

# Indiana Emergent Bilingual Student Time to Reclassification: A Survival Analysis

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*In this study, we employed a discrete-time survival analysis model to examine Indiana emergent bilingual time to reclassification as fluent English proficient. The data consisted of five years of statewide English language proficiency scores. Indiana has a large and rapidly growing Spanish-speaking emergent bilingual population, and these students are prevalent in the low socioeconomic status group. Our findings suggest that Spanish home language status, low socioeconomic status, and special education status are negatively associated with the odds to reclassification. Based on our findings, we recommend a careful investigation to inform best practices that will meet the needs of Spanish-speaking emergent bilinguals and reduce inequities in education.*

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The No Child Left Behind (NCLB) Act's inclusion of school accountability systems focused on the test performance of minority youth caused stakeholders, including school district personnel and policymakers, to pay increased attention to the academic achievement of emergent bilinguals (Burke, 2015; Hopkins, Thompson, Linquanti, Hakuta, & August, 2013); yet, there is well-documented evidence of the harm the law has also inflicted on this unique and diverse student population (Menken, 2006, 2008). NCLB was authorized from 2001 to 2015 and was a version of the primary federal law governing K–12 education, the Elementary and Secondary Education Act (ESEA) of 1965. NCLB was criticized by many for mandating the acceleration of emergent bilinguals' English acquisition and academic achievement, which contributed to an increased usage of English-dominant instructional models and a narrowing of the curriculum, via a focus on English language arts and mathematics instruction, at the expense of instruction in other subject areas (Arias & Faltis, 2012; Gándara & Orfield, 2012; Pandya, 2011). The most recent version of the ESEA, the Every Student Succeeds Act (ESSA) of 2015, maintains many of the mandates related to accelerating emergent bilinguals' English language acquisition, including the use of standardized tests to measure emergent bilinguals' progress in attaining English proficiency, being reclassified fluent English proficient (R-FEP or FEP), and passing state standardized tests.

The purpose of the reported study was to examine emergent bilingual time to reclassification in Indiana, a Midwestern state with a burgeoning emergent bilingual population. We begin with a review of the mandates under NCLB to position our study and explain its importance during the transition to ESSA mandates. We then provide a review of the related literature, a context for our study, and descriptions of our methods and results. We conclude with a discussion of the implications of our findings and several recommendations.

The stated intention of each version of the ESEA is to promote equitable access to high-quality education for all students. To meet this goal, NCLB required states to develop and implement school accountability systems, which included Title I annual measurable objectives (AMOs) based largely on student content area standardized test performance as well as rewards and sanctions to motivate local educational agencies (LEAs) to make these objectives. In order for a school to make its state's NCLB Title I AMOs and avoid being labeled "in need of improvement," a percentage of its students in the following four subgroups needed to show improvement and attainment on standardized tests: low socioeconomic, special education (SPED), racial or ethnic minority, and limited English proficient (LEP).

Schools serving emergent bilinguals faced additional accountability mandates; not only were they required to make Title I AMOs, but they also had to

make Title III annual measurable achievement objectives (AMAOs), which were based on English language proficiency (ELP) test performance and state standardized test performance. This increased level of accountability often resulted in an increased risk of failure to meet accountability mandates compared to schools serving predominantly English monolingual student populations (Burke, DePalma, Ginther, Morita-Mullaney, & Young, 2014).

Although NCLB required states to develop and implement Title III AMAOs, it did not mandate or recommend the implementation of specific programs or instructional models to reach these objectives. This flexibility in the law led to considerable variability between states' Title III AMAOs and school-level programming for emergent bilinguals (Abedi, 2004). ESSA does not include the term *AMAOs*; however, under Title I of the law, states are still required to hold their schools accountable for emergent bilinguals' English acquisition. Under Title III of ESSA, states must continue to demonstrate through standardized test scores that their emergent bilinguals are attaining the same level of proficiency on state standards as reclassified FEP students and monolingual, English only (EO)–speaking students (ESSA, 2015).

The NCLB mandates to expedite students' English language acquisition are part of a policy shift that occurred in the United States in the 1980s. Title VII, the Bilingual Education Act (BEA), was included with the reauthorization of the ESEA in 1968. According to García and Kleifgen (2010), in the 1980s, federal funding for English-only instructional programs was increased while limits on time in transitional bilingual programs were imposed. As a result, English-only instructional programs have been privileged over native language instruction even though there is substantial evidence supporting the long-term benefits of bilingualism, most notably the superior academic achievement of biliterate students as they advance to higher grades (Thomas & Collier, 1997, 2002; Umansky & Reardon, 2014). Findings from studies that compare the academic performance and English acquisition of emergent bilinguals in English immersion programs to those in bilingual programs indicate that those in bilingual programs took longer to reclassify but demonstrated superior academic outcomes in the long term (Umansky, Valentino, & Reardon, 2016; Valentino & Reardon, 2015).

With the passage of NCLB in 2001, the Office of Bilingual Education and Minority Language Affairs (OBEMLA) under the U.S. Department of Education (DoED) was renamed the Office of English Language Acquisition (OELA). This historic decision resulted in the replacement of many bilingual education models with English-dominant language instruction models (Crawford, 2008).

Within NCLB, the term LEP was defined as a school-aged individual whose difficulties in reading, writing, understanding, or speaking English deny the person (a) the ability to attain proficiency on a state standardized test, (b) the ability to perform adequately in classrooms when English is the language of instruction, and (c) the opportunity to fully participate in

society (20 U.S.C. § 7801(25)). ESSA replaced LEP with the term English learner; however, the law maintains the same definition.

The use of the term LEP is contested by scholars as it suggests that English is the only desired outcome for these students (Menken & Solorza, 2014a). Further, the term LEP implies that these students are deficient or “limited” linguistically when in fact these students are acquiring an additional language, namely, English (García, 2009). García (2009) proposed the term emergent bilinguals, which is a more accurate description of these students’ linguistic and academic trajectories. We use this additive term in this article with two exceptions. First, we use the terms LEP and R-FEP or FEP when referencing national and state laws, as these referred to specific segments of the emergent bilingual population when this study was conducted and NCLB was the law. For example, the context for the reported study is Indiana, and the Indiana Department of Education (IDOE) uses the term LEP to refer to an emergent bilingual whose English proficiency is measured to be between Overall Levels 1 and 4 on the state’s ELP test, the LAS Links. Second, we use the terms English language learner (ELL) and English learner (EL) in our literature review if these terms were used by the authors of the reviewed sources.

Emergent bilinguals have received increased attention from policy-makers in recent decades because they constitute the fastest growing portion of the nation’s K–12 population, and those with beginning levels of English language proficiency are low performers on the standardized tests used for state and federal accountability purposes to measure school effectiveness. Findings from longitudinal studies conducted prior to NCLB indicated the time required to attain English proficiency to be between 4 and 10 years (Collier, 1987; Collier & Thomas, 1989; Cummins, 1981; Hakuta, Butler, & Witt, 2000; Thomas & Collier, 1997). However, NCLB required schools to provide evidence in the form of higher ELP standardized test scores that they were expediting their emergent bilinguals’ English language acquisition (Menken, 2008; Menken & Solorza, 2014a, 2014b; Ricento & Wright, 2008; Wiley, 2007). These federal mandates set the stage for large-scale empirical studies that examine the application of new statistical models to examine the construct of English language acquisition.

Currently, states have different expectations related to time to reclassification. Moreover, because states use different systems—including different instruments, methods, and criteria—to determine LEP/EL and FEP status, establishing the amount of time required by emergent bilinguals to reach English proficiency remains challenging (Hopkins et al., 2013). Twenty-nine states, including Indiana and the District of Columbia, only require the use of ELP test results to make reclassification decisions (Linguanti & Cook, 2015). In contrast, other states use multiple measures, including standardized test scores, school grades, teachers’ evaluations, local assessment results, review committees, and information derived from meetings with

parents (Linquanti & Cook, 2015; Tanenbaum et al., 2012); several states, including Texas, have modified their accountability systems by including the amount of time emergent bilinguals have spent in U.S. schools (Texas Education Agency [TEA], 2015). Under ESSA, states will have greater flexibility when determining EL classification criteria and ELP targets.

NCLB treated emergent bilinguals as a homogenous group and prohibited states from adjusting their accountability measures to account for the influence of numerous variables with the exception of time in U.S. schools (Cook & Zhao, 2011; US DoED, 2008). However, findings from large-scale studies provide substantial evidence to suggest that emergent bilinguals' levels of English proficiency are affected by numerous variables, including initial first language (L1) academic language proficiency (Thompson, 2015). For example, Cook, Boals, Wilmes, and Santos (2008) found that initial ELP level greatly influenced the growth rate of English language acquisition and in turn the time needed to reach English proficiency; but because NCLB Title III AMAOs failed to account for students' initial ELP levels, the performance of schools and districts evaluated with these metrics may have been misjudged.

Ignoring important differences among emergent bilinguals may result in confounded estimates of time to reclassification; therefore, in this study, we used a statistical method that allows us to learn about the different variables impacting emergent bilinguals by simultaneously modeling all the predictors in a single predictive model. We employed a predictive model to examine the longitudinal relationship between time to English proficiency and student-level characteristics. The data for this inquiry consist of five years of statewide emergent bilingual scores on the LAS Links, the ELP test used by Indiana during the years of data collection (2008–2009 to 2012–2013). Findings suggest that language background, socioeconomic status (SES), and SPED status are associated with the odds to reclassification; that is, students classified as Spanish-speaking, low SES, and SPED were less likely to reclassify within the examined time period. Indiana has a large and rapidly growing Spanish-speaking emergent bilingual population, and these students are predominant in the low-SES group. Based on our findings, we recommend a careful investigation to inform instructional practices for Spanish-speaking students. We believe findings from our analysis will galvanize the collective efforts of communities, schools, and universities to systemically support emergent bilingual students.

## Literature on Time to English Proficiency and Reclassification

Prior to the passage of state and federal mandates that require annual standardized testing of K–12 students, researchers were limited in their ability to measure time to second language (L2) proficiency because the data sets necessary for longitudinal analyses were either nonexistent or rare.

The following estimated timeframes from longitudinal studies conducted before NCLB suggest that there is a range of time required by emergent bilinguals to reach English proficiency: 4 to 8 years (Collier, 1987), 5 to 10 years (Collier & Thomas, 1989), 5 to 7 years (Cummins, 1981), 4 to 7 years (Hakuta et al., 2000), and 4 to 10 years (Thomas & Collier, 2002).

The passage of NCLB caused a dramatic increase in the amount of ELP testing; however, emergent bilingual researchers continue to be limited by the lack of an agreed on definition of English language proficiency (Boals et al., 2015). Another challenge that researchers face is determining the variables primarily responsible for hindering or increasing L2 acquisition. Thus far, researchers have identified a vast array of variables including the following: SES (Kennedy & Park, 1994; Reese, Garnier, Gallimor, & Goldernberg, 2000; Roberts, Mohammed, & Vaughn, 2010), amount of schooling prior to immigration (Cummins, 1989; Thomas & Collier, 1997), family environment (August & Hakuta, 1998; Diaz-Soto, 1988; Dornbusch & Ritter, 1988; Feinberg, 2002; Genesee & Riches, 2006; Henderson, 1987; Hidalgo, Bright, Sui, Swap, & Epstein, 1995), age on arrival to a country where acquiring an L2 is required (Collier, 1987, 1988), L1 cognitive maturity and subject mastery during L1 schooling (Collier & Thomas, 1989), and L2 aptitude (Krashen & Terrell, 1983). Additional factors determined to affect time to proficiency include the learner's level of motivation, school climate, instruction, and programming (D'Angiulli, Siegel, & Maggi, 2004).

Federal accountability mandates created a demand for large-scale, empirical research on the amount of time required by emergent bilinguals to acquire sufficient English proficiency to reach academic parity with non-emergent bilinguals. For example, in response to state and regional requests, researchers at the Regional Educational Laboratories (RELs) conducted two longitudinal studies on time to reclassification. In the first, Greenberg Motamedi (2015) examined data on eight cohorts of students who entered seven Washington school districts between the 2000–2001 and 2007–2008 school years ( $N = 17,733$ ). Greenberg Motamedi followed the cohorts for at least six years and calculated the mean number of years it took ELs to reclassify. The findings indicated that the average time to reclassification was 3.8 years and reclassification occurred more quickly in earlier grades and in schools with higher percentages of minority students and students eligible for free and reduced lunch. Additionally, students who spoke Spanish and Samoan took longer to reclassify than speakers of Amharic, Arabic, and Korean.

In the second REL study, Haas, Tran, Huang, and Yu (2015) examined Arizona EL cohort data from three grade spans between the 2006–2007 to 2011–2012 school years: kindergarten to Grade 5 ( $N = 16,377$ ), Grade 3 to Grade 8 ( $N = 7,938$ ), and Grade 6 to Grade 11 ( $N = 4,287$ ). At least 90% of the students from each cohort reclassified within the six-year time period. Students in the kindergarten cohort had the lowest reclassification rate,

which the authors acknowledge is inconsistent with the literature. Haas et al. state that the differences in reclassification rates were minor and may be due to the students in the Grade 3 and Grade 6 cohorts being more ready to attain a passing score on the ELP test.

Although Greenberg Motamedi (2015) and Haas et al.'s (2015) studies provide valuable insight into the factors affecting time to reclassification, both are limited by a reliance on descriptive analysis. As Greenberg Motamedi acknowledges, the statistical method referred to as survival analysis allows a deeper investigation of the effects of multiple student background variables on time to reclassification. Major findings from recent, large-scale, longitudinal studies in which the author(s) used discrete-time survival analysis (also referred to as hazard analysis or event history analysis) to examine time to reclassification are summarized in Table 1 and then discussed. Although we preferred the term emergent bilingual, we used the terms EL or ELL in Table 1 if the author(s) of the listed study used these terms.

Findings from the studies in Table 1 support the claims that emergent bilinguals are a heterogeneous population and require a range of time to attain English proficiency. Care should be taken when comparing these studies as reclassification criteria and the assessments used to measure English language proficiency vary by state.

Conger (2009) investigated the rate of reclassification of all ELs, ages 5 to 10, who attended New York City (NYC) schools between 1996 and 2004. Using data on four cohorts of ELs ( $N = 8,976$ ), Conger examined how quickly ELs attained English proficiency and if their age when they began attending public schools affected their time to proficiency. The controls included student initial ELP level, home language, economic status, disability status, race, gender, and the school attended. Findings suggest an EL's age of entry into the school system does impact the student's likelihood of attaining proficiency and rate of reclassification; moreover, the findings indicate that ELs who were younger upon entry reached proficiency more quickly than ELs who were older upon entry. The median time to English proficiency for ELs who entered at 5 years of age was 1.69 years while the median time was 3.78 years for ELs who entered school when they were 10 years old. Additionally, Conger found variations in time to proficiency among students from different home-language backgrounds: Students with Spanish or Haitian as a home language were least likely to reach English proficiency.

Conger, Hatch, McKinney, Atwell, and Lamb (2012) examined time to English proficiency for all ELLs ages 5 through 10 in NYC from 1997–1998 to 2003 and in Miami-Dade County Public Schools (M-DCPS) from 2003–2004 to 2008 ( $N = 12,158$ ). The variables examined included student age at entry in school, economic status, race, and gender. Findings indicate that nearly half the students from NYC and a third from M-DCPS were not English proficient after three years of schooling. The findings also suggest that there is a range of time required by ELLs to reach English proficiency:

**Table 1**  
**Longitudinal Studies That Used Survival Analysis to Examine Time to English Proficiency and Reclassification**

Author(s), Year	Measure of English Language Proficiency	State Reclassification Criteria	Student Sample(s)	Major Finding(s)
Conger (2009)	Language Assessment Battery (LAB)	Prior to 2002–2003, attaining above 40th percentile on the LAB, and after 2002–2003, attaining “proficient” level on the New York State English as a Second Language Achievement Test (NYSESLAT); additionally, for Grades 3–8, attaining “Expanding/Advanced” level and 3 or above on the NYS ELA assessment in same school year; Grades 9–12: score Expanding/Advanced level and 65 or above on the Regents Exam in English in same school year	All ELs ages 5–10 in New York City (NYC) schools between 1996 and 2004 (N = 8,976)	Reclassification occurred more quickly for ELs who entered school at younger ages.
Conger, Hatch, McKinney, Atwell, and Lamb (2012)	LAB <sup>a</sup>	NYC: The same reclassification criteria as Conger (2009) study Miami-Dade County Oral Language Proficiency Scale-Revised (M-DCOLPS-R); Proficient on each subtest, Grades 3–11, 50th percentile or higher Florida state assessment of ELA in same school year; grades 11–12, a score on the 10th-grade Florida Comprehensive Assessment Test (FCAT) in reading sufficient for graduation requirements or an equivalent concordant score	All ELLs ages 5 through 10 in NYC schools from 1997–1998 to 2003 (N = 9,108) and in Miami-Dade County Public Schools (M-DCPS) from 2003–2004 to 2008 (N = 12,158)	About half of the students from NYC and a third from M-DCPS were not proficient after 3 years of schooling.
Slama (2014)	EL status (measure not specified) <sup>b</sup>	Massachusetts’s English Proficiency Assessment (MEPA) score of either “At or Above” or “Approaching”; the performance of a student at the beginning of Level 5 in listening, speaking, reading, and writing and student scored Proficient on the Massachusetts Comprehensive Assessment System (MCAS) ELA test	8 years of Massachusetts statewide data for ELs in fall 2002 kindergarten cohort (N = 5,354)	The average EL was reclassified after 3 years of schooling (second grade); however, the odds of reclassification for non-Spanish speaking ELs was almost twice that of Spanish-speaking ELs.

(continued)



**Table 1 (continued)**

Author(s), Year	Measure of English Language Proficiency	State Reclassification Criteria	Student Sample(s)	Major Finding(s)
Umansky and Reardon (2014)	California Language Development Test (CELDT)	CELDT Early Advanced or Advanced Level (listening, speaking, reading, and writing at Intermediate level or above), teacher evaluation, parent input, peer comparisons	12 years of EL data from one large, urban California district from fall 2000 to spring 2012 ( <i>N</i> = 5,423)	ELs in dual-language programs took longer to reclassify in elementary school but had higher rates of overall reclassification.
Thompson (2015)	CELDT	(a) Overall score of Proficient on the CELDT, (b) scores of Intermediate or higher on each of the CELDT sections (listening, speaking, reading, and writing), and (c) scoring Basic (300) or above on academic Standardized Testing and Reporting (STAR)-ELA test, teacher evaluation, parent input, peer comparisons	Los Angeles Unified School District (LAUSD) EL data from 2001–2002 to 2009–2010 of kindergarten cohorts <i>N</i> = 202,931	With a 9-year cohort, 25% of ELs not reclassified. ELs not reclassified by late elementary are less likely to be exited in secondary school.

*Note.* EL = English learner; ELL = English language learner; ELA = English language arts.

<sup>a</sup>In 2015, Florida transitioned to using the World-Class Instructional Design and Assessment (WIDA) Consortium Assessing Comprehension and Communication in English State-to-State (ACCESS) English language proficient (ELP) test.

<sup>b</sup>In 2012, Massachusetts transitioned to using the WIDA ACCESS ELP test.

Students who are poor, Black, Hispanic and who entered school when they were older had higher median times to proficiency.

Slama (2014) and Umansky and Reardon (2014) included all factors simultaneously in a single discrete survival model. Slama investigated time to reclassification using eight years of statewide EL data from Massachusetts. The student sample ( $N = 5,354$ ) consisted of ELs who began kindergarten in 2002. The student variables included in this study were economic status, home language, and school and district attended. Slama found the average EL reclassified FEP within three years or by second grade; however, Spanish-speaking ELs took longer to reclassify, and the likelihood of non-Spanish speaking ELs being reclassified was nearly twice that of Spanish-speaking ELs. Slama suggests the lower reclassification rates among Spanish-speaking ELs could be attributed to these students being retained in language programs longer than ELs with other language backgrounds. This is due to the “triple segregation” of this portion of the EL population described by Orfield (2001), Orfield and Lee (2006), and Rios-Aguilar, González-Canché, and Sabetghadam (2012) as the high concentration of ELs, minority students, and low-income students within the same schools.

Umansky and Reardon (2014) used 12 years of data to investigate the effect of three bilingual programming models (dual immersion, transitional bilingual, and maintenance bilingual) and one English-only language programming model (English immersion) on reclassification within one large, urban California school district. The data consisted of student- and school-level variables for ELs ( $N = 5,423$ ) who attended the district from fall 2000 to spring 2012. The student variables included initial ELP level, home language, economic status, country of origin, and year of entry. The school variables included school size, percentage of students receiving free/reduced-priced lunch, and percentage of minority students from various backgrounds. Umansky and Reardon found that in dual language programs, where content area instruction is delivered in two languages to emergent bilinguals and EO students, ELs reclassified more slowly in the elementary grades but had higher rates of overall reclassification by the time they completed high school. Additionally, they found that half of the Latino ELs took eight years to be reclassified, and approximately one-quarter were never reclassified.

Thompson (2015) used discrete-time survival analysis and nine years of longitudinal data to estimate time to reclassification for entering EL kindergartners ( $N = 202,931$ ) from the Los Angeles Unified School District (LAUSD). Thompson examined the length of time to satisfy the six criterion for California reclassification, including a proficient score on three different areas of the state’s ELP test, the California Language Development Test (CELDT), performance on annual ELA exams, teacher evaluation, and parent input. Thompson’s findings indicate that gender, home language, special education status, parents’ level of education, and initial academic English

proficiency are associated with time to reclassification. Findings indicated that students who spoke Filipino, Cantonese, and Korean as home languages were approximately twice as likely to be reclassified as students who spoke Spanish, corroborating Slama's (2014) earlier findings in Massachusetts. Thompson notes that after nine years, students' likelihood of reclassification was 74%, higher than the 62% likelihood of reclassification in Umansky and Reardon's (2014) study. Thompson attributes this discrepancy to different reclassification cut scores in the participating districts, with the LAUSD having a lower cut score for reclassification than the district in Umansky and Reardon's study. Lastly, Thompson found that ELs not reclassified by upper elementary were less likely to do so in secondary school, suggesting the existence of a critical "reclassification window" in upper elementary school.

Table 1 provides a summary of recent longitudinal survival analysis studies on the time to reclassification in four states: California, Florida, Massachusetts, and New York. These coastal states have large emergent bilingual populations and different reclassification criteria (Linquanti, Cook, Bailey, & MacDonald, 2016). Differences in estimates of time to reclassification can be attributed to different reclassification criteria at the state and district levels (e.g., Abedi, 2008; Thompson, 2015). Indiana uses only an ELP test to determine reclassification, whereas California uses additional measures, including information from teacher evaluations and parent consultations (California Department of Education, 2014). The ESSA affords greater state and local control of accountability systems; therefore, it is imperative to conduct studies that examine the local interpretation of federal policy. We used survival analyses to contribute to the growing body of literature on emergent bilingual time to reclassification. Further studies need to be conducted to determine whether patterns of reclassification are consistent or differ due to different state contexts and reclassification methodology.

Prior survival analyses have been conducted using data from New York, Massachusetts, and California, states that have long histories of serving emergent bilinguals and using different bilingual education models. In contrast, Indiana's history of educating emergent bilinguals has been to rely almost exclusively on English-only immersion language models (Morita-Mullaney, in press). Furthermore, as Table 1 indicates, the majority of the studies on rate of reclassification are located in states with nation's largest emergent bilingual populations, states with large, often urban emergent bilingual populations and longer histories of teaching emergent bilinguals. To date, there have been no large-scale longitudinal studies that examine the time to English proficiency for emergent bilinguals in Indiana, a state with a comparatively small, rural, and recent emergent bilingual population (for a review, see Burke, 2014).

The current study answers the call for longitudinal studies to strengthen the literature on time to English proficiency and reclassification (Burke et al., 2014; Hopkins et al., 2013; Slama, 2014). This is the first study to examine

emergent bilingual time to English language proficiency using statewide, longitudinal data from Indiana's ELP test the LAS Links. Because different states have different identification and reclassification criteria and ELP assessments, it is critical that investigations of reclassification rates of emergent bilinguals from different states be conducted. The strength of the relationship between different student characteristics and the likelihood of reclassification could differ from state to state. Since ESSA provides states with greater flexibility in determining their accountability systems and objectives for schools serving emergent bilinguals, studies like ours of state-level data are valuable for determining the factors influencing reclassification rates in states with differing emergent bilingual populations and policies.

### Context for the Study

In contrast to the stabilization of the emergent bilingual population at the national level and a slight decline in some states, Indiana's emergent bilingual population has continued to grow annually (IDOE Office of English Learning and Migrant Education, 2014). Indiana's emergent bilingual population has grown by 493% in the past 15 years, making it the second fastest growing emergent bilingual population in the country (Migrant Policy Institute, 2010; Tanenbaum et al., 2012). Indiana's emergent bilinguals represents 263 distinct language groups and many countries of origin, including the United States (IDOE Office of English Learning and Migrant Education, 2014). Indeed, it is worth noting that the majority of emergent bilinguals were born in the United States (García, Kleifgen, & Falchi, 2008); this is also true of Indiana's emergent bilingual population.

Like many states, Indiana's Spanish-speaking population constitutes the largest segment of the state's emergent bilingual population. Additionally, Indiana's growing Spanish-speaking emergent bilingual population reflects national trends; according to the American Community Survey (ACS) analysis, after English, the most frequently spoken language in the United States is Spanish, with 34.8 million speakers ages 5 and older. Among Spanish speakers, 93% identify as Hispanic (Pew Research Center, 2013).

Twenty-seven percent of Indiana's self-identified Hispanic population is school-aged or between 5 and 18 years old, and 33% of the state's self-identified Hispanic residents live in poverty, with school-aged children constituting the largest portion of these residents (Pew Hispanic Center's ACS, 2011). In addition, between the 1999–2000 and 2008–2009 school years, Indiana's rural Hispanic population increased 156.6%, and there was an above average increase in the percentage of rural Hispanic students living in poverty (Indiana Commission on Hispanic/Latino Affairs, 2005). A student who self-identifies as Hispanic may not speak Spanish; however, descriptors on the student cohort examined in the reported study indicate that

*Table 2*  
**Indiana Emergent Bilingual LAS Links Overall Proficiency Trend**

	Level 1 Beginning, % ( <i>n</i> )	Level 2 Early Intermediate, % ( <i>n</i> )	Level 3 Intermediate, % ( <i>n</i> )	Level 4 Advanced, % ( <i>n</i> )	Level 5 Fluent English Proficient, % ( <i>n</i> )
2006–2007	10.9 (5,134)	12.0 (5,614)	22.7 (10,639)	37.3 (17,521)	17.1 (8,026)
2007–2008	8.2 (4,101)	10.5 (5,268)	20.1 (10,053)	37.8 (18,920)	23.3 (11,669)
2008–2009	8.1 (4,243)	11.3 (5,881)	21.3 (11,116)	39.0 (20,349)	20.3 (10,578)
2009–2010	7.1 (3,823)	10.0 (5,423)	19.5 (10,518)	41.1 (22,212)	22.3 (12,027)
2010–2011	6.8 (3,811)	10.2 (5,749)	20.8 (11,703)	41.4 (23,242)	20.8 (11,670)
2011–2012	5.4 (3,104)	9.5 (5,500)	19.4 (11,254)	42.5 (24,627)	23.1 (13,398)
2012–2013	5.1 (3,219)	9.3 (5,818)	20.8 (13,109)	42.3 (26,578)	22.5 (14,162)
2013–2014	5.0 (3,345)	9.1 (6,066)	19.4 (12,909)	43.2 (28,796)	23.2 (15,484)

*Source.* The data used to create this table is from the Indiana Department of Education (IDOE) Compass website (IDOE, 2015b).

approximately 95% of the students classified as Hispanic are Spanish-speakers.

School-aged students in Indiana who speak a first language other than English are classified as either LEP or FEP, according to their performance on the LAS Links. The LAS Links contains five levels of English proficiency from Level 1 (Beginner) to Level 5 (Fluent). Emergent bilinguals at Levels 1 to 4 are classified LEP, and Level 5 students are classified FEP.

Table 2 provides the number and percentages of emergent bilinguals at Levels 1 through 5 on the LAS Links (IDOE, 2015b). As Table 2 indicates, between the 2006–2007 and 2013–2014 school years, the number of Level 4s and 5s in the state has increased, the number of Levels 1s and 2s has decreased, and the number of Level 3s has fluctuated.

Compared to other language groups, Spanish-speaking emergent bilinguals are more likely to be classified LEP and receive additional educational services (Levinson et al., 2007). During the 2009–2010 school year, 80% (38,245 of 47,772) of the LEP students in Indiana spoke Spanish (IDOE, 2011). Citing EDFacts/Consolidated State Performance Report, the National Clearinghouse for English Language Acquisition (NCELA) (n.d.) reported the primary languages spoken by emergent bilinguals in Indiana during the 2013–2014 school year as Spanish, Burmese, German, Arabic, and Chinese. In the data set used in the reported study, approximately 79% of emergent bilinguals spoke Spanish, and 4% spoke German (Amish). The remaining portion of emergent bilinguals represent close to 100 additional language groups, each less than 2% of the total emergent bilingual population.

Although most of Indiana's Spanish-speaking emergent bilinguals are located in urban centers in Indianapolis and in northern Indiana near Chicago, there is a growing representation of Spanish speakers in rural

**Table 3**  
**Description of Indiana Annual Measurable Achievement**  
**Objective (AMAO) Indicators**

AMAO No. 1: Making English proficiency progress	Percentage of Limited English Proficient (LEP) students in Grades K–12 whose performance increased 12 or more scale score points from their most recent prior test to Spring 2014 on the ILEPA/LAS Links
AMAO No. 2: English proficiency attainment	Percentage of LEP students who attained a Level 1–4 of English language proficiency on a prior ILEPA/LAS Links test and increased to an overall/composite Level 5, Fluent English Proficient, and at least a Level 4 in each language domain (listening, speaking, reading, and writing) in Spring 2014 ILEPA/LAS Links.
AMAO No. 3: Adequate Yearly Progress (AYP) on ELA and math ISTEP+	School districts receive an affirmative Spring (date) AYP determination based on meeting the state’s (date) performance and participation targets for English language Arts and Math (STEP+)

*Source.* Indiana Department of Education (2013).

*Note.* ELA = English language arts.

Indiana communities (IDOE Office of English Learning and Migrant Education, 2014). During 2013–2014, Indiana’s total K–12 enrollment was 1,047,430. Of this total, 10.1% (106,254) were Hispanic, and 5.3% (55,776) were classified as ELLs, namely, emergent bilinguals (IDOE, 2015a).

The LAS Links was first administered in Indiana in spring 2006. At this time, Indiana was struggling to meet NCLB Title III AMAO requirements. In particular, the IDOE was having difficulty setting appropriate AMAOs without adequate longitudinal data (Levinson et al., 2007). Table 3 provides descriptions of Indiana’s AMAOs (IDOE, 2013).

To comply with NCLB, Indiana policymakers established the state’s first set of AMAO indicators in 2007, based on a comparison of student English acquisition and attainment data from the 2005–2006 and 2006–2007 school years (Pinkos, 2007). Based on their examination of matched student records between the two school years, policymakers at the IDOE determined that 12 LAS Links scale points would be an appropriate amount of English progress for schools to have their students classified as LEP make in order to achieve AMAO No. 1 (progress toward English proficiency). Policymakers determined that to make AMAO No. 2 (English proficiency attainment), schools must demonstrate that a certain percentage of their emergent bilinguals reached Overall Level 5 and at least Level 4 in the subdomains of listening,

*Table 4*  
**Percentage of Indiana Students Classified as LEP  
 Required to Meet AMAO Nos. 1 and 2**

School Year	AMAO No. 1 English Proficiency Progress Target (%)	AMAO No. 2 English Proficiency Attainment Target (%)
2007–2008	40	8
2008–2009	40	8
2009–2010 <sup>a</sup>	45	11
2010–2011	47	12
2011–2012	49	13
2012–2013	51	14
2013–2014	53	16

<sup>a</sup>During 2009–2010, the U.S. Department of Education required the Indiana Department of Education to reexamine their AMAO cut scores.

*Note.* LEP = Limited English Proficient; AMAO = Annual Measurable Achievement Objective.

reading, writing, and speaking. School attainment of AMAO No. 3 was based on the percentage of emergent bilinguals (students classified as LEP or FEP) who passed the state academic test, the ISTEP+.

Under NCLB, the percentage of students required to make AMAO Nos. 1 and 2 increased annually. Table 4 provides the increasing percentage of Indiana students (classified as LEP) required to meet AMAO Nos. 1 and 2 between the 2007–2008 and 2013–2014 school years. During 2009–2010, the IDOE reset the state's AMAO Nos. 1 and 2 because the US DoED (2008) released a Notice of Interpretations (NOI) that required that all LEP students be included in AMAO determinations and reinforced the requirement to increase performance targets annually.

Since Indiana implemented these AMAOs, an increasing number of school districts or local educational agencies have failed to make one or more of these objectives. If a district failed to make its AMAOs for two consecutive years, the state could subject the district to a number of sanctions. Following the reauthorization of the ESEA in 2015, the IDOE continues to hold schools accountable for AMAO Nos. 1 and 2. However, during the transitional period to ESSA, the state is not requiring schools to make AMAO No. 3.

Indiana's AMAOs present specific English language learning goals for school districts but do not consider the variation in emergent bilingual populations between schools. For example, a district with a high density of newcomer, Level 1 students has a lesser probability of making AMAO No. 2 as less of their students are likely to achieve LAS Links Level 5 or proficiency. Also, a district with a high density of Level 4 students, who are the most likely to reach Level 5 and be reclassified FEP, may struggle to do so due

to the natural rate of English language acquisition (Burke, 2015). Furthermore, increasing AMAO requirements by a certain number of percentage points per year does not account for the fluctuating demographics of many schools. School demographics can change dramatically each year as some emergent bilinguals are reclassified FEP and exit the LEP subgroup while simultaneously new emergent bilinguals enter these schools and the LEP subgroup. Burke et al. (2014) analyzed statewide student performance data and Adequate Yearly Progress (AYP) reports from Indiana schools and school districts between 2002 and 2011. Results indicated that Indiana schools serving large emergent bilingual populations were more likely to also serve low-SES students and less likely to make AYP.

## Methods

The primary question guiding this study asks: How does emergent bilingual time to reclassification differ based on student background characteristics? To answer this question, we used descriptive statistics and discrete-time survival analysis to compare the proportion of emergent bilinguals reclassified and the odds of reclassification for one group of students in comparison to another group, keeping other variables the same in the model. The sample included statewide data from emergent bilinguals in Grades 3 to 7 over a five-year period.

### Instrument

The instrument used in this study was the LAS Links English proficiency test, which consists of two tests: a placement test taken by new students and an annual test that is used to measure English language proficiency and acquisition (IDOE, 2011). The test is used to assess the English language domains of speaking, listening, reading, and writing. These scores are averaged to generate an Overall score (Abedi, 2007) and used to determine the ELP level of emergent bilinguals within each of the following grade spans: K–1, 2–3, 4–5, 6–8, and 9–12. The LAS Links levels correspond to the following categories of English proficiency: Level 1: Beginning, Level 2: Early Intermediate, Level 3: Intermediate, Level 4: Proficient, and Level 5: Above Proficient (CTB-McGraw Hill, 2007).

### Description of the Data

We used longitudinal student data from the 2008–2009 to 2012–2013 school years to create an estimate of the proportion of emergent bilinguals classified as LEP predicted to reclassify FEP in the state of Indiana and the odds of their reclassification. One cohort of emergent bilinguals who were in Grade 3 during the 2008–2009 school year were followed until Grade 7 at the end of the 2012–2013 school year, contributing to five waves of student data. Significant changes were made to the LAS Links prior to 2008,



*Table 5*  
**Sample Demographics and Percentage Reclassified (Grades 3–7)**

Variable	Whole Sample		Proportion Reclassified	
	Percentage	<i>N</i>	Percentage	<i>N</i>
Female	48	1,907	34	641
Male	52	2,103	32	663
Spanish-speaking	79	3,155	29	906
Special education eligibility	10	382	18	67
Free/reduced-price lunch	85	3,402	30	1,013
All emergent bilingual students	100	4,010	33	1,304

*Note.* The longitudinal data used to create this table is from one cohort of emergent bilinguals in Grades 3 through 7 during the 2008–2009 to 2012–2013 school years.

including resetting the test's cut scores; therefore, a longitudinal analysis was only possible with data collected after 2008. In addition, in 2014 when the data were collected, Indiana was in the process of making numerous changes to its accountability system and statewide assessments as well as transitioning from using the LAS Links to a different ELP test. In conversations with IDOE officials, it was determined that the Grade 3 through Grade 7 span was the most stable time period to examine the ELP test performance in the state. Lastly, we did not have access to several background variables, including the students' initial English proficiency upon entry. Therefore, we did not include covariates that could be associated with time to reclassification. These limitations should be considered when interpreting the results of this study.

The descriptive statistics of the student sample used in this study are reported in Table 5. As Table 5 indicates, a majority of the students were Spanish-speaking and eligible for free or reduced-price lunch (FRL), a school metric of poverty. Ten percent of the emergent bilinguals were also classified as SPED. We considered students to be FRL or SPED if they were classified as such during the time period examined. In our preliminary analyses, we found Spanish-speaking students underperformed both in English language arts and mathematics. They also scored lower on the LAS Links than emergent bilinguals with other first languages. Additionally, because the non-Spanish speaking emergent bilinguals in Indiana comprise numerous small groups (German-speaking Amish students constituted approximately 4% of the sample, and each additional non-Spanish speaking group constituted less than 2% of the sample), we considered Spanish-speaking students as a single subgroup in our models.

### **Median Time to Reclassification**

We employed survival analysis because it allows the investigation of how the odds of reclassification vary as a function of time and other predictors, such as student demographic characteristics (Singer & Willett, 2003). We pooled Indiana district data into a single analytical file to increase the sample size.

To isolate the unique associations of individual predictors, it is necessary to include all predictors simultaneously in a single predictive model that estimates the likelihood of reclassification for each student. These likelihood predictions can be used to reconstruct the predicted cumulative distribution functions for studying how each predictor affects the cumulative distributions while keeping all other factors constant. In essence, these models can provide a more meaningful assessment of how the different combinations of student characteristics are associated with reclassification rates (Greenberg Motamedi, Singh, & Thompson, 2016). All Grade 3 students in the sample were included in the survival analysis, regardless of whether they stayed in the data set through seventh grade. Students who had been reclassified within that period were coded as having the event of reclassification. Those who had not been reclassified were censored at the end of the seventh grade. Because the estimate of gender had a non-statistically significant finding, we did not include gender as a predictor for estimating the proportion of reclassified students. In other words, the sample includes both male and female, and the graph could equally represent male or female students.

### **Likelihood of Reclassification**

It is important to develop a predictive model that best captures the data in order to model the likelihood of reclassification, given the variables of interest. The likelihood of reclassification is also known as the odds that an emergent bilingual will reclassify over the studied period. The odds ratio provides a ratio of the likelihood of reclassification between two groups while controlling for other characteristics in the model. In this study, the outcome is students' reclassification. Interpreting the odds ratio requires the use of a reference group and therefore is a unit free metric, meaning we are comparing the likelihood of reclassification of one group to a reference group. The odds ratio makes interpreting the effect sizes of the predictors easier to communicate and understand. For example, if the odds ratio of gender is 2.0 with the reference group being males, then we can say that females are twice as likely to be reclassified as males in any given year. However, the odds ratios may differ from year to year if the non-reclassified emergent bilinguals in both groups start to differ in their rates of reclassification. In such cases, an interaction effect between the predictor and time will also need to be modeled (Greenberg Motamedi et al., 2016). To calculate the likelihood of reclassification and because the hazard needs to be calculated before it can be converted to the survival function, we had to first determine

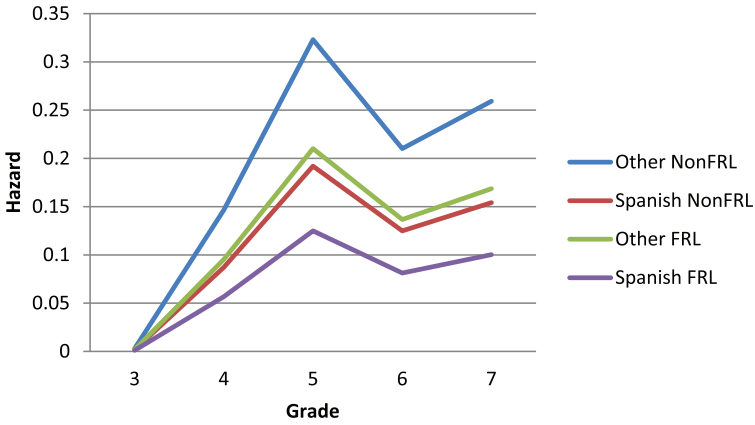


Figure 1. Hazard functions of the fitted model showing four different student profiles.

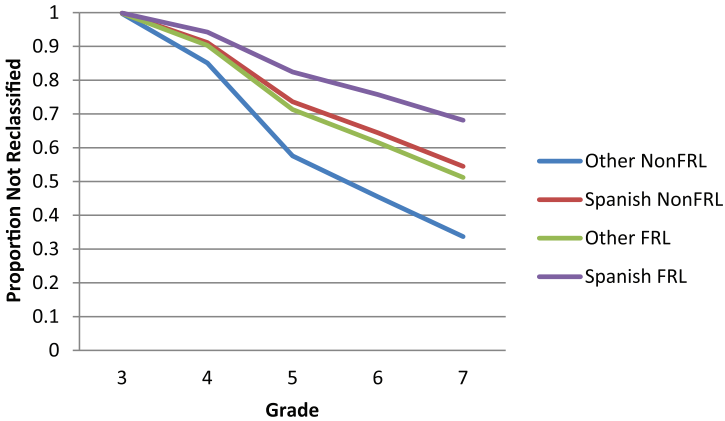


Figure 2. Survival functions of the fitted model showing four different student profiles.

the hazard of being reclassified in each grade period (Figure 1). The likelihood of reclassification can vary over the five-year period; for example, it was highest in the third year (see Figure 2).

### Cumulative Proportion of Reclassified Students

The cumulative proportion of reclassified students is the accumulated sum of students being reclassified over the five-year period. The cumulative

proportion is best illustrated graphically as a function of time, showing the predicted cumulative percentage of emergent bilinguals by the end of each school year of study. The predicted median survival time—the value of time that predicts 50% of the students reclassifying—can be easily obtained from the cumulative distribution graphs.

### Specifying the Survival Model

We explored different survival models, starting with the most general model (the piece-wise function) (Singer & Willet, 2003) that included dummy variables representing the different time periods. We created dummy variables with one period as a reference year. However, the general model did not converge appropriately. We then explored polynomial functions and arrived at a final model that converged appropriately. This model was a cubic polynomial function that resembles the final cubic models that Slama (2014) reported.

### Correcting for Standard Error Estimates

The estimate for the between-school difference was statistically significant and therefore justified using a nested discrete-time survival model. Ignoring the clustering of students within schools typically does not change the parameter estimates but tends to cause an underestimation of the standard errors, thereby contributing to a higher chance of making Type I errors (Singh, 2013, 2015). In the following, we report the equation for the logit hazard reclassification equation showing the Level 1 variables.

### Logit Hazard Equation for Survival Analysis

$$\text{Logit hazardReclassification}_{ij} = \alpha_0 + \alpha_1 \text{Period}_{ij} + \alpha_2 \text{Period}^2_{ij} + \alpha_3 \text{Period}^3_{ij} + \alpha_4 \text{Male}_{ij} + \alpha_5 \text{Spanish}_{ij} + \alpha_6 \text{SES}_{ij} + \alpha_7 \text{SPED}_{ij} \quad (1)$$

Hazard ( $b$ ) is the quantity used to evaluate the risk of event occurrence (reclassification) in each discrete time period in the model. Therefore,  $b(t_{ij})$ , the discrete-time hazard, is the conditional probability that a student experiences the event (reclassification) in time period  $j$ , given the student did not experience it in any earlier time periods. The hazard (or reclassification) is highest during the third year for all students (Figure 3).

Logit hazard reclassification logit  $b(t_{ij})$  transforms hazard values that are bounded between 0 and 1. This improves the distributional behaviors, preventing inadmissible values and enabling extreme values to be more comparable (Singer & Willett, 2003). The parameter estimates from the model were used to predict the cumulative proportion of students who reclassify in each time period. To illustrate, we provide an example to show how we obtained

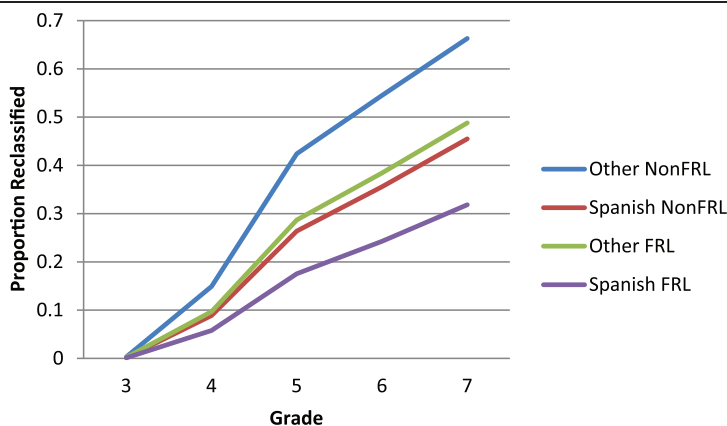


Figure 3. Graph illustrating the cumulative proportion of students reclassifying for four different student profiles.

the survival function over a three-year period for students who are speakers of other languages and who are not eligible for free or reduced-price lunch. The estimates from the predictive model can be used to predict the hazard probabilities for each of the first three years:  $b(t_1)$ ,  $b(t_2)$ , and  $b(t_3)$ . The estimated survival probability can then be calculated as:

$$S = [1 - ht_1][1 - ht_2][1 - ht_3]. \quad (2)$$

In this equation,  $1 - b(t_1)$  is the probability of survival in the first year;  $1 - b(t_2)$  is the probability of survival in the second year, conditional on having survived the first year; and  $1 - b(t_3)$  is the probability of survival in the third year, conditional on having survived to the second year.

For Time 1,  $b(t_1) = .003$ , for Time 2,  $b(t_2) = .147$ , and for Time 3,  $b(t_3) = .323$ . Inputting the values in the survival function, the survival probability is estimated for the first three years to be 58%. Finally, to obtain the cumulative probability that students are reclassified within the first three years, we took the complement of the probability of survival after three years ( $1 - \text{survival probability}$ ). Thus, the cumulative proportion who reclassify after three years is 42%.

## Results

In this study, data were analyzed from a starting sample of 4,010 (Table 5) emergent bilinguals from when they were in Grade 3, with approximately 79% of the sample classified as Spanish-speaking. This analysis focused on

Table 6  
**Results of Fitting Discrete-Time Hazard Models to the Time to  
 Reclassification for the Cohorts**

Variable	Parameter	Logit	Odds Ratio
Male	$\alpha_4$	-.08n.s. (.06)	.93 (.06)
Socioeconomic status	$\alpha_5$	-.43*** (.08)	.65*** (.05)
Spanish	$\alpha_6$	-.52*** (.08)	.60*** (.05)
Special education	$\alpha_7$	-.90*** (.13)	.41*** (.05)
Between-school variance		Estimate .48*** (.05)	

Note. The estimates for the time coefficients were not included, focusing only on the estimates for the question variables.

\*\*\*  $p < .0001$ .

differences between Spanish-speaking and non-Spanish speaking emergent bilinguals, statistically controlling for SES status and SPED status.

We report the coefficients for each of the predictors in our model in Table 6. We excluded the estimates for the time coefficients for a clearer presentation of the results related to the research question. A student's gender did not significantly predict the likelihood of reclassification when all other predictors were also included in the model. In short, statistically controlling for other factors, male and female students have similar rates of reclassification.

As Table 6 illustrates, Spanish-speaking students were 40% less likely to reclassify than their non-Spanish speaking peers during Grades 3 to 7, keeping other factors constant. Students eligible for free or reduced-priced lunch when in third grade had a 35% lower likelihood of being reclassified than their higher SES counterparts. As expected, special education students had much lower odds of being reclassified, as much as having a 59% lower likelihood for reclassification when compared to their non-SPED peers when all other factors were kept the same. We checked for statistical significance for two-way and three-way interaction effects and found none. Thus, the effects are additive and not multiplicative.

Next, we modeled the predicted cumulative proportion of reclassified students across the following demographic groups: emergent bilinguals with home languages other than Spanish and eligible for free or reduced-priced lunch, emergent bilinguals with home languages other than Spanish who were not eligible for free or reduced-price lunch, emergent bilinguals with Spanish as a home language who received free or reduced-price lunch, and emergent bilinguals with Spanish as a home language who did not receive free or reduced-price lunch.

Figure 3 provides the predicted cumulative proportion of emergent bilinguals reclassified. As Figure 3 illustrates, on average, emergent bilinguals who are speakers of other languages and who do not receive free

or reduced-price lunch are expected to be twice as likely to reclassify as emergent bilinguals who are Spanish speakers and who receive free or reduced price lunch. Statistically controlling for all predictors in the model, we calculated the reduction in the likelihood of reclassification attributed uniquely to a single variable by subtracting its odds ratio from 1 and multiplying by 100, namely,  $100(1 - \text{odds ratio})$ . Receiving free or reduced-price lunch will reduce the likelihood of reclassification by 35% (odds ratio = .65), and being a special education student will reduce the likelihood of reclassification by 59% (odds ratio = .41). Most emergent bilinguals entering middle school will still need emergent bilingual services, and the majority will be Spanish-speaking students.

## Discussion

The results of this study build on previous research that examined the factors associated with emergent bilingual time to reclassification. It is important to reiterate that care should be taken when examining the findings of this study as our analysis was limited to one cohort of students during a five-year period. While the inclusion of additional student cohorts, variables, and years of data would strengthen the study, several of the study's findings are noteworthy and hold implications for teachers, school administrators, and policymakers. This is especially true in light of Indiana's recent decision to join the World-Class Instructional Design and Assessment (WIDA) Consortium. Currently, Indiana has adopted the WIDA English language development standards and has replaced the LAS Links with the WIDA English language proficiency test, the Assessing Comprehension and Communication in English State-to-State for English Language Learners (ACCESS for ELLs). This study captures a unique period of time that can inform future developments in policy for emergent bilinguals. In addition, this is the only longitudinal study to date that examines time to reclassification in Indiana.

### Factors Related to Time to Reclassification

Findings from this study indicate that the rate of English language acquisition of emergent bilinguals whose home language is Spanish may be influenced by factors that do not affect emergent bilinguals with other home languages. This study contributes to the argument made by many that emergent bilinguals are not a homogenous group and their conditions for English acquisition and academic performance are not stable. Moreover, findings from this study indicate that the factors influencing the time required to acquire English proficiency and reach state academic standards needs to be investigated. Using the mean time of students reclassifying does not provide reliable and unbiased estimates of time to reclassification. Likewise, conducting group comparisons, such as a descriptive analysis, does not

provide an accurate indication of the unique challenges experienced by emergent bilinguals from various home-language backgrounds, nor does it provide an accurate measure of the unique trajectories to English proficiency experienced by emergent bilinguals from various home-language backgrounds.

Findings from this study suggest that Indiana's Spanish-speaking emergent bilinguals experience different trajectories to English proficiency compared to emergent bilinguals from other home-language backgrounds. We ascertained this estimate by statistically controlling for the confounders of SPED and SES and taking into account the nested structure of the data where students are naturally clustered within schools. However, these different trajectories are likely due to the influence of additional and unique challenges facing Spanish-speaking students. Further studies that investigate the variation within Indiana's Spanish-speaking population need to be conducted. The time to reclassification for Indiana's Spanish-speaking emergent bilinguals may be affected by other background variables that were not included in this study, including country of origin, generational status, immigration status, parent education level, and the institutional conditions of schools. Additionally, the rate of reclassification for Spanish-speaking emergent bilinguals may be hindered if these students attend "triplely segregated" schools, containing large concentrations of poor, minority, and emergent bilingual students (Orfield, 2001; Orfield & Lee, 2006; Rios-Aguilar et al., 2012; Slama, 2014).

### **Emergent Bilinguals Are Not a Homogenous Population**

Findings from this study corroborate prior research that indicated that emergent bilinguals are not a homogenous population (Roberts et al., 2010; Stevens, Butler, & Castellon-Wellington, 2000). Researchers interested in improving school accountability systems have argued that these systems should reflect the diversity of this subgroup (Cook & Zhao, 2011). For example, Cook et al. (2008) suggested the development of objectives that consider grade level, English proficiency level upon entering school, and the natural rate of second language acquisition. Findings from Cook et al.'s study indicate that emergent bilinguals in lower grades with lower levels of English proficiency achieved higher levels of proficiency more quickly than those who were in higher grades with higher ELP levels.

Federal law has allowed states to create cohorts within the LEP subgroup and establish different targets for each cohort; however, historically the law has limited states to establishing separate cohorts based solely on the amount of time students have had access to English language instruction and programming (Cook & Zhao, 2011; US DoED, 2008). Given these limitations, Cook (2010) examined the use of a weighted formula based on the amount of time spent in a language program. Cook found that the weighted AMAO No. 2 model lowered the expectations for students who had spent



less than five years in a language program; however, in this model, the performance of students who had more than five years of programming negatively affected their districts' AMAO No. 2 results.

The Colorado Department of Education (2014) implemented the use of adequate growth percentiles to measure individual student English language acquisition and attainment. The methods Colorado uses to calculate English language growth involve calculating student growth percentiles, which are calculated using two years of student test scores. Emergent bilinguals are placed in statewide student cohorts based on their initial ELP test score. Then, students' current scores are compared to their previous scores and the scores of students who shared their initial scores. Based on these calculations, annual ELP test score targets are set for each emergent bilingual (Colorado Department of Education, 2014). Although this growth model provides a predictive and transparent formula, it does not include student background variables, such as race, home language, or SES.

In 2012, the IDOE received a federally approved NCLB flexibility waiver, allowing the state to implement an A–F school accountability system (IDOE, 2012). This system included the use of growth models based on the student growth percentiles adopted by Colorado; similar to Colorado's growth model, Indiana's does not include student background variables, including ELP level and home language (Burke, 2014, 2015). Although many argue that growth models have the potential to greatly improve current assessment practices, we are at the beginning stages of understanding the impacts of using growth models for accountability purposes.

Ignoring the factors affecting emergent bilingual academic and ELP test performance can lead school personnel to implement instructional programming and interventions that may be inappropriate for their emergent bilingual populations, meeting the needs of some but not all. However well intended adjustments to current accountability systems are, these systems and schools themselves are limited in their ability to eradicate the plethora of challenges facing Spanish-speaking and Latino emergent bilinguals. In their book *The Latino Education Crisis*, Gándara and Contreras (2009) provide a comprehensive review of the grave societal inequities hindering and harming Latino students. Some of the injustices known to negatively impact the academic performance of many Latino students discussed by Gándara and Contreras include being raised in poverty (Bowles, Gintis, & Groves, 2005) and in communities that lack basic resources such as libraries (Leventhal & Brooks-Counn, 2004), lacking nutrition and dependable health care (Capps, Fix, Ost, Reardon-Anderson, & Passel, 2004), attending crowded and underfunded schools (Rumberger & Gándara, 2004), being placed and retained in a low-level curriculum track (Oakes, 1986), and developing depression and other mental health problems as a result of experiencing racial discrimination (Suárez-Orozco & Suárez-Orozco, 1995). Studies should be conducted in Indiana to examine the conditions both

inside and outside of school for Spanish-speaking students, and the results of these studies should be used to argue for improved conditions.

The fact that about a third of Indiana's Hispanic population lives in poverty (Pew Hispanic Center's ACS, 2011) is unacceptable, and given the state's growing rural Hispanic poor population, immediate steps must be taken to address the causes of this poverty. Lastly, Indiana politicians have passed numerous bills that specifically hurt Latinos and emergent bilinguals. Indiana schools had to make significant cuts to their staff and programs as a result of the decision of the legislature to slash approximately \$300 million from public education in 2009. In 2011, the legislature also passed two bills that prevented undocumented immigrants raised in Indiana from receiving in-state tuition benefits to attend state universities (Garau, 2015). These actions have severe impacts on the morale and lives of Latino students in the state.

### **Language Policies That Emphasize Expediting Reclassification Neglect Emergent Bilinguals' Long-Term Needs**

As in other states, Indiana's accountability system places tremendous pressure on schools to expedite the rate of emergent bilingual reclassification. As stated in NCLB and ESSA, the intention of mandating the attainment of English language objectives is to help emergent bilingual youth succeed in school and beyond graduation, but the reality is that policies that emphasize speed to reclassification and mandate short-term gains diminish opportunities for instructional and curricular alignment. Further, efforts to expedite the rate of reclassification have led to erroneous decisions to implement English-only language programs over historically instituted bilingual programs (Menken & Solorza, 2014a, 2014b). Research shows that quicker reclassification may not be the best approach for long-term academic achievement. Emergent bilinguals in Indiana would benefit from programming designed to help them reach long-term goals, such as high levels of literacy and oral communication in both English and their home language. This programming would need to be responsive to the grave institutional inequities that Spanish-speaking emergent bilinguals experience.

Lastly, despite the known benefits of bilingual education for Spanish-speaking emergent bilinguals (García & Kleifgen, 2010), the dominant education model in Indiana is English-only instruction. None of the districts in our sample reported to the IDOE that they employed bilingual education. Instead, 100% of the districts reported using a version of English-only programming, including English as a Second Language, English as a New Language, Sheltered English, and Structured Immersion. Despite the prevalence of English-only programming throughout Indiana, in 2015 the state moved in a positive direction by adopting a Dual Language Pilot Program (2015) and the State Certificate of Biliteracy (2015). These initiatives legitimize and encourage the implementation of bilingual programming.

There has been an increase in dual language programming across the country (Wilson, 2011), and the Office of English Language Acquisition offers grants to support bilingual and multilingual programming. By encouraging high-quality bilingual programming, Indiana has the potential to remedy, at least in part, the academic and linguistic challenges facing Spanish-speaking emergent bilinguals. Moreover, by supporting bilingual programming, Indiana will be acknowledging and embracing the linguistic assets of the state's Spanish-speaking communities and emergent bilinguals.

## Conclusion

We developed a measure that more accurately measures the likelihood of reclassification for different emergent bilingual populations. Findings from our model, which controlled for the confounders of SPED and SES, indicated that Spanish-speaking emergent bilinguals took the longest to acquire English proficiency and be reclassified FEP. Our findings indicate that emergent bilinguals with Spanish as a home language face additional and unique challenges compared to students with other home languages. This is notable given that Indiana's present accountability system treats emergent bilinguals as a monolithic group and Spanish is the second most widely spoken language in the home, both in Indiana and nationally. Based on our findings, we recommend future studies that more closely examine how these and other variables affect time to reclassification. In Indiana, studies that examine the additional individual and institutional factors affecting Spanish-speaking students need to be conducted in order to determine how best to meet these students' needs. If the duration of NCLB, 15 years, is an indicator, ESSA may be in effect for a significant portion of current students' lives; therefore, there is an urgent need for additional studies like ours that use state-level data to help determine the factors affecting time to reclassification in states with different emergent bilingual populations and reclassification criteria. We are optimistic that by considering additional information, stakeholders will modify educational policies to respond to students' diverse needs and the complex realities of schools and communities.

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