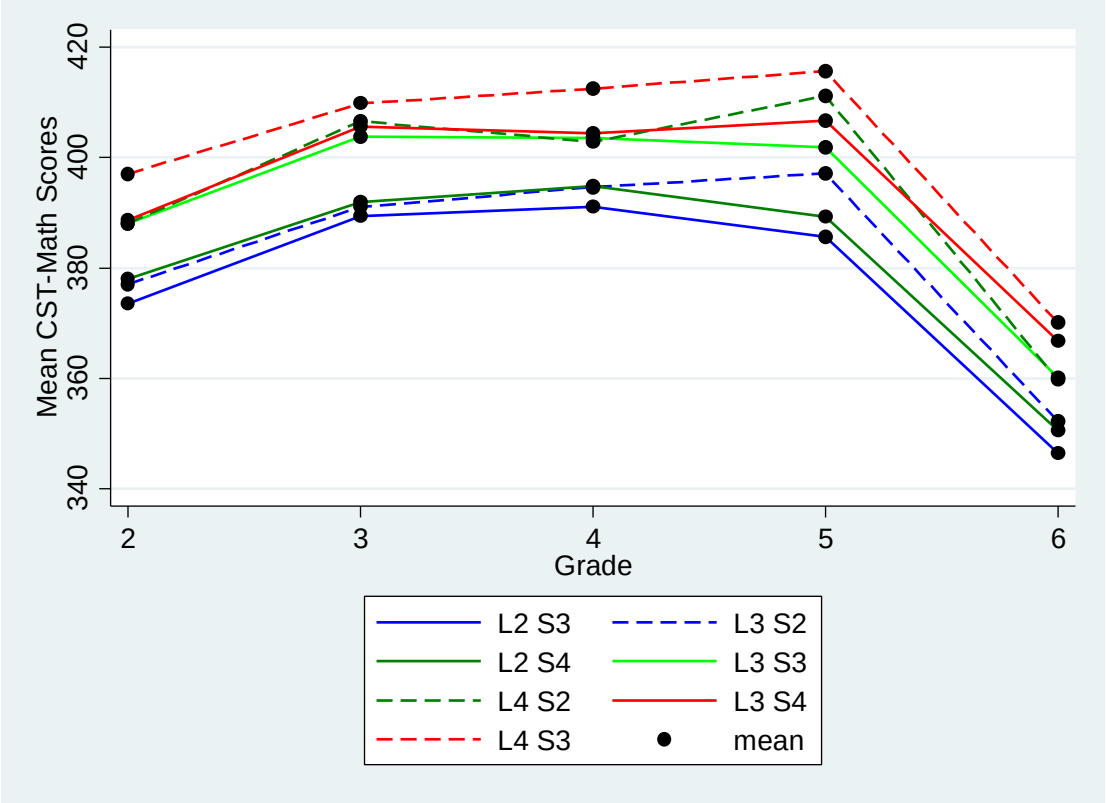


Figure 5.2. Trajectories of CST-Math scores by CELDT profile groups

Tables 5.4 and 5.5 present the results of the OLS regression models using CST-ELA and CST-Math scores as outcomes, respectively. I presented only the coefficients of interest in the tables: the coefficients for the profile groups and the initial CELDT overall scores, respectively. Each model included initial CELDT overall scores, parent education, whether a student was designated for special education in Kindergarten, whether a student received free/reduced price lunch in Kindergarten, number of absent days in Kindergarten, and gender as covariates. Therefore, the coefficients shown in Tables 5.4 and 5.5 represent the difference in the CST scores between comparison groups in each model, after controlling for the covariates (the reference group for each pair is in bold). Each row of the tables represents each pair of CELDT profile groups to be compared, and each column shows CST scores in Grades 2 through 6,

respectively. Before comparing pairs of CELDT profile groups, I first checked the relationship between the initial CELDT overall scores and the CST scores without considering the CELDT profile groups. As shown in the first rows of Tables 5.4 and 5.5, a student's initial CELDT overall score was a significant predictor of all the CST scores: the higher initial CELDT overall score he or she had, the higher performance he or she showed in the CST-ELA and CST-Math in all of the grades.

Next, I compared CELDT profile groups within a similar range of initial CELDT scores. Listening 2 and speaking 3 (L2 S3) group was compared with listening 3 and speaking 2 (L3 S2) as their mean initial CELDT overall scores were similar. Similarly, pairwise comparisons were conducted among L2 S4, L3 S3, and L4 S2 as well as between L3 S4 and L4 S3. Except the comparison between L2 S4 and L3 S3 groups in CST-Math scores, there was no significant difference between CELDT profile groups within similar CELDT overall scores. However, L2 S4 performed lower than L3 S3 in all grades' CST-Math. Compared to students who had the intermediate level proficiency in both listening and speaking at Kindergarten, students who were less proficient in listening but more proficient in speaking had consistently lower achievement in math. However, the overall results suggest that students' initial CELDT profile (listening and speaking) did not have impact on students' later academic outcomes, whereas their initial overall proficiency was a strong predictor of academic achievement.

Table 5.4. Results of Ordinary Least Square regression: Coefficients for CELDT profile group comparisons (Outcome = CST-ELA scores)

	CST-ELA scores in each grade				
Comparison Groups	Grade 2	Grade 3	Grade 4	Grade 5	Grade 6
Initial CELDT overall Score	.50*** (.06)	.48*** (.06)	.41*** (.07)	.46***(.06)	.39***(.07)
L2 S3 vs. **L3 S2**	1.91 (3.25)	1.75 (3.26)	4.97 (3.40)	2.63 (3.25)	2.68 (3.51)
L2 S4 vs. **L3 S3**	-1.44 (3.21)	-1.39 (3.38)	-1.05 (3.42)	2.37 (3.29)	-0.93 (3.52)
L3 S3 vs. **L4 S2**	5.64 (5.71)	2.73 (5.88)	6.36 (5.98)	5.93 (5.77)	11.51 (5.88)
L2 S4 vs. **L4 S2**	2.82 (5.76)	-0.36 (5.91)	4.41 (6.40)	7.73 (6.05)	10.30 (6.41)
L3 S4 vs. **L4 S3**	1.50 (5.27)	2.58 (5.41)	6.88 (5.69)	4.53 (5.40)	1.70 (5.72)

*** $p < 0.001$, ** $p < 0.01$, * $p < 0.05$, † $p < 0.10$

Note: 1) In each pair of comparison, a reference group is the CELDT profile group in bold. 2) For each model, I included initial CELDT overall scores, parent education, whether a student received special education in Kindergarten, whether a student received free/reduced price lunch in Kindergarten, number of absent days in Kindergarten, and gender as covariates. 3) Standard error in parentheses

Table 5.5. Results of Ordinary Least Square regression: Coefficients for CELDT profile group comparisons (Outcome = CST-Math scores)

	CST-Math scores in each grade				
Comparison Groups	Grade 2	Grade 3	Grade 4	Grade 5	Grade 6
Initial CELDT overall Score	.58*** (.09)	.62*** (.11)	.44*** (.10)	.56***(.11)	.54***(.10)
L2 S3 vs. **L3 S2**	-2.28 (4.48)	.40 (5.39)	-3.71 (5.16)	-11.67* (5.85)	-5.73 (4.89)
L2 S4 vs. **L3 S3**	-8.08† (4.48)	-11.88*(5.52)	-12.03*(5.01)	-11.34*(5.96)	-11.58*(5.04)
L3 S3 vs. **L4 S2**	1.56 (7.86)	-8.44 (9.48)	3.44 (8.69)	-7.97 (10.38)	2.58 (8.46)
L2 S4 vs. **L4 S2**	-8.23 (8.55)	-24.16*(10.31)	-9.98 (9.74)	-22.28†(11.69)	-9.91 (9.09)
L3 S4 vs. **L4 S3**	-6.89 (7.63)	-3.67 (9.09)	-1.06 (8.44)	-1.26 (9.92)	-2.34 (8.80)

*** $p < 0.001$, ** $p < 0.01$, * $p < 0.05$, † $p < 0.10$

Note: 1) In each pair of comparison, a reference group is the CELDT profile group in bold. 2) For each model, I included initial CELDT overall scores, parent education, whether a student received special education in Kindergarten, whether a student received free/reduced price lunch in Kindergarten, number of absent days in Kindergarten, and gender as covariates. 3) Standard error in parentheses

Comparing proportions of RFEP among CELDT profile groups in Grades 2 through 6

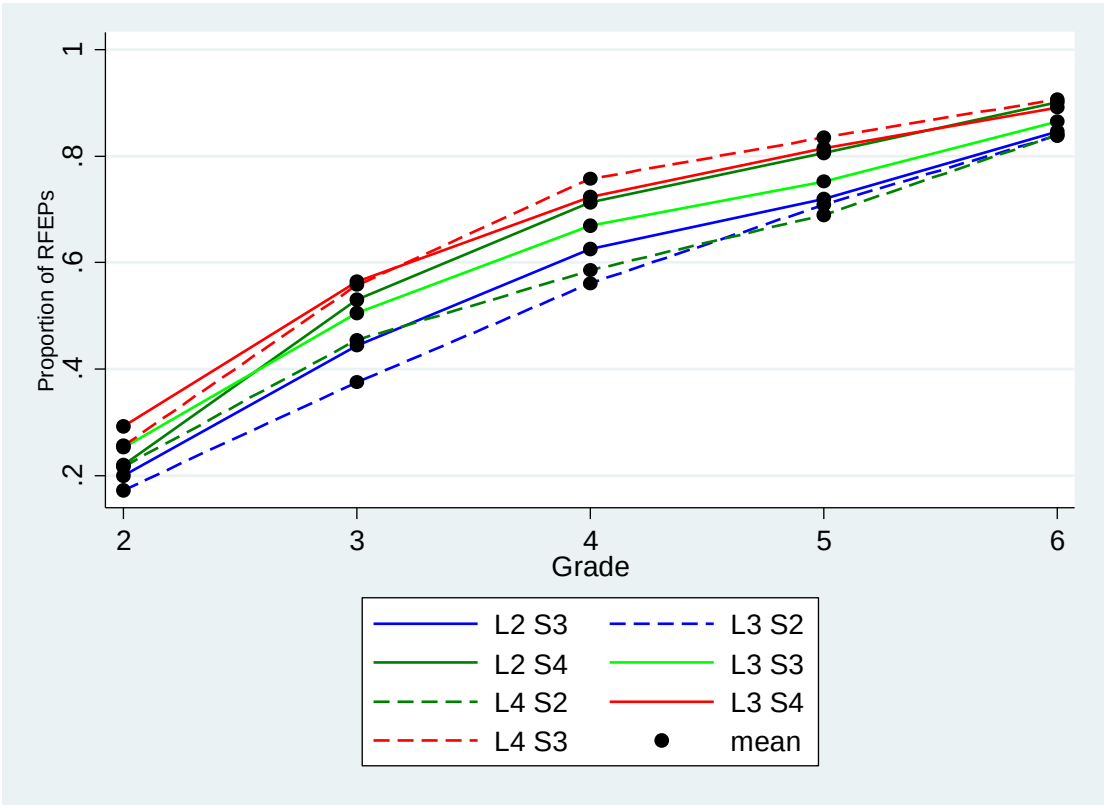
Do different CELDT profile groups have an impact on students' reclassification? Figure 5.3 illustrates the proportion of RFEP students in Grades 2 through 6 by CELDT profile group.

Similar to the performance in CST, groups with lower initial CELDT overall scores tended to have smaller proportion of RFEPs in each grade.

Logistic regressions were conducted in order to examine if the likelihood of being RFEP in every grade differed by CELDT profile groups at similar initial CELDT overall scores. The outcome was the likelihood of being reclassified by a certain grade, and the covariates included variables in Kindergarten: initial CELDT overall scores, parent education, whether a student was eligible for special education, whether a student received free/reduced price lunch, number of absent days (in Grade 1;the information was not available for Kindergarten), and gender. Other variables included in the model were previous year's CELDT overall scores and CST-ELA scores, the two of four reclassification criteria. CST-ELA score was not included for the model using the outcome in Grade 2 as the CST was not administered in the previous year (Grade 1).

Table 5.6 presents the results of the logistic regression analyses. As the interest of this study is in the difference between CELDT profile groups in terms of their likelihood of being reclassified, I presented only the coefficients of interest: the coefficients for the profile groups and the initial CELDT overall scores, respectively. Before comparing CELDT profile groups, I examined the relationship of the initial CELDT overall scores and the likelihood of being reclassified at each grade. The results showed that there was a statistically significant and positive relationship between the initial CELDT overall scores and the probability of being reclassified in any grade levels. On the other hand, little difference was in general found between CELDT profile groups at similar initial CELDT overall scores. In Grade 4 column, the estimates for four groups (L2 S3 vs. **L3 S2,** L2 S4 vs. **L3 S3**, L3 S3 vs. **L4 S2,** L2 S4 vs. **L4 S2)** were statistically significant and positive. Compared to students with comparatively higher level of speaking than listening in Kindergarten, students who were comparatively more skilled in

listening than in speaking in Kindergarten were more likely to be reclassified by Grade 4. However, that difference was not noticed in Grade 5 and 6, and overall there does not seem to be a difference among different CELDT profiles in terms of the likelihood of reclassification. This indicates that whether a student was more skilled in one or the other domain at Kindergarten did not have an impact on the amount of time it took for him or her to be reclassified in the later grades after controlling for all the covariates mentioned previously.



7

Figure 5.3. Proportion of Reclassified Fluent English Proficient (RFEP) students in Grades 2 through 6 by CELDT Profile groups

Table 5.6. Results of logistic regression predicting being reclassified in each grade

	Reclassification in each grade				
Comparison Groups	Grade 2	Grade 3	Grade 4	Grade 5	Grade 6
Initial CELDT overall Score	.01*** (.003)	.02*** (.003)	.02*** (.003)	.02*** (.003)	0.02*** (.004)
L2 S3 vs. **L3 S2**	0.18 (0.17)	0.32* (0.14)	0.25† (0.14)	-0.04 (0.15)	0.02 (0.20)
L2 S4 vs. **L3 S3**	-0.12 (0.15)	0.01 (0.13)	0.25† (0.15)	0.31† (0.17)	0.26 (0.24)
L3 S3 vs. **L4 S2**	0.16 (0.26)	0.17 (0.22)	0.48* (0.23)	0.31 (0.26)	0.29 (0.34)
L2 S4 vs. **L4 S2**	0.09 (0.30)	0.15 (0.26)	0.60* (0.27)	0.54† (0.31)	0.51 (0.42)
L3 S4 vs. **L4 S3**	0.16 (0.24)	0.13 (0.22)	0.12 (0.26)	0.01 (0.30)	0.02 (0.39)

Note: 1) In each pair of comparison, a reference group is the CELDT profile group in bold. 2) For each model, I included initial CELDT overall scores, parent education, whether a student received special education in Kindergarten, whether a student received free/reduced price lunch in Kindergarten, number of absent days in Kindergarten, and gender as covariates. 3) Standard error in parentheses

Discussion and Implications

This study examined the impact of the profiles of initial CELDT Listening and Speaking scores on students' later academic outcomes. The results showed that there was no difference in later academic performance among students who had similar overall scores but were at different levels of Listening and Speaking in the initial CELDT. CELDT profile groups did not show significantly different performance in their later CST-ELA and CST-Math, after controlling the initial CELDT overall scores. On the other hand, the initial CELDT overall score was a strong predictor of students' later academic achievement. These findings indicate that a Kindergarten student's initial overall language proficiency, as measured by a composite of CELDT listening and speaking sub-domain tests, has an impact on his or her later academic outcomes. Whether or not a student was relatively more skilled in listening or speaking, as measured by CELDT levels, did not seem to have much impact on his or her academic achievement.

Similarly, there was not a significant difference among CELDT profile groups in terms of proportions of RFEP students in each grade except Grade 4. By Grade 4, students who were

more skilled in listening than speaking were more likely to be reclassified than students who were more skilled in speaking than listening. However, that difference was not found before and after Grade 4, suggesting that two groups were quite equivalent in terms of reclassification. The initial CELDT overall score was a significant and positive predictor of a student's reclassification in each grade. The higher a student's initial CELDT score was, the more likely he or she was reclassified in each grade.

The results of this study might be generalizable to a restricted group of students as the sample was students who were at the Intermediate level in their initial CELDT overall scores. In addition, the sample of this study was tested on only two sub-domains, listening and speaking, which provided the basis for creating the profile groups. No difference between different CELDT profile groups might be attributed to the fact that the profile groups were created based on only two sub-domains. Different results from the current study might be obtained if the same questions and analyses are applied to different samples of students who were tested in all four domains: Reading and Writing as well as Listening and Speaking.

In conclusion, the findings of this study imply in terms of academic outcomes, it is more impactful for students to begin kindergarten as ELLs at a higher language skill level overall, regardless of being relatively more or less skilled in listening or speaking. This study provides empirical data showing that kindergarteners' listening and speaking skills are the foundation of later academic achievement. This study has clear implications for parents and care-givers who have a significant impact on students' language skills in the pre-school years. Teachers, schools, and districts can also draw implications for curriculum and instruction from these findings.

Chapter 6. Results of Research Question 3: Taking a closer look at Long-term English Learners (LTEL)

In this chapter, I present the results of research question 3: LTELs' profiles and their academic outcomes and experiences.

a. How similar are LTELs and non-LTELs in terms of student characteristics?
b. How do LTELs and non-LTELs compare in terms of the two of the reclassification criteria: CELDT and CST-ELA?
c. How do LTELs and non-LTELs compare in terms of academic performance, and educational experiences?

Data

For this study, I followed students who were initially identified as ELLs in Kindergarten in 2002-2003 until they reached Grade 10 in 2012-2013. Of all 35,846 kindergarten students initially classified in the academic year of 2002-2003 (2003, henceforth), I limited the sample to students who (1) were initially classified as ELL, (2) reported speaking Spanish at home, and (3) scored Level 3 (Intermediate) on their initial CELDT. This left a sample of 10,065 ELLs. The district defines LTELs as ELLs who still are not meeting reclassification criteria at the beginning of their 6th year. I applied this rule to define LTELs in this study. Of the 7,054 ELLs who were still in the district in the sixth year since the initial classification, I created two groups based on their ELL status by Grade 5 (2008): LTELs (n=3,302) who were still-ELLs, and non-LTELS (n=3,752) who had already been reclassified (also known as Reclassified Fluent English Proficient [RFEP]).

Table 6.1 presents the number of still-ELLs and RFEPs in each year, from 2003 through 2013. In 2008, there were 7,054 ELL students remaining in the district: 3,302 (46.8%) students were defined as LTELs while 3,752 (53.2%) were classified as non-LTELs (RFEPs).

I focused on students whose initial CELDT classification was Intermediate (Level 3), which is right below the cutoff for IFEP. The reasons for focusing on this group – rather than considering all ELLs (Levels 1 – 5) are the following. First, this ensures that ELL students being compared were at the same initial CELDT level and had the same level of English proficiency. This avoids the problem of comparing ELLs and LTELs who differed in their proficiency from the outset. Second, they were all right below the cutoff for IFEP initial classification and so were expected to be reclassified sooner than students at lower initial CELDT levels (1 and 2). Even though most students who were initially classified as ELLs eventually became RFEP by Grade 10 (the 11th year since the initial classification), the ELLs whose initial level was 3 were expected to be reclassified much sooner, considering their initial English proficiency. According to the district's minimum progress expectations from Structured English Immersion to Mainstream class, all the ELLs in this study, who were all at Intermediate level on their initial CELDT, were expected to be reclassified by their fourth year (Grade 3, 2006).

Table 6.1. Number and percent of Still-ELL and RFEP in 2003 through 2013

Year	Grade	Still-ELL	RFEP	Total
2003	K	10,065	--	10,065
2004	1	9,563	--	9,563
2005	2	8,603 (97.6%)	214 (2.4%)	8,817
2006	3	7,202 (89.7%)	825 (10.28%)	8,027
2007	4	5,086 (68.3%)	2,365 (31.7%)	7,451
2008	5	**3,302 (46.8%)**	3,752 (53.2%)	7,054
2009	6	**1,800 (28.1%)**	4,610 (71.9%)	6,410
2010	7	**1,186 (19.2%)**	4,989 (80.8%)	6,175
2011	8	**909 (15.1%)**	5,095 (84.9%)	6,004
2012	9	**675 (12.5%)**	4,718 (87.5%)	5,393
2013	10	**329 (7.8%)**	3,891 (92.2%)	4,220

Note. 1) ELLs in 2008 or later are considered as "LTELs" (indicated in bold). 2) The diminishing total number of students reflects that students were no longer enrolled in the district or they were not in the data.

Method

To explore why some ELLs became LTELs, and to examine LTELs' English language development and academic performance, I compared the two groups' characteristics from the baseline year, their initial and annual CELDT scores, their CST scores, and their English and Mathematics' course grades. I conducted descriptive analyses and logistic regression analyses.

Results

Differences between LTELs and Non-LTELs

Among the ELLs who were "Initial Level 3" at Kindergarten, who became LTELs and who did not? Before comparing LTELs and non-LTELs in terms of their later academic outcomes and experiences, it is important to understand how similar or different the two groups were at initial classification. Therefore, I examined whether the groups differed significantly in the baseline characteristics. Table 6.2 presents the baseline (2003) characteristics of LTELs and non-LTELs. Compared to non-LTELs, LTELs on average were more likely to be male and to be

designated as eligible for special education services. LTELs had a lower mean score on the CELDT than non-LTELs, and the parents of LTELs had lower levels of education on average.

Figure 6.1 shows the distribution of initial overall CELDT scale scores by LTELs and non-LTELs. There are relatively more LTELs at the lower ends in contrast to more non-LTELs at the higher ends, but overall both groups are spread fairly evenly. While some differences between students who became LTELs and those who did not were statistically significant, the differences are not large in absolute terms, and were all within Level 3 of the initial CELDT. Thus, I conclude that these two populations were fairly similar in terms of their English language proficiency.

Table 6.3 reports regression coefficients for a logistic regression model investigating the relationship between baseline student characteristics and the likelihood of being an LTEL (remaining ELL in Grade 5). I used student characteristics in the baseline rather than the year before Grade 5 because the goal of this analyses was to examine the effect of initial ELL classification and other characteristics in the initial year (Kindergarten) on students in the later years. The baseline characteristics included a student's initial CELDT score, a dummy variable for parent education that is high school graduate, a dummy variable for parent education that is some college or beyond, whether a student was designated as special education or not, whether a student received a free/reduced-priced lunch, gender, and a total number of present days in Grade 1 (the number of present days in Kindergarten was not available). The estimates in Table 6.3 represent differences in the estimated log-odds of becoming an LTEL. I also present corresponding odds-ratios.

Table 6.2. Baseline Characteristics of LTELs and Non-LTELs

	LTELs (*n* =3,302)		**Non-LTELs by Grade 5 (*n* = 3,752)**		
Characteristics in Grade K	*n*	*m* (*sd*)	*n*	*m* (*sd*)	***t* /x^2**
Female	3,231	.45	3,698	.52	5.97***
FRPL	3,231	.86	3,698	.86	-0.66
Special Education	3,302	.02	3,752	.01	-2.89**
Parent Education Level	2,101		2,487		
Not HS Graduate		.49		.44	18.43***
High School Graduate		.33		.33	
Some College and above		.18		.23	
Number of Present Days (Grade 1)	3,155	148.86 (32.65)	3,603	150.02 (30.69)	2.67**
Initial CELDT	3,302	475.96 (12.96)	3,752	480.02 (13.42)	12.86***

*** $p < 0.001$, ** $p < 0.01$, * $p < 0.05$, † $p < 0.10$

Note. 3,011 students had left the district by 2008 or they are not in the dataset in 2008.

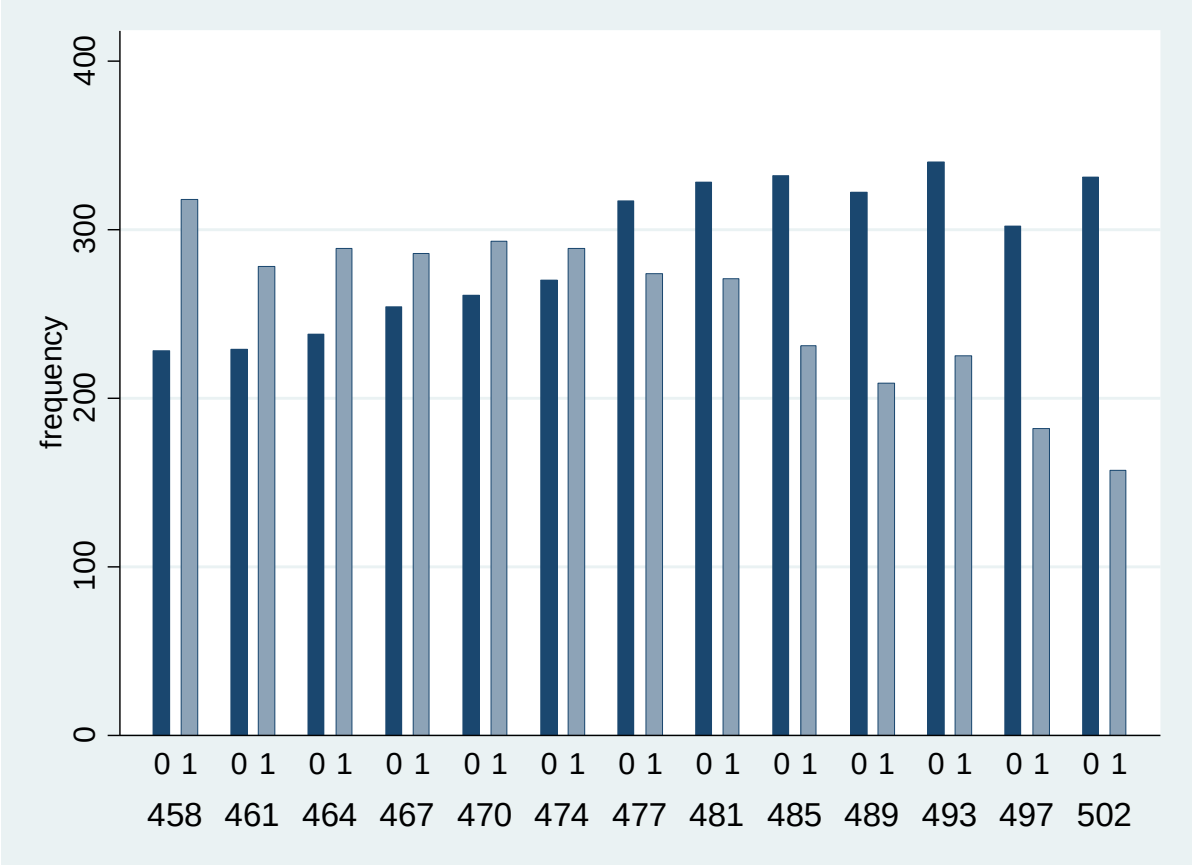


Figure 6.1. Histogram of initial (2003) overall CELDT scale score by LTEL and Non-LTELs (Non-LTELs = 0, LTELs = 1)

The results showed that many of a student's baseline characteristics contributed to the likelihood of being an LTEL: initial CELDT score, parent education level, whether or not a student was designated as special education, being female, and number of present days in Grade 1. For a one-unit increase in the initial CELDT score, we would expect to see an approximate 3% decrease in the odds of being an LTEL. Compared to a student whose parents did not graduate high school, a student whose parents had some college education or more had about 25% lower odds of becoming an LTEL, controlling for all other characteristics. Being designated as a student for special education increased 70% of the odds of becoming an LTEL. In addition, the odds of becoming LTEL were 22% smaller for females than for males. For one more day of attendance, the odds decreased about 0.2%.

Table 6.3. Results of logistic regression predicting becoming LTEL (Remaining as ELL in Grade 5)

	b (se)	Odds ratios
Initial CELDT Score	-.027***	0.973
	(.002)	
PE Level: High school graduate	-0.101	0.904
	(0.07)	
PE Level: Some college or above	-0.282***	0.754
	(0.082)	
Special Education	0.532*	1.703
	(0.253)	
FRPL	0.092	1.097
	(0.093)	
Female	-0.250***	0.778
	(0.06)	
Number of Present days	-0.002*	0.998
	(0.001)	

*** $p < 0.001$, ** $p < 0.01$, * $p < 0.05$, † $p < 0.10$

Note. PE level: High school graduate = whether or not parents' highest education level is high school graduate (Yes/No); PE level: Some college or above = whether or not parents' highest education level is some college or above (Yes/No); Special Education = whether or not a student was designated as special education needs in Kindergarten (Yes/No); FRPL = whether or not a student received a free/reduced-priced lunch in Kindergarten (Yes/No); Female = whether or not a student is female (Yes/No); Number of present days = A total number of present days in Grade 1 (The information for Kindergarten was not available)

On average, LTELs tended to have lower initial CELDT scores, lower parent education levels, lower attendance rates in school, a higher proportion of students who were male, and a higher proportion of students who were designated as needing special education services. To further examine the difference between LTELs and non-LTELs, I compared reclassified and non-reclassified ELL students in each grade. Appendix C displays the descriptive tables of the comparison between the two groups in each grade. The data showed reclassified and non-reclassified ELL students in each grade differed somewhat only in terms of special education designation. The group of students at a grade level who were not reclassified tended to have a higher proportion of students designated as needing special education services than the group of students who were reclassified as RFEP. However, it is also the case that most students who retained their ELL classification (and were not reclassified as RFEP) were not designated as needing special education services. Therefore, special education designation is not a factor that relates to the long-term ELL status of most LTELs. On all other background characteristics examined in this study (gender, parent education level, and school attendance rate), reclassified and non-reclassified students were very similar in each grade level.

Comparing LTEL and Non-LTELs' performance on annual CELDT and CST-ELA: Insights into students' reclassification rates

To be reclassified as proficient in English, students must meet all of the following reclassification criteria set by the district: 1) An Overall CELDT score of Level 4 (Early Advanced) or Level 5 (Advanced) and scores of each CELDT subdomain (listening, speaking, reading, and writing) at Level 3 (Intermediate) or higher, 2) CST-ELA score at Basic or above, and 3) Teacher Evaluation based on student grades/progress report marks (a score of 3 out of 5 or higher in English Language Arts for elementary school students and grade C or higher in

English Language Arts for secondary school students), and 4) Parent consultation and approval. As I have data only about CST and CELDT scores, but not information pertaining to the other criteria, the analyses here is based on CST and CELDT scores.

As described earlier, LTELs and non-LTELs were not very different from each other in terms of their initial CELDT scores. While LTELs had a lower mean CELDT scores than non-LTELs, all were at the same overall level, Intermediate (Level 3). To examine if two groups developed their English proficiency similarly or differently over time, I divided the two groups more specifically based on the year they were reclassified. This constructed 10 cohorts of students based on the grade they were reclassified. Table 6.4 describes the number of students who were reclassified in each grade level/year. For example, the grade 2 cohort includes 140 students who were reclassified in Grade 2 in year 2005, and 267 students who remained as ELLs until Grade 10 (the Still ELL cohort).

I compared the reclassification cohorts' overall and sub-domain CELDT scores, as well as CST-ELA scores from Kindergarten (2003) to Grade 4 (2007). Figures 6.2 through 6.6 describe the trajectories of the ten groups in terms of each test score. In each figure, the dashed lines represent the trajectories of non-LTELs who were reclassified in Grade 5 (2008) or earlier. The solid lines show paths of LTELs who were reclassified at some point between Grade 6 (2009) and Grade 10 (2013) or who were not reclassified by Grade 10 (the Still ELL cohort).

Figure 6.2 displays the trajectories of the average overall CELDT scores from Kindergarten (2003) through Grade 4 (2007) by the reclassification cohorts. Average CELDT score by group diverged widely even at Grade 1 (2004), a year after the initial classification, and the range of average scores expanded from about 10 points at Kindergarten to approximately 80 points at Grade 1. The CELDT scores rank-ordered the groups by the reclassification year. In

each year, the group of students who were reclassified in the following year had the highest mean score among the groups. For example, students in the Grade 2 cohort who were reclassified at Grade 2 had the highest CELDT score at Grade 1. The still ELL group remained in the lowest place throughout the years. The LTELs (those who were reclassified after Grade 5 (2008)) tended to cluster more closely together compared to the non-LTELs (those who were reclassified by Grade 5).

Figures 6.3, 6.4, and 6.5 display the trajectories of listening/speaking, reading, and writing CELDT scores by the reclassification groups, respectively. Reading and writing domains were included in the CELDT starting in 2005 when the students were at Grade 2. The ranking pattern shown in the CELDT domains is aligned with that of the overall CELDT scores: the first group to be reclassified is the group with the highest mean score.

Figure 6.6 shows the trajectories of CST-ELA scores between Grade 2 and Grade 4 by the reclassification cohorts. The highest performing group consisted of students reclassified at Grade 3, followed by students who were reclassified at Grade 4. Students who were reclassified at Grade 2 performed lower than these two groups. In Grade 2, the reclassification decision was not based on students' CST-ELA scores as they did not take CST at Grade 1. Except the group who were reclassified at Grade 2, the CST scores ranked students by reclassification year as the CELDT did. The results reflect the fact that the reclassification was likely based on the CELDT and CST scores.

Table 6.4. Number of students who were reclassified in each year/grade level

LTEL or not	Reclassification Cohort	Year	Grade	Number of Students
Non-LTEL	Grade 2	05	2	140
	Grade 3	06	3	553
	Grade 4	07	4	1,509
	Grade 5	08	5	1,506
LTEL	Grade 6	09	6	1,240
	Grade 7	10	7	505
	Grade 8	11	8	228
	Grade 9	12	9	118
	Grade 10	13	10	61
	Still ELL	13	10	267
Left the district or no data				926
Total				7054

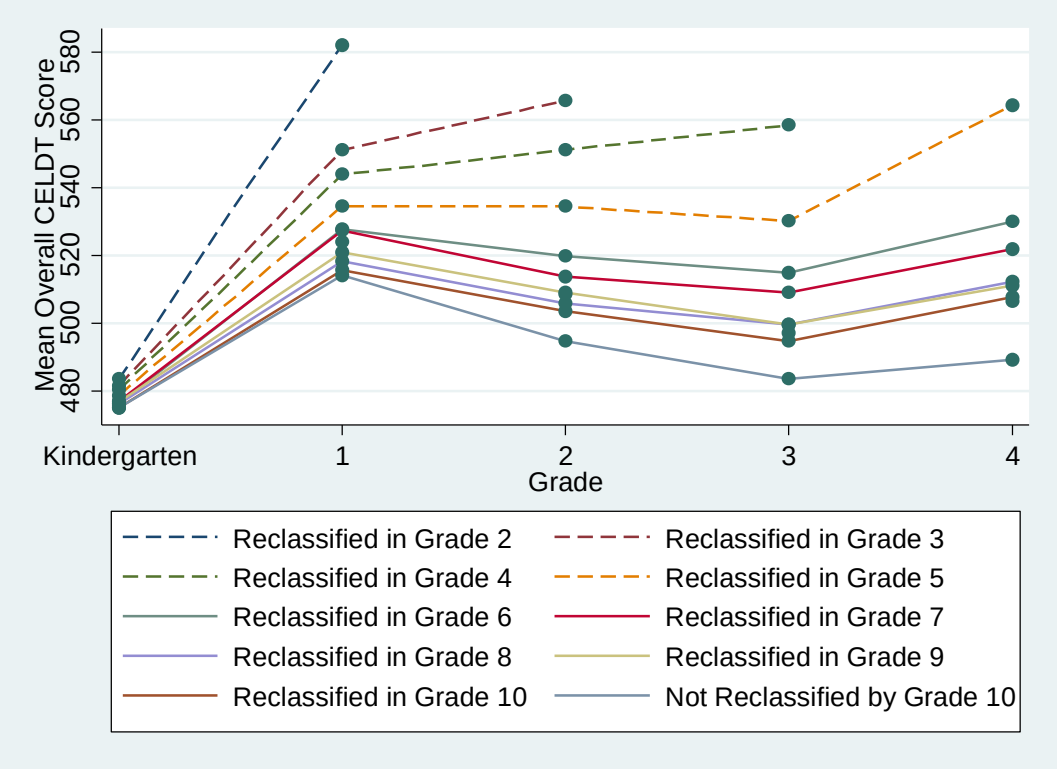


Figure 6.2. Trajectories of mean overall CELDT scores by reclassification cohorts

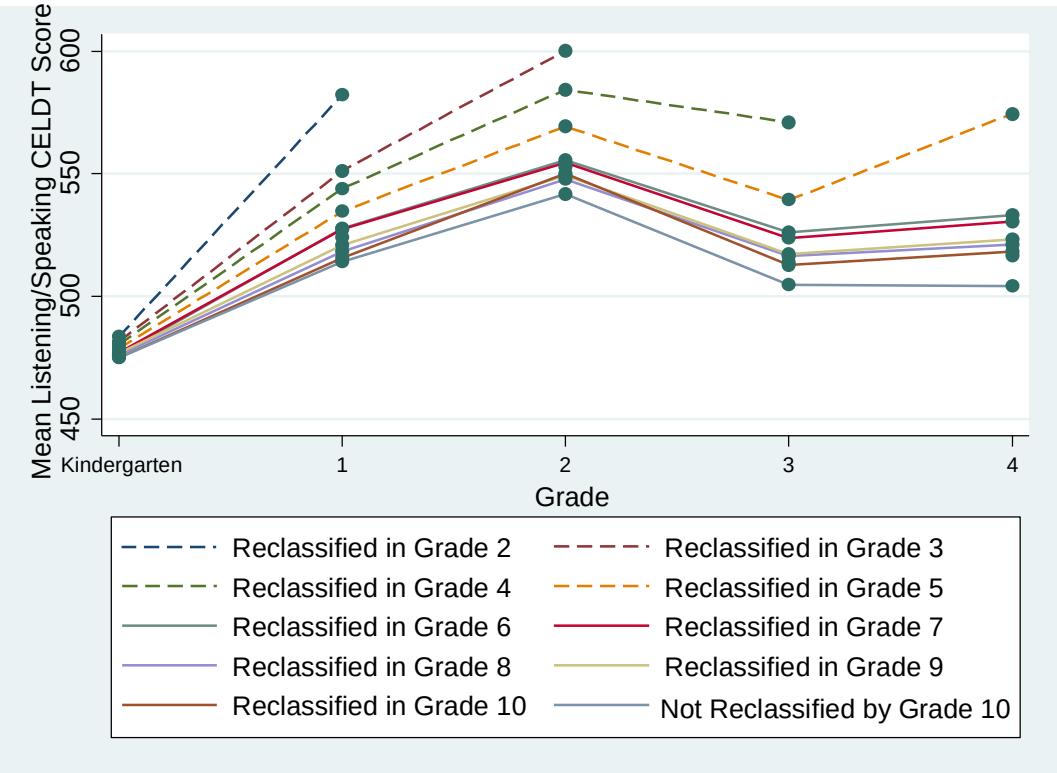


Figure 6.3. Trajectories of mean listening/speaking CELDT scores by reclassification cohorts

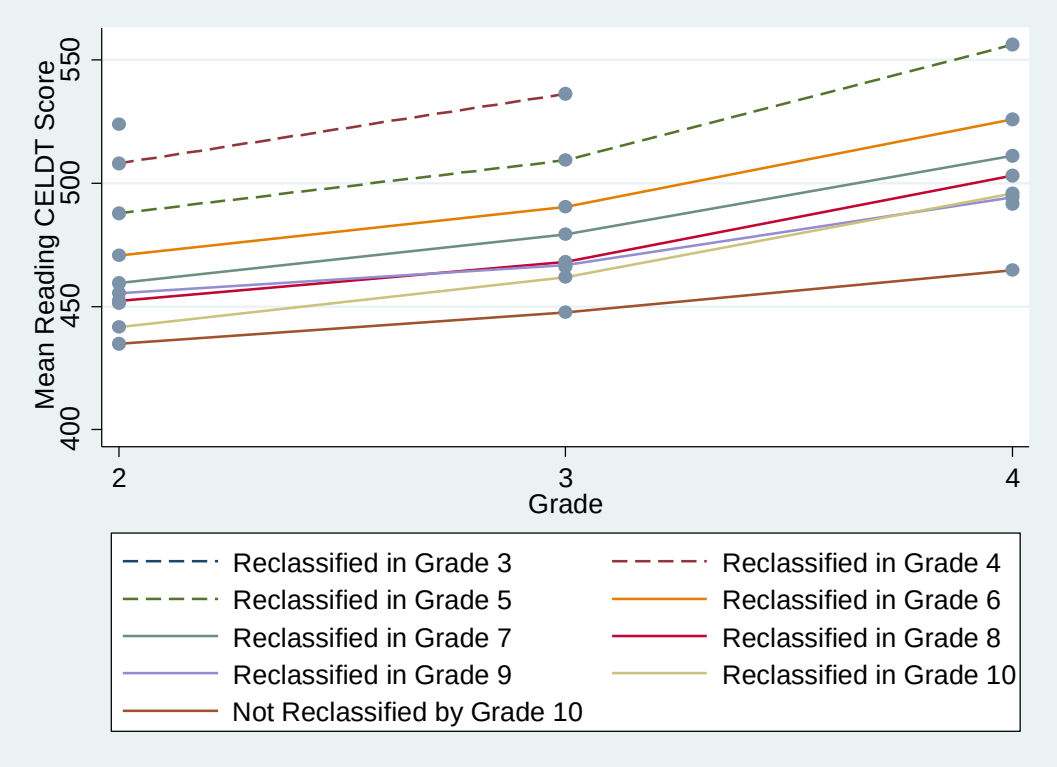


Figure 6.4. Trajectories of mean reading CELDT scores by reclassification cohorts

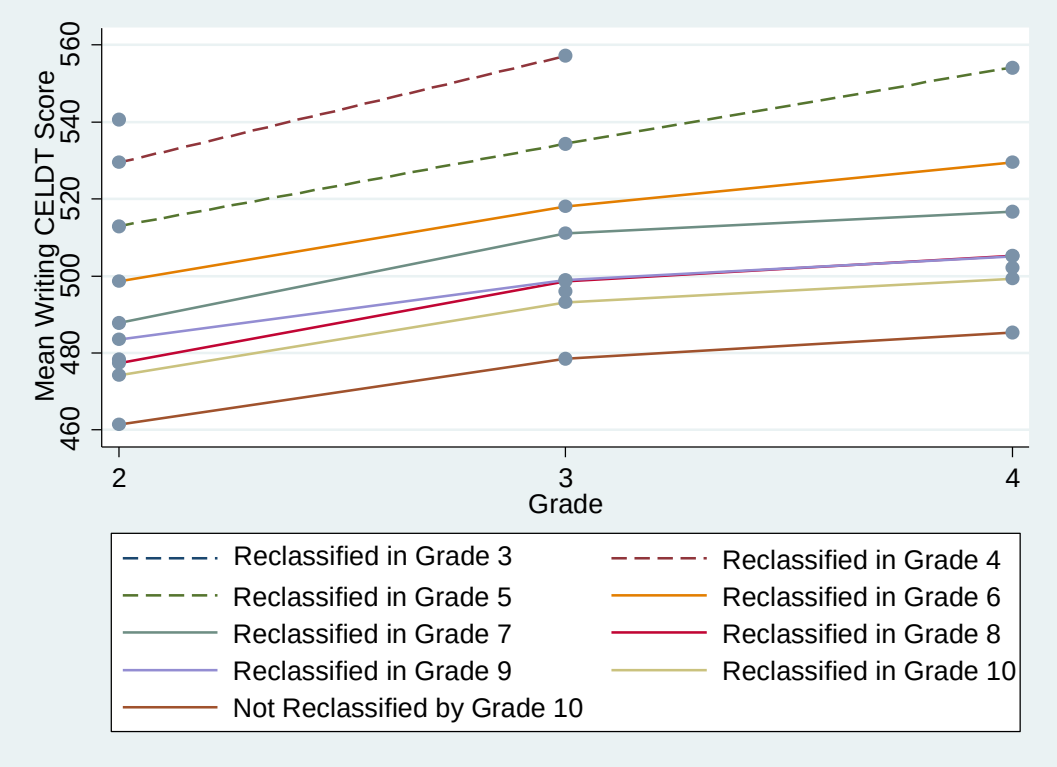


Figure 6.5. Trajectories of mean writing CELDT scores by reclassification cohorts

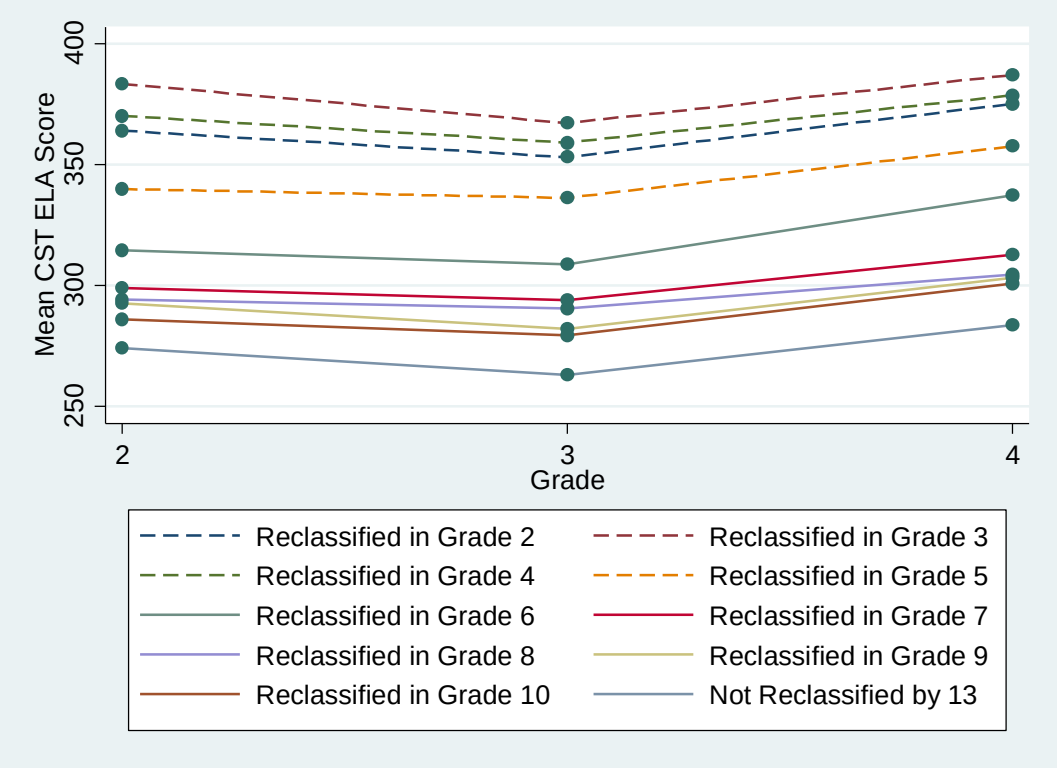


Figure 6.6. Trajectories of mean CST-ELA scores (Grades 2 through 4) by reclassification cohorts

To investigate which reclassification criterion LTEL students failed to meet, I grouped LTELs and non-LTELs based on whether they met reclassification criteria in CST-ELA and/or CELDT performance in a year prior to reclassification. I categorized students who were ELL or RFEP in one year according to their previous year's CST-ELA and CELDT scores. For example, I divided ELL students in Grade 5 based on their Grade 4 CST-ELA and CELDT scores. I did the same thing for RFEP students in Grade 5. The categorization created four groups: 1) ELLs who met reclassification criteria in neither CST-ELA nor CELDT, 2) only CST-ELA, 3) only CELDT, and 4) both CST-ELA and CELDT.

Table 6.5 displays the number and percent of ELL and RFEP students in each year grouped by whether they met CST-ELA or/and CELDT reclassification criteria in a grade (Grades 1 through 4, no CST for Grade 1) and by reclassification results in the following grade (Grades 2 through 5). Students who did not meet either CST-ELA or CELDT criterion or both in a year were unlikely to be reclassified in the next year. There was a considerably large number of students who met both of the requirements for being reclassified as RFEP but remained classified as ELLs. In Grade 3, among students who satisfied both CST-ELA and CELDT criteria, a larger number (2,499) of students were not reclassified compared to the number of students (542) who were reclassified. In the following grades, meeting both criteria seemed to have more students reclassified, but there were still a large number of students who remained as ELLs in spite of having CST-ELA and CELDT scores sufficient for reclassification. In Grade 4, there were 711 students who fulfilled both criteria but remained as ELLs, and there were 714 students who did so in Grade 5.

Table 6.5. Number of students grouped by whether they met CST-ELA and CELDT reclassification criteria at one grade (Grades 1 through 4) and by reclassification results in the following grade (Grades 2 through 5)

		1	2	3	4		
Satisfied reclassification criteria in the previous year's	CST-ELA	No	Yes	No	Yes	Unknown	Total
	CELDT	No	No	Yes	Yes		
Reclassification Grade (Year)							
2 (2005)	ELL	2,769 (40.8%)	--	3,959 (58.4%)	--	46 (0.01%)	6,774
	RFEP	5 (20%)	--	10 (40%)	--	10 (40%)	25
3 (2006)	ELL	1,588 (25.7%)	**1,864** (30.2%)	168 (0.03%)	**2,499** (40.4%)	61 (0.01%)	6,180
	RFEP	5 (0.01%)	10 (0.01%)	3 (0.004%)	542 (74.9%)	161 (22.2%)	724
4 (2007)	ELL	1,852 (39.3%)	**1,937** (41.1%)	115 (2.4%)	**711** (15.1%)	93 (0.02%)	4,708
	RFEP	3 (0.001%)	51 (0.02%)	23 (0.01%)	1,435 (64.1%)	725 (32.4%)	2,237
5 (2008)	ELL	946 (19.7%)	**1,451** (43.9%)	108 (0.03%)	**714** (21.6%)	83 (0.03%)	3,302
	RFEP	2 (0.001%)	33 (0.02%)	25 (0.02%)	1,429 (94.1%)	30 (0.02%)	1,519

Note: 1) Whether a student meets reclassification criteria in terms of CST-ELA and CELDT levels is based on his performance in the year prior to the reclassification year. 2) Percent was calculated using the total number of students in each row. 3) CST was not administered in Grade 1.

Table 6.6. Mean overall CELDT scores and Mean CST-ELA scores of students who met both CST-ELA and CELDT reclassification criteria at one grade (Grade 2, 3, or 4) by reclassification results in the following grade (Grade 3, 4, or 5)

Reclassification Grade (Year)	Reclassification Results	Previous year's Test Scores	
		CELDT	CST-ELA
3 (2006)	ELL	554.34 (26.79)	360.94 (41.72)
	RFEP	566.96 (30.95)	384.98 (38.95)
	t	-9.64***	-12.24***
4 (2007)	ELL	552.00 (20.63)	346.77 (32.65)
	RFEP	560.23 (24.97)	360.97 (34.05)
	t	-7.47***	-9.16***
5 (2008)	ELL	555.90 (19.02)	343.03 (25.69)
	RFEP	565.85 (24.04)	358.86 (32.69)
	t	-9.47***	-11.22***

*** $p < 0.001$, ** $p < 0.01$, * $p < 0.05$, † $p < 0.10$

Note. The students did not take the CST in 2004 when they were at Grade 1. Therefore, the reclassification in 2005 did not rely on CST-ELA scores.

Why was this large number of students not reclassified even after they met two major reclassification criteria? One reason might be because they might have failed to meet one or both of the other reclassification criteria: Teacher evaluation based on student grades/progress report marks (3 out of 5 or higher in English Language Arts for elementary school students and grade C or higher in English Language Arts for secondary school students), and parent consultation and approval.

Table 6.6 compares students who remained as ELLs and those who were reclassified as RFEP in terms of CST-ELA and overall CELDT scores. Overall, students who remained as ELLs had lower CST-ELA and overall CELDT scores than those who were reclassified. This fact might partially explain why those who met both CST-ELA and CELDT criteria remained as ELLs: they had lower scores in both CST-ELA and overall CELDT scores compared to students who were reclassified, and it is more likely that the ELLs also might have had lower course grades in English Language Arts, which was another reclassification criteria. It is also possible that they were not reclassified simply because teachers or parents might have recommended that

these students stay in ESL an additional year. Another potential reason for the reclassification lag might be due to the period of the CST administration (Thompson, 2012). While the CELDT is administered in the fall of each year, the CST is administered in the spring, and the results become available in August, almost a full year apart from the CELDT administration. Therefore, due to availability of CST scores in a certain school or the district, students eligible for reclassification may experience a delay in their status change.

Another thing to notice in Table 6.5 is that many students satisfied the requirement in CST-ELA while they failed to do so in CELDT. In 2006, there were 1,874 students who met the criterion in CST-ELA but failed to do so in CELDT, whereas there were only 171 students who satisfied the criterion in CELDT but not in CST-ELA. In 2008, 1,988 students met CST-ELA but did not meet CELDT, and 1,484 students did so in 2009. It seems that it was more difficult to meet the CELDT criteria than the CST-ELA criteria. This might be due to the fact that students had to meet five conditions (Level 4 or higher in overall score and Level 3 or higher in listening, speaking, reading, and writing scores) to be able to satisfy the CELDT criteria. As a result, it is much harder to meet the CELDT criteria than the CST-ELA. The purpose not only of the ELL classification system but also of the provision of ELD services is to assist ELL students to perform well in the mainstream classroom. The results of this study show that many ELLs performed well enough by showing level 3 (out of 5) performance on the CST-ELA, which is an assessment to measure a general academic performance. Even though the students seemed to be ready by showing an average level performance in the general academic test, they had to remain as ELLs because they had not met all of the CELDT criteria. This raises a question about what test should be emphasized more to measure ELL student's readiness for reclassification: a general academic ability test in English Language Arts or an English language proficiency test.

Academic performance and Educational Experiences of LTELs and non-LTELs

To compare LTELs and non-LTELs in their academic performance, I examined their performance in CST-ELA, CST-Math, secondary school English and math courses by reclassification year. Figures 7 through 10 compare trajectories of different year's reclassified groups in terms of outcomes. In each figure, the dashed lines represent the trajectories of non-LTELs who were reclassified in 2008 or earlier. The solid lines show paths of LTELs who were reclassified at some point between 2009 and 2013 or who had not been reclassified by 2013.

As Figures 6.7 and 6.8 show, similar patterns are observed in the trajectories of both the CST-ELA and the CST-Math scores. Overall, non-LTELs performed better than LTELs, and the earlier the group's reclassification, the higher its mean. As mentioned earlier, the group reclassified in Grade 2 (2005) was different in that their reclassification was not based on CST-ELA scores because CST was not administered in the previous year, Grade 1. Among the non-LTEL groups, those who reclassified in the first three years, Grades 2 through 4 (2005 through 2007), tended to cluster more closely throughout the years, being several score points away from the reclassified in Grade 5. Among the LTEL groups, those who reclassified in Grade 6 had the highest mean scores, while the group of students who never reclassified had the lowest mean in all years. The rest of the LTELs tended to cluster throughout the years in terms of their mean scores.

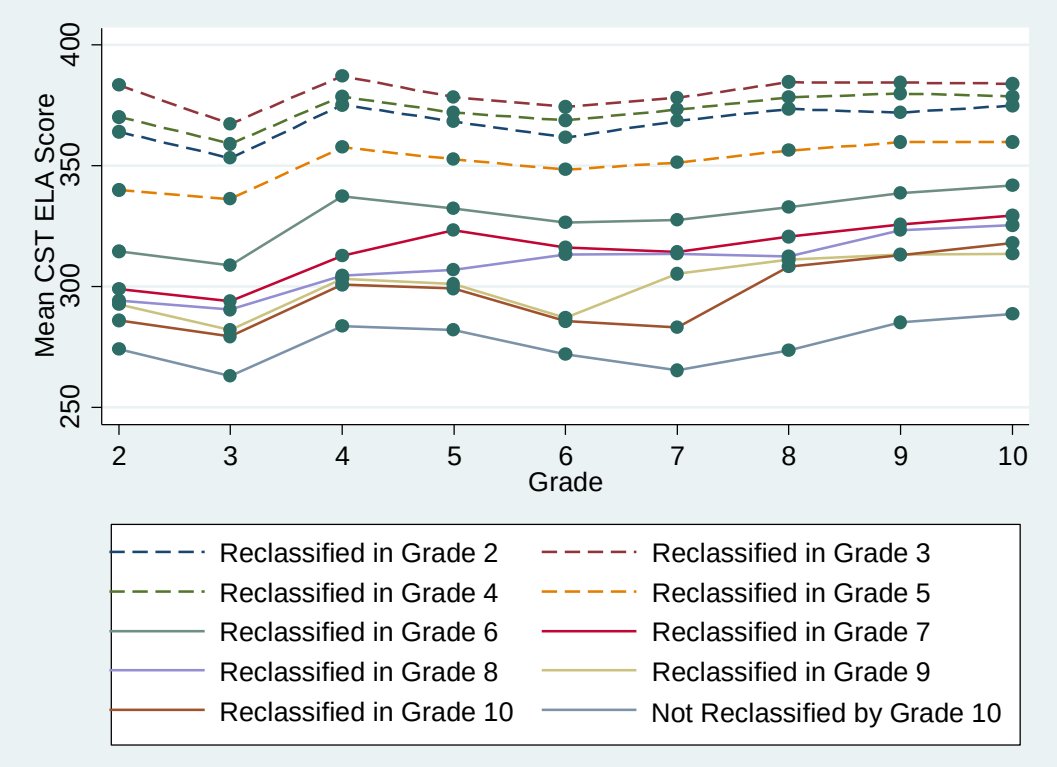


Figure 6.7. Trajectories of mean CST-ELA scores (Grades 2 through 10) by reclassification cohorts

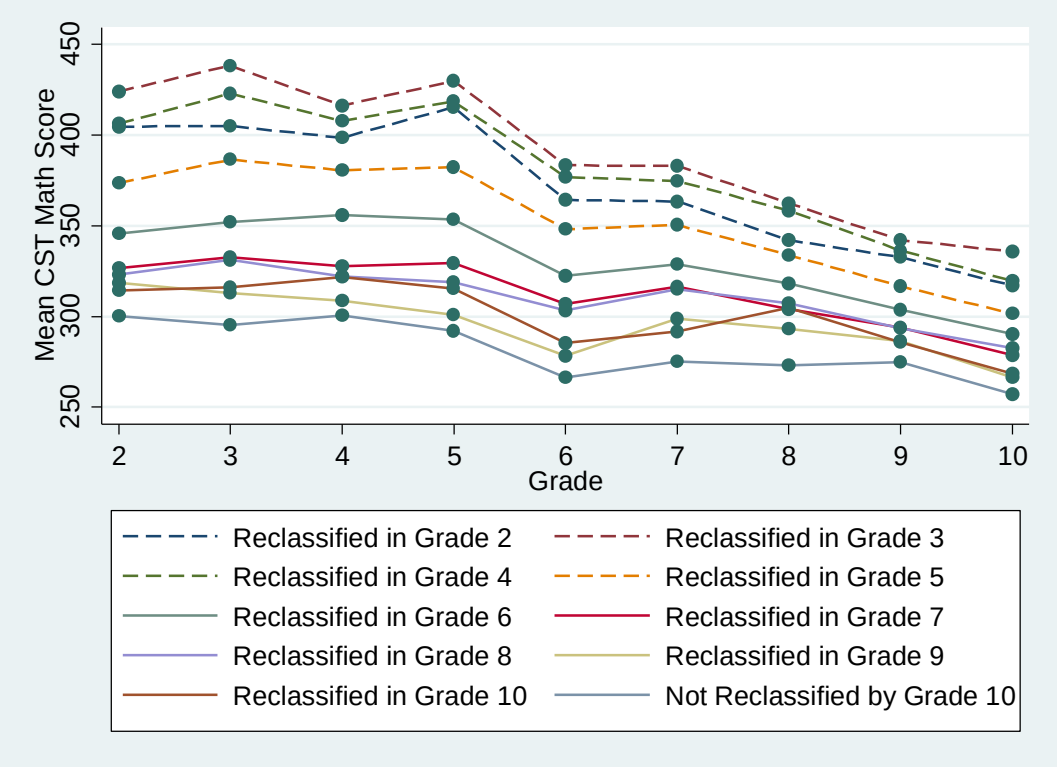


Figure 6.8.Trajectories of mean CST-Math scores (Grades 2 through 10) by reclassification cohorts

To compare academic performance of LTELs and non-LTELs, I ran an ordinary least square (OLS) regression including a dummy variable for LTEL, initial CELDT score, and covariates in the baseline such as parent education, whether a student received special education, whether a student had received free/reduced price lunch, and gender. Table 6.7 presents the estimates of the outcome difference between LTEL and non-LTEL after controlling for the covariates. Holding the covariates constant, LTELs had significantly lower scores than non-LTELs in all of the outcomes.

Table 6.7. Results of Ordinary Least Square regression: Coefficients for LTEL vs. non-LTELs only

Year	Grade	CST-ELA Score	CST-MATH Score	English Course Grade	Mathematics Course Grade
05	2	-59.37*** (1.34)	-69.03*** (2.04)	--	--
06	3	-58.56*** (1.17)	-81.57*** (1.95)	--	--
07	4	-54.78*** (1.20)	-66.34*** (1.78)	--	--
08	5	-48.20*** (1.06)	-77.02*** (2.16)	--	--
09	6	-50.56*** (1.22)	-62.14*** (1.79)	-0.45*** (0.04)	-0.62*** (0.04)
10	7	-54.98*** (1.38)	-55.05*** (1.81)	-0.52*** (0.04)	-0.61*** (0.04)
11	8	-53.24*** (1.51)	-44.05*** (2.06)	-0.42*** (0.04)	-0.46*** (0.05)
12	9	-48.72*** (1.563)	-35.70*** (1.93)	-0.51*** (0.04)	-0.64*** (0.08)
13	10	-42.26*** (1.69)	-33.56*** (2.22)	-0.57*** (0.04)	-0.50*** (0.08)

*** $p < 0.001$, ** $p < 0.01$, * $p < 0.05$, † $p < 0.10$

Note: 1) For each model, I included gender, parent education level (two dummy variables for high school graduate and some college or above, respectively), initial CELDT score, whether a student was designated as special education in Kindergarten, whether a student received free/reduced price lunch in Kindergarten, and number of present days in Grade 1 as covariates. 2) English courses are 6, English7, English8, English9, and English10 for Grade 6 through Grade 10, respectively. Math courses are Math6, Math7, Algebra1, Geometry, and Algebra2 for Grade 6 through Grade 10, respectively.

In order to investigate if LTELs' lower academic performance and late reclassification was due to their lower initial CELDT score, I conducted additional analyses focusing on sub-groups of ELLs who had the lowest, middle, and highest initial CELDT score among the sample in this study (Initial CELDT score 458, 477, and 502, respectively). I assumed that the three groups would show different findings in terms of their academic performance and language development progress if the initial CELDT score was the main factor that had impact on a student's becoming an LTEL and low academic performance. As I did with the whole sample in this study, I compared trajectories of CST-ELA, CST-Math, as well as English and Math course grades by reclassification groups (by a grade level when a group of students were reclassified). All the relevant figures and graphs can be found in Appendix D. The results showed similar patterns in all three groups. Even students who had the same initial CELDT score started diverging in their academic achievement and language development in Grades 1 and 2. There were some students who became LTELs even among the group with the highest initial CELDT score. In addition, as the analyses of the whole sample showed earlier, students who were reclassified in the earlier grade performed better than those who were reclassified later.

Language services that LTELs and non-LTELs received

Did LTELs and non-LTELs receive the same kinds of language development services? I examined the language programs students were assigned to by reclassification cohorts (groups based on their reclassification year/grade). Before reclassification, most ELL students were assigned to either an English Language Development (ELD) program or were labeled as "Preparation for Redesignation Program (PRP)." If a student had completed all the ELD coursework, he or she could no longer get credit for those courses and would be placed in regular and grade-appropriate English classes with the designation of PRP until reclassification.

Table 6.8 presents the proportion of students in each reclassification cohort who were assigned to ELD or PRP in the year prior to their reclassification grade. Each row represents a reclassification cohort (a group of students who were reclassified at a certain grade), and each column shows the proportion of the group who were assigned to ELD and PRP in the year prior to the reclassification grade, respectively. For example, students who were reclassified in Grade 2 are found in the Grade 2 cohort row: 89% of the group were assigned to ELD in Grade 1 while 5% of them were in PRP. As this group of students was reclassified in Grade 2, they were not assigned to ELD or PRP in the following grades. In Table 6.6, the proportions from the year prior to the reclassification are in bold. The grade 2 through grade 5 cohorts are LTELs and the rows are shaded in grey. In each year, most ELLs (more than 90%) were either in ELD or in PRP in the year before their reclassification. Starting in Grade 4, there was a considerable proportion of ELL students who were assigned to PRP but not reclassified in the following year. For example, 28% of the grade 7 cohort were assigned to PRP in Grade 5, but they were not reclassified until Grade 7. In terms of the grade 10 cohort, a considerable proportion was in PRP even in Grade 4, six years before their reclassification in Grade 10: 11% in Grade 4, 23% in Grade 5, 35% in Grade 6, 40% in Grade 7, and 74% in Grade 8. These students had not received any language supports from the year when they had completed all of the ELD classes and had been assigned to PRP until their reclassification year. At the same time, they had repeatedly failed to meet the reclassification requirements (either or all of the CELDT, CST-ELA, or course grades), even after their completion of the ELD classes. It seems that this group of LTELs may have benefitted from extra support beyond the regular ELD classes to meet the reclassification criteria. However, the reasons for their continuous failures are unclear, and this needs more investigation.

Table 6.8. Proportion of students assigned to English Language Development (ELD) programs and Preparation for Redesignation Program (PRP) by reclassification cohort

Reclassification Cohort	Program	Proportions of Students in ELD or PRP in each grade									
		1	2	3	4	5	6	7	8	9	10
Grade 2	ELD	**.89**	--	--	--	--	--	--	--	--	--
	PRP	**.05**	--	--	--	--	--	--	--	--	--
Grade 3	ELD	.92	**.90**	--	--	--	--	--	--	--	--
	PRP	.01	**.07**	--	--	--	--	--	--	--	--
Grade 4	ELD	.93	.96	**.83**	--	--	--	--	--	--	--
	PRP	.002	.003	**.15**	--	--	--	--	--	--	--
Grade 5	ELD	.91	.93	.90	**.69**	--	--	--	--	--	--
	PRP	.001	.004	.04	**.28**	--	--	--	--	--	--
Grade 6	ELD	.90	.92	.88	.77	**.56**	--	--	--	--	--
	PRP	0	.002	.04	*.18*	**.42**	--	--	--	--	--
Grade 7	ELD	.89	.91	.90	.85	.70	**.38**	--	--	--	--
	PRP	0	.002	.02	***.08***	***.28***	**.49**	--	--	--	--
Grade 8	ELD	.92	.92	.88	.85	.70	.44	**.35**	--	--	--
	PRP	0	0	.03	***.08***	***.23***	***.31***	**.55**	--	--	--
Grade 9	ELD	.95	.94	.94	.86	.72	.41	.31	**.05**	--	--
	PRP	0	.01	.02	***.11***	***.23***	***.42***	***.57***	**.92**	--	--
Grade 10	ELD	.89	.92	.89	.82	.76	.42	.39	.08	**.02**	--
	PRP	0	0	0	***.11***	***.23***	***.35***	***.40***	***.74***	**.94**	--
Still ELL in Grade10	ELD	.88	.88	.89	.89	.85	.57	.45	.12	.03	**.01**
	PRP	0	.01	.02	***.04***	***.11***	***.21***	***.39***	***.71***	***.79***	**.87**

Note: Reclassification Cohort refers to a group of students who were reclassified at a certain grade. For example, the grade 2 cohort refers to students who were reclassified in Grade 2. The numbers in bold indicate the proportions of a cohort in each program (ELD or PRP) in the year prior to the cohort's reclassification.

Coursework: Enrollment in Algebra 1 by Grade 8

When course-taking patterns in secondary school are analyzed in terms of on-time graduation, taking Algebra 1 in Grade 7 or 8 is considered to be an indication that a student is "on-track." I compared LTELs and non-LTELs in terms of the proportion taking Algebra 1 at Grade 7 or 8. Table 6.9 presents the number of non-LTELs and LTELs who took Algebra 1 at Grade 7 or 8 and who did not. It also provides the number of students by the reclassification year among LTELs. Of note, more than two thirds of non-LTELs (*n*=2,647, 70.55%) took Algebra 1 at Grade 7 or 8 while a half of LTELs (*n*=1,733, 52.48%) did. Focusing on LTELs, the

proportions taking Algebra 1 were similar among those who were reclassified in Grade 6, 7, or 8. LTELs that remained as ELL in Grade 8 were less likely to take Algebra 1 by Grade 8 than LTELs who were reclassified by Grade 8.

Table 6.9. Number of students who took Algebra 1 at Grade 7 or 8

	Algebra 1 at Grade 7 or 8		
	No	Yes	Total
Non-LTEL	1,105 (29.45%)	2,647 (70.55%)	3,752 (100%)
LTEL	1,569 (47.52%)	1,733 (52.48%)	3,302 (100%)
Reclassified in Grade 6	440 (35.31%)	806 (64.69%)	1,246 (100%)
Reclassified in Grade 7	185 (36.56%)	321 (64.44%)	506 (100%)
Reclassified in Grade 8	84 (36.68%)	145 (63.32%)	229 (100%)
Still ELL in Grade 8	355 (45.11%)	432 (54.89%)	787 (100%)

Table 6.10 reports regression coefficients for a logistic regression model investigating the relationship between various predictors on the likelihood of taking Algebra 1 at Grade 7 or 8. The estimates represent differences in the estimated log-odds of taking Algebra 1 at Grade 7 or 8, and the corresponding odds-ratios are also presented. Being an LTEL had a significant and negative impact on taking Algebra 1 at Grade 7 or 8, controlling for a student's initial CELDT score and other student characteristic covariates in the baseline. Holding other predictors constant, the odds of taking Algebra 1 at Grade 7 or 8 for LTELs over non-LTELs is .42, which implies that LTELs are about 60% lower odds to take Algebra 1 than ELLs who were reclassified as RFEP by 2008. Holding other variables constant, students who were designated as special education in Kindergarten were approximately 50% less likely to take Algebra 1 than those who did not.

Table 6.10. Results of Logistic Regression predicting taking Algebra 1 at Grade 7 or 8

Predictors	b (se)	Odds ratios
LTEL	-0.88*** (0.07)	0.42
Initial CELDT Score	-0.0004 (0.002)	1.00
PE level: High school graduate	-0.05 (0.07)	0.95
PE level: Some college or above	- 0.22* (0.08)	0.80
Special Education	- 0.64* (0.25)	0.53
FRPL	0.06 (0.09)	1.06
Female	0.01 (0.06)	1.01
Number of Present Days	0.001 (0.001)	1.00

*** $p < 0.001$, ** $p < 0.01$, * $p < 0.05$, † $p < 0.10$

Note. PE level: High school graduate = whether or not parents' highest education level is high school graduate (Yes/No); PE level: Some college or above = whether or not parents' highest education level is some college or above (Yes/No); Special Education = whether or not a student was designated as special education needs in Kindergarten (Yes/No); FRPL = whether or not a student received a free/reduced-priced lunch in Kindergarten (Yes/No); Female = whether or not a student is female (Yes/No); Number of present days = A total number of present days in Grade 1 (The information for Kindergarten was not available)

Discussion and Implications

The findings showed that by their fifth year of schooling, the demographic characteristics of students did not have impact their likelihood of becoming a long-term English learner. Although LTELs were more disadvantaged than non-LTELs in baseline characteristics (lower parent education level, higher proportion of special education), those characteristics did not predict whether a student remained as an ELL at their sixth year after the initial classification, controlling for their CELDT scores.

The results of this study corroborate prior research on LTELs suggesting that LTELs are at academic and linguistic risk. LTELs had significantly lower mean scores than non-LTELs in CST-ELA, CST-Math as well as English and Math courses, controlling for the key covariates (such as gender, parent education level, receiving free/reduced priced lunch or not, and being designated as special education or not). In addition, LTELs were less likely than non-LTELS to take Algebra by Grade 8.

Previous studies (Flores et al., 2009; Hill et al., 2014) suggest that reclassification would help ELLs perform better. However, my data showed that high-performing students were reclassified, not that reclassification helped students become high-performing. As displayed earlier in Figures 7 and 8 (the trajectories of CST-ELA and Math scores by reclassification cohorts), those reclassified in a certain year were already the highest performing students in the year prior to their reclassification.

The findings also showed that it was more difficult for students to meet CELDT criteria than to meet CST-ELA criteria for reclassification. Many ELLs who met the CST-ELA criterion were not able to meet all of the CELDT reclassification criteria. According to these findings, it might be a natural result that the students reclassified earlier by meeting both CST and CELDT criteria in earlier grades were also better performing students overall. This finding merits further discussion. We should remember that the main purpose of the ELL classification and assessment system is the provision of language services until such services are no longer needed. When students can demonstrate academic abilities on tests given in English, careful consideration should be paid when the language proficiency test, considered to predict such outcomes, does not align.

In terms of LTELs' linguistic risk, the findings confirm previous research on LTEL suggesting that LTELs are often unable to surpass the intermediate level. Considering the LTELs in this study began Kindergarten with the initial CELDT classification of Intermediate (Level 3), their academic language proficiency did not seem to improve much. Their CELDT scores were consistently lower than non-LTELs between Grade 1 and Grade 4. In addition, the CELDT scores between Kindergarten and Grade 4 aligned in rank order with their reclassification year: the last group to reclassify had the lowest mean CELDT scores whereas the first group to

reclassify had the highest. As LTELs had been in the US at least from their Kindergarten year, they would have been expected to have basic academic language skills or at least basic language skills of communication. These findings are consistent with prior research suggesting that LTELs are often US born and they have little difficulty in functioning in both their home language and in English but can have weak academic language and significantly low reading and writing skills.

In regards to program placement, findings suggest that many ELLs were assigned to Preparation for Redesignation Program (PRP) for two or more years. Students were assigned to PRP when they had completed all of the ELD classes and had been pulled out from language services. At the same time, this indicates that they had repeatedly failed to meet the reclassification requirements (either or all of the CELDT, CST-ELA, or course grades). These students were unlikely to get any extra language services, which they might have received benefit from, until their reclassification year. It seems that this group of LTELs might have needed extra support beyond the regular ELD classes to meet the reclassification criteria. This discontinuation of ELD services in the years prior to reclassification might partly explain why some of LTELs remained as ELLs for a long time. However, the reasons for their continued underperformance in the CELDT or/and CST-ELA are unclear, therefore this needs more investigation.

An additional area of interest is the finding that many ELLs were not reclassified even when they satisfied CST-ELA and CELDT reclassification criteria. It might have been because those students did not meet one of the two other criteria: teacher evaluation or parent consultation. However, it is hard to imagine that students would fail to score C or higher in a grade-level English Language Arts class when he/she meets all of the CELDT and CST-ELA criteria. Another plausible reason for this reclassification lag might be the late administration of

CST and arrival of its results (Thompson, 2012). While CELDT is administered in fall, the beginning of an academic year, CST is administered in spring, the end of the year, and the CST results arrive in August, the beginning of the next academic year. Therefore, a student who meets the CELDT and CST criteria in one grade can be reclassified in August, at earliest. It is also very possible that reclassifications can be delayed until the next academic year. This administrative delay should be improved so that the system can be more efficient and students can be assigned the appropriate ELL status in order to receive appropriate services. In either of the two scenarios, this matter needs to be more carefully considered and investigated in terms of these students who were not considered proficient enough to be reclassified.

Considering all of these "ELL" factors, nothing seems to give a clear answer as to why some ELLs became LTELs who underperform academically and linguistically. To pursue the answer, we can turn our attention to other aspects of development and schooling and consider other reasons that students can become LTELs. They might have had a learning delay or disability, including reading, writing, speaking, and listening, some of which might not have been detected by the district's measures of special education eligibility. Or, they might not have received appropriate ELD services in terms of ELD level, quality, pacing, frequency, or intensity. Therefore, to investigate the reasons why some ELLs become LTELs, more careful documentation and observation are necessary. Such investigations could occur at a school-level, a teacher-level, and a student-level to extend our understanding beyond the current literature on LTELs and to decrease the number of LTELs and increase the timely reclassification of ELLs.

Focusing on ELLs who were initially classified as "Intermediate" (Level 3), this study provides information specific to LTELs who started school with comparably higher language proficiency. This also can be a limitation of this study as the results of this study are

generalizable only to this limited ELL population. The same research questions could be applied to ELLs whose overall initial CELDT scores were at Level 1 or 2, but the answers might differ. Nevertheless, this study makes an important contribution by providing the empirical data that describe LTELs' academic and linguistic performance as well as their schooling conditions. The research discussed here has implications for policymakers in terms of reclassification and policies for LTELs. Teachers, schools, and districts can also draw implications for curriculum and instruction for LTELs from these findings. The new era of assessment with the Common Core State Standards will have a significant impact on the ELL classification and assessment system. We must keep examining longitudinal data and make efforts to ensure that the system becomes more efficient, beneficial, and fair for all students.

Chapter 7. Conclusion

English Language Learner (ELL) students are the fastest growing student population within the United States. In spite of federal and state laws and regulations that require states and local districts to provide ELLs with support services, prior research has indicated that ELL students are in general lagging behind non-ELL students in academic achievement. An unanswered question is whether and how the initial designation of students as ELL (apart from their actual skill level) may influence their later academic progress and experiences. The main purpose of this study, then, was to examine the effects of initial ELL classification (while controlling for their actual skill level) on students' academic experiences and later academic achievement. In particular, it compared outcomes for high-scoring ELL students (just below the cutoff for being classified as Initially Fluent English Speaking, IFEP) and students just above the cutoff who were classified as IFEP. This study also investigated whether students' particular profiles of proficiency at the time of the initial classification (speaking, listening) influenced their academic experiences and achievement, as well as the experiences and achievement of students who retained their ELL status over a long term despite having initial scores placing them near the cutoff for being classified as IFEP. This study used student-level longitudinal data (Kindergarten through tenth grade) from a very large school district in southern California.

The sample consisted of 13,335 Spanish-speaking students (as identified by a home language survey) who were administered the California English Language Development Test (CELDT) in Kindergarten to determine whether they would be classified as ELL or as Initially Fluent English Proficient (IFEP) students. All analyses in this study focused on students who scored near the CELDT cutoff score for distinguishing IFEP students from ELL students in their initial Kindergarten classification. In terms of CELDT scores, the range was from about 50

points below the cutoff to about 50 points above the cutoff (the entire range of CELDT scores for all Spanish-speaking students in the district was 490 points). The portion of students represented in the range of CELDT scores used in this study represented 13% of all Spanish-speaking students in the district who were tested using the CELDT in the Kindergarten year.

The study examined students' academic progress in terms of California Standards Test-English Language Arts (CST-ELA) and California Standards Test-Mathematics (CST-Math) in Grades 2 through 10, English and Mathematics course grades in Grades 6 through 10, and enrollment in Algebra 1 in Grade 7 or 8.

This study investigated the effects of initial ELL classification on students' later academic achievement and educational experiences in three ways: (1) the causal effects of the initial classification on students who were below and above the cutoff for Initially Fluent English Proficient (IFEP), (2) the impact of California English Language Development Test (CELDT) profiles in terms of listening and speaking scores of almost-IFEPs on their later academic achievement, and (3) the examination of academic outcomes and experiences of Long-term English Language Learners (LTELs), students who retained their ELL classification for at least five years.

The causal effects of initial ELL classification on students' later academic progress

Regression discontinuity analyses showed that, for students who were near the cutoff score for ELL and IFEP classification, being classified as ELL as opposed to IFEP in Kindergarten seemed to have a positive impact on their performance in the early elementary grades (especially in Grades 2 and 3). However, it had no impact, positive or negative, on their performance after the early elementary grades.

The lack of difference between ELLs and IFEPs in the later grades is consistent with previous research (e.g., Robinson, 2011; Thompson, 2012) in that being an ELL did not disadvantage a student's academic achievement, or being a non-ELL was not beneficial than being an ELL. However, the finding of higher performance of ELLs than IFEPs in the early grades (at the cut-off for classification) is not consistent with prior research. One possible explanation for the finding of a positive effect of initial classification on students' academic achievement in the early grades may be that factors associated with the classification may have been effective in helping ELLs acquire language skills and perform well. For example, most ELLs were assigned to English Language Development (ELD) services while IFEPs did not receive the services but instead received education only in the mainstream setting. Because the analyses controlled for a variety of covariates such as socioeconomic variables, the difference in performance between ELLs and IFEPs is probably not due to these student background characteristics.

The null effect of initial classification in the later years might be interpreted in different ways. First, the ELL classification and services might have been effective in that the classification system and the services that ELL students received in the earlier grades supported them well so that they performed as well as IFEPs in the later grades. ELLs might have performed worse than IFEPs at the cutoff in the later grades without the classification and the accompanying services they received. Second, the change from positive effects in the early grades to null effects in the later grades might be related to students' language status change (ELL to RFEP) and consequent change in eligibility for the language services. ELLs did not receive language services once they were reclassified. Most ELLs were reclassified as Reclassified Fluent English Proficiency (RFEP) by the end of 6th grade (72%). Thus, the

disappearance of the discontinuity at the cutoff (the effect of the initial ELL classification) may have coincided with withdrawal of the language support services that occurred in the later grades. Further research is needed to determine whether this was, in fact, the case.

Impact of CELDT score profiles on students' later academic progress

The particular profile of students' language proficiency in terms of speaking and listening did not influence students' later academic progress. That is, later academic outcomes were best predicted by students' overall CELDT scores, not by whether, for example, they had high speaking scores relative to their listening scores, or whether they had high listening scores relative to their speaking scores.

The impact of students' overall CELDT scores on their later academic achievement is consistent with previous research that showed the significant relationship between ELLs' English oral proficiency and their English literacy, which was highly associated with their academic achievement (Geva, 2006). However, the similar performance between students with different profiles of CELDT scores is unexpected. A previous study showed that speaking domain of CEDLT differentiated ELLs and English Only (EO) students more sharply than listening domain of the test (CDE, 2011). Based on this finding, I assumed that the gap in speaking proficiency between ELLs and EOs might be a factor of the academic achievement gap between the two groups, and being more proficient in speaking might predict ELLs' later academic outcomes. However, this study showed that whether a Kindergarten ELL student was more skilled in speaking than in listening or vice versa did not have an effect on his or her later academic achievement. This finding underscores the importance of overall oral proficiency (rather than being more skilled in a particular domain) in academic progress.

Academic progress of Long-term English Language Learners (LTELs)

Among students whose initial CELDT scores placed them just below the cutoff score for being classified as IFEP, students who retained their ELL classification over the long-term (at least five years) showed lower academic performance than ELL students who were reclassified as IFEP within five years.

The findings of this study were consistent with previous studies suggesting that LTELs are low-performing both academically and linguistically aspects **(**Callahan, 2005; Olsen, 2010; Thompson, 2012; Yang, Urrabazo & Murray, 2001). In this study, LTELs showed significantly lower performance than non-LTELs in California Standardized Test (CST) of English Language Arts (ELA) and Math as well as English and Math courses, controlling for the key covariates (such as gender, parent education level, receiving free/reduced priced lunch or not, and being designated as special education or not). In addition, LTELs were less likely than non-LTELS to take Algebra by Grade 8.

In terms of LTELs' language proficiency, the findings confirm previous research on LTELs suggesting that LTELs are often stuck in the intermediate level of the CELDT score range. Their CELDT scores were consistently lower than the scores of non-LTELs between Grade 1 and Grade 4. LTELs in this study began Kindergarten with the initial CELDT classification of Intermediate (Level 3) and their academic language proficiency did not seem to improve much over time.

On average, LTELs tended to have lower initial CELDT scores, lower parent education levels, lower attendance rates in school, a higher proportion of students who were male, and a higher proportion of students who were designated as needing special education services. However, comparisons of reclassified and non-reclassified ELL students in each grade showed

that these groups differed somewhat only in terms of special education designation. The group of students at a grade level who were not reclassified tended to have a higher proportion of students designated as needing special education services than the group of students who were reclassified as RFEP. However, it is also the case that most students who retained their ELL classification (and were not reclassified as RFEP) were not designated as needing special education services. So special education designation is not a factor that relates to the long-term ELL status of most LTELs. On all other background characteristics examined in this study (gender, parent education level, and school attendance rate), reclassified and non-reclassified students were very similar in each grade level.

A very notable result is that LTELs started to diverge from non-LTELs in the very early grades. Despite having similar CELDT scores in Kindergarten, LTELs and non-LTELs started showing different academic performance as early as Grade 1, and differences were already pronounced in Grade 2. The lower performance of LTELs impacted their rates of reclassification in interesting ways. To be reclassified as proficient in English in the district, students must meet all of the following reclassification criteria as set by the district: 1) An Overall CELDT score of Level 4 (Early Advanced) or Level 5 (Advanced) and scores of each CELDT subdomain (listening, speaking, reading, and writing) at Level 3 (Intermediate) or higher, 2) CST-ELA score at Basic or above, and 3) Teacher Evaluation based on student grades/progress report marks (a score of 3 out of 5 or higher in English Language Arts for elementary school students and grade C or higher in English Language Arts for secondary school students), and 4) Parent consultation and approval. Most centrally, most students who retained their ELL status over the long term did not show enough improvement in their CELDT scores to be reclassified as RFEP in the short term. CELDT scores constituted a key component in the

district's reclassification criteria. This study showed that LTELs often met the CST-ELA criterion for reclassification but not the CELDT criterion for reclassification. It might have been hard for students to meet CELDT reclassification criteria because the CELDT criteria consisted of five sub-criteria, every one of which had to be satisfied (Level 3 or higher in all of the four sub-domain scores and Level 4 or higher in the overall score).

Whether a reclassification system requiring students to meet every one of multiple benchmarks is overly strict is an issue that has been investigated by other researchers. For example, Bailey and Carroll (2015) suggest a compensatory approach for making the reclassification decision under which all evidence is considered, but one criterion is allowed to fall slightly below a cutoff, or within a range of uncertainty that is predetermined. If the classification system is recalibrated to be more flexible (for example, allowing students who meet all criteria except, say, one of the five CELDT score criteria), it is possible that more students would be reclassified as RFEP in the short term, and that the number of LTELs would shrink. Whether earlier classification of ELL students as RFEP so that they do not retain ELL status over the long term would change the trajectory of student academic performance is not known and is an important topic for further research.

Examination of the performance of students who were reclassified as RFEP highlights an important conclusion about the direction of the relationship between ELL classification and academic performance. Students who met the performance criteria for reclassification in one year were typically reclassified as RFEP the following year. That is, high academic performance (especially on the CELDT and other English language indicators) was a precursor to classification as RFEP. It was *not* the case that reclassification as RFEP preceded high performance. This suggests that being classified as ELL over the long term was a consequence of

low performance. These results suggest that classification status did not have a causal effect on performance, but rather was a result of performance.

Overall, this study showed, first, that among Spanish-speaking students near the cut-off score for being classified as IFEP there was little effect of the initial (Kindergarten) ELL classification of students on students' later performance. The one exception was an advantage of ELL students over IFEP students in the early elementary grades in terms of academic performance. This advantage disappeared after the early grades: by about Grade 4 students who had initially scored just below the cutoff for IFEP status performed similarly to students who had initially scored just above the cutoff for IFEP status. In all, these results show that, among students near the cutoff for being classified as IFEP, being classified as ELL did not have a deleterious effect on their future performance but rather could be characterized as neutral. Further research is needed to determine whether and how the particular services and instruction that those ELL students received, and/or that those IFEP students did not receive, may have contributed to this result.

APPENDIX A

Descriptive Statistics Tables for Non-consistent analytic, Consistent analytic, and all available samples

Note for Tables A1- A27.

- Sample 1 = Non-consistent analytic sample, Sample 2 = Consistent analytic sample, Sample 3 = All available cases
- All variables except Absent Days and each outcome variable in the tables from baseline (Kindergarten) year.
- FRPL = Received free/reduced priced lunch (Yes/No)
- Special Education = Designated as Special Education (Yes/No)
- Some College Above = Some college, College graduate, or Graduate school/Post graduate school
- Absent Days = Number of Absent Days in Grade 1 (The information in Kindergarten was not available)
- Initial CELDT = California English Language Development Test scores in Kindergarten
- CST-ELA = California Standards Test of English Language Arts score
- CST-MATH = California Standards Test of Mathematics score

Table A.11. Descriptive Statistics (Outcome = Grade 2's CST-ELA)

	All cases (ELL and IFEP combined)					
	Sample 1		Sample 2		Sample 3	
Variable	*n*	*m* (*sd*)	*n*	*m* (*sd*)	*n*	*m* (*sd*)
ELL	7,070	.75	3,228	.74	11,385	.75
Female	7,070	.50	3,228	.52	11,198	.49
FRPL	7,070	.84	3,228	.86	11,198	.84
Special Education	7,070	.01	3,228	.01	11,198	.01
Parent Education Level	7,070		3,228		7,337	
Not High School Grad		.44		.45		.44
High School Grad		.33		.33		.33
Some College Above		.23		.22		.23
Absent Days	7,070	5.63 (5.97)	3,228	5.04 (5.56)		5.82 (6.07)
Initial CELDT	7,070	488.54 (22.39)	3,228	489.23 (22.20)	11,385	488.44 (22.42)
CST-ELA (Grade 2)	7,070	336.16 (55.07)	3,228	343.61 (54.35)	11,385	335.16 (54.65)
	ELL					
	Sample 1		Sample 2		Sample 3	
	n	*m* (*sd*)	*n*	*m* (*sd*)	*n*	*m* (*sd*)
ELL	5,303	1.00	2,396	1.00	8,563	1.00
Female	5,303	.49	2,396	.51	8,431	.48
FRPL	5,303	.86	2,396	.88	8,431	.86
Special Education	5,303	.02	2,396	.01	8,563	.02
Parent Education Level	5,303		2,396		5,498	
Not High School Grad		.46		.46		.46
High School Grad		.33		.33		.33
Some College Above		.21		.21		.14
Absent Days	5,303	5.62 (5.96)	2,396	5.00 (5.51)	8,217	5.79 (6.06)
Initial CELDT	5,303	478.05 (13.29)	2,396	478.67 (13.40)	8,563	477.99 (13.28)
CST-ELA (Grade 2)	5,303	330.61 (53.73)	2,396	337.64 (54.16)	8,563	328.98 (52.96)
	IFEP					
	Sample 1		Sample 2		Sample 3	
	n	*m* (*sd*)	*n*	*m* (*sd*)	*n*	*m* (*sd*)
ELL	1,767	0.00	832	0.00	2,822	0.00
Female	1,767	.52	832	.54	2,767	.51
FRPL	1,767	.84	832	.86	2,767	.80
Special Education	1,767	.01	832	.01	2,822	.01
Parent Education Level	1,767		832		1,839	
Not High School Grad		.40		.43		.40
High School Grad		.32		.31		.32
Some College Above		.28		.26		.28
Absent Days	1,767	5.66 (6.01)	832	5.14 (5.70)	2,699	5.93 (6.09)
Initial CELDT	1,767	520.00 (12.43)	832	519.64 (12.17)	2,822	520.14 (12.54)
CST-ELA (Grade 2)	1,767	352.83 (55.71)	832	360.80 (51.19)	2,822	349.85 (56.67)

Table A.12. Descriptive Statistics (Outcome = Grade 3's CST-ELA)

	All cases (ELL and IFEP combined)					
	Sample 1		Sample 2		Sample 3	
Variable	*n*	*m* (*sd*)	*n*	*m* (*sd*)	*n*	*m* (*sd*)
ELL	6,455	.75	3,228	.74	10,383	.75
Female	6,455	.50	3,228	.52	10,193	.49
FRPL	6,455	.84	3,228	.86	10,193	.84
Special Education	6,455	.01	3,228	.01	10,383	.01
Parent Education Level	6,455		3,228		6,705	
Not High School Grad		.44		.45		.44
High School Grad		.33		.33		.33
Some College Above		.23		.22		.23
Absent Days	6,455	5.56 (5.95)	3,228	5.04 (5.56)	9,939	5.76 (6.00)
Initial CELDT	6,455	488.64 (22.40)	3,228	489.23 (22.20)	10,383	488.55 (22.48)
CST-ELA (Grade 3)	6,455	328.60 (49.77)	3,228	334.98 (47.59)	10,383	327.04 (48.92)
	ELL					
	Sample 1		Sample 2		Sample 3	
	n	*m* (*sd*)	*n*	*m* (*sd*)	*n*	*m* (*sd*)
ELL	4,838	1.00	2,396	1.00	7,798	1.00
Female	4,838	.49	2,396	.51	7,665	.49
FRPL	4,838	.86	2,396	.88	7,665	.86
Special Education	4,838	.02	2,396	.01	7,798	.02
Parent Education Level	4,838		2,396		5,019	
Not High School Grad		.46		.46		.46
High School Grad		.33		.33		.33
Some College Above		.21		.21		.21
Absent Days	4,838	5.55 (5.94)	2,396	5.00 (5.51)	7,475	5.71
Initial CELDT	4,838	478.14 (13.33)	2,396	478.67 (13.40)	7,798	478.04
CST-ELA (Grade 3)	4,838	323.44 (49.14)	2,396	329.80 (47.02)	7,798	322.26 (48.04)
	IFEP					
	Sample 1		Sample 2		Sample 3	
	n	*m* (*sd*)	*n*	*m* (*sd*)	*n*	*m* (*sd*)
ELL	1,617	0.00	832	0.00	2,585	0.00
Female	1,617	.52	832	.54	2,528	.51
FRPL	1,617	.84	832	.86	2,528	.80
Special Education	1,617	.01	832	.01	2,585	.01
Parent Education Level	1,617		832		1,686	
Not High School Grad		.40		.43		.40
High School Grad		.32		.31		.32
Some College Above		.28		.26		.28
Absent Days	1,617	5.60 (5.97)	832	5.14 (5.70)	2,464	5.89
Initial CELDT	1,617	520.04 (12.45)	832	519.64 (12.17)	2,585	520.22
CST-ELA (Grade 3)	1,617	344.04 (48.45)	832	349.92 (46.08)	2,585	341.45 (48.73)

Table A.13. Descriptive Statistics (Outcome = Grade 4's CST-ELA)

	All cases (ELL and IFEP combined)					
	Sample 1		Sample 2		Sample 3	
Variable	*n*	*m* (*sd*)	*n*	*m* (*sd*)	*n*	*m* (*sd*)
ELL	6,058	.75	3,228	.74	9,755	.75
Female	6,058	.50	3,228	.52	9,569	.49
FRPL	6,058	.84	3,228	.86	9,569	.84
Special Education	6,058	.01	3,228	.01	9,755	.01
Parent Education Level	6,058		3,228		6,301	
Not High School Grad		.45		.45		.45
High School Grad		.33		.33		.33
Some College Above		.22		.22		.22
Absent Days	6,058	5.52 (5.92)	3,228	5.04 (5.56)	9,331	5.70 (5.96)
Initial CELDT	6,058	488.57 (22.44)	3,228	489.23 (22.20)	9,755	488.48 (22.50)
CST-ELA (Grade 4)	6,058	349.47 (52.79)	3,228	357.70 (44.98)	9,755	346.87
	ELL					
	Sample 1		Sample 2		Sample 2	
	n	*m* (*sd*)	*n*	*m* (*sd*)	*n*	*m* (*sd*)
ELL	4,546	1.00	2,396	1.00	7,334	1.00
Female	4,546	.49	2,396	.51	7,202	.49
FRPL	4,546	.86	2,396	.88	7,202	.86
Special Education	4,546	.01	2,396	.01	7,334	.02
Parent Education Level	4,546		2,396		4,723	
Not High School Grad		.46		.46		.46
High School Grad		.33		.33		.33
Some College Above		.21		.21		.21
Absent Days	4,546	5.51 (5.92)	2,396	5.00 (5.51)	7,024	5.66 (5.94)
Initial CELDT	4,546	478.09 (13.37)	2,396	478.67 (13.40)	7,334	478.00 (13.35)
CST-ELA (Grade 4)	4,546	344.50 (52.13)	2,396	352.69 (44.12)	7,334	342.54 (52.58)
	IFEP					
	Sample 1		Sample 2		Sample 2	
	n	*m* (*sd*)	*n*	*m* (*sd*)	*n*	*m* (*sd*)
ELL	1,512	0.00	832	0.00	2,421	0.00
Female	1,512	.52	832	.54	2,367	.52
FRPL	1,512	.84	832	.86	2,367	.80
Special Education	1,512	.01	832	.01	2,421	.00
Parent Education Level	1,512		832		1,578	
Not High School Grad		.40		.43		.40
High School Grad		.32		.31		.32
Some College Above		.28		.26		.28
Absent Days	1,512	5.54 (5.92)	832	5.14 (5.70)	2,307	5.84 (6.02)
Initial CELDT	1,512	520.08 (12.49)	832	519.64 (12.17)	2,421	520.23 (12.64)
CST-ELA (Grade 4)	1,512	364.42 (51.95)	832	372.11 (44.33)	2,421	359.98 (56.38)

Table A.14. Descriptive Statistics (Outcome = Grade 5's CST-ELA)

	All cases (ELL and IFEP combined)					
	Sample 1		**Sample 2**		**Sample 3**	
Variable	*n*	*m* (*sd*)	*n*	*m* (*sd*)	*n*	*m* (*sd*)
ELL	5,885	.75	3,228	.74	9,381	.75
Female	5,885	.50	3,228	.52	9,201	.49
FRPL	5,885	.85	3,228	.86	9,201	.84
Special Education	5,885	.01	3,228	.01	9,381	.01
Parent Education Level	5,885		3,228		6,128	
Not High School Grad		.45		.45		.45
High School Grad		.33		.33		.33
Some College Above		.22		.22		.22
Absent Days	5,885	5.51 (5.89)	3,228	5.04 (5.56)	8,.969	5.68 (5.97)
Initial CELDT	5,885	488.70 (22.44)	3,228	489.23 (22.20)	9,381	488.55 (22.47)
CST-ELA (Grade 5)	5,885	356.15 (43.26)	3,228	352.13 (41.45)	9,381	344.40 (43.79)
	ELL					
	Sample 1		**Sample 2**		**Sample 2**	
	n	*m* (*sd*)	*n*	*m* (*sd*)	*n*	*m* (*sd*)
ELL	4,408	1.00	2,396	1.00	7,054	1.00
Female	4,408	.49	2,396	.51	6,925	.49
FRPL	4,408	.86	2,396	.88	6,925	.86
Special Education	4,408	.02	2,396	.01	7,054	.02
Parent Education Level	4,408		2,396		4,587	
Not High School Grad		.46		.46		.46
High School Grad		.33		.33		.33
Some College Above		.21		.21		.21
Absent Days	4,408	5.49 (5.87)	2,396	5.00 (5.51)	6,750	5.67 (5.94)
Initial CELDT	4,408	478.18 (13.37)	2,396	478.67 (13.40)	7,054	478.10 (13.36)
CST-ELA (Grade 5)	4,408	341.86 (42.38)	2,396	347.89 (41.00)	7,054	340.56 (42.87)
	IFEP					
	Sample 1		**Sample 2**		**Sample 2**	
	n	*m* (*sd*)	*n*	*m* (*sd*)	*n*	*m* (*sd*)
ELL	1,477	0.00	832	0.00	2,327	356.02 (44.52)
Female	1,477	.52	832	.54	2,276	.52
FRPL	1,477	.85	832	.86	2,276	.80
Special Education	1,477	.01	832	.01	2,327	.00
Parent Education Level	1,477		832		1,541	
Not High School Grad		.41		.43		.41
High School Grad		.31		.31		.31
Some College Above		.28		.26		.28
Absent Days	1,477	5.56 (5.95)	832	5.14 (5.70)	2,219	5.82 (6.04)
Initial CELDT	1,477	520.05 (12.52)	832	519.64 (12.17)	2,327	520.23 (12.65)
CST-ELA (Grade 5)	1,477	358.97 (43.34)	832	364.35 (40.31)	2,327	356.02 (44.52)

Table A.15. Descriptive Statistics (Outcome = Grade 6's CST-ELA)

	All cases (ELL and IFEP combined)					
	Sample 1		Sample 2		Sample 3	
Variable	*n*	*m* (*sd*)	*n*	*m* (*sd*)	*n*	*m* (*sd*)
ELL	5,333	.75	3,228	.74	8,359	.76
Female	5,333	.49	3,228	.52	8,205	.49
FRPL	5,333	.85	3,228	.86	8,205	.85
Special Education	5,333	.01	3,228	.01	8,359	.01
Parent Education Level	5,333		3,228		5,545	
Not High School Grad		.45		.45		.46
High School Grad		.33		.33		.33
Some College Above		.22		.22		.21
Absent Days	5,333	5.48 (5.88)	3,228	5.04 (5.56)	7,999	5.66 (5.96)
Initial CELDT	5,333	488.67 (22.31)	3,228	489.23 (22.20)	8,359	488.29 (22.34)
CST-ELA (Grade 6)	5,333	341.76 (46.70)	3,228	348.84 (42.97)	8,359	339.80 (47.28)
	ELL					
	Sample 1		**Sample 2**		**Sample 2**	
	n	*m* (*sd*)	*n*	*m* (*sd*)	*n*	*m* (*sd*)
ELL	3,999	1.00	2,396	1.00	6,315	1.00
Female	3,999	.49	2,396	.51	6,203	.49
FRPL	3,999	.86	2,396	.88	6,203	.86
Special Education	3,999	.01	2,396	.01	6,315	.02
Parent Education Level	3,999		2,396		4,158	
Not High School Grad		.47		.46		.47
High School Grad		.33		.33		.33
Some College Above		.20		.21		.21
Absent Days	3,999	5.46 (5.87)	2,396	5.00 (5.51)	6,046	5.61 (5.93)
Initial CELDT	3,999	478.25 (13.38)	2,396	478.67 (13.40)	6,315	478.01 (13.32)
CST-ELA (Grade 6)	3,999	336.96 (46.54)	2,396	344.21 (42.63)	6,315	335.49 (46.90)
	IFEP					
	Sample 1		**Sample 2**		**Sample 2**	
	n	*m* (*sd*)	*n*	*m* (*sd*)	*n*	*m* (*sd*)
ELL	1,334	0.00	832	0.00	2,044	0.00
Female	1,334	.51	832	.54	2,002	.52
FRPL	1,334	.85	832	.86	2,002	.80
Special Education	1,334	.01	832	.01	2,044	0.00
Parent Education Level	1,334		832		1,.387	
Not High School Grad		.42		.43		.42
High School Grad		.31		.31		.31
Some College Above		.27		.26		.27
Absent Days	1,334	5.54 (5.93)	832	5.14 (5.70)	1,953	5.84 (6.03)
Initial CELDT	1,334	519.90 (12.35)	832	519.64 (12.17)	2,044	520.06 (12.53)
CST-ELA (Grade 6)	1,334	356.12 (44.18)	832	362.16 (41.14)	2,044	353.12 (45.97)

Table A.16. Descriptive Statistics (Outcome = Grade 7's CST-ELA)

	All cases (ELL and IFEP combined)					
	Sample 1		Sample 2		Sample 3	
Variable	*n*	*m* (*sd*)	*n*	*m* (*sd*)	*n*	*m* (*sd*)
ELL	5,115	.75	3,228	.74	8,029	.75
Female	5,115	.49	3,228	.52	7,879	.49
FRPL	5,115	.85	3,228	.86	7,879	.85
Special Education	5,115	.01	3,228	.01	8,029	.01
Parent Education Level	5,115		3,228		5,327	
Not High School Grad		.46		.45		.46
High School Grad		.32		.33		.32
Some College Above		.22		.22		.22
Absent Days	5,115	5.48 (5.88)	3,228	5.04 (5.56)	7,667	5.68 (5.96)
Initial CELDT	5,115	488.75 (22.34)	3,228	489.23 (22.20)	8,029	488.38 (22.42)
CST-ELA (Grade 7)	5,115	344.92 (51.69)	3,228	353.39 (48.74)	8,029	342.27 (52.00)
	ELL					
	Sample 1		Sample 2		Sample 2	
	n	*m* (*sd*)	*n*	*m* (*sd*)	*n*	*m* (*sd*)
ELL	3,835	1.00	2,396	1.00	6,055	1.00
Female	3,835	.49	2,396	.51	5,948	.49
FRPL	3,835	.87	2,396	.88	6,055	.02
Special Education	3,835	.02	2,396	.01	5,948	.86
Parent Education Level	3,835		2,396		3,997	
Not High School Grad		.47		.46		.47
High School Grad		.33		.33		.33
Some College Above		.20		.21		.13
Absent Days	3,835	5.47 (5.87)	2,396	5.00 (5.51)	5,785	5.63 (5.94)
Initial CELDT	3,835	478.30 (13.36)	2,396	478.67 (13.40)	6,055	478.01 (13.31)
CST-ELA (Grade 7)	3,835	339.54 (50.34)	2,396	347.67 (48.04)	6,055	337.45 (50.76)
	IFEP					
	Sample 1		Sample 2		Sample 2	
	n	*m* (*sd*)	*n*	*m* (*sd*)	*n*	*m* (*sd*)
ELL	1,280	0.00	832	0.00	1,974	0.00
Female	1,280	.52	832	.54	1,931	.52
FRPL	1,280	.85	832	.86	1,931	.80
Special Education	1,280	.01	832	.01	1,974	.01
Parent Education Level	1,280		832		1,333	
Not High School Grad		.43		.43		.43
High School Grad		.31		.31		.31
Some College Above		.26		.26		.26
Absent Days	1,280	5.52 (5.90)	832	5.14 (5.70)	1,882	5.83
Initial CELDT	1,280	520.05 (12.34)	832	519.64 (12.17)	1,974	520.20 (12.59)
CST-ELA (Grade 7)	1,280	361.06 (52.35)	832	369.85 (47.02)	1,974	357.04 (53.00)

Table A.17. Descriptive Statistics (Outcome = Grade 8's CST-ELA)

	All cases (ELL and IFEP combined)					
	Sample 1		Sample 2		Sample 3	
Variable	*n*	*m* (*sd*)	*n*	*m* (*sd*)	*n*	*m* (*sd*)
ELL	5,006	.75	3,228	.74	7,851	.76
Female	5,006	.50	3,228	.52	7,708	.50
FRPL	5,006	.85	3,228	.86	7,.708	.85
Special Education	5,006	.01	3,228	.01	7,851	.01
Parent Education Level	5,006		3,228		5,212	
Not High School Grad		.46		.45		.46
High School Grad		.33		.33		.33
Some College Above		.21		.22		.21
Absent Days	5,006	5.50 (5.91)	3,228	5.04 (5.56)	7,500	5.71 (6.01)
Initial CELDT	5,006	488.62 (22.30)	3,228	489.23 (22.20)	7,851	488.27 (22.32)
CST-ELA (Grade 8)	5,006	350.31 (54.05)	3,228	359.94 (50.75)	7,851	347.80 (54.44)
	ELL					
	Sample 1		Sample 2		Sample 2	
	n	*m* (*sd*)	*n*	*m* (*sd*)	*n*	*m* (*sd*)
ELL	3,764	1.00	2,396	1.00	5,943	1.00
Female	3,764	.49	2,396	.51	5,839	.49
FRPL	3,764	.86	2,396	.88	5,839	.86
Special Education	3,764	.02	2,396	.01	5,.943	.02
Parent Education Level	3,764		2,396		3,916	
Not High School Grad		.47		.46		.47
High School Grad		.33		.33		.33
Some College Above		.20		.21		.20
Absent Days	3,764	5.50 (5.93)	2,396	5.00 (5.51)	5,678	5.67 (6.01)
Initial CELDT	3,764	478.25 (13.36)	2,396	478.67 (13.40)	5,943	478.04 (13.32)
CST-ELA (Grade 8)	3,764	345.29 (52.84)	2,396	355.10 (50.11)	5,943	343.20 (53.28)
	IFEP					
	Sample 1		Sample 2		Sample 2	
	n	*m* (*sd*)	*n*	*m* (*sd*)	*n*	*m* (*sd*)
ELL	1,242	0.00	832	0.00	1,908	0.00
Female	1,242	.52	832	.54	1,869	.52
FRPL	1,242	.85	832	.86	1,869	.80
Special Education	1,242	.01	832	.01	1,908	.01
Parent Education Level	1,242		832		1,296	
Not High School Grad		.42		.43		.43
High School Grad		.31		.31		.31
Some College Above		.27		.26		.26
Absent Days	1,242	5.50 (5.85)	832	5.14 (5.70)	1,822	5.84 (6.00)
Initial CELDT	1,242	520.03 (12.30)	832	519.64 (12.17)	1,908	520.15 (12.49)
CST-ELA (Grade 8)	1,242	365.53 (54.85)	832	373.86 (50.03)	1,908	362.16 (55.50)

Table A.18. Descriptive Statistics (Outcome = Grade 9's CST-ELA)

	All cases (ELL and IFEP combined)					
	Sample 1		**Sample 2**		**Sample 3**	
Variable	*n*	*m* (*sd*)	*n*	*m* (*sd*)	*n*	*m* (*sd*)
ELL	4,353	.75	3,228	.74	6,863	.76
Female	4,353	.50	3,228	.52	6,744	.50
FRPL	4,353	.86	3,228	.86	6,863	.01
Special Education	4,353	.01	3,228	.01	6,744	.86
Parent Education Level	4,353		3,228		4,537	
Not High School Grad		.46		.45		.46
High School Grad		.32		.33		.32
Some College Above		.22		.22		.22
Absent Days	4,353	5.41 (5.88)	3,228	5.04 (5.56)	6,544	5.65 (5.99)
Initial CELDT	4,353	488.49 (22.15)	3,228	489.23 (22.20)	6,863	488.15 (22.28)
CST-ELA (Grade 9)	4,353	353.04 (51.34)	3,228	363.22 (47.54)	6,863	351.05 (51.57)
	ELL					
	Sample 1		**Sample 2**		**Sample 2**	
	n	*m* (*sd*)	*n*	*m* (*sd*)	*n*	*m* (*sd*)
ELL	3,272	1.00	2,396	1.00	5,191	1.00
Female	3,272	.49	2,396	.51	5,107	.49
FRPL	3,272	.87	2,396	.88	5,107	.87
Special Education	3,272	.01	2,396	.01	5,191	.02
Parent Education Level	3,272		2,396		3,413	
Not High School Grad		.47		.46		.47
High School Grad		.33		.33		.33
Some College Above		.20		.21		.20
Absent Days	3,272	5.39 (5.87)	2,396	5.00 (5.51)	4,944	5.59
Initial CELDT	3,272	478.21 (13.36)	2,396	478.67 (13.40)	5,191	477.93 (13.33)
CST-ELA (Grade 9)	3,272	348.59 (50.22)	2,396	358.50 (46.60)	5,191	347.28 (50.60)
	IFEP					
	Sample 1		**Sample 2**		**Sample 2**	
	n	*m* (*sd*)	*n*	*m* (*sd*)	*n*	*m* (*sd*)
ELL	1,081	0.00	832	0.00	1,672	0.00
Female	1,081	.52	832	.54	1,637	.53
FRPL	1,081	.86	832	.86	1,637	.82
Special Education	1,081	.01	832	.01	1,672	.01
Parent Education Level	1,081		832		1,124	
Not High School Grad		.43		.43		.43
High School Grad		.31		.31		.31
Some College Above		.26		.26		.26
Absent Days	1,081	5.48 (5.91)	832	5.14 (5.70)	1,600	5.80 (6.13)
Initial CELDT	1,081	519.59 (12.16)	832	519.64 (12.17)	1,672	519.88 (12.42)
CST-ELA (Grade 9)	1,081	366.52 (52.34)	832	376.81 (46.61)	1,672	362.76 (52.82)

Table A.19. Descriptive Statistics (Outcome = Grade 10's CST-ELA)

	All cases (ELL and IFEP combined)					
	Sample 1		Sample 2		Sample 3	
Variable	*n*	*m* (*sd*)	*n*	*m* (*sd*)	*n*	*m* (*sd*)
ELL	3,487	74	3,228	.74	5,499	.75
Female	3,487	.52	3,228	.52	5,413	.52
FRPL	3,487	.86	3,228	.86	5,413	.85
Special Education	3,487	.01	3,228	.01	5,499	.01
Parent Education Level	3,487		3,228		3,630	
Not High School Grad		.46		.45		.46
High School Grad		.32		.33		.32
Some College Above		.22		.22		.22
Absent Days	3,487	5.09 (5.57)	3,228	5.04 (5.56)	5,246	5.26 (5.63)
Initial CELDT	3,487	488.99 (22.16)	3,228	489.23 (22.20)	5,499	488.49 (22.26)
CST-ELA (Grade 10)	3,487	358.05 (47.74)	3,228	359.09 (47.51)	5,499	356.04 (47.36)
	ELL					
	Sample 1		Sample 2		Sample 2	
	n	*m* (*sd*)	*n*	*m* (*sd*)	*n*	*m* (*sd*)
ELL	2,596	1.00	2,396	1.00	4,137	1.00
Female	2,596	.51	2,396	.51	4,073	.52
FRPL	2,596	.87	2,396	.88	4,073	.87
Special Education	2,596	.01	2,396	.01	4,137	.01
Parent Education Level	2,596		2,396		2,707	
Not High School Grad		.47		.46		.46
High School Grad		.33		.33		.33
Some College Above		.20		.21		.21
Absent Days	2,596	5.06 (5.49)	2,396	5.00 (5.51)	3,938	5.22 (5.56)
Initial CELDT	2,596	478.50 (13.36)	2,396	478.67 (13.40)	4,137	478.16 (13.33)
CST-ELA (Grade 10)	2,596	353.80 (46.24)	2,396	354.74 (46.09)	4,137	352.43 (46.18)
	IFEP					
	Sample 1		Sample 2		Sample 2	
	n	*m* (*sd*)	*n*	*m* (*sd*)	*n*	*m* (*sd*)
ELL	891	0.00	832	0.00	1,362	0.00
Female	891	.54	832	.54	1,340	.55
FRPL	891	.86	832	.86	1,340	.81
Special Education	891	.01	832	.01	1,362	.01
Parent Education Level	891		832		923	
Not High School Grad		.43		.43		.43
High School Grad		.31		.31		.31
Some College Above		.26		.26		.26
Absent Days	891	5.18 (5.79)	832	5.14 (5.70)	1,307	5.39 (5.84)
Initial CELDT	891	519.56 (12.14)	832	519.64 (12.17)	1,362	519.86 (12.34)
CST-ELA (Grade 10)	891	370.42 (49.89)	832	371.61 (49.31)	1,362	366.99 (49.22)

Table A.20. Descriptive Statistics (Outcome = Grade 2's CST-MATH)

	All cases (ELL and IFEP combined)					
	Sample 1		Sample 2		Sample 3	
Variable	*n*	*m* (*sd*)	*n*	*m* (*sd*)	*n*	*m* (*sd*)
ELL	7,070	.75	3,228	.74	11,385	.75
Female	7,070	.50	3,228	.52	11,198	.49
FRPL	7,070	.84	3,228	.86	11,198	.84
Special Education	7,070	.01	3,228	.01	11,385	.01
Parent Education Level	7,070		3,228		7,337	
Not High School Grad		.44		.45		.44
High School Grad		.33		.33		.33
Some College Above		.20		.22		.23
Absent Days	7,070	5.63 (5.97)	3,228	5.04 (5.56)	10,916	5.82 (6.07)
Initial CELDT	7,070	488.54 (22.39)	3,228	489.23 (22.20)	11,385	488.44 (22.42)
CST-MATH (Grade 2)	7,070	368.03 (77.84)	3,228	379.61 (76.57)	11,385	365.84 (77.77)
	ELL					
	Sample 1		Sample 2		Sample 3	
	n	*m* (*sd*)	*N*	*m* (*sd*)	*n*	*m* (*sd*)
ELL	5,303	1.00	2,396	1.00	8,563	1.00
Female	5,303	.49	2,396	.51	8,431	.48
FRPL	5,303	.86	2,396	.88	8,431	.86
Special Education	5,303	.02	2,396	.01	8,563	.02
Parent Education Level	5,303		2,396		5,498	
Not High School Grad		.46		.46		.46
High School Grad		.33		.33		.33
Some College Above		.21		.14		.21
Absent Days	5,303	5.62 (5.96)	2,396	5.00 (5.51)	8,217	5.79 (6.06)
Initial CELDT	5,303	478.05 (13.29)	2,396	478.67 (13.40)	8,563	477.99 (13.28)
CST-MATH (Grade 2)	5,303	361.97 (75.98)	2,396	373.28 (76.00)	8,563	360.12 (76.44)
	IFEP					
	Sample 1		Sample 2		Sample 3	
	n	*m* (*sd*)	*n*	*m* (*sd*)	*n*	*m* (*sd*)
ELL	1,767	0.00	832	0.00	2,822	0.00
Female	1,767	.52	832	.54	2,767	.51
FRPL	1,767	.84	832	.86	2,767	.80
Special Education	1,767	.01	832	.01	2,822	.01
Parent Education Level	1,767		832		1,839	
Not High School Grad		.40		.43		.40
High School Grad		.32		.31		.32
Some College Above		.28		.26		.28
Absent Days	1,767	5.66 (6.01)	832	5.14 (5.70)	2,699	5.93 (6.09)
Initial CELDT	1,767	520.00 (12.43)	832	519.64 (12.17)	2,822	520.14 (12.54)
CST-MATH (Grade 2)	1,767	386.22 (80.50)	832	397.82 (75.33)	2,822	383.60 (79.12)

Table A.21. Descriptive Statistics (Outcome = Grade 3's CST-MATH)

	All cases (ELL and IFEP combined)					
	Sample 1		Sample 2		Sample 3	
Variable	*n*	*m* (*sd*)	*n*	*m* (*sd*)	*n*	*m* (*sd*)
ELL	6,444	.75	3,226	.74	10,361	.75
Female	6,444	.50	3,226	.52	10,171	.49
FRPL	6,444	.84	3,226	.86	10,171	.84
Special Education	6,444	.01	3,226	.01	10,361	.01
Parent Education Level	6,444		3,226		6,692	
Not High School Grad		.46		.45		.44
High School Grad		.33		.33		.33
Some College Above		.21		.22		.23
Absent Days	6,444	5.56 (5.95)	3,226	5.03 (5.56)	9,918	5.75 (5.99)
Initial CELDT	6,444	488.65 (22.41)	3,226	489.24 (22.20)	10,361	488.86 (22.49)
CST-MATH (Grade 3)	6,444	378.04 (77.21)	3,226	389.00 (74.82)	10,361	375.91 (76.79)
	ELL					
	Sample 1		**Sample 2**		**Sample 3**	
	n	*m* (*sd*)	*n*	*m* (*sd*)	*n*	*m* (*sd*)
ELL	4,828	1.00	2,394	1.00	7,778	1.00
Female	4,828	.49	2,394	.51	7,645	.49
FRPL	4,828	.86	2,394	.88	7,645	.86
Special Education	4,828	.02	2,394	.01	7,778	.02
Parent Education Level	4,828		2,394			.46
Not High School Grad		.46		.46		.33
High School Grad		.33		.33		.21
Some College Above		.21		.21	7,456	5.71 (5.97)
Absent Days	4,828	5.54 (5.94)	2,394	5.00 (5.51)	7,456	5.71 (5.97)
Initial CELDT	4,828	478.14 (13.34)	2,394	478.67 (13.40)	7,778	478.05 (13.33)
CST-MATH (Grade 3)	4,828	371.80 (76.24)	2,394	384.43 (74.39)	7,778	370.05 (75.77)
	IFEP					
	Sample 1		**Sample 2**		**Sample 3**	
	n	*m* (*sd*)	*n*	*m* (*sd*)	*n*	*m* (*sd*)
ELL	1,616	0.00	832	0.00	2,583	0.00
Female	1,616	.52	832	.54	2,526	.51
FRPL	1,616	.84	832	.86	2,526	.80
Special Education	1,616	.01	832	.01	2,583	.01
Parent Education Level	1,616		832		1,685	
Not High School Grad		.40		.43		.40
High School Grad		.32		.31		.32
Some College Above		.28		.26		.28
Absent Days	1,616	5.60 (5.98)	832	5.14 (5.70)	2,462	5.88 (6.06)
Initial CELDT	1,616	520.05 (12.45)	832	519.64 (12.17)	2,583	520.23 (12.58)
CST-MATH (Grade 3)	1,616	396.68 (77.12)	832	405.04 (73.76)	2,583	393.57 (77.15)

Table A.22. Descriptive Statistics (Outcome = Grade 4's CST-MATH)

	All cases (ELL and IFEP combined)					
	Sample 1		Sample 2		Sample 3	
Variable	*n*	*m* (*sd*)	*n*	*m* (*sd*)	*n*	*4m* (*sd*)
ELL	6,026	.75	3,226	.74	9,684	.75
Female	6,026	.50	3,226	.52	9,499	.49
FRPL	6,026	.84	3,226	.86	9,499	.84
Special Education	6,026	.01	3,226	.01	9,684	.01
Parent Education Level	6,026		3,226		6,269	
Not High School Grad		.45		.45		.45
High School Grad		.33		.32		.33
Some College Above		.22		.23		.22
Absent Days	6,026	5.51 (5.91)	3,226	5.04 (5.56)	6,262	5.69 (5.96)
Initial CELDT	6,026	488.59 (22.43)	3,226	489.23	9,684	488.49 (22.51)
CST-MATH (Grade 4)	6,026	372.09 (67.95)	3,226	382.03 (66.89)	9,684	369.34 (67.42)
	ELL					
	Sample 1		Sample 2		Sample 3	
	n	*m* (*sd*)	*n*	*m* (*sd*)	*n*	*m* (*sd*)
ELL	4,520	1.00	2,394	1.00	7,282	1.00
Female	4,520	.49	2,394	.51	7,150	.49
FRPL	4,520	.86	2,394	.88	7,150	.86
Special Education	4,520	.02	2,394	.01	7,282	.02
Parent Education Level	4,520		2,394		4,697	
Not High School Grad		.46		.46		.46
High School Grad		.33		.33		.33
Some College Above		.21		.21		.21
Absent Days	4,520	5.50 (5.90)	2,394	5.00 (5.51)	6,974	5.65 (5.94)
Initial CELDT	4,520	478.10 (13.37)	2,394	478.67 (13.40)	7,282	478.01 (13.35)
CST-MATH (Grade 4)	4,520	367.23 (66.92)	2,394	376.91 (66.12)	7,282	365.01 (66.33)
	IFEP					
	Sample 1		Sample 2		Sample 3	
	n	*m* (*sd*)	*n*	*m* (*sd*)	*n*	*m* (*sd*)
ELL	1,506	0.00	832	0.00	2,402	0.00
Female	1,506	.52	832	.54	2,349	.52
FRPL	1,506	.84	832	.86	2,349	.80
Special Education	1,506	.01	832	.01	2,402	.00
Parent Education Level	1,506		832		1,572	
Not High School Grad		.40		.43		.40
High School Grad		.32		.31		.31
Some College Above		.28		.26		.29
Absent Days	1,506	5.54 (5.92)	832	5.14 (5.70)	2,288	5.82 (6.01)
Initial CELDT	1,506	520.07 (12.48)	832	519.64 (12.17)	2,402	520.25 (12.64)
CST-MATH (Grade 4)	1,506	386.70 (68.95)	832	396.75 (66.92)	2,402	382.49 (69.00)

Table A.23. Descriptive Statistics (Outcome = Grade 5's CST-MATH)

	All cases (ELL and IFEP combined)					
	Sample 1		Sample 2		Sample 3	
Variable	*n*	*m* (*sd*)	*n*	*m* (*sd*)	*n*	*m* (*sd*)
ELL	5,886	.75	3,227	.74	9,381	.75
Female	5,886	.50	3,227	.52	9,201	.49
FRPL	5,886	.85	3,227	.86	9,201	.84
Special Education	5,886	.01	3,227	.01	9,381	.01
Parent Education Level	5,886		3,227		6,129	
Not High School Grad		.45		.45		.45
High School Grad		.33		.33		.33
Some College Above		.22		.32		.22
Absent Days	5,886	5.51 (5.89)	3,227	5.03 (5.55)	8,969	5.68 (5.97)
Initial CELDT	5,886	488.70 (22.44)	3,227	489.24 (22.20)	9,381	488.55 (22.47)
CST-MATH (Grade 5)	5,886	375.90 (81.44)	3,227	388.85 (80.09)	9,381	372.37 (81.81)
	ELL					
	Sample 1		Sample 2		Sample 3	
	n	*m* (*sd*)	*n*	*m* (*sd*)	*n*	*m* (*sd*)
ELL	4,408	1.00	2,395	1.00	7,054	1.00
Female	4,408	.49	2,395	.51	6,925	.49
FRPL	4,408	.86	2,395	.88	6,925	.86
Special Education	4,408	.02	2,395	.01	7,054	.02
Parent Education Level	4,408		2,395		4,587	
Not High School Grad		.46		.46		.46
High School Grad		.33		.33		.33
Some College Above		.21		.21		.21
Absent Days	4,408	5.49 (5.87)	2,395	5.00 (5.50)	6,750	5.64 (5.94)
Initial CELDT	4,408	478.17 (13.37)	2,395	478.68 (13.40)	7,054	478.09 (13.36)
CST-MATH (Grade 5)	4,408	369.92 (79.82)	2,395	382.80 (79.07)	7,054	367.08 (80.18)
	IFEP					
	Sample 1		Sample 2		Sample 3	
	n	*m* (*sd*)	*n*	*m* (*sd*)	*n*	*m* (*sd*)
ELL	1,478	0.00	832	0.00	2,327	0.00
Female	1,478	.52	832	.54	2,276	.52
FRPL	1,478	.85	832	.86	2,276	.80
Special Education	1,478	.01	832	.01	2,327	.00
Parent Education Level	1,478		832		1,542	
Not High School Grad		.41		.43		.41
High School Grad		.31		.31		.31
Some College Above		.28		.26		.28
Absent Days	1,478	5.56 (5.95)	832	5.14 (5.70)	2,219	5.82 (6.04)
Initial CELDT	1,478	520.08 (12.52)	832	519.64 (12.17)	2,3327	520.22 (12.65)
CST-MATH (Grade 5)	1,478	393.72 (83.63)	832	406.27 (80.50)	2,327	388.39 (84.59)

Table A.24. Descriptive Statistics (Outcome = Grade 6's CST-MATH)

	All cases (ELL and IFEP combined)					
	Sample 1		**Sample 2**		**Sample 3**	
Variable	*n*	*m* (*sd*)	*n*	*m* (*sd*)	*n*	*m* (*sd*)
ELL	5,334	.75	3,226	.74	8,352	.76
Female	5,334	.49	3,226	.52	8,198	.49
FRPL	5,334	.85	3,226	.86	8,198	.85
Special Education	5,334	.01	3,226	.01	8,352	.01
Parent Education Level	5,334		3,226		5,546	
Not High School Grad		.45		.45		.46
High School Grad		.33		.32		.33
Some College Above		.22		.23		.21
Absent Days	5,334	5.48 (5.89)	3,226	5.04 (5.56)	7,992	5.66 (5.95)
Initial CELDT	5,334	488.66 (22.31)	3,226	489.22 (22.19)	8,352	488.29 (22.35)
CST-MATH (Grade 6)	5,334	341.76 (65.51)	3,226	352.83 (63.17)	8,352	339.15 (65.26)
	ELL					
	Sample 1		**Sample 2**		**Sample 3**	
	n	*m* (*sd*)	*n*	*m* (*sd*)	*n*	*m* (*sd*)
ELL	4,000	1.00	2,395	1.00	6,308	1.00
Female	4,000	.49	2,395	.51	6,196	.49
FRPL	4,000	.86	2,395	.88	9,196	.86
Special Education	4,000	.02	2,395	.01	6,308	.02
Parent Education Level	4,000		2,395		4,159	
Not High School Grad		.47		.46		.47
High School Grad		.33		.33		.33
Some College Above		.20		.21		.20
Absent Days	4,000	5.46 (5.88)	2,395	5.00 (5.51)	6,039	5.61 (5.93)
Initial CELDT	4,000	478.24 (13.37)	2,395	478.67 (13.40)	6,308	478.00 (13.32)
CST-MATH (Grade 6)	4,000	336.18 (64.06)	2,395	347.27 (61.80)	6,308	334.32 (63.95)
	IFEP					
	Sample 1		**Sample 2**		**Sample 3**	
	n	*m* (*sd*)	*n*	*m* (*sd*)	*n*	*m* (*sd*)
ELL	1,334	0.00	831	0.00	2,.044	0.00
Female	1,334	.51	831	.54	2,002	.52
FRPL	1,334	.85	831	.86	2,002	.80
Special Education	1,334	.01	831	.01	2,044	.00
Parent Education Level	1,334		831		1,387	
Not High School Grad		.42		.43		.42
High School Grad		.31		.30		.31
Some College Above		.27		.27		.27
Absent Days	1,334	5.53 (5.93)	831	5.13 (5.70)	1,953	5.84 (6.03)
Initial CELDT	1,334	519.89 (12.35)	831	519.63 (12.18)	2,044	520.05 (12.53)
CST-MATH (Grade 6)	1,334	358.49 (66.97)	831	368.84 (5.70)	2,044	354.05 (67.00)

Table A.25. Descriptive Statistics (Outcome = Grade 7's CST-MATH)

	All cases (ELL and IFEP combined)					
	Sample 1		Sample 2		Sample 3	
Variable	*n*	*m* (*sd*)	*n*	*m* (*sd*)	*n*	*m* (*sd*)
ELL	5,114	.75	3,227	.74	8,027	.75
Female	5,114	.49	3,227	.52	7,877	.50
FRPL	5,114	.85	3,227	.86	7,877	.85
Special Education	5,114	.01	3,227	.01	8,027	.01
Parent Education Level	5,114		3,227		5,326	
Not High School Grad		.46		.45		.46
High School Grad		.32		.33		.32
Some College Above		.22		.22		.22
Absent Days	5,114	5.49 (5.88)	3,227	5.04 (5.56)	7,665	5.68 (5.97)
Initial CELDT	5,114	488.74 (22.34)	3,227	89.24 (22.20)	8,027	488.38 (22.42)
CST-MATH (Grade 7)	5,114	345.91 (62.53)	3,227	356.33 (61.16)	8,027	342.62 (62.04)
	ELL					
	Sample 1		Sample 2		Sample 3	
	n	*m* (*sd*)	*n*	*m* (*sd*)	*n*	*m* (*sd*)
ELL	3,835	1.00	2,395	1.00	6,055	1.00
Female	3,835	.49	2,395	.51	5,948	.49
FRPL	3,835	.86	2,395	.88	5,948	.86
Special Education	3,835	.02	2,395	.01	6,055	.02
Parent Education Level	3,835		2,395		3,994	
Not High School Grad		.47		.46		.47
High School Grad		.33		.33		.33
Some College Above		.20		.21		.20
Absent Days	3,835	5.47 (5.88)	2,395	5.00 (5.51)	5,785	5.64 (5.95)
Initial CELDT	3,835	478.29 (13.36)	2,395	478.67 (13.40)	6,055	478.02 (13.31)
CST-MATH (Grade 7)	3,835	340.94 (61.10)	2,395	351.31 (60.55)	6,055	338.45 (60.59)
	IFEP					
	Sample 1		Sample 2		Sample 3	
	n	*m* (*sd*)	*n*	*m* (*sd*)	*n*	*m* (*sd*)
ELL	1,279	0.00	832	0.00	1,972	0.00
Female	1,279	.52	832	.54	1,929	.52
FRPL	1,279	.85	832	.86	1,929	.80
Special Education	1,279	.01	832	.01	1,972	.01
Parent Education Level	1,279		832		1,332	
Not High School Grad		.43		.43		.43
High School Grad		.31		.31		.31
Some College Above		.26		.15		.26
Absent Days	1,279	5.52 (5.90)	832	5.14 (5.70)	1,880	5.83 (6.04)
Initial CELDT	1,279	520.06 (12.34)	832	519.64 (12.17)	1,972	520.21 (12.59)
CST-MATH (Grade 7)	1,279	360.83 (64.39)	832	370.79 (60.63)	1,972	355.44 (64.63)

Table A.26. Descriptive Statistics (Outcome = Grade 8's CST-MATH)

	All cases (ELL and IFEP combined)					
	Sample 1		Sample 2		Sample 3	
Variable	*n*	*m* (*sd*)	*n*	*m* (*sd*)	*n*	*m* (*sd*)
ELL	4,979	.75	3,217	.74	7,807	.76
Female	4,979	.50	3,217	.52	7,664	.50
FRPL	4,979	.85	3,217	.86	7,664	.85
Special Education	4,979	.01	3,217	.01	7,807	.01
Parent Education Level	4,979		3,217		5,184	
Not High School Grad		.46		.45		.46
High School Grad		.33		.32		.32
Some College Above		.21		.23		.22
Absent Days	4,979	5.50 (5.92)	3,217	5.04 (5.56)	7,457	5.72 (6.00)
Initial CELDT	4,979	488.64 (22.30)	3,217	489.26 (22.20)	7,807	488.30 (22.33)
CST-MATH (Grade 8)	4,979	333.51 (66.35)	3,217	344.32 (65.47)	7,807	330.01 (65.77)
	ELL					
	Sample 1		Sample 2		Sample 3	
	n	*m* (*sd*)	*n*	*m* (*sd*)	*n*	*m* (*sd*)
ELL	3,741	1.00	2,387	1.00	5,906	1.00
Female	3,741	.49	2,387	.51	5,802	.49
FRPL	3,741	.86	2,387	.88	5,802	.86
Special Education	3,741	.02	2,387	.01	5,906	.02
Parent Education Level	3,741		2,387		3,893	
Not High School Grad		.47		.46		.47
High School Grad		.33		.33		.33
Some College Above		.20		.14		.20
Absent Days	3,741	5.50 (5.94)	2,387	5.00 (5.51)	5,641	5.67 (6.00)
Initial CELDT	3,741	478.25 (13.35)	2,387	478.69 (13.40)	5,906	478.04 (13.31)
CST-MATH (Grade 8)	3,741	328.80 (64.62)	2,387	340.02 (64.49)	5,906	325.73 (64.18)
	IFEP					
	Sample 1		Sample 2		Sample 3	
	n	*m* (*sd*)	*n*	*m* (*sd*)	*n*	*m* (*sd*)
ELL	1,238	0.00	830	0.00	1,901	0.00
Female	1,238	.52	830	.54	1,862	.52
FRPL	1,238	.85	830	.86	1,862	.80
Special Education	1,238	.01	830	.01	1,901	.01
Parent Education Level	1,238		830		1,291	
Not High School Grad		.42		.43		.42
High School Grad		.31		.31		.31
Some College Above		.27		.26		.27
Absent Days	1,238	5.51 (5.85)	830	5.15 (5.70)	1,816	5.85 (6.01)
Initial CELDT	1,238	520.02 (12.30)	830	519.67 (12.17)	1,901	520.16 (12.49)
CST-MATH (Grade 8)	1,238	347.76 (69.44)	830	356.69 (66.72)	1,901	343.32 (68.80)

Table A.27. Descriptive Statistics (Outcome = Grade 9's CST-MATH)

	All cases (ELL and IFEP combined)					
	Sample 1		Sample 2		Sample 3	
Variable	*n*	*m* (*sd*)	*n*	*m* (*sd*)	*n*	*m* (*sd*)
ELL	4,326	.75	3,208	.74	6,818	.76
Female	4,326	.49	3,208	.52	6,699	.50
FRPL	4,326	.86	3,208	.86	6,699	.86
Special Education	4,326	.01	3,208	.01	6,818	.01
Parent Education Level	4,326		3,208		4,509	
Not High School Grad		.46		.45		.47
High School Grad		.32		.33		.32
Some College Above		.22		.22		.21
Absent Days	4,326	5.41 (5.88)	3,208	5.03 (5.56)	6,503	5.65 (5.99)
Initial CELDT	4,326	488.47 (22.15)	3,208	489.23 (22.21)	6,818	488.15 (22.28)
CST-MATH (Grade 9)	4,326	31.52 (56.73)	3,208	324.56 (56.66)	6,818	313.73 (55.98)
	ELL					
	Sample 1		Sample 2		Sample 3	
	n	*m* (*sd*)	*n*	*m* (*sd*)	*n*	*m* (*sd*)
ELL	3,252	1.00	2,380	1.00	5,157	1.00
Female	3,252	.48	2,380	.51	5,073	.48
FRPL	3,252	.87	2,380	.88	5,073	.87
Special Education	3,252	.02	2,380	.01	5,157	.02
Parent Education Level	3,252		2,380		3,393	
Not High School Grad		.48		.46		.48
High School Grad		.33		.33		.33
Some College Above		.19		.14		.19
Absent Days	3,252	5.40 (5.87)	2,380	5.00 (5.51)	4,912	5.60 (5.94)
Initial CELDT	3,252	478.19 (13.35)	2,380	478.64 (13.40)	5,157	477.93 (13.32)
CST-MATH (Grade 9)	3,252	312.61 (55.68)	2,380	320.99 (55.83)	5,157	311.07 (54.82)
	IFEP					
	Sample 1		Sample 2		Sample 3	
	n	*m* (*sd*)	*n*	*m* (*sd*)	*n*	*m* (*sd*)
ELL	1,074	0.00	828	0.00	1,661	0.00
Female	1,074	.53	828	.54	1,626	.53
FRPL	1,074	.86	828	.86	1,626	.82
Special Education	1,074	.01	828	.01	1,661	.01
Parent Education Level	1,074		828		1,116	
Not High School Grad		.43		.43		.43
High School Grad		.31		.31		.31
Some College Above		.26		.26		.26
Absent Days	1,074	5.47 (5.92)	828	5.11 (5.70)	1,591	5.79 (6.13)
Initial CELDT	1,074	519,59 (12.18)	828	519.65 (12.18)	1,661	519.90 (12.44)
CST-MATH (Grade 9)	1,074	324.71 (58.89)	828	334.82 (57.79)	1,661	322.01 (58.69)

Table A.28. Descriptive Statistics (Outcome = Grade 10's CST-MATH)

	All cases (ELL and IFEP combined)					
	Sample 1		Sample 2		Sample 3	
Variable	*n*	*m* (*sd*)	*n*	*m* (*sd*)	*n*	*m* (*sd*)
ELL	3,388	.74	3,140	.74	5,330	.75
Female	3,388	.51	3,140	.51	5,246	.52
FRPL	3,388	.86	3,140	.86	5,246	.86
Special Education	3,388	.01	3,140	.01	5,330	.01
Parent Education Level	3,388		3,140		3,524	
Not High School Grad		.46		.45		.45
High School Grad		.33		.33		.33
Some College Above		.21		.22		.22
Absent Days	3,388	5.06 (5.54)	3,140	5.00 (5.53)	5,090	5.24 (5.62)
Initial CELDT	3,388	489.03 (22.16)	3,140	489.25 (22.17)	5,330	488.52 (22.26)
CST-MATH (Grade 10)	3,388	305.46 (56.83)	3,140	306.04 (56.73)	5,330	303.00 (55.66)
	ELL					
	Sample 1		Sample 2		Sample 3	
	n	*m* (*sd*)	*n*	*m* (*sd*)	*n*	*m* (*sd*)
ELL	2,520	1.00	2,330	1.00	4,011	1.00
Female	2,520	.51	2,330	.50	3,948	.51
FRPL	2,520	.88	2,330	.88	3,948	.87
Special Education	2,520	.01	2,330	.02	4,011	.02
Parent Education Level	2,520		2,330		2,628	
Not High School Grad		.46		.46		.46
High School Grad		.33		.33		.33
Some College Above		.21		.21		.21
Absent Days	2,520	5.03 (5.46)	2,330	4.96 (5.47)	3,821	5.19 (5.54)
Initial CELDT	2,520	478.52 (13.37)	2,330	478.70 (13.39)	4,011	478.20 (13.33)
CST-MATH (Grade 10)	2,520	301.82 (55.20)	2,330	302.50 (55.06)	4,011	299.84 (53.94)
	IFEP					
	Sample 1		Sample 2		Sample 3	
	n	*m* (*sd*)	*n*	*m* (*sd*)	*n*	*m* (*sd*)
ELL	868	0.00	810	0.00	1,319	0.00
Female	868	.54	810	.54	1,298	.54
FRPL	868	.86	810	.86	1,298	.81
Special Education	868	.01	810	.01	1,319	.01
Parent Education Level	868		810		896	
Not High School Grad		.43		.43		.43
High School Grad		.31		.31		.31
Some College Above		26		.26		.26
Absent Days	868	5.15 (5.79)	810	5.10 (5.69)	1,269	5.38 (5.86)
Initial CELDT	868	519.51 (12.14)	810	519.61 (12.17)	1,319	519.90 (12.35)
CST-MATH (Grade 10)	868	316.02 (60.13)	810	316.24 (60.15)	1,319	312.61 (59.59)

Table A.29. Descriptive Statistics (Outcome = Grade 6's English 6 course grade)

	All cases (ELL and IFEP combined)					
	Sample 1		**Sample 2**		**Sample 3**	
Variable	*n*	*m* (*sd*)	*n*	*m* (*sd*)	*n*	*m* (*sd*)
ELL	4,588	.74	2,854	.72	7,108	.73
Female	4,588	.50	2,854	.52	6,977	.50
FRPL	4,588	.84	2,854	.85	6,977	.84
Special Education	4,588	.01	2,854	.01	7,108	.01
Parent Education Level	4,588		2,854		4,753	
Not High School Grad		.45		.45		.45
High School Grad		.32		.32		.32
Some College Above		.23		.23		.23
Absent Days	4,588	5.42 (5.82)	2,854	4.98 (5.53)	6,824	5.58 (5.88)
Initial CELDT	4,588	489.97 (22.67)	2,854	490.20 (22.49)	7,108	489.71 (22.75)
English 6	4,588	3.61 (1.06)	2,854	3.79 (.98)	7,108	3.57 (1.08)
	ELL					
	Sample 1		**Sample 2**		**Sample 3**	
	n	*m* (*sd*)	*n*	*m* (*sd*)	*n*	*m* (*sd*)
ELL	3,331	1.00	2,067	1.00	5,187	1.00
Female	3,331	.49	2,067	.51	5,099	.50
FRPL	3,331	.86	2,067	.87	5,099	.86
Special Education	3,331	.01	2,067	.01	5,187	.01
Parent Education Level	3,331		2,067		3,450	
Not High School Grad		.46		.46		.46
High School Grad		.33		.33		.33
Some College Above		.21		.21		.21
Absent Days	3,331	5.37 (5.77)	2,067	4.92 (5.45)	4,984	5.48 (5.80)
Initial CELDT	3,331	478.62 (13.42)	2,067	478.92 (13.43)	5,187	478.42 (13.39)
English 6	3,331	3.60 (1.05)	2,067	3.78 (.98)	5,187	3.56 (1.07)
	IFEP					
	Sample 1		**Sample 2**		**Sample 3**	
	n	*m* (*sd*)	*n*	*m* (*sd*)	*n*	*m* (*sd*)
ELL	1,257	0.00	787	0.00	1,921	0.00
Female	1,257	.51	787	.55	1,878	.52
FRPL	1,257	.80	787	.81	1,878	.80
Special Education	1,257	.01	787	.01	1,921	.00
Parent Education Level	1,257		787		1,303	
Not High School Grad		.42		.43		.42
High School Grad		.31		.30		.31
Some College Above		.27		.27		.27
Absent Days	1,257	5.54 (5.97)	787	5.13 (5.74)	1,840	5.87 (6.08)
Initial CELDT	1,257	520.04 (12.38)	787	519.82 (12.23)	1,921	520.16 (12.59)
English 6	1,257	3.65 (1.07)	787	3.82 (.98)	1,921	3.59 (1.10)

Table A.30. Descriptive Statistics (Outcome = Grade7's English 7 course grade)

	All cases (ELL and IFEP combined)					
	Sample 1		Sample 2		Sample 3	
Variable	*n*	*m* (*sd*)	*n*	*m* (*sd*)	*n*	*m* (*sd*)
ELL	4,968	.74	3,153	.74	7,744	.75
Female	4,968	.50	3,153	.52	7,602	.50
FRPL	4,968	.85	3,153	.86	7,602	.85
Special Education	4,968	.01	3,153	.01	7,744	.01
Parent Education Level	4,968		3,153		5,172	
Not High School Grad		.46		.45		.46
High School Grad		.33		.33		.33
Some College Above		.21		.22		.21
Absent Days	4,968	5.44 (5.81)	3,153	5.03 (5.55)	7,398	5.63 (5.91)
Initial CELDT	4,968	489.24 (22.48)	3,153	489.47 (22.29)	7,744	488.87 (22.51)
English 7	4,968	3.30 (1.19)	3,153	3.53 (1.10)	7,744	3.27 (1.20)
	ELL					
	Sample 1		Sample 2		Sample 3	
	n	*m* (*sd*)	*n*	*m* (*sd*)	*n*	*m* (*sd*)
ELL	3,684	1.00	2,327	1.00	5,777	1.00
Female	3,684	.49	2,327	.51	5,678	.49
FRPL	3,684	.86	2,327	.88	5,678	.86
Special Education	3,684	.01	2,327	.01	5,777	.02
Parent Education Level	3,684		2,327		3,835	
Not High School Grad		.46		.46		.47
High School Grad		.33		.33		.33
Some College Above		.21		.21		.20
Absent Days	3,684	5.41	2,327	4.99 (5.50)	5,524	5.56 (5.86)
Initial CELDT	3,684	478.47 (13.39)	2,327	478.73 (13.43)	5,777	478.21 (13.32)
English 7	3,684	3.27 (1.18)	2,327	3.50 (1.09)	5,777	3.24 (1.19)
	IFEP					
	Sample 1		Sample 2		Sample 3	
	n	*m* (*sd*)	*n*	*m* (*sd*)	*n*	*m* (*sd*)
ELL	1,284	0.00	826	0.00	1,967	0.00
Female	1,284	.52	826	.54	1,924	.52
FRPL	1,284	.81	826	.82	1,924	.80
Special Education	1,284	.01	826	.01	1,967	.01
Parent Education Level	1,284		826		1,337	
Not High School Grad		.43		.43		.43
High School Grad		.31		.31		.31
Some College Above		.26		.26		.26
Absent Days	1,284	5.52 (5.90)	826	5.14 (5.71)	1,874	5.83 (6.04)
Initial CELDT	1,284	520.13 (12.41)	826	519.71 (12.19)	1,967	520.20 (12.61)
English 7	1,284	3.39 (1.20)	826	3.62 (1.11)	1,967	3.35 (1.22)

Table A.31. Descriptive Statistics (Outcome = Grade8's English 8 course grade)

	All cases (ELL and IFEP combined)					
	Sample 1		Sample 2		Sample 3	
Variable	*n*	*m* (*sd*)	*n*	*m* (*sd*)	*n*	*m* (*sd*)
ELL	4,987	.75	3,207	.74	7,825	.76
Female	4,987	.50	3,207	.52	7,680	.50
FRPL	4,987	.85	3,207	.86	7,680	.85
Special Education	4,987	.01	3,207	.01	7,825	.01
Parent Education Level	4,987		3,207		5,196	
Not High School Grad		.46		.45		.46
High School Grad		.32		.32		.32
Some College Above		.22		.23		.13
Absent Days	4,987	5.50 (5.91)	3,207	5.05 (5.57)	7,475	5.72 (6.03)
Initial CELDT	4,987	488.68 (22.33)	3,207	489.25 (22.20)	7,825	488.36 (22.34)
English 8	4,987	3.30 (1.19)	3,207	3.55 (1.10)	7,825	3.28 (1.19)
	ELL					
	Sample 1		Sample 2		Sample 3	
	n	*m* (*sd*)	*n*	*m* (*sd*)	*n*	*m* (*sd*)
ELL	3,745	1.00	2,381	1.00	5,910	1.00
Female	3,745	.49	2,381	.51	5,805	.49
FRPL	3,745	.86	2,381	.88	5,805	.86
Special Education	3,745	.02	2,381	.01	5,910	.02
Parent Education Level	3,745		2,381		3,899	
Not High School Grad		.47		.46		.47
High School Grad		.33		.33		.33
Some College Above		.20		.21		.20
Absent Days	3,745	5.49 (5.91)	2,381	5.01 (5.52)	5,648	5.66 (6.00)
Initial CELDT	3,745	478.27 (13.37)	2,381	478.70 (13.41)	5,910	478.07 (13.33)
English 8	3,745	3.26 (1.18)	2,381	3.52 (1.09)	5,910	3.24 (1.19)
	IFEP					
	Sample 1		Sample 2		Sample 3	
	n	*m* (*sd*)	*n*	*m* (*sd*)	*n*	*m* (*sd*)
ELL	1,242	0.00	826	0.00	1,915	0.00
Female	1,242	.52	826	.54	1,875	.52
FRPL	1,242	.81	826	.82	1,875	.80
Special Education	1,242	.01	826	.01	1,915	.01
Parent Education Level	1,242		826		1,297	
Not High School Grad		.42		.43		.42
High School Grad		.31		.31		.31
Some College Above		.27		.26		.27
Absent Days	1,242	5.52 (5.89)	826	5.14 (5.71)	1,827	5.89 (6.10)
Initial CELDT	1,242	520.07 (12.32)	826	519.67 (12.17)	1,915	520.12 (12.49)
English 8	1,242	3.42 (1.22)	826	3.67 (1.12)	1,915	3.38 (1.22)

Table A.32. Descriptive Statistics (Outcome = Grade 9's English 9 course grade)

	All cases (ELL and IFEP combined)					
	Sample 1		Sample 2		Sample 3	
Variable	*n*	*m* (*sd*)	*n*	*m* (*sd*)	*n*	*m* (*sd*)
ELL	4,513	.75	3,204	.74	7,261	.76
Female	4,513	.49	3,204	.52	7,127	.49
FRPL	4,513	.86	3,204	.86	7,127	.85
Special Education	4,513	.01	3,204	.01	7,261	.01
Parent Education Level	4,513		3,204		4,704	
Not High School Grad		.46		.45		.46
High School Grad		.32		.32		.32
Some College Above		.22		.23		.22
Absent Days	4,513	5.48 (5.91)	3,204	5.04 (5.56)	6,920	5.71 (6.00)
Initial CELDT	4,513	488.42 (22.14)	3,204	489.22 (22.20)	7,261	488.21 (22.30)
English 9	4,513	3.23 (1.23)	3,204	3.56 (1.08)	7,261	3.18 (1.24)
	ELL					
	Sample 1		Sample 2		Sample 3	
	n	*m* (*sd*)	*n*	*m* (*sd*)	*n*	*m* (*sd*)
ELL	3,407	1.00	2,381	1.00	5,497	1.00
Female	3,407	.48	2,381	.51	5,404	.48
FRPL	3,407	.87	2,381	.88	5,404	.87
Special Education	3,407	.02	2,381	.01	5,497	.02
Parent Education Level	3,407		2,381		3,552	
Not High School Grad		.47		.46		.47
High School Grad		.33		.33		.33
Some College Above		.20		.21		.20
Absent Days	3,407	5.47 (5.90)	2,381	5.01 (5.51)	5,238	5.67 (5.97)
Initial CELDT	3,407	478.24 (13.35)	2,381	478.69 (13.39)	5,497	477.99 (13.28)
English 9	3,407	3.20 (1.22)	2,381	3.53 (1.07)	5,497	3.15 (1.23)
	IFEP					
	Sample 1		Sample 2		Sample 3	
	n	*m* (*sd*)	*n*	*m* (*sd*)	*n*	*m* (*sd*)
ELL	1,106	0.00	823	0.00	1,764	0.00
Female	1,106	.53	823	.54	1,723	.53
FRPL	1,106	.82	823	.82	1,723	.81
Special Education	1,106	.01	823	.01	1,764	.01
Parent Education Level	1,106		823		1,152	
Not High School Grad		.43		.43		.43
High School Grad		.31		.30		.31
Some College Above		.26		.27		.26
Absent Days	1,106	5.54 (5.95)	823	5.14 (5.69)	1,682	5.85 (6.10)
Initial CELDT	1,106	519.76 (12.24)	823	519.71 (12.20)	1,764	520.07 (12.48)
English 9	1,106	3.32 (1.27)	823	3.66 (1.09)	1,764	3.25 (1.27)

Table A.33. Descriptive Statistics (Outcome = Grade 10's English 10 course grade)

	All cases (ELL and IFEP combined)					
	Sample 1		Sample 2		Sample 3	
Variable	*n*	*m* (*sd*)	*n*	*m* (*sd*)	*n*	*m* (*sd*)
ELL	4,272	.75	3,195	.74	6,850	.76
Female	4,272	.50	3,195	.52	6,725	.50
FRPL	4,272	.86	3,195	.86	6,725	.86
Special Education	4,272	.01	3,195	.01	6,850	.01
Parent Education Level	4,272		3,195		4,450	
Not High School Grad		.47		.46		.47
High School Grad		.32		.32		.32
Some College Above		.21		.22		.21
Absent Days	4,272	5.42 (5.84)	3,195	5.03 (5.52)	6,534	5.64 (5.95)
Initial CELDT	4,272	488.46 (22.14)	3,195	489.24 (22.21)	6,850	488.22 (22.29)
English 10	4,272	3.21 (1.25)	3,195	3.49 (1.13)	6,850	3.18 (1.26)
	ELL					
	Sample 1		Sample 2		Sample 3	
	n	*m* (*sd*)	*n*	*m* (*sd*)	*n*	*m* (*sd*)
ELL	3,218	1.00	2,373	1.00	5,188	1.00
Female	3,218	.49	2,373	.51	5,099	.49
FRPL	3,218	.87	2,373	.88	5,099	.87
Special Education	3,218	.02	2,373	.01	5,188	.02
Parent Education Level	3,218		2,373		3,356	
Not High School Grad		.48		.46		.48
High School Grad		.33		.33		.33
Some College Above		.21		.21		.19
Absent Days	3,218	5.41 (5.84)	2,373	4.99 (5.46)	4,943	5.59 (5.91)
Initial CELDT	3,218	478.23 (13.35)	2,373	478.68 (13.39)	5,188	478.01 (13.29)
English 10	3,218	3.17 (1.25)	2,373	3.46 (1.12)	5,188	3.16 (1.26)
	IFEP					
	Sample 1		Sample 2		Sample 3	
	n	*m* (*sd*)	*n*	*m* (*sd*)	*n*	*m* (*sd*)
ELL	1,054	0.00	822	0.00	1,662	0.00
Female	1,054	.53	822	.54	1,626	.53
FRPL	1,054	.83	822	.82	1,626	.82
Special Education	1,054	.01	822	.01	1,662	.01
Parent Education Level	1,054		822		1,094	
Not High School Grad		.43		.43		.43
High School Grad		.30		.30		.30
Some College Above		.27		.27		.27
Absent Days	1,054	5.45 (5.85)	822	5.13 (5.69)	1,591	5.77 (6.06)
Initial CELDT	1,054	519.70 (12.14)	822	519.72 (12.20)	1,662	520.09 (12.42)
English 10	1,054	3.33 (1.26)	822	3.57 (1.15)	1,662	3.27 (1.27)

Table A.34. Descriptive Statistics (Outcome = Grade 6's Math 6 course grade)

	All cases (ELL and IFEP combined)					
	Sample 1		Sample 2		Sample 3	
Variable	*n*	*m* (*sd*)	*n*	*m* (*sd*)	*n*	*m* (*sd*)
ELL	4,913	.75	2,973	.74	7,648	.75
Female	4,913	.49	2,973	.52	7,498	.49
FRPL	4,913	.84	2,973	.85	7,198	.84
Special Education	4,913	.01	2,973	.01	7,648	.01
Parent Education Level	4,913		2,973		5,090	
Not High School Grad		.46		.46		.46
High School Grad		.32		.32		.32
Some College Above		.22		.22		.22
Absent Days	4,913	5.53 (5.94)	2,973	5.06 (5.57)	7,338	5.69 (5.97)
Initial CELDT	4,913	488.75 (22.42)	2,973	489.31 (22.34)	7,648	488.43 (22.44)
Math 6	4,913	3.45 (1.13)	2,973	3.68 (1.04)	7,648	3.41 (1.14)
	ELL					
	Sample 1		Sample 2		Sample 3	
	n	*m* (*sd*)	*n*	*m* (*sd*)	*n*	*m* (*sd*)
ELL	3,673	1.00	2,200	1.00	5,755	1.00
Female	3,673	.49	2,200	.51	5,648	.49
FRPL	3,673	.86	2,200	.87	5,648	.86
Special Education	3,673	.01	2,200	.01	5,755	.01
Parent Education Level	3,673		2,200		3,805	
Not High School Grad		.47		.47		.47
High School Grad		.33		.33		.33
Some College Above		.20		.20		.20
Absent Days	3,673	5.52 (5.92)	2,200	5.03 (5.51)	5,525	5.62 (5.93)
Initial CELDT	3,673	478.18 (13.33)	2,200	478.59 (13.40)	5,755	477.99 (13.29)
Math 6	3,673	3.42 (1.13)	2,200	3.65 (1.04)	5,755	3.39 (1.13)
	IFEP					
	Sample 1		Sample 2		Sample 3	
	n	*m* (*sd*)	*n*	*m* (*sd*)	*n*	*m* (*sd*)
ELL	1,240	0.00	773	0.00	1,893	0.00
Female	1,240	.51	773	.55	1,850	.52
FRPL	1,240	.80	773	.81	1,850	.80
Special Education	1,240	.01	773	.01	1,893	.00
Parent Education Level	1,240		773		1,285	
Not High School Grad		.43		.43		.43
High School Grad		.31		.30		.31
Some College Above		.26		.27		.26
Absent Days	1,240	5.56 (5.98)	773	5.15 (5.75)	1,813	5.90 (6.10)
Initial CELDT	1,240	520.05 (12.40)	773	519.82 (12.25)	1,893	520.18 (12.59)
Math 6	1,240	3.55 (1.13)	773	3.76 (1.03)	1,893	3.48 (1.15)

Table A.35. Descriptive Statistics (Outcome = Grade 7's Math 7 course grade)

	All cases (ELL and IFEP combined)					
	Sample 1		Sample 2		Sample 3	
Variable	*n*	*m* (*sd*)	*n*	*m* (*sd*)	*n*	*m* (*sd*)
ELL	4,710	.76	2,893	.75	7,381	.76
Female	4,710	.49	2,893	.52	7,241	.49
FRPL	4,710	.85	2,893	.86	7,241	.85
Special Education	4,710	.01	2,893	.01	7,381	.01
Parent Education Level	4,710		2,893		4,909	
Not High School Grad		.46		.46		.46
High School Grad		.32		.32		.32
Some College Above		.22		.22		.22
Absent Days	4,710	5.63 (5.95)	2,893	5.16 (5.61)	7,046	5.80 (5.99)
Initial CELDT	4,710	488.19 (22.19)	2,893	488.51 (22.02)	7,381	487.86 (22.25)
Math 7	4,710	3.08 (1.20)	2,893	3.33 (1.14)	7,381	3.04 (1.21)
	ELL					
	Sample 1		Sample 2		Sample 3	
	n	*m* (*sd*)	*n*	*m* (*sd*)	*n*	*m* (*sd*)
ELL	3,575	1.00	2,182	1.00	5,629	1.00
Female	3,575	.49	2,182	.51	5,528	.49
FRPL	3,575	.87	2,182	.88	5,528	.86
Special Education	3,575	.02	2,182	.02	5,629	.02
Parent Education Level	3,575		2,182		3,726	
Not High School Grad		.47		.46		.47
High School Grad		.33		.33		.33
Some College Above		.20		.21		.20
Absent Days	3,575	5.60 (5.93)	2,182	5.10 (5.55)	5,376	5.73 (5.94)
Initial CELDT	3,575	478.10 (13.34)	2,182	478.42 (13.41)	5,629	477.83 (13.27)
Math 7	3,575	3.06 (1.20)	2,182	3.31 (1.14)	5,629	3.02 (1.21)
	IFEP					
	Sample 1		Sample 2		Sample 3	
	n	*m* (*sd*)	*n*	*m* (*sd*)	*n*	*m* (*sd*)
ELL	1,135	0.00	711	0.00	1,752	0.00
Female	1,135	.52	711	.54	1,713	.52
FRPL	1,135	.80	711	.81	1,713	.80
Special Education	1,135	.01	711	.01	1,752	.01
Parent Education Level	1,135		711		1,183	
Not High School Grad		.44		.44		.44
High School Grad		.30		.30		.30
Some College Above		.26		.26		.26
Absent Days	1,135	5.72 (6.00)	711	5.35 (5.80)	1,670	6.02 (6.13)
Initial CELDT	1,135	519.97 (12.35)	711	519.48 (12.18)	1,752	520.08 (12.59)
Math 7	1,135	3.16 (1.21)	711	3.41 (1.12)	1,752	3.10 (1.22)

Table A.36. Descriptive Statistics (Outcome = Grade 8's Algebra 1 course grade)

	All cases (ELL and IFEP combined)					
	Sample 1		Sample 2		Sample 3	
Variable	*n*	*m* (*sd*)	*n*	*m* (*sd*)	*n*	*m* (*sd*)
ELL	3,541	.75	2,361	.74	5,610	.76
Female	3,541	.50	2,361	.52	5,513	.50
FRPL	3,541	.85	2,361	.85	5,513	.85
Special Education	3,541	.01	2,361	.01	5,610	.01
Parent Education Level	3,541		2,361		3,684	
Not High School Grad		.46		.46		.46
High School Grad		.33		.32		.33
Some College Above		.21		.22		.21
Absent Days	3,541	5.44 (5.94)	2,361	5.02 (5.60)	5,361	5.66 (6.06)
Initial CELDT	3,541	488.67 (22.34)	2,361	489.41 (22.27)	5,610	488.29 (22.34)
Algebra 1	3,541	3.00 (1.21)	2,361	3.23 (1.15)	5,610	3.00 (1.22)
	ELL					
	Sample 1		Sample 2		Sample 3	
	n	*m* (*sd*)	*n*	*m* (*sd*)	*n*	*m* (*sd*)
ELL	2,660	1.00	1,745	1.00	4,247	1.00
Female	2,660	.50	1,745	.51	4,180	.49
FRPL	2,660	.86	1,745	.87	4,180	.86
Special Education	2,660	.01	1,745	.01	4,247	.01
Parent Education Level	2,660		1,745		2,769	
Not High School Grad		.47		.46		.47
High School Grad		.33		.34		.33
Some College Above		.20		.20		.20
Absent Days	2,660	5.41 (5.94)	1,745	4.96 (5.53)	4,056	5.56 (6.01)
Initial CELDT	2,660	478.26 (13.33)	1,745	478.71 (13.41)	4,247	478.04 (13.29)
Algebra 1	2,660	2.96 (1.21)	1,745	3.20 (1.16)	4,247	2.97 (1.22)
	IFEP					
	Sample 1		Sample 2		Sample 3	
	n	*m* (*sd*)	*n*	*m* (*sd*)	*n*	*m* (*sd*)
ELL	881	0.00	616	0.00	1,363	0.00
Female	881	.52	616	.54	1,333	.52
FRPL	881	.81	616	.81	1,333	.80
Special Education	881	.01	616	.01	1,363	.01
Parent Education Level	881		616		915	
Not High School Grad		.44		.45		.44
High School Grad		.30		.29		.30
Some College Above		.26		.26		.26
Absent Days	881	5.54 (5.94)	616	5.19 (5.79)	1,305	5.95 (6.20)
Initial CELDT	881	520.12 (12.33)	616	519.72 (12.22)	1,363	520.22 (12.53)
Algebra 1	881	3.13 (1.21)	616	3.31 (1.14)	1,363	3.11 (1.22)

Table A.37. Descriptive Statistics (Outcome = Grade 9's Geometry course grade)

	All cases (ELL and IFEP combined)					
	Sample 1		Sample 2		Sample 3	
Variable	*n*	*m* (*sd*)	*n*	*m* (*sd*)	*n*	*m* (*sd*)
ELL	1,465	.73	1,234	.73	2,275	.74
Female	1,465	.52	1,234	.53	2,244	.53
FRPL	1,465	.84	1,234	.85	2,244	.84
Special Education	1,465	.01	1,234	.01	2,275	.01
Parent Education Level	1,465		1,234		1,519	
Not High School Grad		.43		.43		.43
High School Grad		.35		.34		.35
Some College Above		.22		.23		.22
Absent Days	1,465	4.83 (5.40)	1,234	4.63 (5.21)	2,170	4.94 (5.49)
Initial CELDT	1,465	490.12 (22.76)	1,234	490.68 (22.92)	2,275	489.34 (22.63)
Geometry	1,465	3.28 (1.23)	1,234	3.44 (1.13)	2,275	3.29 (1.24)
	ELL					
	Sample 1		Sample 2		Sample 3	
	n	*m* (*sd*)	*n*	*m* (*sd*)	*n*	*m* (*sd*)
ELL	1,071	1.00	899	1.00	1,692	1.00
Female	1,071	.51	899	.52	1,673	.52
FRPL	1,071	.85	899	.87	1,673	.86
Special Education	1,071	.01	899	.01	1,692	.01
Parent Education Level	1,071		899		1,112	
Not High School Grad		.44		.43		.43
High School Grad		.36		.36		.36
Some College Above		.20		.21		.21
Absent Days	1,071	4.68 (5.33)	899	4.48 (5.14)	1,614	4.85
Initial CELDT	1,071	478.84 (13.31)	899	479.23 (13.35)	1,692	478.55 (13.41)
Geometry	1,071	3.27 (1.22)	899	3.42 (1.13)	1,692	3.27 (1.24)
	IFEP					
	Sample 1		Sample 2		Sample 3	
	n	*m* (*sd*)	*n*	*m* (*sd*)	*n*	*m* (*sd*)
ELL	394	0.00	335	0.00	583	0.00
Female	394	.55	335	.54	571	.55
FRPL	394	.80	335	.79	571	.79
Special Education	394	.01	335	.01	583	.01
Parent Education Level	394		335		407	
Not High School Grad		.43		.44		.43
High School Grad		.31		.29		.31
Some College Above		.26		.27		.26
Absent Days	394	5.26 (5.56)	335	5.03 (5.40)	556	5.34 (5.57)
Initial CELDT	394	520.79 (12.58)	335	521.39 (12.69)	583	520.63 (12.58)
Geometry	394	3.32 (1.23)	335	3.49 (1.13)	583	3.35 (1.23)

Table A.38. Descriptive Statistics (Outcome = Grade 10's Algebra 2 course grade)

	All cases (ELL and IFEP combined)					
	Sample 1		Sample 2		Sample 3	
Variable	*n*	*m* (*sd*)	*n*	*m* (*sd*)	*n*	*m* (*sd*)
ELL	1,623	.74	1,427	.73	2,562	.75
Female	1,623	.52	1,427	.52	2,529	.53
FRPL	1,623	.85	1,427	.85	2,529	.85
Special Education	1,623	.01	1,427	.01	2,562	.01
Parent Education Level	1,623		1,427		1,680	
Not High School Grad		.45		.43		.45
High School Grad		.34		.34		.34
Some College Above		.21		.23		.21
Absent Days	1,623	4.83 (5.40)	1,427	4.68 (5.18)	2,446	5.04 (5.57)
Initial CELDT	1,623	489.10 (22.35)	1,427	489.87 (22.63)	2,562	488.84 (22.47)
Algebra 2	1,623	3.04 (1.27)	1,427	3.13 (1.23)	2,562	3.04 (1.26)
	ELL					
	Sample 1		Sample 2		Sample 3	
	n	*m* (*sd*)	*n*	*m* (*sd*)	*n*	*m* (*sd*)
ELL	1,208	1.00	1,047	1.00	1,920	1.00
Female	1,208	.52	1,047	.52	1,900	.53
FRPL	1,208	.86	1,047	.87	1,900	.86
Special Education	1,208	.01	1,047	.01	1,920	.01
Parent Education Level	1,208		1,047		1,253	
Not High School Grad		.45		.43		.45
High School Grad		.35		.36		.35
Some College Above		.20		.21		.20
Absent Days	1,208	4.75 (5.44)	1,047	4.60 (5.21)	1,833	5.00 (5.67)
Initial CELDT	1,208	478.45 (13.23)	1,047	478.77 (13.35)	1,920	478.29 (13.29)
Algebra 2	1,208	3.03 (1.27)	1,047	3.12 (1.22)	1,920	3.02 (1.26)
	IFEP					
	Sample 1		Sample 2		Sample 3	
	n	*m* (*sd*)	*n*	*m* (*sd*)	*n*	*m* (*sd*)
ELL	415	0.00	380	0.00	642	0.00
Female	415	.52	380	.52	629	.53
FRPL	415	.80	380	.80	629	.81
Special Education	415	.01	380	.01	642	.01
Parent Education Level	415		380		427	
Not High School Grad		.44		.44		.44
High School Grad		.30		.29		.30
Some College Above		.26		.27		.26
Absent Days	415	5.04 (5.31)	380	4.90 (5.11)	613	5.14 (5.28)
Initial CELDT	415	520.10 (12.36)	380	520.47 (12.49)	642	520.39 (12.56)
Algebra 2	415	3.08 (1.28)	380	3.16 (1.27)	642	3.09 (1.27)

Table A.39. Descriptive Statistics (Outcome = Enrollment in Algebra 1 at Grade 7 or 8)

	All cases (ELL and IFEP combined)					
	Sample 1		**Sample 2**		**Sample 3**	
Variable	*n*	*m* (*sd*)	*n*	*m* (*sd*)	*n*	*m* (*sd*)
ELL	5,180	.75	3,228	.74	8,207	.76
Female	5,180	.50	3,228	.52	8,054	.50
FRPL	5,180	.85	3,228	.86	8,054	.85
Special Education	5,180	.01	3,228	.01	8,207	.01
Parent Education Level	5,180		3,228		5,398	
Not High School Grad		.46		.45		.46
High School Grad		.33		.33		.32
Some College Above		.21		.22		.22
Absent Days	5,180	5.52 (5.91)	3,228	5.04 (5.56)	7,828	5.74 (6.02)
Initial CELDT	5,180	488.68 (22.31)	3,228	489,23 (22.20)	8,207	488.33 (22.39)
Enrollment in Algebra 1	5,180	.74	3,228	.81	8,207	.74
	ELL					
	Sample 1		**Sample 2**		**Sample 3**	
	n	*m* (*sd*)	*n*	*m* (*sd*)	*n*	*m* (*sd*)
ELL	3,890	1.00	2,396	1.00	6,197	1.00
Female	3,890	.49	2,396	.51	6,087	.49
FRPL	3,890	.86	2,396	.88	6,087	.86
Special Education	3,890	.02	2,396	.01	6,197	.02
Parent Education Level	3,890		2,396		4,051	
Not High School Grad		.47		.46		.47
High School Grad		.33		.33		.33
Some College Above		.20		.21		.20
Absent Days	3,890	5.51 (5.90)	2,396	5.00 (5.51)	5,915	5.69 (6.00)
Initial CELDT	3,890	478.28 (13.34)	2,396	478.67 (13.40)	6,197	478.01 (13.30)
Enrollment in Algebra 1	3,890	.73	2,396	.80	6,197	.73
	IFEP					
	Sample 1		**Sample 2**		**Sample 3**	
	n	*m* (*sd*)	*n*	*m* (*sd*)	*n*	*m* (*sd*)
ELL	1,290	0.00	832	0.00	2,010	0.00
Female	1,290	.52	832	.54	1,967	.52
FRPL	1,290	.81	832	.82	1,967	.80
Special Education	1,290	.01	832	.01	2,010	.00
Parent Education Level	1,290		832		1,347	
Not High School Grad		.43		.43		.43
High School Grad		.31		.31		.31
Some College Above		.26		.15		.26
Absent Days	1,290	5.55 (5.94)	832	5.14	1,913	5.88 (6.10)
Initial CELDT	1,290	20.02 (12.37)	832	519.64 (12.17)	2,010	520.17 (12.60)
Enrollment in Algebra 1	1,290	.78	832	.85	2,010	.76

APPENDIX B

Table B.40. Regression discontinuity estimates of the effect of initial English language learner classification on CST-ELA scores (Consistent Sample)

Grade	OLS difference	Nonparametric estimator			Parametric Estimator					
		Bandwidth			Bandwidth					
		12	24	48	24			48		
	(1)	(2)	(3)	(4)	Linear (5)	Quadratic (6)	Cubic (7)	Linear (8)	Quadratic (9)	Cubic (10)
2	-22.44*** (2.14)	10.64 (6.85)	**9.99* (4.68)**	**6.53† (3.44)**	**10.42* (5.08)**	**10.39* (5.09)**	9.57 (6.78)	**6.28† (3.56)**	6.13 (3.82)	**10.86* (4.73)**
3	-19.64*** (1.88)	8.72 (5.87)	**10.38** (4.00)**	**6.58* (2.90)**	**7.85† (4.53)**	**7.77† (4.53)**	7.53 (6.04)	4.04 (3.13)	4.84 (3.35)	**8.71* (4.15)**
4	-18.95*** (1.77)	8.53 (5.76)	6.41 (3.91)	3.50 (2.84)	2.40 (4.35)	2.36 (4.34)	0.62 (5.80)	0.57 (2.96)	0.85 (3.17)	2.60 (3.93)
5	-16.06*** (1.64)	7.03 (5.26)	**6.19† (3.60)**	3.54 (2.61)	2.64 (4.01)	2.52 (4.01)	2.36 (5.35)	0.98 (2.75)	1.52 (2.94)	2.27 (3.65)
6	-17.36*** (1.70)	**9.99† (5.51)**	**7.74* (3.73)**	3.60 (2.69)	2.34 (4.10)	2.25 (4.10)	2.93 (5.47)	0.27 (2.84)	-0.56 (3.04)	1.84 (3.77)
7	-21.29*** (1.91)	**13.63* (6.14)**	6.68 (4.19)	2.18 (3.05)	-0.56 (4.65)	-0.59 (4.65)	3.82 (6.20)	-0.74 (3.20)	-0.35 (3.43)	0.02 (4.25)
8	-17.99*** (2.01)	10.50 (6.47)	**8.06† (4.39)**	5.15 (3.17)	4.68 (4.93)	4.63 (4.94)	8.96 (6.58)	4.18 (3.35)	3.54 (3.59)	5.81 (4.46)
9	-17.64*** (1.88)	**12.51* (5.77)**	**9.56* (3.97)**	**5.46† (2.95)**	4.51 (4.60)	4.38 (4.60)	9.89 (6.13)	1.85 (3.15)	1.97 (3.37)	4.93 (4.18)
10	-16.35*** (1.88)	8.30 (5.90)	6.81† (4.06)	2.65 (2.98)	2.42 (4.64)	2.37 (4.64)	6.83 (6.18)	-0.29 (3.16)	-0.25 (3.38)	2.04 (4.20)

*** $p < 0.001$, ** $p < 0.01$, * $p < 0.05$, † $p < 0.10$

Note. Standard errors are in the parenthesis; The rows highlighted in grey are the outcomes for which both parametric and nonparametric estimates were significant.; The nonparametric RD uses Nichol's (2011) Stata *rd* code.

Table B.41. Regression discontinuity estimates of the effect of initial English language learner classification on CST-MATH scores (Consistent Sample)

Grade	OLS Difference	Nonparametric estimator			Parametric Estimator					
		Bandwidth			Bandwidth					
		12	24	48	24			48		
					Linear	Quadratic	Cubic	Linear	Quadratic	Cubic
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
2	-24.65*** (3.03)	**23.14* (9.91)**	**17.69** (6.77)**	**10.40* (4.93)**	**17.01* (7.42)**	**16.78* (7.42)**	**18.59† (9.88)**	6.97 (5.51)	8.74 (5.42)	**14.70* (6.73)**
3	-21.80*** (2.96)	**23.99* (9.41)**	**15.46* (6.40)**	**9.79* (4.63)**	11.18 (7.24)	10.84 (7.24)	13.47 (9.65)	5.99 (4.96)	7.97 (5.31)	**13.38* (6.58)**
4	-20.02*** (2.66)	10.79 (8.57)	**10.02† (5.80)**	5.90 (4.22)	1.77 (6.65)	1.62 (6.65)	3.56 (8.86)	-1.09 (5.36)	-3.72 (4.80)	3.28 (5.95)
5	-23.61*** (3.19)	15.07 (10.60)	11.24 (7.13)	5.09 (5.07)	4.01 (7.89)	3.62 (7.88)	7.65 (10.51)	-0.75 (5.36)	-0.14 (5.74)	3.27 (7.13)
6	-21.43*** (2.50)	10.89 (8.17)	8.63 (5.56)	4.70 (4.02)	4.64 (6.26)	4.51 (6.25)	4.12 (8.33)	1.24 (4.19)	1.65 (4.49)	5.13 (5.57)
7	-19.03*** (2.43)	9.51 (7.72)	8.53 (5.24)	6.21 (3.83)	1.11 (5.60)	0.89 (5.96)	-0.60 (7.94)	-0.77 (4.09)	1.41 (4.38)	4.15 (5.43)
8	-16.08*** (2.62)	11.23 (8.29)	7.12 (5.65)	4.38 (4.11)	3.96 (6.59)	3.91 (6.59)	5.03 (8.78)	2.42 (4.40)	3.33 (4.72)	5.46 (5.85)
9	-13.56*** (2.28)	10.98 (7.48)	3.99 (5.06)	0.37 (3.67)	-1.83 (5.77)	-2.08 (5.77)	6.06 (7.68)	-1.24 (3.84)	-2.96 (4.11)	-0.06 (5.10)
10	-13.49*** (2.29)	9.23 (7.30)	7.18 (5.01)	2.78 (3.69)	6.72 (5.75)	6.55 (5.75)	13.26† (7.65)	0.73 (3.86)	3.70 (4.13)	7.58 (5.13)

*** $p < 0.001$, ** $p < 0.01$, * $p < 0.05$, † $p < 0.10$

Note. Standard errors are in the parenthesis; The rows highlighted in grey are the outcomes for which both parametric and nonparametric estimates were significant.; The nonparametric RD uses Nichol's (2011) Stata *rd* code.

Table B.42. Regression discontinuity estimates of the effect of initial English language learner classification on course grades (Consistent Sample)

Grade	Courses	OLS difference	Nonparametric estimator			Parametric Estimator					
			12	24	48	24			48		
						Linear	Quadratic	Cubic	Linear	Quadratic	Cubic
		(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
6	English 6	-0.01	**0.22†**	**0.20***	0.11	**0.19†**	**0.19†**	0.13	0.08	0.10	**0.18***
		(0.04)	**(0.13)**	**(0.09)**	(0.07)	**(0.10)**	**(0.10)**	(0.13)	(0.07)	(0.07)	**(0.09)**
7	English 7	-0.09*	**0.35***	**0.24***	**0.14†**	0.16	0.16	0.21	0.12	0.11	**0.17†**
		(0.04)	**(0.14)**	**(0.10)**	**(0.07)**	(0.10)	(0.10)	(0.14)	(0.07)	(0.08)	**(0.10)**
8	English 8	-0.12**	**0.29***	**0.18†**	0.08	**0.27***	**0.27***	**0.29***	0.06	0.09	**0.19†**
		(0.04)	**(0.14)**	**(0.10)**	(0.07)	**(0.11)**	**(0.11)**	**(0.14)**	(0.07)	(0.08)	**(0.10)**
9	English 9	-0.11*	0.07	0.07	0.02	0.08	0.08	0.12	0.02	0.07	0.05
		(0.04)	(0.14)	(0.09)	(0.07)	(0.11)	(0.11)	(0.14)	(0.07)	(0.08)	(0.10)
10	English 10	-0.09†	0.19	**0.19†**	0.12	0.18	0.18	**0.26†**	0.09	0.08	0.10
		(0.04)	(0.15)	**(0.10)**	(0.07)	(0.11)	(0.11)	**(0.15)**	(0.08)	(0.08)	(0.10)
6	Math 6	-0.10*	**0.29***	**0.23***	**0.13†**	0.16	0.15	**0.26†**	0.07	0.10	**0.17†**
		(0.04)	**(0.14)**	**(0.10)**	**(0.07)**	(0.11)	(0.11)	**(0.14)**	(0.07)	(0.08)	**(0.10)**
7	Math 7	-0.09†	0.24	**0.18†**	0.07	**0.22†**	**0.22†**	0.24	0.02	0.08	0.17
		(0.05)	(0.16)	**(0.11)**	(0.08)	**(0.12)**	**(0.12)**	(0.16)	(0.08)	(0.09)	(0.11)
8	Algebra 1	-0.09	0.26	**0.25***	**0.17†**	**0.27***	**0.27***	0.20	0.06	0.12	0.18
		(0.05)	(0.17)	**(0.12)**	**(0.09)**	**(0.13)**	**(0.13)**	(0.18)	(0.09)	(0.10)	(0.12)
9	Geometry	-0.08	0.10	0.16	0.09	**0.31***	**0.31***	**0.42†**	0.05	0.10	**0.30†**
		(0.07)	(0.24)	(0.17)	(0.12)	**(0.18)**	**(0.18)**	**(0.24)**	(0.13)	(0.13)	**(0.17)**
10	Algebra 2	-0.03	0.24	0.12	0.08	0.30	0.30	0.41	0.16	0.14	**0.34***
		(0.07)	(0.24)	(0.16)	(0.11)	(0.19)	(0.19)	(0.25)	(0.13)	(0.14)	**(0.17)**

*** $p < 0.001$, ** $p < 0.01$, * $p < 0.05$, † $p < 0.10$

Note. Standard errors are in the parenthesis; The rows highlighted in grey are the outcomes for which both parametric and nonparametric estimates were significant.; The nonparametric RD uses Nichol's (2011) Stata *rd* code.

APPENDIX C

Note for Tables C1- C6.

- FRPL = Received free/reduced priced lunch (Yes/No)
- Special Education = Designated as Special Education (Yes/No)
- Parent education level: Not HS Graduate = If a student's parents highest education level is "not high school graduate" (Yes/No)
- Parent education level: High Shool Graduate = If a student's parents highest education level is "high school graduate" (Yes/No)
- Parent education level: Some College or above = If a student's parents highest education level is some college or above (Yes/No) (Some College or above = Some college, College graduate, or Graduate school/Post graduate school)
- Number of Present days = A total number of a student's present days in Grade 1 (The information in Kindergarten was not available)
- Initial CELDT = Overall California English Language Development Test scores in Kindergarten
- CST-ELA = California Standards Test of English Language Arts score
- CST-MATH = California Standards Test of Mathematics score
- x^2 statistic is only for parent education level variables. t statistics are for the other variables.

Table C.43. Descriptive statistics of ELLs and IFEPs for Kindergarten and Grade 1

	Kindergarten				
	ELL (*n* =10,065)		**IFEP (*n* = 3,270)**		**Comparison between two groups**
Variable	*n*	*m* (*sd*)	*n*	*m* (*sd*)	***t* /x^2**
Female	9,928	.48	3,212	.51	2.49*
FRPL	9,928	.85	3,212	.79	-8.03***
Special Education (Kindergarten)	10,065	.02	3,270	.01	-4.83***
Parent Education Level	6,029		1,965		
Not HS Graduate		.45		.40	
High School Graduate		.33		.31	45.96***
Some College or above		.22		.29	
Initial CELDT (Kindergarten)	10,065	477.89 (13.32)	3,270	520.09 (12.53)	159.69***
	Grade 1				
	ELL (*n* =9,563)		**Reclassification starts at Grade 2**		
Variable	*n*	*m* (*sd*)			
Female	9,426	.48			
FRPL	9,426	.86			
Special Education (Kindergarten)	9,563	.02			
Parent Education Level	5,905				
Not HS Graduate		.45			
High School Graduate		.33			
Some College or above		.22			
Number of Present Days (Grade 1)	9,105				
Initial CELDT (Kindergarten)	9,563	477.87 (13.32)			

*** $p < 0.001$, ** $p < 0.01$, * $p < 0.05$, † $p < 0.10$

Note. x^2 statistic is only for parent education level variables. *t* statistics are for the other variables.

Table C.44. Descriptive statistics of Reclassified and Non-reclassified ELLs (Grades 2 & 3)

	Grade 2				
	Reclassified (*n* = 142)		**Not Reclassified (*n* = 8,603)**		***Comparison between two groups***
Variable	*n*	*m* (*sd*)	*n*	*m* (*sd*)	t / x^2
Female	140	.51	8,471	.48	-0.69
FRPL	140	.81	8,471	.86	1.85†
Special Education (Kindergarten)	142	.00	8,603	.02	1.53
Special Education (Grade 1)	142	.01	8,603	.02	1.33
Parent Education Level	97		5,491		
Not HS Graduate		.40		.46	4.36
High School Graduate		.30		.33	
Some College or above		.30		.21	
Number of Present Days (Grade 1)	140	158.90 (23.91)	8,281	149.83 (.99)	-3.39***
Initial CELDT (Kindergarten)	142	483.46 (13.03)	8,603	477.85 (13.28)	-5.00***
CELDT (Prior year)	141	582.09 (56.96)	8,458	532.50 (44.53)	-13.05***
CST-ELA Score (Prior year)	--	--	--	--	--
	Grade 3				
	Reclassified (*n* = 554)		**Not Reclassified (*n* = 7,202)**		
Variable	*n*	*m* (*sd*)	*n*	*m* (*sd*)	t / x^2
Female	547	.53	7,079	.48	-1.92†
FRPL	547	.83	7,079	.86	1.99*
Special Education (Kindergarten)	554	.00	7,202	.02	2.35*
Special Education (Prior year)	554	.01	7,202	.03	2.72**
Parent Education Level	337		4,658		
Not HS Graduate		.37		.47	
High School Graduate		.29		.33	33.51***
Some College or above		.34		.20	
Number of Present Days (Grade 1)	537	151.70 (29.83)	6,902	149.62 (31.86)	-1.46
Number of Present Days (Prior year)	537	159.90 (24.57)	6,960	155.31 (28.36)	-3.64***
Initial CELDT (Kindergarten)	554	481.52 (13.68)	7,202	477.67 (13.21)	-6.60***
CELDT (Prior year)	553	565.81 (31.38)	7,090	526.12 (35.04)	-25.84***
CST-ELA Score (Prior year)	549	383.48 (40.17)	7,135	325.37 (50.15)	-26.50***

*** $p < 0.001$, ** $p < 0.01$, * $p < 0.05$, † $p < 0.10$

Note. x^2 statistic is only for parent education level variables. *t* statistics are for the other variables.

Table C.45. Descriptive statistics of Reclassified and Non-reclassified ELLs (Grades 4 & 5)

	Grade 4				
	Reclassified (*n* = 1,510)		**Not Reclassified (*n* = 5,086)**		
Variable	*n*	*m* (*sd*)	*n*	*m* (*sd*)	t/x^2
Female	1,495	.53	4,977	.47	-3.95***
FRPL	1,495	.87	4,977	.86	-0.67
Special Education (Kindergarten)	1,510	.01	5,086	.02	1.96*
Special Education (Prior year)	1,510	.01	5,086	.04	5.61***
Parent Education Level	1,001		3,266		
Not HS Graduate		.45		.48	
High School Graduate		.33		.33	3.54
Some College or above		.22		.19	
Number of Present Days (Grade 1)	1,464	150.14 (31.04)	4,853	149.47 (32.08)	-0.71
Number of Present Days (Prior year)	1,494	163.44 (24.42)	4,872	159.45 (27.89)	-4.98***
Initial CELDT (Kindergarten)	1,510	480.29 (13.40)	5,086	476.79 (13.08)	-9.08***
CELDT (Prior year)	1,500	558.48 (26.07)	4,937	512.11 (30.41)	-53.40***
CST-ELA Score (Prior year)	1,506	359.19 (35.31)	4,994	305.47 (40.13)	-46.77***
	Grade 5				
	Reclassified (*n* = 1,480)		**Not Reclassified (*n* = 3,302)**		
Variable	*n*	*m* (*sd*)	*n*	*m* (*sd*)	t/x^2
Female	1,452	.51	3,231	.45	-4.02***
FRPL	1,452	.86	3,231	.86	-0.06
Special Education (Kindergarten)	1,480	.02	3,302	.02	0.79
Special Education (Prior year)	1,480	.01	3,302	.06	7.08***
Parent Education Level	1,008		2,101		
Not HS Graduate		.45		.49	
High School Graduate		.35		.33	4.79†
Some College or above		.20		.18	
Number of Present Days (Grade 1)	1,410	150.67 (31.18)	3,155	148.86 (32.65)	-1.76†
Number of Present Days (Prior year)	1,439	161.07 (29.80)	3,129	159.64 (28.62)	-1.55
Initial CELDT (Kindergarten)	1,480	478.68 (13.22)	3,302	475.96 (12.96)	-6.66***
CELDT (Prior year)	1,454	564.44 (24.97)	3,188	516.70 (33.13)	-48.96***
CST-ELA Score (Prior year)	1,473	357.73 (33.58)	3,242	315.26 (35.63)	-38.62***

*** $p < 0.001$, ** $p < 0.01$, * $p < 0.05$, † $p < 0.10$

Note. x^2 statistic is only for parent education level variables. *t* statistics are for the other variables.

Table C.46.Descriptive statistics of Reclassified and Non-reclassified ELLs (Grades 6 & 7)

	Grade 6				
	Reclassified (*n* = 1,237)		**Not Reclassified (*n* = 1,800)**		
Variable	*n*	*m* (*sd*)	*n*	*m* (*sd*)	t/x^2
Female	1,217	.49	1,750	.43	-3.45***
FRPL	1,217	.87	1,750	.86	-1.01
Special Education (Kindergarten)	1,237	.02	1,800	.02	0.98
Special Education (Prior year)	1,237	.02	1,800	.11	9.17***
Parent Education Level	819		1,133		
Not HS Graduate		.48		.51	
High School Graduate		.35		.32	2.43
Some College or above		.17		.17	
Number of Present Days (Grade 1)	1,183	149.01 (32.95)	1,712	148.62 (32.02)	-0.32
Number of Present Days (Prior year)	1,211	163.88 (25.69)	1,634	159.97 (28.70)	-3.76***
Initial CELDT (Kindergarten)	1,237	476.33 (13.12)	1,800	475.60 (12.84)	-1.52
CELDT (Prior year)	1,220	579.05 (25.70)	1,645	538.77 (34.32)	-34.45***
CST-ELA Score (Prior year)	1,232	332.33 (28.36)	1,754	300.57 (30.34)	-28.92***
	Grade 7				
	Reclassified (*n* = 509)		**Not Reclassified (*n* = 1,186)**		
Variable	*n*	*m* (*sd*)	*n*	*m* (*sd*)	t/x^2
Female	500	.47	1,150	.40	-2.69**
FRPL	500	.85	1,150	.85	0.05
Special Education (Kindergarten)	509	.02	1,186	.02	0.60
Special Education (Prior year)	509	.03	1,186	.12	5.81***
Parent Education Level	355		724		
Not HS Graduate		.47		.52	
High School Graduate		.34		.31	2.41
Some College or above		.19		.17	
Number of Present Days (Grade 1)	485	150.01 (30.98)	1,118	147.88 (32.40)	-1.51
Number of Present Days (Prior year)	508	170.43 (10.45)	1,127	166.45 (18.51)	-4.53***
Initial CELDT (Kindergarten)	509	476.99 (13.16)	1,186	475.23 (12.63)	-2.59**
CELDT (Prior year)	480	587.31 (26.56)	1,076	542.88 (38.01)	-23.20***
CST-ELA Score (Prior year)	505	316.38 (27.98)	1,150	283.38 (40.24)	-16.74***

*** $p < 0.001$, ** $p < 0.01$, * $p < 0.05$, † $p < 0.10$

Note. x^2 statistic is only for parent education level variables. *t* statistics are for the other variables.

Table C.47. Descriptive statistics of Reclassified and Non-reclassified ELLs (Grades 8 & 9)

	Grade 8				
	Reclassified (*n* = 240)		**Not Reclassified (*n* = 909)**		
Variable	*n*	*m* (*sd*)	*n*	*m* (*sd*)	t/x^2
Female	233	.48	881	.39	-2.53*
FRPL	233	.85	881	.85	0.31
Special Education (Kindergarten)	240	.01	909	.02	1.10
Special Education (Prior year)	240	.05	909	.16	4.60***
Parent Education Level	161		544		
Not HS Graduate		.47		.56	
High School Graduate		.39		.27	7.34*
Some College or above		.14		.17	
Number of Present Days (Grade 1)	235	146.46 (31.77)	851	147.58 (33.26)	0.46
Number of Present Days (Prior year)	240	165.27 (15.09)	861	161.06 (16.98)	-3.48***
Initial CELDT (Kindergarten)	240	476.10 (12.87)	909	474.91 (12.61)	-1.29
CELDT (Prior year)	216	600.51 (26.91)	829	559.87 (39.42)	-14.31***
CST-ELA Score (Prior year)	237	313.50 (30.01)	875	273.83 (34.57)	-16.10***
	Grade 9				
	Reclassified (*n* = 123)		**Not Reclassified (*n* = 675)**		
Variable	*n*	*m* (*sd*)	*n*	*m* (*sd*)	t/x^2
Female	119	.40	655	.38	-0.48
FRPL	119	.86	655	.87	0.53
Special Education (Kindergarten)	123	.02	675	.03	0.83
Special Education (Prior year)	123	.10	675	.18	2.30***
Parent Education Level	76		417		
Not HS Graduate		.57		.56	
High School Graduate		.26		.27	4.40
Some College or above		.17		.17	
Number of Present Days (Grade 1)	119	145.23 (34.11)	619	148.65 (32.31)	1.05
Number of Present Days (Prior year)	123	164.64 (15.59)	631	162.04 (18.25)	-1.48
Initial CELDT (Kindergarten)	123	476.82 (13.29)	675	474.49 (12.34)	-1.91†
CELDT (Prior year)	106	610.42 (26.48)	601	573.96 (42.61)	-8.52***
CST-ELA Score (Prior year)	117	311.30 (32.20)	631	279.29 (37.36)	-8.69***

*** $p < 0.001$, ** $p < 0.01$, * $p < 0.05$, † $p < 0.10$

Note. x^2 statistic is only for parent education level variables. *t* statistics are for the other variables.

Table C.48. Descriptive statistics of Reclassified and Non-reclassified ELLs (Grade 10)

	Grade 10				
	Reclassified (*n* = 62)		**Not Reclassified (*n* = 329)**		
Variable	*n*	*m* (*sd*)	*n*	*m* (*sd*)	***t* /x^2**
Female	60	.48	319	.37	-1.70†
FRPL	60	.88	319	.87	-0.25
Special Education (Kindergarten)	62	.06	329	.03	-1.17
Special Education (Prior year)	62	.05	329	.23	3.25**
Parent Education Level	34		197		
Not HS Graduate		.53		.57	
High School Graduate		.24		.28	1.50
Some College or above		.23		.15	
Number of Present Days (Grade 1)	57	149.82 (35.59)	299	151.00 (30.85)	0.26
Number of Present Days (Prior year)	62	165.15 (23.01)	303	163.13 (22.10)	-0.65
Initial CELDT (Kindergarten)	62	474.97 (11.76)	329	474.90 (12.72)	-0.04†
CELDT (Prior year)	57	613.93 (25.25)	299	566.53 (42.66)	-8.12***
CST-ELA Score (Prior year)	61	313.13 (29.32)	304	285.21 (36.46)	-5.62***

*** $p < 0.001$, ** $p < 0.01$, * $p < 0.05$, † $p < 0.10$

Note. x^2 statistic is only for parent education level variables. *t* statistics are for the other variables.

APPENDIX D

Students whose initial CELDT score was 458

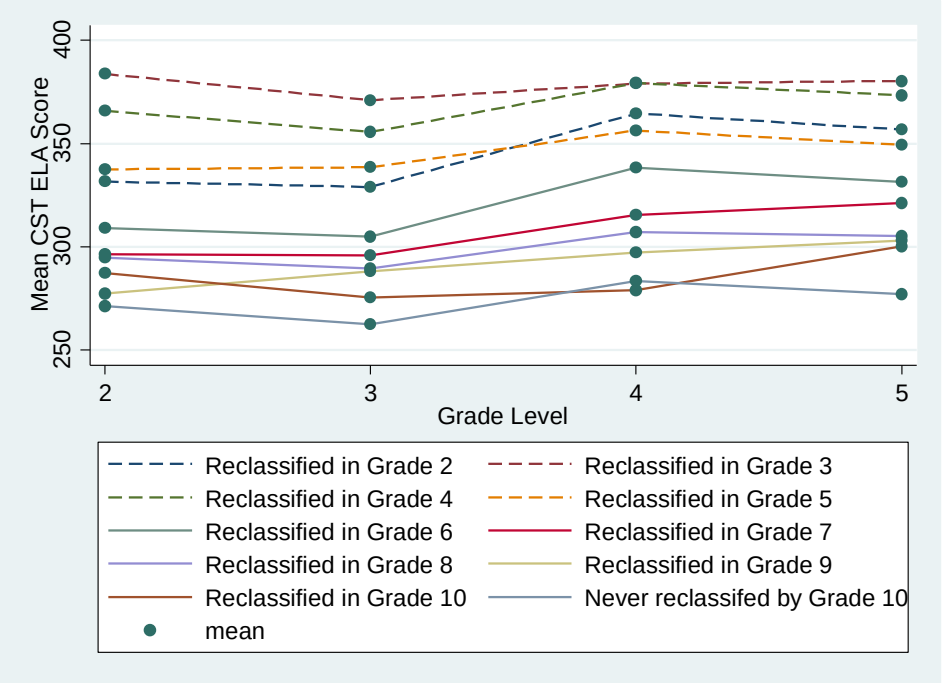


Figure D.9. Trajectories of mean CST ELA Scores (Grades 2 through 8) by reclassification cohorts (Only for students whose Initial CELDT Score = 458)

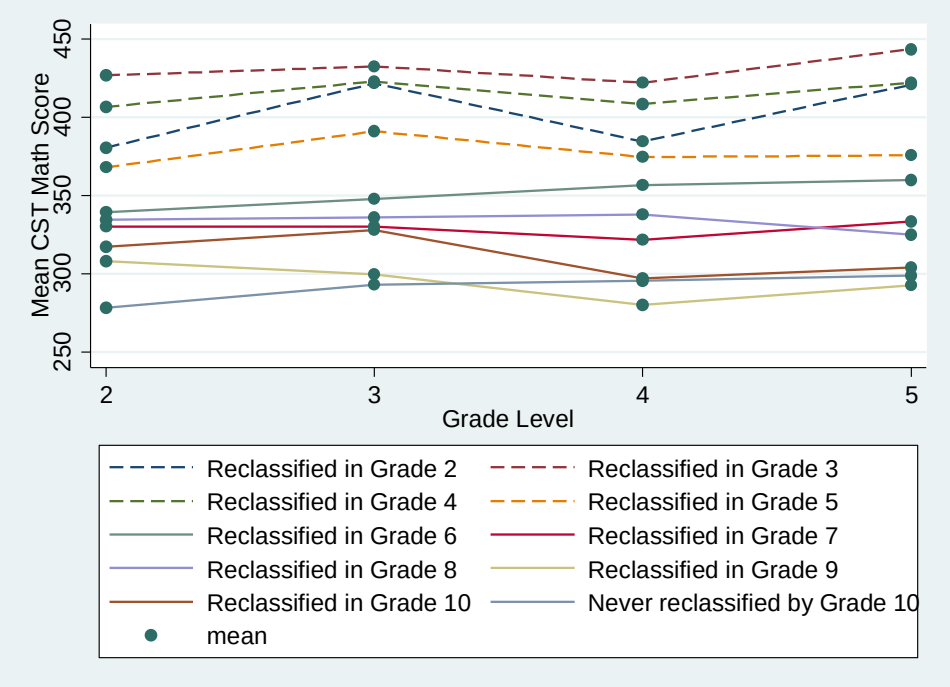


Figure D.10. Trajectories of mean CST Math Scores (Grades 2 through 8) by reclassification cohorts (Only for students whose Initial CELDT Score = 458)

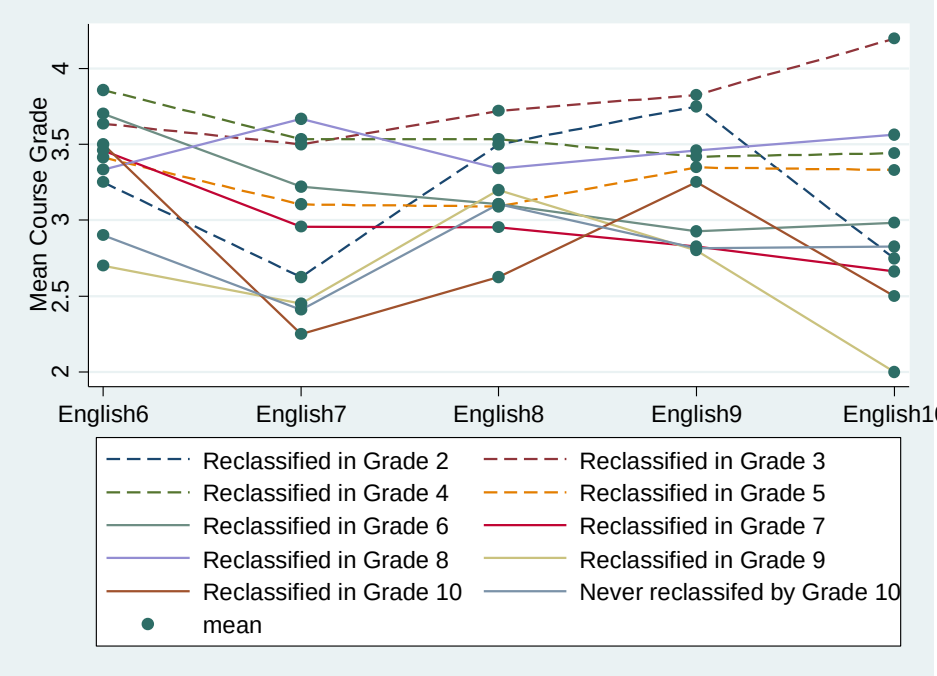


Figure D.11. Trajectories of mean English course grades (Grades 6 through 10) by reclassification cohorts (Only for students whose Initial CELDT Score = 458)

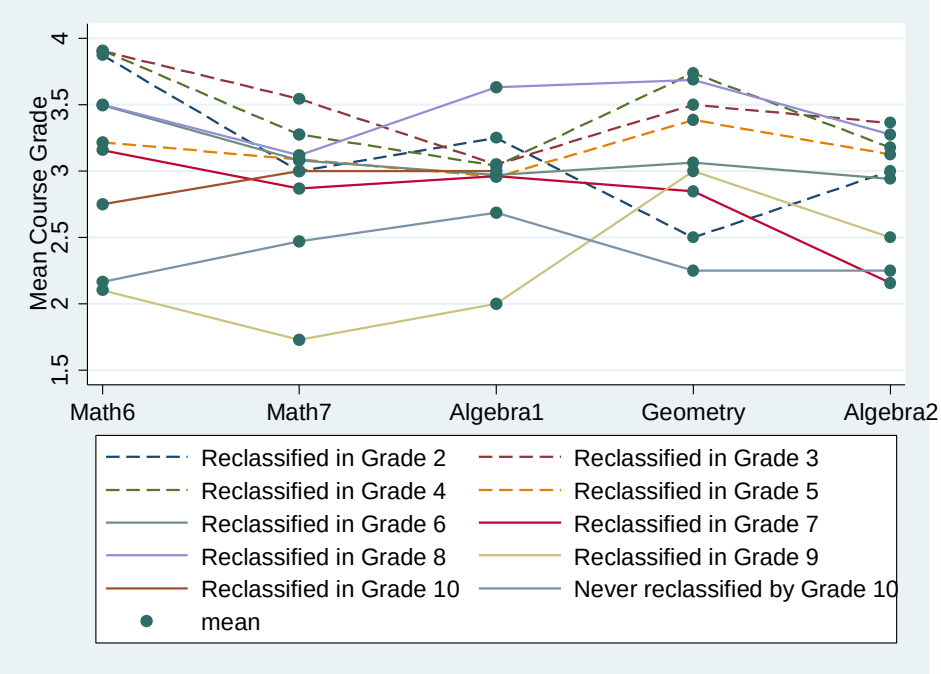


Figure D.12. Trajectories of mean Math course grades (Grades 6 through 10) by reclassification cohorts (Only for students whose Initial CELDT Score = 458)

Table D.49. Descriptive Statistics by Reclassification Grade for students whose initial CELDT score was 458

	Reclassification Grade									
	2 (n = 5)		**3 (n = 33)**		**4 (n = 91)**		**5 (n = 94)**		**6 (n = 118)**	
Variable	*n*	*m* (*sd*)	*n*	*m* (*sd*)	*n*	*m* (*sd*)	*n*	*m* (*sd*)	*n*	*m* (*sd*)
Female	4	.50	33	.58	91	.53	92	.45	117	.51
FRPL	4	.50	33	.85	91	.82	92	.89	117	.87
Special Education	5	.00	33	.00	91	.00	94	.03	118	.03
Parent Education Level	2		19		60		60		81	
Not HS Graduate		1.00		.37		.50		.60		.47
High School Graduate		.00		.21		.28		.23		.38
Some College and above		.00		.42		.22		.17		.15
Some of Present Days	5	166.80 (7.36)	32	144.81 (39.34)	90	152.32 (29.03)	91	151.59 (32.38)	113	147.71 (34.52)

	Reclassification Grade									
	7 (n = 47)		**8 (n = 25)**		**9 (n = 11)**		**10 (n = 4)**		**Never (n = 21)**	
Variable	*n*	*m* (*sd*)	*n*	*m* (*sd*)	*n*	*m* (*sd*)	*n*	*m* (*sd*)	*n*	*m* (*sd*)
Female	45	.56	24	.50	11	.45	4	.50	21	.43
FRPL	45	.98	24	.67	11	1.00	4	1.00	21	.86
Special Education	47	.02	25	.08	11	.00	4	.00	21	.05
Parent Education Level	35		14		7		2		12	
Not HS Graduate		.46		.50		.57		1.00		.25
High School Graduate		.40		.36		.29		.00		.67
Some College and above		.14		.14		.14		.00		.08
Some of Present Days	44	151.84 (33.44)	24	132.29 (43.31)	11	152.18 (25.49)	3	161.33 (9.61)	19	150.21 (37.61)

Total Number of Students whose initial CELDT Score is 458 = 788 (339 missing cases in terms of reclassification year, in other words, 339 of 788 students (43%) had left the district)

Students whose initial CELDT score was 477

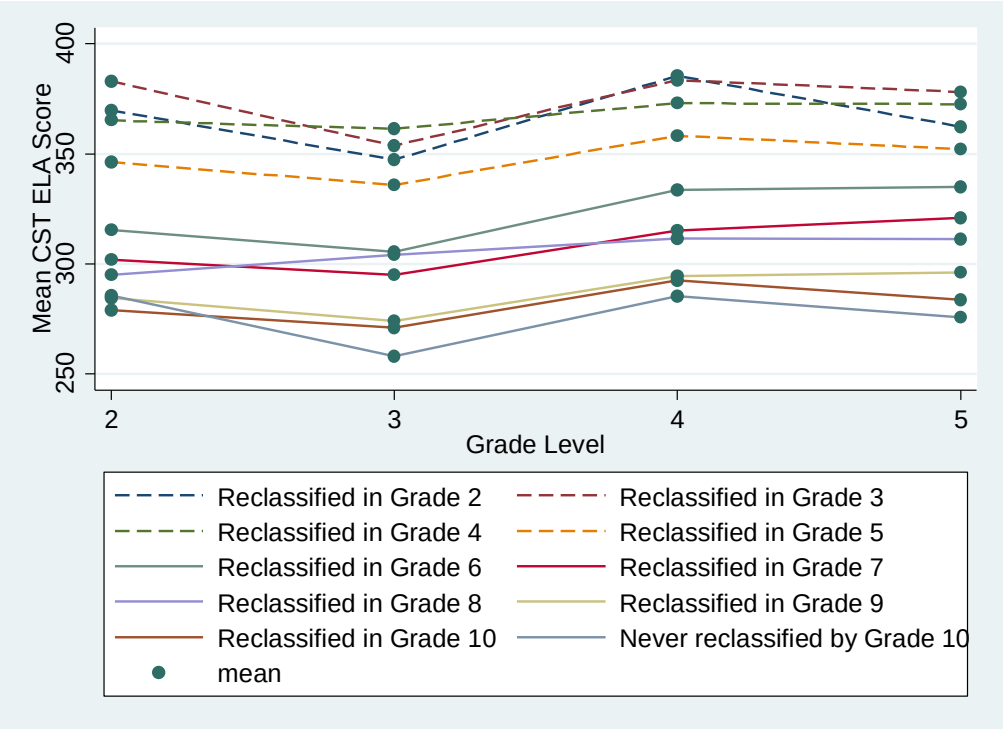


Figure D.13. Trajectories of mean CST ELA Scores (Grades 2 through 8) by reclassification cohorts (Only for students whose Initial CELDT Score = 477)

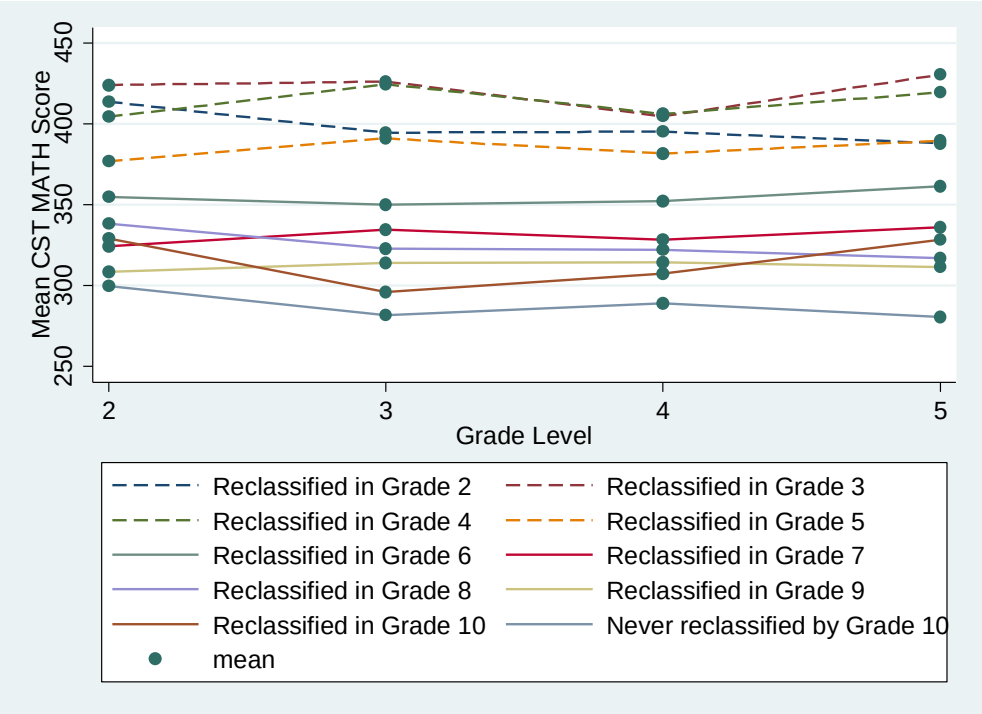


Figure D.14. Trajectories of mean CST Math Scores (Grades 2 through 8) by reclassification cohorts (Only for students whose Initial CELDT Score = 477)

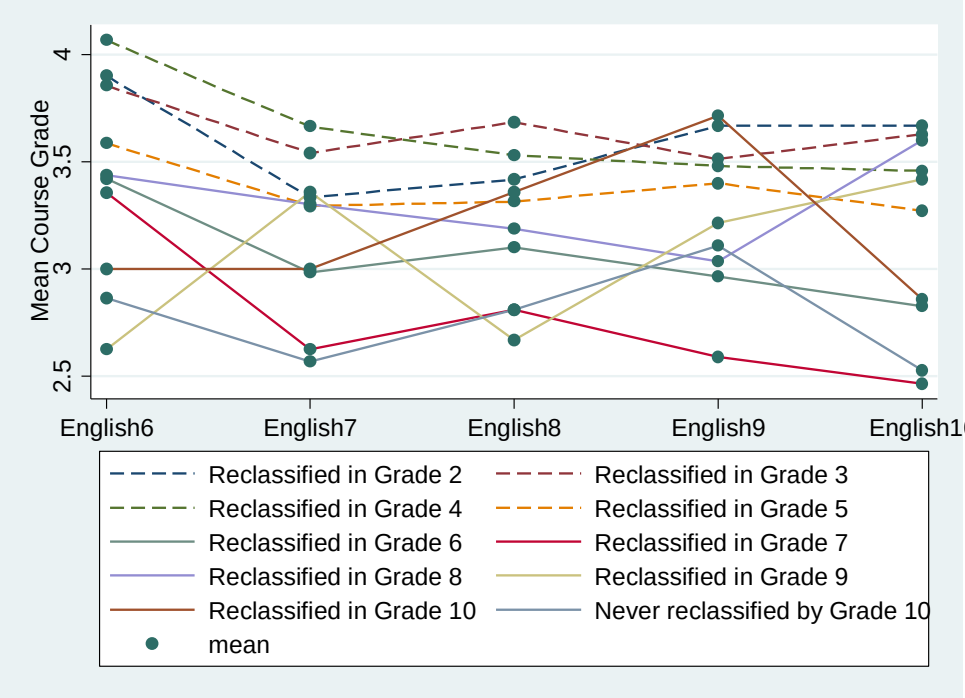


Figure D.15. Trajectories of mean English course grades (Grades 6 through 10) by reclassification cohorts (Only for students whose Initial CELDT Score = 477)

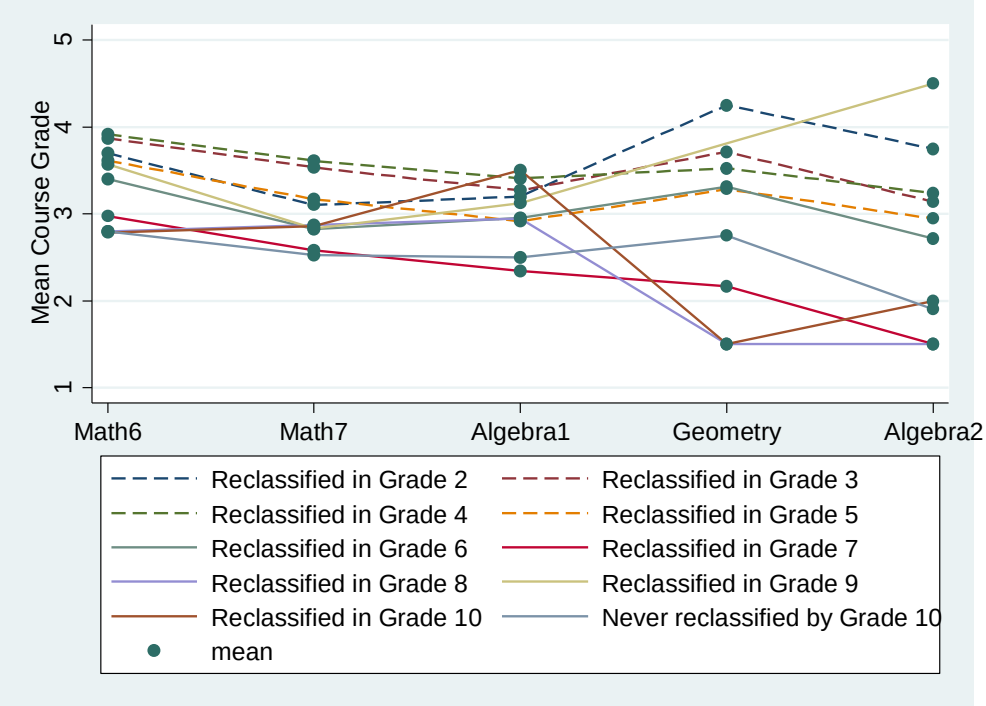


Figure D.16. Trajectories of mean Math course grades (Grades 6 through 10) by reclassification cohorts (Only for students whose Initial CELDT Score = 477)

Table D.50. Descriptive Statistics by Reclassification Grade for students whose initial CELDT score was 477

	Reclassification Grade									
	2 (n = 7)		**3 (n = 56)**		**4 (n = 124)**		**5 (n = 128)**		**6 (n = 102)**	
Variable	*n*	*m* (*sd*)	*n*	*m* (*sd*)	*n*	*m* (*sd*)	*n*	*m* (*sd*)	*n*	*m* (*sd*)
Female	7	.43	55	.49	123	.57	127	.50	98	.48
FRPL	7	.86	55	.84	123	.91	127	.87	98	.86
Special Education	7	.00	56	.00	124	.00	128	.01	102	.01
Parent Education Level	4		34		78		90		70	
Not HS Graduate		.25		.35		.46		.44		.49
High School Graduate		.25		.24		.31		.41		.30
Some College and above		.50		.41		.27		.15		.21
Some of Present Days	6	160.67 (19.41)	54	148.65 (30.67)	120	154.33 (29.97)	124	150.80 (33.01)	97	149.75 (32.41)

	Reclassification Grade									
	7 (n = 38)		**8 (n = 16)**		**9 (n = 9)**		**10 (n = 7)**		**Never (n = 23)**	
Variable	*n*	*m* (*sd*)	*n*	*m* (*sd*)	*n*	*m* (*sd*)	*n*	*m* (*sd*)	*n*	*m* (*sd*)
Female	38	.47	16	.56	9	.44	7	.29	22	.50
FRPL	38	.87	16	.94	9	.89	7	.86	22	.73
Special Education	38	.00	16	.00	9	.00	7	.00	23	.00
Parent Education Level	29		15		6		4		14	
Not HS Graduate		.34		.47		.83		25		.64
High School Graduate		.48		.47		.17		.50		.21
Some College and above		.18		.06		.00		.25		.15
Some of Present Days	36	152.17 (27.90)	16	161.38 (8.97)	9	139.22 (38.72)	6	146.50 (41.11)	19	152.42 (33.58)

Total Number of Students whose initial CELDT Score is 477 = 843 (333 missing cases in terms of reclassification year, in other words, 333 of 843 students (40%) had left the district)

Students whose initial CELDT score was 502

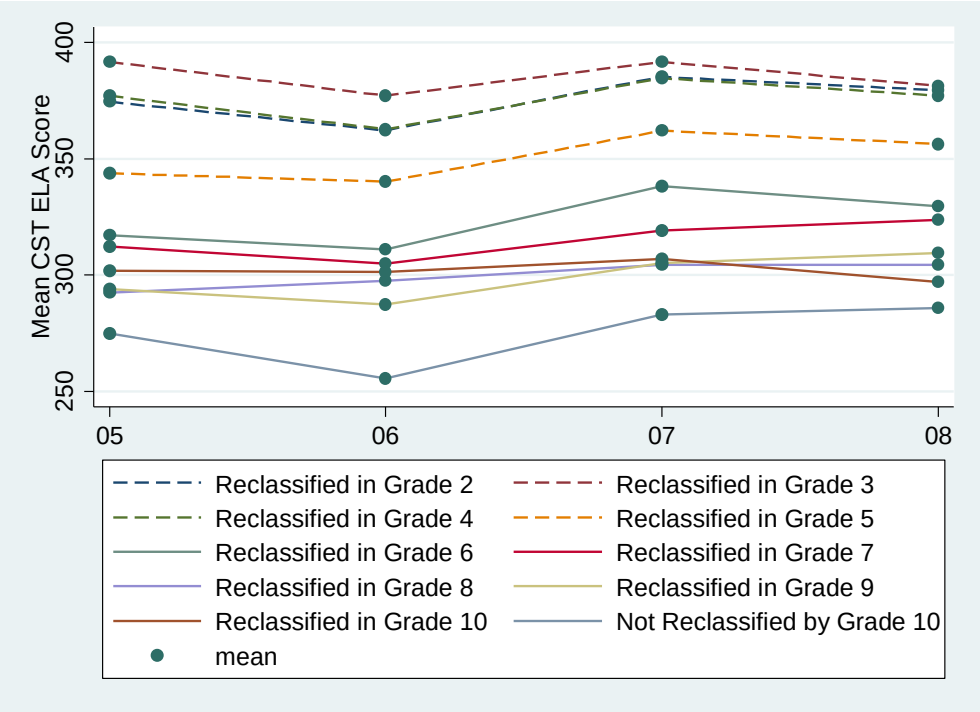


Figure D.17. Trajectories of mean CST ELA Scores (Grades 2 through 8) by reclassification cohorts (Only for students whose Initial CELDT Score =502)

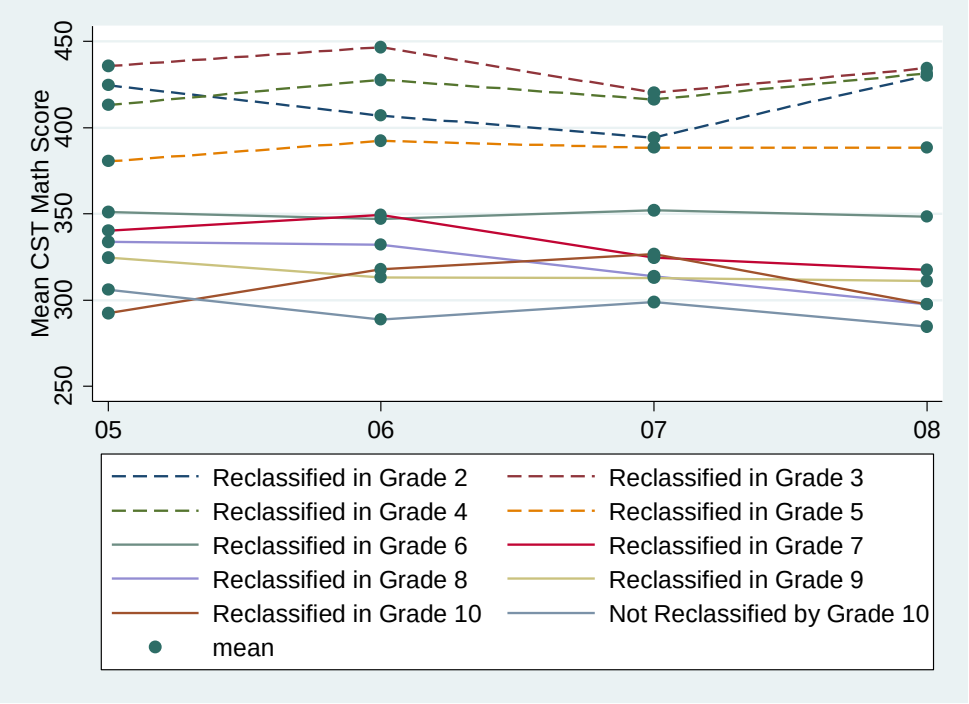


Figure D.18. Trajectories of mean CST Math Scores (Grades 2 through 8) by reclassification cohorts (Only for students whose Initial CELDT Score =502)

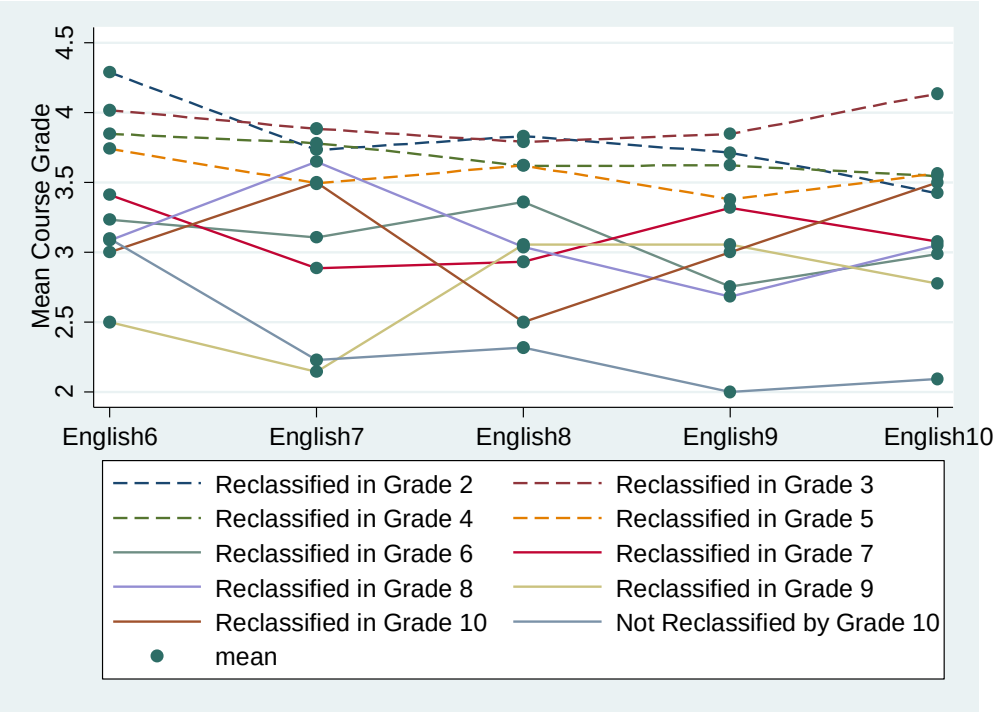


Figure D.19. Trajectories of mean English course grades (Grades 6 through 10) by reclassification cohorts (Only for students whose Initial CELDT Score =502)

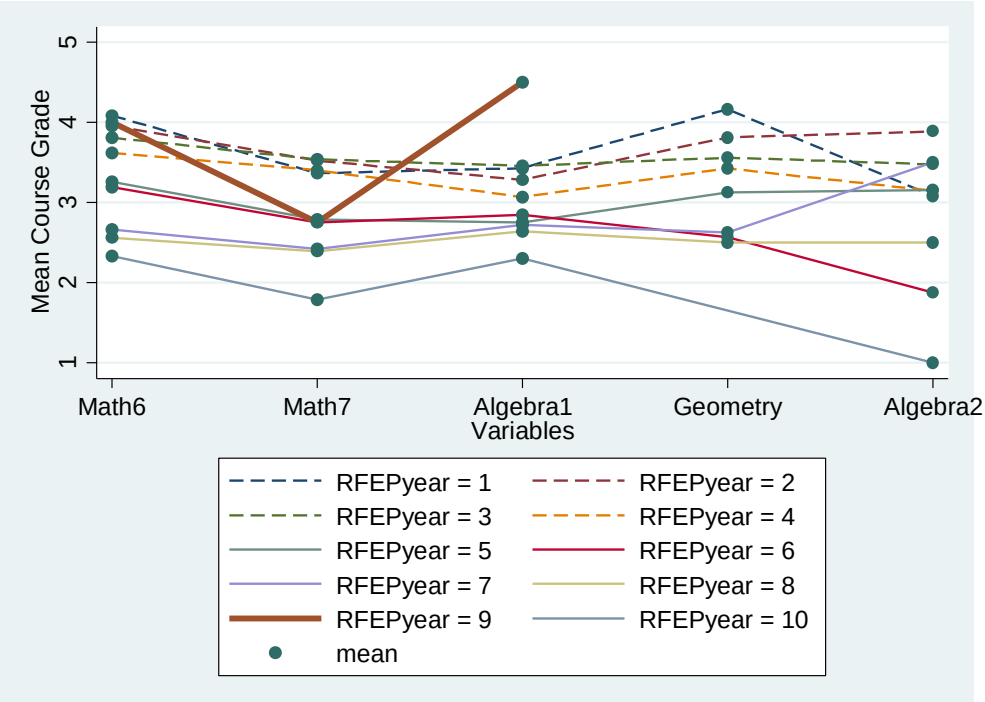


Figure D.20. Trajectories of mean Mathematics course grades (Grades 6 through 10) by reclassification cohorts (Only for students whose Initial CELDT Score =502)

Table D.51. Descriptive Statistics by Reclassification Grade for students whose initial CELDT score was 502

	Reclassification Grade									
	2 (n = 18)		**3 (n = 65)**		**4 (n = 136)**		**5 (n = 104)**		**6 (n = 57)**	
Variable	*n*	*m* (*sd*)	*n*	*m* (*sd*)	*n*	*m* (*sd*)	*n*	*m* (*sd*)	*n*	*m* (*sd*)
Female	18	.61	63	.59	135	.50	102	.59	56	.46
FRPL	18	.78	63	.75	135	.91	102	.87	56	.86
Special Education	18	.00	65	.00	136	.01	104	.02	57	.00
Parent Education Level	12		36		90		74		38	
Not HS Graduate		.17		.36		.48		.47		.47
High School Graduate		.25		.39		.36		.32		.26
Some College and above		.58		.26		.16		.21		.27
Some of Present Days	17	159.35 (24.75)	63	143.94 (37.60)	130	149.74 (29.73)	97	147.12 (33.08)	55	149.27 (33.56)

	Reclassification Grade									
	7 (n = 28)		**8 (n = 13)**		**9 (n = 9)**		**10 (n = 2)**		**Never (n = 12)**	
Variable	*n*	*m* (*sd*)	*n*	*m* (*sd*)	*n*	*m* (*sd*)	*n*	*m* (*sd*)	*n*	*m* (*sd*)
Female	27	.48	11	.45	9	.33	2	.50	12	.17
FRPL	27	.89	11	.91	9	.89	2	1.00	12	.92
Special Education	28	.04	13	.08	9	.00	2	.00	12	.00
Parent Education Level	19		5		6		1		9	
Not HS Graduate		.58		.40		.17		1.00		.67
High School Graduate		.32		.40		.33		.00		.11
Some College and above		.10		.20		.50		.00		.20
Some of Present Days	25	151.68 (29.29)	13	137.15 (31.96)	9	127.89 (49.94)	2	143.50 (47.38)	12	145.25 (30.26)

Total Number of Students whose initial CELDT Score is 502 = 672 (228 missing cases in terms of reclassification year, in other words, 228 of 672 students (34%) had left the district)

References

Abedi, J. (2002). Standardized achievement tests and English language learners: Psychometric issues. *Educational Assessment, 8*, 231–257.

Abedi, J. (2004). The No Child Left Behind Act and English language learners: Assessment and accountability issues. *Educational Researcher, 33*(1), 4–14.

Abedi, J. (2008a). Classification system for English language learners: Issues and recommendations. *Educational Measurement: Issues and Practices*, pp. 17–31.

Abedi, J. (2008b). Measuring students' level of English proficiency: Educational significance and assessment requirements. *Educational Assessment, 13*, 193–214.

Abedi, J., & Gandara, P. (2006). Performance of English language learners as a subgroup in large-scale assessment: Interaction of research and policy. *Educational measurement: Issues and practice, 25*(4), 36-46.

Abedi, J.,Herman, J. L., Courtney, M., Leon, S., & Kao, J. (2004). *English language learners and math achievement: A study on classroom-level opportunity to learn*. Los Angeles: University of California: Center for the Study of Evaluation/National Center for Research on Evaluation, Standards, and Student Testing.

Abedi, J., Leon, S., & Mirocha, J. (2003). *Impact of students' language background on content-based assessment: Analyses of extant data* (CRESST Report 603). Los Angeles: University of California, National Center for Research on Evaluation, Standards, and Student Testing.

Abedi, J., & Lord, C. (2001). The language factor in mathematics tests. *Applied Measurement in Education, 14*, 219–234.

Abedi, J., Lord, C., & Hofstetter, C. (1998). *Impact of selected background variables on students' NAEP math performance* (CRESST Report 478). Los Angeles: UCLA Center for the Study of Evaluation/National Center for Research on Evaluation, Standards, and Student Testing.

Agresti, A., & Finlay, B. (2009). *Statistical Methods for the Social Sciences* (4th ed.). Upper Saddle River, NJ: Pearson Prentice Hall.

Aguilar, V. (2010). Schooling English learners: Contexts and challenges. In California Department of Education, *Improving education for English learners: Research-based Approaches*. (pp. 1–20). Sacramento, CA: California Department of Education.

Aud, S., Wilkinson-Flicker, S., Kristapovich, P., Rathbun, A., Wang, X., and Zhang, J. (2013). *The Condition of Education 2013* (NCES 2013-037). U.S. Department of Education,

National Center for Education Statistics. Washington, DC. Retrieved September 1, 2013 from http://nces.ed.gov/pubsearch.

Bailey, A. L., & Carroll, P. E. (2015). Assessment of English language learners in the era of new academic content standards. *Review of Research in Education, 39*(1), 253-294.

Bailey, A. L., & Kelly, K. R. (2013). Home language survey practices in the initial Identification of English learners in the United States. *Educational Policy, 27*, 770–804.

Battistin, E., and Rettore, E (2008). Ineligibles and eligible non-participants as a double comparison group in regression-discontinuity designs. *Journal of Econometrics, 142*, 715-730.

Bloom, H.S. (2009). *Modern regression discontinuity analysis.* MDRC working papers on research methodology.

California Department of Education (2011). A Comparison Study of Kindergarten and Grade 1 English-Fluent Students and English Learners on the 2010–11 Edition of the CELDT.

California Department of Education. (2013). *California English Language Development Test: 2013-14 information guide*. Retrieved from http://www.cde.ca.gov/ta/tg/el/documents/celdt13guide.pdf

Callahan, R. M. (2005). Tracking and high school English learners: Limited opportunities to learn. *American Educational Research Journal, 42*, 305–328.

Callahan, R., Wilkinson, L., Muller, C., & Frisco, M. (2009). ESL placement and schools: Effects on immigrant achievement. *Educational Policy, 23*, 355–384.

Callahan, R., Wilkinson, L., & Muller, C. (2010). Academic achievement and course taking among language minority youth in U.S. schools: Effects of ESL placement. *Educational Evaluation and Policy Analysis, 32*, 84–117.

Castañeda v. Pickard, 648 F.2d 989, 1006–07 (5th Cir. 1981).

Chamot, A. U., & O'Malley, J. M. (1996). The cognitive academic language learning approach: A model for linguistically diverse classrooms. *Elementary School Journal, 96*(3), 259–273.

Civil Rights Act of 1964, Pub. L. No. 88–352, 78 Stat. 241 (1964).

Conger, D. (2009). Testing, time limits, and English learners: Does age of school entry affect how quickly students can learn English? *Social Science Research, 38*(2), 383-396.

Cook, H.G., Boals, T., Wilmes, C., & Santos, M. (2007). *Issues in the Development of Annual Measurable Achievement Objectives (AMAOs) for WIDA Consortium States.* Madison, WI: WIDA Consortium.

Cook, T. D., Shadish, W. R., & Wong, V. C. (2008). Three conditions under which experiments and observational studies produce comparable causal estimates: New findings from within-study comparisons. *Journal of Policy Analysis and Management, 27*, 724–750.

de Jong, E. (2004). After exit: Academic achievement patterns of former English language learners. *Educational Policy Analysis Archives, 12*, 50.

Echevarria, J., & Graves, A. W. (1998). *Sheltered content instruction: Teaching English-language learners with diverse abilities*. Boston: Allyn & Bacon.

Flores, S. M., Batalova, J., & Fix, M. (2012*). The Educational Trajectories of English Language Learners in Texas.* Washington, DC: Migration Policy Institute.

Flores, E., Painter, G., & Pachon, H. (2009). *¿Qué pasa? Are ELL students remaining in English learning classes too long?* Los Angeles, CA: Tomás Rivera Policy Institute.

Freeman, Y. S., Freeman, D. E., & Mercuri, S. (2002). *Closing the achievement gap: How to reach limited-formal-schooling and long-term English learners.* Portsmouth, NH: Heinemann.

Gándara, P. C., Rumberger, R. W., Maxwell-Jolly, J., & Callahan, R. M. (2003). English learners in California schools: Unequal resources, unequal outcomes, *Education Policy Analysis Archives, 11*(36). Retrieved from http://epaa.asu.edu/epaa/v11n36/.

Gandara, P., & Merino, B. (1993). Measuring the outcomes of LEP programs: Test scores, exit rates, and other mythological data. *Educational Evaluation and Policy Analysis, 15*, 320–338.

Genesee, F., Lindholm-Leary, K., Saunders, W. M., & Christian, D. (2006). *Educating English language learners: A synthesis of research evidence*. Cambridge, UK: Cambridge University Press.

Geva, E. (2006). Second-Language Oral Proficiency and Second-Language Literacy. In D. August & T. Shanahan, (Eds.), *Developing Literacy in Second-Language Learners: A Report of the National Literacy Panel on Language-Minority Children and Youth* (123-140). Mahwah, NJ: Lawrence Erlbaum Associates, Inc.

Grissom, J. B. (2004). Reclassification of English language learners. *Educational Policy Analysis Archives, 12* (36). Retrieved [date] from http://epaa.asu.edu/epaa/v12n36/.

Gutiérrez, K. D. (2005). *Rethinking educational policy for English learners*. Washington, DC: Aspen Institute Congressional Forum.

Hahn, J., Todd, P., and Van der Klaauw, W. (2001). Identification and estimation of treatment effects with a regression-discontinuity design. *Econometrica, 69* (1), 201-209.

Hakuta, K., Goto Butler, Y., & Witt, D. (2000). *How long does it take English learners to attain proficiency?* University of California Linguistic Minority Research Institute Policy Report 2000-1.

Harklau, L.A. (1994). Jumping tracks: How language-minority students negotiate evaluations of ability. *Anthropology and Education Quarterly, 25*(3), 347-363.

Hemphill, F. C., & Vanneman, A. (2011). *Achievement gaps: How Hispanic and White students in public school perform in mathematics and reading on the National Assessment of Education Progress*. Washington, DC: National Center for Education Statistics, Institute of Education Sciences.

Hill, L. E. (2012). *California's English learner students*. San Francisco: Public Policy Institute of California.

Hill, L. E., Weston, M., & Hayes, J. M. (2014). *Reclassification of English learner students in California.* San Francisco: Public Policy

Holland, P. W. (1986). Statistics and causal inference. *Journal of the American Statistical Association, 81*(396), 945-970.

Imbens, G., & Rubin, D. (2007). Causal Inference: Statistical Methods for Estimating Causal Effects in Biomedical, Social, and Behavioral Sciences. Cambridge University Press.

Imbens, G., & Lemieux, T. (2008). Regression discontinuity designs: A guide to practice. *Journal of Econometrics, 142*, 615-635.

Jacob, R., Zhu, P., Somers, M., & Bloom, H. (2012). A practical guide to regression discontinuity. New York: MDRC.

Jenness, D. (1990). *Making sense of social studies*. New York: Macmillan.

Katz, S. R. (1999). Teaching in tensions: Latino immigrant youth, their teachers and the structures of schooling. *Teachers College Record, 100,* 809–840.

Kena, G., Musu-Gillette, L., Robinson, J., Wang, X., Rathbun, A., Zhang, J., Wilkinson-Flicker, S., Barmer, A., and Dunlop Velez, E. (2015). The Condition of Education 2015 (NCES 2015-144). U.S. Department of Education, National Center for Education Statistics. Washington, DC. Retrieved [date] from http://nces.ed.gov/pubsearch.

Kieffer, M. J. (2011). Converging trajectories: Reading growth in language minority learners and their classmates, Kindergarten to Grade 8. *American Educational Research Journal, 48* (5), 1187-1225.

Kirkland, L.D. & Patterson, J. (2005). Developing oral language in primary classrooms. *Early Childhood Education Journal, 32* (6), 391-395.

Kim & Herman (2010). *When to exit ELL students: Monitoring success and failure in mainstream classrooms after ELLs' reclassification* (CRESST Report 779). Los Angeles: University of California, National Center for Research on Evaluation, Standards, and Student Testing.

Lau v. Nichols, 414 U.S. 563 (1974).

Linquanti, R. (2001). The redesignation dilemma: Challenges and choices in fostering meaningful accountability for English learners (Policy Rep. No. 2001-1). Santa Barbara: University of California, Linguistic Minority Research Institute.

Mahoney, K.S., & MacSwan, J. (2005). Reexamining identification and reclassification of English Language Learners: A critical discussion of select state practices. *Bilingual Research Journal: The Journal of the National Association for Bilingual Education, 29*(1). 31-42.

Martiniello, M. (2009, April). The achievement gap of language minority students in elementary and middle school. Paper presented at the annual meeting of the American Educational Research Association, San Diego, CA.

Menken, K., & Kleyn, T. (2010). The long-term impact of subtractive schooling in the educational experiences of secondary English language learners. *International Journal of Bilingual Education and Bilingualism, 13*(4). 399-417.

Moore, K. A., & Redd, Z. (2002). *Children in poverty: Trends, consequences, and policy options*. Washington, DC: Child Trends.

Nichols, A. (2011). *rd 2.0: Revised Stata module for regression discontinuity estimation.* http://ideas.repec.org/c/boc/bocode/s456888.html

No Child Left Behind Act of 2001, Pub. L. No. 107-110, 115 Stat. 1425 (2002).

Olsen, L. (2010). *Reparable harm: Fulfilling the unkept promise of educational opportunity for California's long term English learners.* Long Beach, CA: Californians Together.

Parrish, T., Perez, M., Merickel, A., & Linquanti, R. (2006). Effects of the implementation of Proposition 227 on the education of English learners, K-12: Findings from a five-year evaluation. Palo Alto, CA: American Institutes for Research.

Ragan, A., & Lesaux, N. (2006). Federal, state, and district level English language learner program entry and exit requirements: Effects on the education of language minority

students. *Educational Policy Analysis Archives, 14* (20).

Ramsey, A., & O'Day, J. (2010). *Title III policy: State of the states* (Policy Brief). Washington, DC: American Institutes for Research and U.S. Department of Education.

Robinson, J. P. (2011). Evaluating criteria for English learner reclassification: A causal-effects approach using a binding-score regression discontinuity design with instrumental variables. *Educational Evaluation and Policy Analysis, 33*(3), 267-292.

Rubin, D. B. (1978). Bayesian inference for causal effects: The role of randomization. *The Annals of Statistics, 6*, 34-58.

Ruiz-de-Velasco, J., & Fix, M. (2000). *Overlooked and underserved: Immigrant students in U.S. secondary schools*. Washington, DC: The Urban Institute.

Salazar, J. J. (2007). *Master Plan evaluation report for English learners—2005/2006*. Los Angeles: Los Angeles Unified School District, Program Evaluation and Assessment Branch.

Saunders, W. M., & Marcelletti, D. J. (2013). The gap that can't go away: The Catch-22 of reclassification in monitoring the progress of English learners. *Educational Evaluation and Policy Analysis, 35*(2), 139-156.

Shadish, W. R., Cook, T. D., & Campbell, D. T. (2002). *Experimental and quasi-experimental designs for generalized causal inference.* Boston, MA: Houghton Mifflin.

Shadish, W. R., & Cook, T. D. (2009). The renaissance of field experimentation in evaluating interventions. *Annual Review of Psychology, 60*, 607-629.

Schneider, B., Swanson, C. B., & Riegle-Crumb, C. (1998). Opportunities for learning: Course sequences and positional advantages. *Social Psychology of Education, 2*(1), 25–53.

Stokes-Guinan, K., & Goldenberg, C. (2011). Use with caution: What CELDT results can and cannot tell us. *The CATESOL Journal, 22* (1), 189-202.

Thompson, K. D. (2012). *Are we there yet? Exploring English learners' journey to reclassification and beyond*. (Unpublished dissertation). Stanford University, Stanford, CA.

Thornton, S. J. (1994). The social studies near century's end: Reconsidering patterns of curriculum and instruction. *Review of Research in Education, 20*, 223–254.

Trochim, W. (1984). *Research Design for Program Evaluation: The Regression-Discontinuity Approach*. Beverly Hills, CA: Sage Publications.

Valdés, G. (1998). The world outside and inside schools: Language and immigrant children. *Educational Researcher, 27*(6), 4–18.

Valdés, G. (2001). *Learning and not learning English: Latino students in American schools*. New York, NY: Teachers College Press.

Wang, J., & Goldschmidt, P. (1999). Opportunity to learn, language proficiency, and immigrant status effects on mathematics achievement. *Journal of Educational Research,93*(2), 101–111.

Wolf, M. K., Kao, J. C., Griffin, N., Herman, J. L., Bachman, P. L., Chang, S.M., & Farnsworth, T. (2008). *Issues in assessing English language learners: English language proficiency measures and accommodation uses—Practice review* (CRESST Report 732). Los Angeles: University of California, National Center for Research on Evaluation, Standards, and Student Testing.

Wolf, M. K., Kao, J. C., Herman, J. L., Bachman, L. F., Bailey, A. L., Bachman, P. L., Farnsworth, T., & Chang, S. M. (2008). *Issues in assessing English language learners: English language proficiency measures and accommodation uses—Literature review* (CRESST Report 731). Los Angeles: University of California, National Center for Research on Evaluation, Standards, and Student Testing.

Yang, H., Urrabazo, T., & Murray, W. (2001). *How did multiple years (7+) in a BE/ESL program affect the English acquisition and academic achievement of secondary LEP students? Results from a large urban school district*. Dallas: Dallas Independent School District, TX.

Young, J. W., Cho, Y., Ling, G., Cline, F., Steinberg, J., & Stone, E. (2008). Validity and fairness of state standards- based assessments for English language learners. *Educational Assessment, 13*(3), 170–192.

Young, J.W., Steinberg, J., Cline, F., Stone, E., Martiniello, M., Ling, G., & Cho, Y. (2010). Examining the Validity of Standards-Based Assessments for Initially Fluent Students and Former English Language Learners. *Educational Assessment, 15*(2), 87-106.