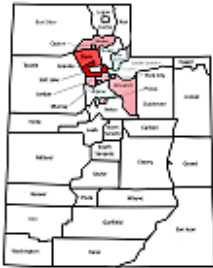


Figure 1. District Participation in DLI Programs (2009-2013)

1-3 Programs 3-6 Programs 6-9 Programs 10-12 Programs

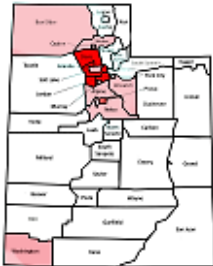
2009



2010



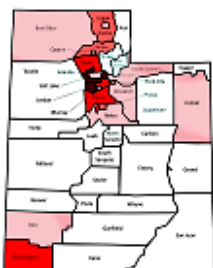
2011



2012



2013



DUAL LANGUAGE IMMERSION PROGRAM PARTICIPATION

This brief describes the districts, schools, and students participating in Utah’s Dual Language Immersion (DLI) program from 2009-2013.¹

In 2007, Utah’s Critical Languages Program was established with the passage of [Senate Bill 80](#). In 2008, as part of the International Education Initiative, [Senate Bill 41](#) established an initial critical language pilot program in elementary schools. Together, these bills provided the basis for the Utah DLI program, which began implementation in 2009. Students participating in the Utah DLI program spend half the school day learning in English and half learning in a target language from a different teacher. As of 2014, the target languages are Chinese, French, German, Portuguese, and Spanish. (Click [here](#) for additional information about the Utah DLI program and program funding.)

To date, many benefits for participating in DLI-type programs have been cited.^{2, 3, 4, 5, 6} However, critics of DLI have raised concerns. Some of those concerns have addressed issues of inequalities in participation, including questions about the participation of students from traditionally marginalized demographic groups and students with disabilities.^{7, 8, 9, 10, 11, 12}

In this brief we describe district, school, and student participation in Utah’s DLI program. We also provide comparative information between schools and students that participated in DLI with those that did not participate in DLI.

District and School Participation

In the first year of DLI implementation in 2009, 25 elementary schools in eight districts offered DLI programs. By 2014, the program had grown to include 118 schools in 22 districts. Figure 1 shows participating districts between 2009 and 2013. Figure 3 on the following page shows participating districts, schools, and languages offered, as of 2014. As shown, schools and districts in urban regions have more DLI programs than schools and districts in rural regions.

Within school districts offering DLI, there were few demographic differences between schools that had and did not have DLI. We analyzed data from 2009 through 2013 and found that schools with DLI were similar demographically to same-district schools without DLI regarding student characteristics such as race, language proficiency, and family income.¹³ The only significant differences between schools with and without DLI were that schools with DLI had more students (see Figure 2). School size difference can be explained by the programmatic requirement that schools with a DLI program must offer a non-DLI option at each grade level.

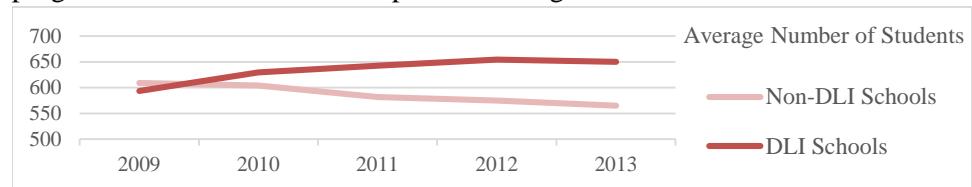
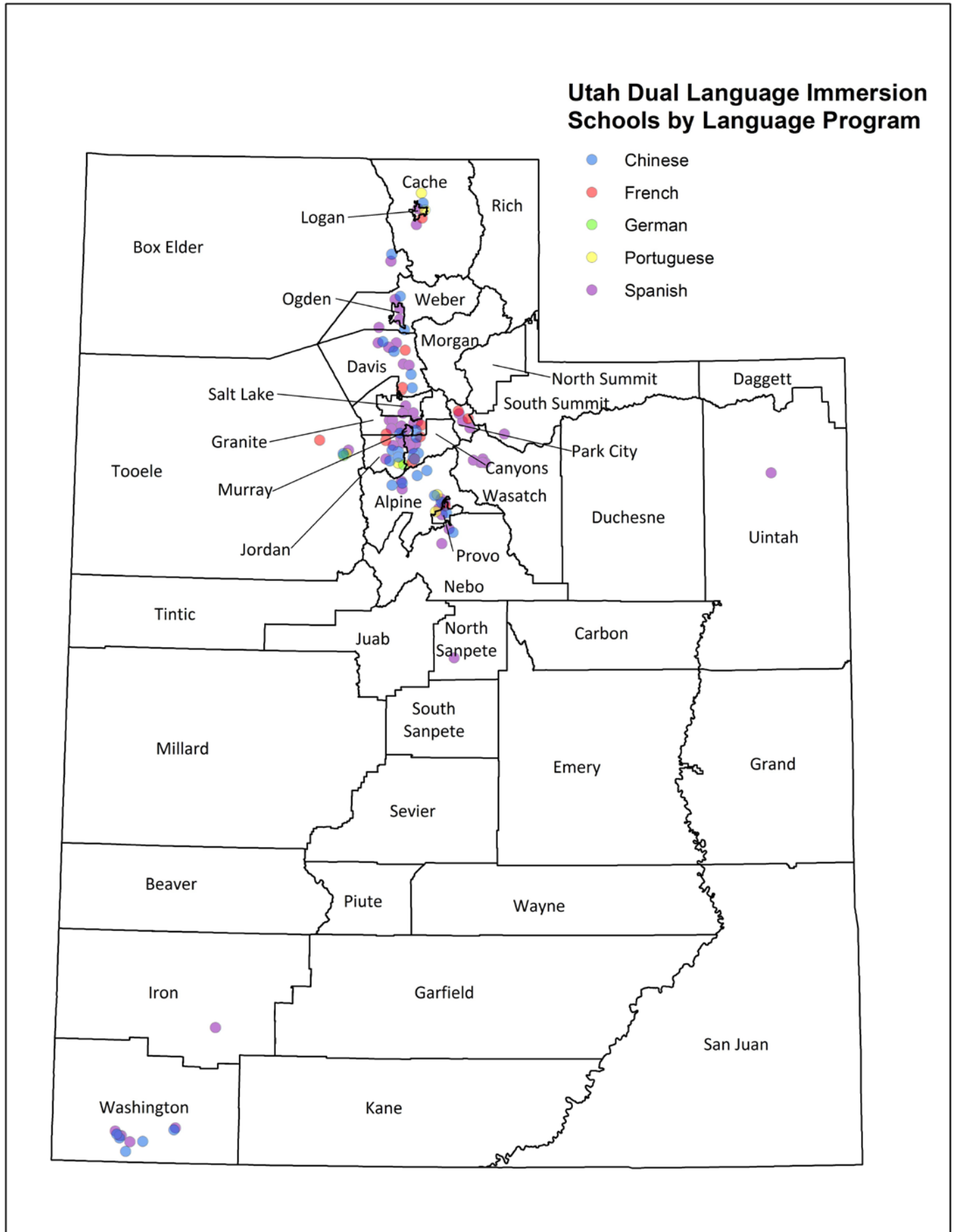


Figure 2. Average Number of Students in DLI and Non-DLI Schools

Figure 3. Location of Schools offering DLI programs and Languages Offered in 2013



Student Participation

While we can identify which schools and districts participated in the DLI program since 2009, data about individual students who participated in DLI were not available until students had third grade assessment scores recorded. Data for this report came from two cohorts of students: those who began DLI in 2009 and were in third grade in 2012 and those who began DLI in 2010 and were in third grade in 2013. In 2012, there were 2,794 third grade students enrolled in schools with DLI. Of the third grade students in schools with DLI in 2012, 1,273 third graders participated in DLI. In 2013, there were 4,871 third grade students in schools with DLI. Of the third grade students in schools with DLI in 2013, 2,016 participated in DLI. Figure 4 shows demographics for all third grade students enrolled in DLI schools and for third grade students participating in DLI in 2012. Figure 5 shows the same demographics as Figure 4 but for third grade students in 2013.

Figure 4. Demographic Characteristics of Third Grade Students in DLI Schools in 2012

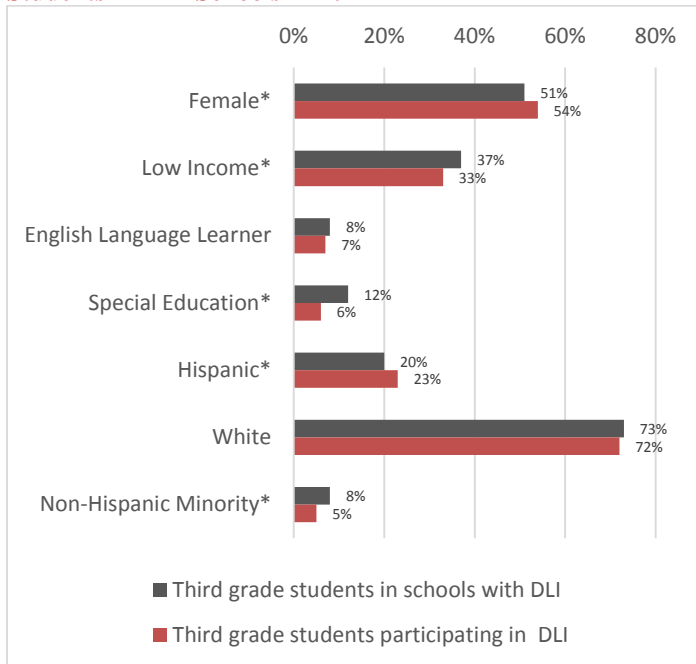
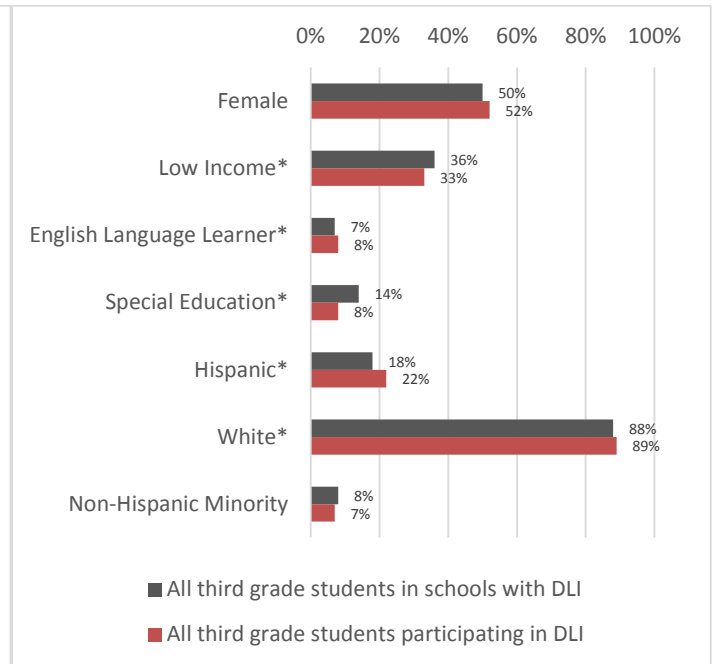


Figure 5. Demographic Characteristics of Third Grade Students in DLI Schools in 2013



* Represents statistically significant differences between the DLI schools overall and the DLI programs.¹⁴ Note: Ethnicity percentages among all students enrolled in DLI schools in 2012 sum to over 100% due to rounding error; ethnicity percentages in 2013 sum to over 100% because students were allowed to select multiple categories.

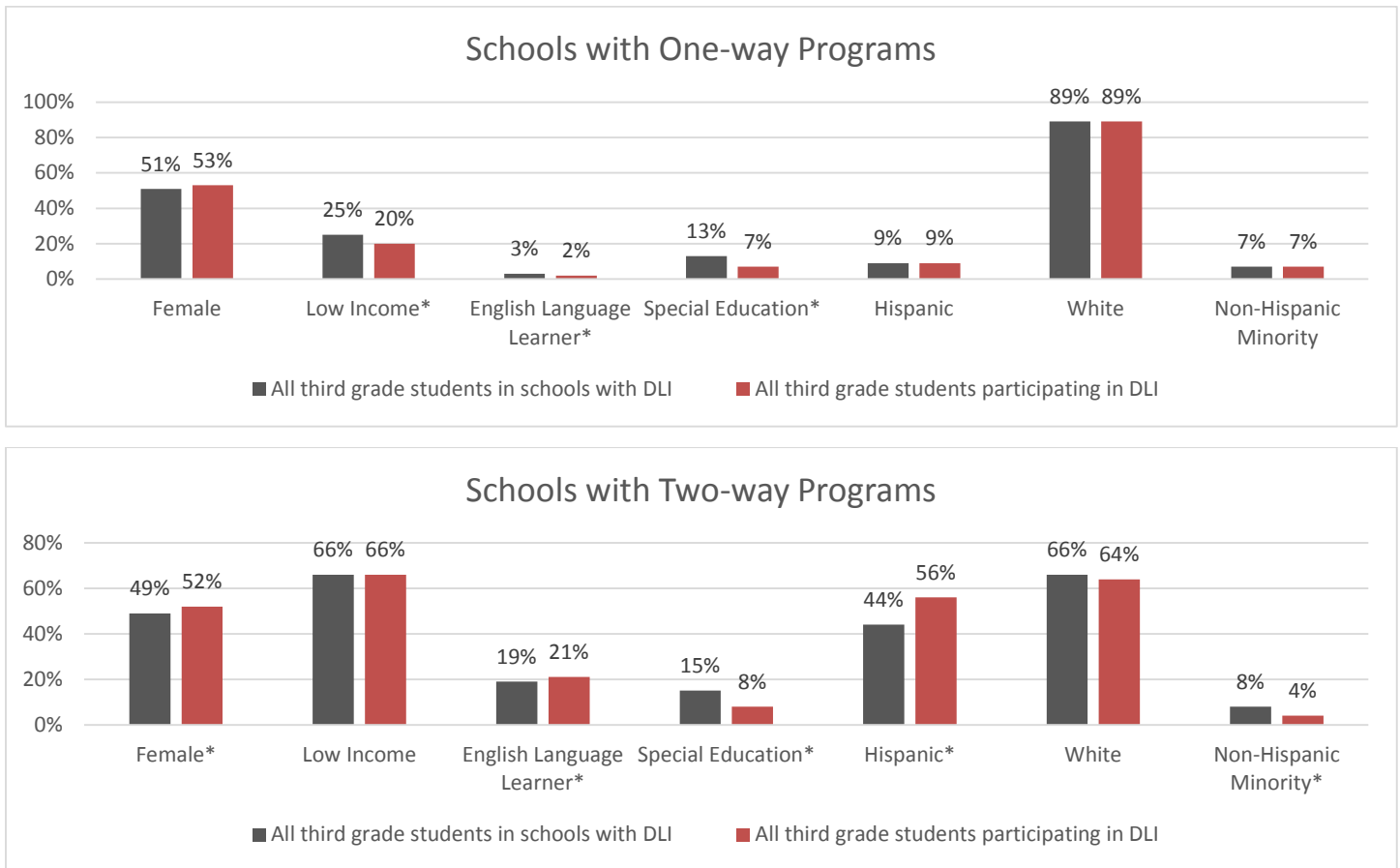
Comparisons of data, as illustrated in Figures 4 and 5, showed some statistically significant differences across both cohorts. These differences indicated that students from low income homes and students in special education were less likely to participate in DLI, and students with Hispanic backgrounds were more likely to participate in DLI. Although the differences were statistically significant, the effect sizes were quite small, collectively accounting for about 4% of the overall likelihood of a student participating in a DLI program.¹⁵

Participation in One- and Two-way Programs

Utah offers one-way and two-way DLI programs. One-way DLI programs are mainly comprised of students whose native language is English. Two-way DLI programs are comprised of both students whose native language is English and students whose native language is the target language. In order to qualify as a two-way program, at least 33% of students must identify as having the target language as their native language.¹⁶ In Utah, all two-way programs have Spanish as the target language.

In 2012, 69% of third grade students in DLI were in one-way programs, and 31% of third graders in DLI were in two-way programs. In 2013, 73% of third grade students in DLI were in one-way programs, and 27% were in two-way programs. Figure 6 shows demographics for all third grade students in DLI schools with one-way and two-way programs in either 2012 or 2013 and for third grade students participating in DLI in those years.

Figure 6. Demographic Characteristics of Third Grade Students in Schools with One-and Two- Way DLI Programs



* Represents statistically significant differences between the DLI schools overall and the DLI programs. Note: In 2013 data were collected in such a way that students could identify as Hispanic ethnicity and White race, thus some percentages sum to greater than 100%.

Overall, Figures 4 and 5 showed significant differences between DLI enrollment and whole school enrollment for students in special education, from low income homes, and with Hispanic backgrounds. Some of those differences were accounted for by the type of program (one-way or two-way DLI) the schools offered. As shown in Figure 6, students in special education were less likely to participate in DLI for both types of programs. Students from low income homes, however, were less likely to participate in DLI programs only in schools that had one-way programs. Similarly, students from Hispanic backgrounds were more likely to participate in DLI only in schools that had two-way programs. Participation in two-way programs also differed from participation in one-way programs regarding the percentage of students who identified as non-White and non-Hispanic. This difference was such that students who identified as non-White and non-Hispanic were less likely to participate in DLI when enrolled in schools with two-way programs.

Summary

As the participation data from 2009-2013 showed, schools with DLI programs did not differ significantly from non-DLI schools in the same district with regard to students' race, family income, or language proficiency. The only significant difference was related to school size, which can be explained by programmatic requirements. At the student level, we were able to consider only two DLI cohorts, representing 3,289 of the approximately 25,000 students now enrolled in DLI. Data from these two cohorts showed that students in DLI programs generally represented the overall population of their schools. Statistically significant differences for participation by special education (fewer students qualifying for special education in DLI programs), income level (fewer students qualifying for free or reduced-price lunch in DLI programs), and race or ethnicity (more students identifying as Hispanic in DLI programs) were small, with effect sizes that each accounted for less than 3% of the variance. Differences based on income were limited to one-way programs and differences based on race or ethnicity were limited to two-way programs.

-
- ¹ The Utah DLI program is different than the bilingual dual immersion program available to English Language Learners in some schools.
- ² Bialystok, E., & Barac, R. (2011). Emerging bilingualism: dissociating advantages for metalinguistic awareness and executive control. *Cognition, 122*, 67-73.
- ³ Bialystok, E., Poarch, G., Luo, L., & Craik, F. I. M. (2014). Effects of bilingualism and aging on executive function and working memory. *Psychology and Aging, 29*, 696-705.
- ⁴ Collier, V. P., & Thomas, W. P. (2004). The astounding effectiveness of dual language education for all. *NABE Journal of Research and Practice, 2:1*, 1-20.
- ⁵ Foy, J. G., & Mann, V. A. (2014). Bilingual children show advantages in nonverbal auditory executive function task. *International Journal of Bilingualism, 18*, 717-729.
- ⁶ Kharkhurin, A. V. (2011). The role of selective attention in bilingual creativity. *Creativity Research Journal, 23*, 239-254.
- ⁷ Wimmer, M. C., & Marx, C. (2014). Inhibitory processes in visual perception: a bilingual advantage. *Journal of Experimental Child Psychology, 126*, 412-419.
- ⁸ Olson, P., & Burns, G. (1983). Politics, class, and happenstance: French immersion in a Canadian context. *Interchange, 14*, 1-16.
- ⁹ Hart, D., & Lapkin S. (1998). In S. Lapkin (Ed.), *French second language education in Canada: Empirical studies* (pp. 324-346).
- ¹⁰ Palmer, D. (2010). Race, power, and equity in a multiethnic urban elementary school with a dual-language "Strand" program. *Anthropology & Education Quarterly, 41*, 94-114.
- ¹¹ Scanlan, M., & Palmer, D. (2009). Race, power, and (in) equity within two-way immersion settings. *The Urban Review, 41*, 391-415.
- ¹² Wise, N. (2011). Access to special education for exceptional students in French immersion programs: an equity issue. *Canadian Journal of Applied Linguistics, 14*, 177-193.
- ¹³ In this brief, low income is indicated if a student qualified for free or reduced lunch.
- ¹⁴ Chi square tests of independence, with continuity correction for single degrees of freedom were conducted, with significance set at $p < .01$.
- ¹⁵ A multiple logistic regression predicting DLI participation from low income, special education, and Hispanic ethnicity was significant, $-2LL = 6428$; Cox & Snell $R^2 = .036$; $\exp(b)$ for low income = .636; $\exp(b)$ for special education = .426, and $\exp(b)$ for Hispanic = 2.152.
- ¹⁶ Families self-identify their home language as either English or a language other than English.