# English learner student characteristics and time to reclassification: An example from Washington state

*Jason Greenberg Motamedi*
*Malkeet Singh*
*Havala Hanson*
Education Northwest

This report summarizes findings from a 2016 study that estimated the time it takes English learner students to be reclassified as former English learner students in seven Washington state school districts. The study found that it took students who entered kindergarten as English learner students a median of 3.8 years to develop the English proficiency necessary to be reclassified as former English learner students. English learner students entering kindergarten with advanced English proficiency were more likely than those entering with lower levels of English proficiency to be reclassified in their first eight years of school, and female English learner students were more likely than male English learner students to be reclassified in their first eight years of school. Speakers of Chinese, Vietnamese, or Russian or Ukrainian (combined) were more likely than speakers of Somali or Spanish to be reclassified in their first eight years of school. This study's findings may help school districts and state education agencies set expectations for the amount of time it takes English learner students to gain English proficiency.

**ies** NATIONAL CENTER FOR EDUCATION EVALUATION AND REGIONAL ASSISTANCE
Institute of Education Sciences
U.S. Department of Education

**REL** NORTHWEST
Regional Educational Laboratory
At Education Northwest

## Why this study?

English learner students who have not reached proficiency in English struggle to learn grade-level content (Halle, Hair, Wandner, McNamara, & Chien, 2012; Kieffer, 2011), take longer to graduate, and graduate at much lower rates than do non–English learner students (Callahan, 2013; Gwynne, Pareja, Ehrlich, & Allensworth, 2012; Kim, 2011). Knowing how long it takes students to develop English proficiency can provide educators with a measure of students' progress and may help identify students who are struggling to reach proficiency. State-level policymakers responsible for establishing English learner policies and accountability targets may also be interested in knowing how long it takes students to develop English proficiency.

In 2015 English learner students accounted for 20 percent of the student population in seven Washington state school districts (Community Center for Education Results, 2015). These districts (Auburn, Federal Way, Highline, Kent, Renton, Seattle, and Tukwila) participate in the Road Map Project, a communitywide initiative aimed at improving student achievement from cradle to college and career. To understand more about its English learner students, the Road Map Project English Language Learner Workgroup requested that Regional Educational Laboratory (REL) Northwest estimate the number of years it takes English learner students to reach a grade-specific score on the state's English language proficiency assessment and be reclassified as former English learner students.

This brief summarizes the findings of Greenberg Motamedi, Singh, and Thompson (2016) and compares them with the findings of a previous descriptive study (Greenberg Motamedi, 2015). Both studies estimated time to reclassification for English learner students in the Road Map Project districts but used different samples of students, different methods, and different statistics to summarize the results. The descriptive study estimated the mean time to reclassification, while Greenberg Motamedi, Singh, and Thompson (2016) focused on the median time to reclassification—that is, the amount of time it took for 50 percent of the students to be reclassified—using a statistical model to predict the time to reclassification for all English learner students, including those who were not reclassified during the study period, from 2005/06 to 2012/13. The model also isolated three student-level predictors that are associated with longer times to reclassification.

## What the study examined

The study sample included 16,957 English learner students who entered kindergarten between 2005/06 and 2011/12 in the seven Road Map Project districts (approximately 80 percent of all K–12 English learner students in the Road Map Project districts in 2012/13). The five language groups most prevalent among these English learner students were Spanish, Vietnamese, Russian or Ukrainian (combined), Somali, and Chinese (Cantonese and Mandarin). The study used a statistical model to estimate the median time to reclassification and the likelihood of reclassification in the first eight years of school for different groups of English learner students (box 1).

## What the study found

This section presents four findings on how long it takes English learner students to be reclassified as English proficient and how the likelihood of reclassification within eight years varies among students with different characteristics. It also discusses why these findings differ from those reported in the descriptive study on time to reclassification (Greenberg Motamedi, 2015).

## The median time to reclassification for English learner students who entered kindergarten in a Road Map Project district between 2005/06 and 2011/12 was 3.8 years

It took 3.8 years for 50 percent of the English learner students who entered kindergarten in a Road Map Project district to be reclassified as former English learner students. Median time to reclassification and likelihood of reclassification within eight years varied by English proficiency at entry to kindergarten, gender, and home language, as discussed in the following sections.

## English learner students with advanced English proficiency at entry to kindergarten were reclassified in fewer years than were students with lower levels of English proficiency at entry

English learner students entering kindergarten with advanced English proficiency took a median of 3.0 years to be reclassified, compared with 4.4 years for English learner students entering with beginning, advanced beginning, or intermediate proficiency. English learner students entering kindergarten with advanced English proficiency were also more likely than students with lower levels of proficiency to be reclassified within the first eight years of school. Even after student gender, home language, cohort, and school were taken into account, English learner students with advanced English proficiency at entry to kindergarten were 185 percent more likely than students entering with beginning, advanced beginning, or intermediate English proficiency to be reclassified in their first eight years of school (table 1).

## Female English learner students were reclassified in fewer years than were male English learner students

It took female English learner students a median of 3.6 years to be reclassified, compared with 4.1 years for male English learner students (see table 1). Even after English proficiency at entry to kindergarten, home

**Table 1. Median years to reclassification and likelihood of reclassification within eight years for English learner students who entered kindergarten in a Road Map Project school district, 2005/06–2012/13**

| Student subgroup | Total sample | | Median years to reclassification | Likelihood of reclassification within eight years |
| | Number | Percent | | |
|---|---|---|---|---|
| Total sample | 16,957 | 100 | 3.8 | |
| **English proficiency at entry to kindergarten** | | | | |
| Advanced proficiency | 6,283 | 37 | 3.0 | 185 percent more likely to be reclassified than students with beginning, advanced beginning, or intermediate proficiency** |
| Beginning, advanced beginning, or intermediate proficiency | 10,674 | 63 | 4.4 | Comparison group |
| **Gender** | | | | |
| Female | 8,128 | 48 | 3.6 | 39 percent more likely to be reclassified than male** |
| Male | 8,829 | 52 | 4.1 | Comparison group |
| **Home language** | | | | |
| Chinese (Cantonese and Mandarin) | 482 | 3 | 2.8 | 190 percent more likely to be reclassified than Spanish speakers** |
| Vietnamese | 1,820 | 11 | 2.9 | 102 percent more likely to be reclassified than Spanish speakers** |
| Russian or Ukrainian | 1,442 | 9 | 3.2 | 39 percent more likely to be reclassified than Spanish speakers** |
| Spanish | 8,068 | 48 | 3.7 | Comparison group |
| Somali | 1,215 | 7 | 3.9 | No difference from Spanish speakers |
| Other languages | 3,930 | 23 | 5.1 | 78 percent less likely to be reclassified than Spanish speakers** |

** Significant at $p < 0.01$.

**Note:** Median years to reclassification and likelihood of reclassification within eight years are based on a discrete-time survival analysis that included statistical controls for initial English proficiency, gender, home language, student cohort, and school fixed effects. The statistical model adjusted the standard errors for repeated observations of students and clustering of students within schools. Percentages may not sum to 100 because of rounding.

**Source:** Authors' analysis based on Washington Office of Superintendent of Public Instruction data from 2005/06 to 2012/13.

language, cohort, and school were taken into account, female English learner students were 39 percent more likely than male English learner students to be reclassified in their first eight years of school.

### Speakers of Chinese, Vietnamese, or Russian or Ukrainian (combined) were reclassified in fewer years than were speakers of Somali, Spanish, or other languages

Chinese speakers had the shortest median time to reclassification (2.8 years), followed by speakers of Vietnamese (2.9 years), Russian or Ukrainian (3.2 years), Spanish (3.7 years), and Somali (3.9 years). Speakers of other languages (159 languages in total) had the longest median time to reclassification (5.1 years). Even after initial English proficiency, gender, cohort, and school were taken into account, Chinese, Vietnamese, and Russian or Ukrainian speakers were more likely to be reclassified in their first eight years of school than were Somali and Spanish speakers (see table 1).

### The findings differ from those in the earlier descriptive study on time to reclassification

The descriptive study (Greenberg Motamedi, 2015) found that the mean time to reclassification was 3.2 years for English learner students who entered kindergarten in a Road Map Project district and that

85 percent of these students were reclassified between 2000/01 and 2012/13. In contrast, Greenberg Motamedi, Singh, and Thompson (2016) found that the median time to reclassification was 3.8 years for English learner students who entered kindergarten in a Road Map Project district and that about 84 percent were predicted to be reclassified in eight years.

The two studies used different student samples; however the different findings do not appear to be attributable to the samples. The descriptive study used a sample of 6,944 English learner students who entered kindergarten in a Road Map Project district from 2000/01 to 2007/08. Greenberg Motamedi, Singh, and Thompson (2016) used a sample of 16,957 English learner students who entered kindergarten in a Road Map Project district from 2005/06 to 2011/12. But the demographic characteristics of the two samples were not appreciably different (for example, about 48 percent of both samples were Spanish-speaking English learner students), and the overall patterns of reclassification for groups of English learner students in both samples were similar. This suggests that the different findings are a result of the different methods used to produce the estimates and the different statistics used to summarize the results.

The descriptive study's calculation of the mean time to reclassification included only students who had already been reclassified by 2012/13. As a result, the mean of 3.2 years is a valid estimate of time to reclassification only for the 85 percent of students who were reclassified during the study period. In contrast, Greenberg Motamedi, Singh, and Thompson (2016) used discrete-time survival analysis, which predicts time to reclassification for all students, even those who were not reclassified during the study period. Including English learner students who take more than eight years to be reclassified will result in a higher mean value, and these estimates can then be generalized to all students in the sample, including those who were not reclassified by the end of the study period. The descriptive study could therefore have underestimated the time to reclassification by .6 year (or approximately seven months)—a statistically significant difference —when compared with the estimate derived from Greenberg Motamedi, Singh, and Thompson's (2016) statistical model (3.8 years).

Finally, the two studies used two different statistics to summarize the results. The descriptive study calculated the mean by dividing the total time to reclassification across all students by the number of students. Greenberg Motamedi, Singh, and Thompson (2016) calculated the median by predicting the time to reclassification for 50 percent of students. When data are normally distributed, the mean and median are equivalent. But when the data are not normally distributed, the median provides a better estimate of the amount of time it typically takes students to be reclassified.

## Implications of the study findings

The study findings suggest that districts may want to take a student's English language proficiency at entry to kindergarten, gender, and home language into account in setting expectations for how long it takes English learner students to gain English proficiency. The findings also suggest that state agencies could consider these student characteristics in determining appropriate targets for federal school accountability measures and establishing new proficiency standards for English learner students under the Every Student Succeeds Act of 2015. The time to reclassification predicted in Greenberg Motamedi, Singh, and Thompson (2016) was estimated after other factors were statistically controlled for. Therefore, initial English proficiency, gender, and home language remain correlated with time to reclassification even after taking into account the other student-level characteristics.

The findings also have implications for choosing a method to estimate the time it takes English learner students to be reclassified. Researchers and educators may wish to consider the importance of generalizability to their analysis when choosing a method. Findings from descriptive studies that calculate the mean time

to reclassification may not be generalizable to the whole population because students who were not reclassified during the study period are excluded from the analysis. Discrete-time survival analysis addresses that issue by predicting time to reclassification for all students.

Generalizing the mean time to reclassification to all English learner students may underestimate the amount of time it takes to gain English proficiency. However, the extent of the underestimate will depend on the percentage of students in the sample who were reclassified. As that number increases, the two methods will produce similar estimates. For example, as more years of data become available, more students will be reclassified, and the difference between estimates produced by the two methods will diminish.

## Limitations of the study

Variations in time to reclassification associated with initial English proficiency, gender, and home language are correlations and cannot be interpreted as the cause of the differences. The amount of time it takes students to be reclassified could be correlated to factors that were unavailable for analysis in this study, such as socioeconomic status and parent education levels.

# References

Callahan, R. M. (2013). *The English learner dropout dilemma: Multiple risks and multiple resources* (Report No. 19). Santa Barbara, CA: University of California Santa Barbara, Gevirtz Graduate School of Education, California Dropout Research Project. Retrieved September 3, 2015, from http://www.cdrp.ucsb.edu/pubs_reports.htm.

Community Center for Education Results, Road Map Project. (2015). *The Road Map Project 2015 results report.* Retrieved March 2, 2016, from http://www.roadmapproject.org/wp-content/uploads/2016/02/Road-Map-Project-2015-Results-Report.pdf.

Greenberg Motamedi, J. (2015). *Time to reclassification: How long does it take English language learners in the Washington Road Map school districts to develop English proficiency?* (REL 2015–092). Washington, DC: U.S. Department of Education, Institute of Education Sciences, National Center for Education Evaluation and Regional Assistance, Regional Educational Laboratory Northwest. http://eric.ed.gov/?id=ED558159

Greenberg Motamedi, J., Singh, M., & Thompson, K. D. (2016). *English learner student characteristics and time to reclassification: An example from Washington State* (REL 2016–128). Washington, DC: U.S. Department of Education, Institute of Education Sciences, National Center for Education Evaluation and Regional Assistance, Regional Educational Laboratory Northwest.

Gwynne, J., Pareja, A. S., Ehrlich, S. B., & Allensworth, E. (2012). *What matters for staying on-track and graduating in Chicago Public Schools: A focus on English language learners.* Chicago, IL: University of Chicago, Consortium on Chicago School Research. http://eric.ed.gov/?id=ED532513

Halle, T., Hair, E., Wandner, L., McNamara, M., & Chien, N. (2012). Predictors and outcomes of early versus later English language proficiency among English language learners. *Early Childhood Research Quarterly, 27*(1), 1–20. http://eric.ed.gov/?id=EJ947502

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. http://eric.ed.gov/?id=EJ939251

Kim, J. (2011). *Relationships among and between ELL status, demographic characteristics, enrollment history, and school persistence* (CRESST Report No. 810). Los Angeles, CA: University of California Los Angeles, Graduate School of Education & Information Studies, National Center for Research on Evaluation, Standards, & Student Testing. http://eric.ed.gov/?id=ED527529

Singer, J. D., & Willett, J. B. (2003). *Applied longitudinal data analysis: Modeling change and event occurrence.* New York, NY: Oxford University Press.

## The Regional Educational Laboratory Program produces 7 types of reports

**Making Connections**
Studies of correlational relationships

**Making an Impact**
Studies of cause and effect

**What's Happening**
Descriptions of policies, programs, implementation status, or data trends

**What's Known**
Summaries of previous research

**Stated Briefly**
Summaries of research findings for specific audiences

**Applied Research Methods**
Research methods for educational settings

**Tools**
Help for planning, gathering, analyzing, or reporting data or research