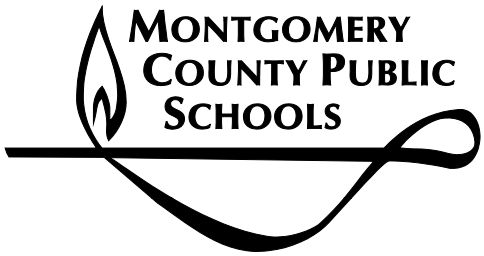

Outcome Evaluation of the English for Speakers of Other Languages Program in Secondary Schools

Office of Shared Accountability

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Helen Wang, Ph.D.
Shahpar Modarresi, Ph.D.

Montgomery County Public Schools

OFFICE OF SHARED ACCOUNTABILITY

Mr. Adrian B. Talley, Associate Superintendent
850 Hungerford Drive
Rockville, Maryland 20850
301-279-3553

Dr. Joshua P. Starr
Superintendent of Schools

Dr. Frieda K. Lacey
Deputy Superintendent of Schools

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Executive Summary

The Office of Shared Accountability (OSA) conducted implementation and outcome evaluations of the English for Speakers of Other Languages (ESOL) program in secondary (middle and high) schools in Montgomery County Public Schools (MCPS) in 2010−2011. These evaluations were a continuation of evaluations that were requested by the Executive Leadership Team and the Division of English for Speakers of Other Languages/Bilingual Programs in 2008–2009. This outcome evaluation examined the effects of the instructional services provided through the ESOL program in secondary schools on English language acquisition and achievement in content areas in school years 2007−2008 through 2009−2010.

Based on the federal *No Child Left Behind Act of 2001* (NCLB) requirements for English language proficiency and academic achievement of students with limited English proficiency, the Maryland State Department of Education (MSDE) established and approved the Annual Measurable Achievement Objectives (AMAOs) for 2006−2007 through 2010−2011. The U.S. Department of Education approved the MSDE definitions and targets for the objectives for 2008−2009 through 2010−2011. ESOL students are expected to improve and attain English language proficiency as well as achieve in content areas. Five questions were addressed in this study:

1. To what extent did secondary ESOL students make annual progress (a 15-point or more increase in Language Assessment System Links (LAS-Links) overall scale scores from spring to spring) in acquiring English language proficiency skills towards AMAO I targets?
2. To what extent did secondary ESOL students attain English language proficiency (achieving level 5, advanced level of proficiency, on the LAS-Links overall English language proficient level and at least level 4, proficient, on each specific language domain) toward AMAO II targets?
3. How did Grade 8 ESOL students perform on Measures of Academic Progress–Reading (MAP-R)?
4. How did Grade 8 ESOL students perform on Maryland School Assessments (MSAs) in reading and mathematics?
5. Were students receiving higher-level ESOL instruction more likely to pass High School Assessments (HSAs) than those receiving lower-level ESOL instruction?

Summary of Methodology

The evaluation utilized outcome measures for the secondary ESOL program on standardized assessments for language acquisition and content areas. Study samples comprised MCPS secondary ESOL students in recent school years, specified to meet the purpose of each question. Appropriate designs and analytical procedures were applied based on the nature of the question and data characteristics.

Analyses for question one included three cohorts of Grades 6−12 ESOL students with spring-to-spring scores on LAS-Links tests from 2008 to 2010. The study calculated and compared

percentages of students in each grade level who made at least a 15-point annual score increase against the AMAO I target rates (48%, 56%, and 58% for the given years).

Analyses for question two included Grades 6−12 ESOL students with complete or partial LAS-Links scores in 2009 and 2010. The study calculated and compared percentages of test takers in each grade level who were advanced on the overall English proficient level and on or above the proficient level in each domain of speaking, listening, reading, and writing against the AMAO II target rates (15% and 16% for the given years).

For questions three and four, the study analyzed three-year longitudinal data from Grade 8 MAP-R and MSAs (reading and mathematics) to examine trends across years in the ESOL student reading and mathematics achievement using advanced statistical techniques (the Analysis of Covariance), which controlled for differences in students' background information. Effect size measures were used to examine the magnitude of achievement differences across cohorts of Grade 8 ESOL students.

For question five, logistic regression procedures were used to compare likelihoods of passing HSAs (i.e., algebra, English, biology, and government) between students receiving higher- and lower-level ESOL instruction while several student characteristics were held constant. The significance tests from the logistic regression procedures were supplemented by a report of effect size statistics. The goal was to judge whether the subject-level differences observed among ESOL groups of students (higher-level ESOL instruction vs. lower-level ESOL instruction) are large enough to be of practical significance to educators.

Summary of Findings

Evaluation Question One

- Students in the majority of secondary grade cohorts and their subgroups defined by race and ethnicity and special services made the expected annual progress toward English proficiency, exceeding the target rates for AMAO I.
- Students in all Grade 9 cohorts and the majority of their subgroups as well as the majority of Grades 11 and 12 subgroups in cohort 3 did not meet the AMAO I targets. Among subgroups in all grade cohorts, special education groups were most likely to fall below the targets.
- Middle school students in all ESOL instructional levels and lower-level (i.e., beginning and low intermediate) high school ESOL students met the AMAO I targets in almost all secondary grade cohorts. However, higher-level (i.e., high intermediate and advanced) ESOL students in the majority of high school grade cohorts did not. Lower-level ESOL students had more room for improvement on the scale score than higher-level students and therefore made the annual progress toward English proficiency expected for AMAO I.
- Differences in the percentage of the expected annual progress toward English proficiency between subgroups relative to racial and ethnic groups and receipt of Free and Reduced-price Meals System (FARMS) services became smaller, negligible, none, or reversed across cohorts in most secondary grades.

Evaluation Question Two

- Students in all secondary grades and the majority of their subgroups relative to race and ethnicity and special services demonstrated attainment of advanced English proficiency by meeting or exceeding the target rates for AMAO II in both years.
- The majority of special education groups, including two for middle school and all for high school as well as African American and Hispanic students in Grade 9, did not meet the AMAO II targets in both years.
- Students in higher ESOL instructional levels (i.e., intermediate and advanced ESOL for middle school and high intermediate and advanced ESOL for high school) attained the advanced English proficiency in all secondary grades for both years. However, lower-level ESOL students did not meet the AMAO II targets except low intermediate Grade 9. Higher-level ESOL students were more academically ready than lower-level students in attaining the advanced English proficient level expected for AMAO II.
- White students in middle school grades had a much higher percentage of attainment of advanced English proficiency than other racial and ethnic groups in both years; White students in high school grades led nearly all other groups as well. The non-FARMS and the non-special education groups largely led their counter peers.

Evaluation Question Three

- After controlling for students' background variables, there were no significant differences, on average, among cohorts of ESOL students across years (2007–2008 vs. 2008–2009; 2007–2008 vs. 2009–2010) as measured by the Grade 8 MAP-R Rasch Unit (RIT) scores. Furthermore, the effect sizes show no yearly achievement differences for both comparisons, indicating that ESOL students' MAP-R performances remained flat since the 2007–2008 school year.

Evaluation Question Four

- For both MSA subjects (reading and mathematics), Grade 8 ESOL students in 2008–2009, on average, significantly outperformed their peers in 2007–2008 after controlling for background characteristics. Effect sizes confirmed that the significant changes in ESOL students' MSA reading and mathematics in 2008–2009 compared with those in 2007–2008 were close to being educationally significant.
- Subject-level analyses, comparing 2007–2008 with 2009–2010, found that on average, ESOL students demonstrated a statistically significant increase in MSA reading scores but stayed the same in MSA mathematics scores. The observed statistically significant difference in MSA reading performance was educationally significant.

Evaluation Question Five

Overall, the findings revealed that the likelihood (odds) of passing HSA subjects were significantly higher for students in higher ESOL instructional levels when compared to the passing rates of their peers in lower instructional levels. Effect sizes calculated from the odds were in the small to moderate range suggesting that observed differences were practically significant in educational settings.

- *HSA Algebra.* The likelihood or the probability of passing HSA Algebra was highest for ESOL students in instructional levels 4 and 5 combined when compared to levels 2 and 3 combined. The rest of comparisons produced relatively same odds. The calculated effect

sizes with the estimated odds were small but large enough to have educational significance.

- *HSA Biology*. The likelihood of passing HSA Biology was the largest in the comparison of level 5 ESOL students with those in levels 4 and 3 combined. Comparing level 5 ESOL students with their peers in level 4 also showed a significantly higher chance of passing HSA Biology in favor of level 5 ESOL students. Finally, the likelihood of passing biology was higher for level 4 ESOL students compared with those ESOL students in level 3. The effect sizes associated with the three comparisons ranged from small to medium, suggesting the observed significant differences in all three comparisons also were educationally significant.
- *HSA English*. Similar to HSA Biology, the likelihood of passing HSA English was the largest when comparing level 5 ESOL students with those in levels 4 and 3 combined. The same patterns as the ones observed in HSA Biology were also observed in the rest of the comparisons (level 5 vs. level 4; level 4 vs. level 3). The odds associated with passing HSA English in the stated comparisons were statistically significant. The effect sizes associated with the odds were in a moderate range for the first two comparisons and small for the comparison that produced the lowest odds, indicating educational significance of all the observed differences.
- *HSA Government.* The same analyses revealed relatively comparable patterns as those found in HSA English and Biology. The likelihood of passing HSA Government was significantly higher for students in higher instructional levels than their peers in lower levels across all three comparisons (level 5 vs. level 3 + 4), (level 5 vs. level 4), and (level 4 vs. 3). The effect sizes associated with the estimated odds were large enough to be educationally significant, ranging from moderate to small.

Recommendations

Based on findings from the evaluation, the following recommendations are provided for improving ESOL instructional services in the secondary schools:

- Continue to implement effective ESOL instructional services to ensure secondary students make consistent progress toward English language proficiency and attain the advanced English language proficiency (ELP) level, given positive findings for AMAO I and AMAO II targets.
- Provide more intensive English language instructional services to ESOL students in Grade 9, given that this grade level was least likely to meet the AMAO I and AMAO II targets among all secondary grade levels.
- Encourage ESOL students to take HSA tests when they have sufficient proficiency in English. This recommendation is based on positive and significant findings about the relationship between the odds of passing the HSA and student ESOL instructional levels.

Outcome Evaluation of the English for Speakers of Other Languages Program in Secondary Schools

Helen Wang, Ph.D., and Shahpar Modarresi, Ph.D.

The Office of Shared Accountability (OSA) conducted an outcome evaluation of the English for Speakers of Other Languages (ESOL) program in secondary (middle and high) schools in Montgomery County Public Schools (MCPS) during the 2010–2011 school year. This is a continuation of an evaluation that was requested during the 2008–2009 school year. The evaluation examined the effects of the instructional services provided through the ESOL program in secondary schools on English language acquisition and academic achievement in school years 2007−2008 through 2009−2010.

Background

Program History and Goals

The ESOL program, operated by the Division of ESOL/Bilingual Programs, has been implemented in MCPS for more than four decades. The program is designed to meet the increasingly diverse educational and cultural needs of prekindergarten (pre-K) through Grade 12 students who are learning English as a new language and to develop their readiness for rigorous assessments (MCPS, 2010). By providing instructional services, the program helps ESOL students function linguistically and culturally in regular classrooms and eventually in mainstream American society. According to the federal *No Child Left Behind Act* (NCLB), all students in the limited English proficient (LEP) subgroup, which includes ESOL students and reclassified English language learners (R-ELLs; i.e., former ESOL students who exited the ESOL program within the past two years), are expected to become proficient in English and reach the state academic standards in content areas. (see Appendix A for classification of English language learners.)

Placement and Population of Students Who Receive ESOL Services

As mandated by the Maryland State Department of Education (MSDE), students who use a language other than American English are assessed for their proficiency in listening, speaking, reading, and writing on the state-mandated English language proficiency (ELP) test for placement—Language Assessment System Links (LAS-Links). The Residency and International Admissions office, school staff, parents, or other family members can refer students who meet this criterion to take the LAS-Links placement test. The test yields an ELP level that determines a student's eligibility for ESOL instructional services. The school's English language learner (ELL) team develops an ELL plan for the student.

Students who receive ESOL services come from a variety of cultural, linguistic, socioeconomic, and academic backgrounds. Over 50% of all students enrolled in the ESOL program in MCPS are born in the United States. According to the MCPS 2009–2010 enrollment file, there are about 3,800 ESOL students in secondary schools, making up 23% of the total ESOL population in MCPS.

ESOL Curriculum and Instruction in Secondary Schools

Curriculum. The ESOL program in secondary schools aims to enable students at all ESOL instructional levels to acquire the English needed for successful performance across content areas. In order to provide structured, systematic English language development instruction, the Division of ESOL/Bilingual Programs developed the rigorous standards-based ESOL curriculum. Aligned with the state English language proficient standards, the ESOL curriculum supports the state targets for Annual Measurable Achievement Objectives (AMAOs) (MCPS, 2010).

The ESOL curriculum, designed for culturally and linguistically diverse students, reflects an integration of four language skills—listening, speaking, reading, and writing; it is organized around themes related to reading/language arts, social studies, and science. Therefore, ESOL students learn and practice English language through academic content that represents a multicultural perspective (MCPS, 2010).

Instruction. Given that the ESOL curriculum is based on students' ELP levels rather than grade levels, students in adjacent grades may be grouped for instruction by their ELP levels. There are three ESOL instructional levels for middle school grades: beginning, intermediate, and advanced levels. There are five ESOL instructional levels for high school grades: low beginning, high beginning, low intermediate, high intermediate, and advanced levels.

Students receive daily instruction appropriate for their ELP levels through one or two ESOL courses taught by ESOL teachers. Most high school ESOL students receive intensive instruction in English at a high school ESOL center. Through the ESOL courses, students develop proficiency in oral and written English and explore human experiences from a multicultural perspective while developing language skills. They are exposed to a wide variety of texts and academic vocabularies, while learning to analyze text and develop critical reading and thinking skills. In addition to the ESOL courses, some students take daily reading classes taught by the school reading instructors as well as mathematics and other content classes (MCPS, 2010).

Several elective courses are provided for high school ESOL students, such as an Academic Language course for newcomers, a Test of English as a Foreign Language (TOEFL) course for college-bound ESOL students with a high ELP level, and an ESOL Advanced Communication course for students with a high intermediate to advanced ESOL instructional level (MCPS, 2010).

ESOL instructional pathways. There are instructional pathways designed for both middle and high school ESOL students. The pathways are established based on ESOL instructional levels. With each pathway, appropriate ESOL courses and content courses are provided to support the development of English language proficiency and academic content simultaneously. The instructional pathways are modified for students with limited or no formal schooling or students with special education needs.

A special program, the Multidisciplinary Education, Training, and Support (METS) program, is provided for ESOL students with limited or no formal schooling. The purpose of the program is

to develop English language proficiency while providing additional support in developing literacy and academic skills in the content areas to help narrow students' educational gaps and facilitate articulation to non-METS classes. In 2010−2011, there was a METS program at 10 of 38 middle schools and 8 of 26 high schools in MCPS (MCPS, 2010).

Annual Measurable Achievement Objectives and Accountability Requirements

Based on the federal NCLB requirements for LEP students' English language proficiency and academic achievements, MSDE determined the AMAO levels I, II, and III, as measured by the LAS-Links test, the Maryland School Assessment (MSA), and the Maryland High School Assessment (HSA). MSDE established and approved these objectives for 2006−2007 through 2010−2011 (Grasmick, 2008). The U.S. Department of Education approved definitions and targets for these objectives for 2008−2009 through 2010−2011 (Grasmick, 2009). This evaluation compared findings obtained through analyzing LAS-Links test results against the AMAO I and AMAO II target rates.

AMAO I. AMAO I measures the annual progress towards English proficiency on the LAS-Links test for students who receive ESOL services. Students are considered to have made progress if their overall score on the LAS-Links test is at least 15 scale score points higher than their scores in the previous year (Grasmick, 2009). To meet AMAO I, school systems must have a specified percentage of ESOL students progress at least 15 points each year. These specified percentages are the AMAO I targets, presented in Table 1 below.

Table 1
Targets for Annual Measurable Achievement Objective I

School year	AMAO I target %[a]
2006–2007	40
2007–2008	48
2008–2009	56
2009–2010	58
2010–2011	60

Data source: Maryland Department of Education, 2008 and 2009.
[a]Percentage of ESOL students with a 15-point or more annual increase in LAS-Links overall scale scores.

AMAO II. AMAO II measures the attainment of ELP as measured by the LAS-Links test among students who receive ESOL services. A overall cut score of the highest proficient level (level 5, above proficient or advanced) on the LAS-Links ELP assessment and a minimum cut score of level 4 (proficient) in each domain of speaking, listening, reading, and writing are used to determine ELP attainment (Grasmick, 2009). AMAO II results are determined by the percentage of students who demonstrate ELP attainment. The AMAO II criterion was revised in 2008−2009; therefore only targets in or after that year are shown in Table 2.

Table 2
Targets for Annual Measurable Achievement Objective II

School year	AMAO II target %[a]
2008–2009	15
2009–2010	16
2010–2011	17

Data source: Maryland Department of Education, 2009.
[a]Percentage achieving English language proficient level 5 (above proficient) in composite overall scores and at least level 4 (proficient) in each domain of speaking, listening, reading, and writing on LAS-Links tests.

Literature Review

English Acquisition and Academic Performance

Many studies have been conducted on the significance of using student assessment data to achieve accountability and improvement of learning English as a second language programs (Lindholm-Leary, 2005). Research has provided ample evidence linking ESOL instructional services, English language proficiency, and academic performance among English language learners (Brock, 2001; Collier and Thomas, 2004; Moore & Zainuddin, 2003; and Platt, 2001); the findings revealed that ESOL instructional services raised students' achievement by significant amounts. Furthermore, acquiring academic English proficiency was identified as a key to academic success for English language learners (Genesee, Lindholm-Leary, Saunders, and Christian, 2006; Francis, Rivera, Lesaux, Keiffer, & Rivera, 2006). However, Genesee et al. (2006) found very few scientifically based research (experimental or quasi-experimental) studies available to guide policy and practice related to ESOL instruction.

A more recent study of ESOL programs (Wilkinson, Callahan, & Frisco, 2008) used transcript data from the Adolescent Health and Academic Achievement Study and performed propensity score matching to investigate the relationship between ESOL instructional services receipt and high school academic outcomes (i.e., grade point average [GPA] and mathematics and science course taking) among a sample of Mexican-American immigrant students. The results of the study suggested that the ESOL instructional services improved GPA of the students in the junior year.

Sociodemographics and English Acquisition

According to a research review by the Center for Public Education (2007), lower rates of language acquisition have been found to be associated with lower socioeconomic status such as lower family income and lower parent education level among English language learners (Abedi & Dietel 2004; Hakuta, Butler, & Witt, 2000; Jepsen & de Alth, 2005). Researchers also addressed differences in students' educational background and cultural orientations that would impact the rate of language acquisition among English language learners (Center for Public Education, 2007). Although English language learners are a very diverse group, Hispanic students have been the majority of English learners; Hispanic students lagged behind other racial and ethnic groups in academic achievement, especially in mathematics, due to their language

barriers and other factors (Freeman and Crawford, 2008; National Clearinghouse for English Language Acquisition and Language Instruction Educational Programs [NCELA], 2007; Ortiz, Wilkinson, Robertson-Courtney, & Kushner, 2006; Paret, 2006).

Despite the debate about the age impact on second language learning, most studies reviewed showed that older English language learners acquired English at higher rates than younger learners (Jepsen & de Alth, 2005; Lightbown & Spada, 2008; Munoz, 2006 as cited in Munoz, 2008). The literature addressed the fact that age impact may be confounded by other factors such as previous learning, level of cognitive development, and language learning settings.

ESOL Curriculum and Assessments

Schools where students showed high rates of attaining language proficiency tended consistently to use a meaningful ESOL curriculum aligned with state standards and assessments (Genesee, et al., 2006; Corallo & McDonald, 2002; Lindholm-Leary & Molina, 2000; Montecel & Cortez, 2002). Several studies documented that it would be unwise to expect the same growth for all students regardless of their prior test scores and program-related factors (Anstrom, 1997; De Avila, 1984). In particular, a student may show a small score increase but gain a full proficient level; conversely, a student may show the greatest gain in scores but make no increase in the proficient level.

Evaluation Questions

The purpose of this study was to examine the development and attainment of English language proficiency as measured by the LAS-Links test among ESOL students. Middle school ESOL students' performances in reading and mathematics were assessed through the Measures of Academic Progress Assessment in Reading (MAP-R) and Maryland School Assessments (MSAs). In addition, this study examined the relationship between ESOL instructional levels and High School Assessment (HSA) passing rates. The following questions were investigated:

1. To what extent did secondary ESOL students make annual progress (a 15-point or more increase in LAS-Links overall scale scores from spring to spring) in acquiring English language proficiency skills towards AMAO I targets?

2. To what extent did secondary ESOL students attain English language proficiency (achieving level 5, advanced level of proficiency, on the LAS-Links overall English language proficient level and at least level 4, proficient, on each specific language domain) toward AMAO II targets?

3. How did Grade 8 ESOL students perform on MAP-R (reading)?

4. How did Grade 8 ESOL students perform on MSAs (reading and mathematics)?

5. Were students receiving higher-level ESOL instruction more likely to pass HSAs than those receiving lower-level ESOL instruction?

Methodology

This evaluation utilized outcome measures for the secondary ESOL program on standardized assessments including LAS-Links, MAP-R, MSA reading and mathematics, and HSAs. Appropriate designs and analytical procedures were applied based on the nature of the evaluation question and the measurement level of the data.

For questions one and two, numbers and percentages of ESOL students who made the expected annual progress toward English proficiency and those who attained the advanced English proficiency were computed and the percentages were compared against the AMAO I and AMAO II target rates set by the state.

For questions three to five, the analyses of student achievement relied on a quasi-experiment design as described by Shadish, Cook, & Campbell (2002). This design emphasizes maximizing internal validity of the study by controlling confounding variables. The main control technique for controlling confounding variables and consequently improving the internal validity of a study is through the use of the propensity score method as well as advanced statistical procedures. The propensity scores based on students' background characteristics (e.g., race, gender, and receipt of Free and Reduced-price Meals System [FARMS] or special education services) were computed using logistic regression models **(**Luellen, Shadish, & Clark, 2005**).** To balance the groups, the propensity scores were divided into five categories and used as covariates in the statistical models (Rosenbaum & Rubin, 1983, 1984, 1985). The use of the propensity score method provided an effective avenue for controlling several preexisting differences between groups of students across time and produced a less biased estimate of the achievement gains or differences in outcome measures.

Outcome Measures

LAS-Links Test

LAS-Links test results were the primary measure for annual progress in learning English and attainment of English language proficiency among ESOL students in three recent cohorts of Grades 6 through 12. MCPS has administered the state-mandated LAS-Links census and placement tests since spring 2006. This test measures progress towards and attainment of English language proficiency for ESOL students in kindergarten through Grade 12.

The LAS-Links test is a norm-referenced test that measures competencies in four domains of English speaking, listening, reading, and writing and provides information relative to the performance of students in the national norming sample. The scale scores are converted into five English proficient levels, including beginning (level 1), early intermediate (level 2), intermediate (level 3), proficient (level 4), and above proficient (level 5). (See definitions for LAS-Links proficient levels in Appendix B.) An overall score is derived from equally weighted subtest scores from each of the four specific language domains (Grasmick, 2009). Furthermore, the LAS-Links test makes use of a common scale to show students' gains annually and as they move to different levels of the test. Specifically, the assessment may demonstrate the student's growth

over time and across grades as well as toward the goal of acquiring the English language proficiency skills necessary for academic success (Gomes, 2010).

According to MCPS ESOL program staff, the LAS-Links test is loosely aligned with the state's English language proficiency curriculum standards, with test bands appropriate for different grades. The content of the LAS-Links test uses language that has been selected for its appropriateness to a specific grade and language that students encounter in the classroom (Gomes, 2010).

Measures of Academic Progress Assessment in Reading Rasch Unit

The MAP-R Rasch Unit (RIT) scores were used to assess the reading performance of ESOL students in the three recent cohorts of Grade 8. MAP-R is a computer adaptive standardized assessment in reading. The assessment is administrated to Grades 3 through 8 three times a year in fall, winter, and spring. MAP-R scores are equated both vertically and from year to year. This allows for not only the measurement of growth over time but also for cross-cohort comparisons within the same grade level.

Maryland School Assessment

The MSA reading and mathematics scale scores were used to assess the performance of ESOL students in the three recent cohorts of Grade 8. MSA is a standardized test that demonstrates how well Maryland students have learned the skills specified in the state curriculum. Its reading and mathematics tests are administered annually in Grades 3 through 8. The cut score for MSA is set for the performance standard at the basic, proficient, and advanced levels for each grade. The tests are equated from year to year so they are stable and reliable for cross-cohort comparisons within the same grade.

High School Assessment

Compiled with other student data, the HSA information was used to explore the association of passing of HSA subjects (i.e., algebra, English, biology, and government) with corresponding ESOL instructional levels for two recent cohorts of Grade 12.

The HSA is a standardized test of a student's knowledge of different content areas. The assessments are based on the state's Core Learning Goals, which clearly outline course content and learning objectives for each content area (MSDE, 2009). The HSAs are administered multiple times each year. Students take the test after completing an HSA related course and may take the test as many times as necessary. A passing score is set for each content area. There are a number of options for meeting the testing requirement for graduation, including: 1) passing all HSAs; 2) using a combined-score option; 3) completing one or more projects to demonstrate proficiency in content and skills on each HSA a student did not pass, if the student is qualified for the Bridge Plan; and 4) receiving an HSA passing score without taking the HSA in the related area if the student earns a state-approved score on an Advanced Placement (AP) or International Baccalaureate (IB) test. Students entering Grade 9 in or after 2005−2006 and graduating at

Grade 12 in or after 2008−2009 are required to pass HSAs in order to receive a Maryland high school diploma.

Study Samples

The study samples included secondary students who were enrolled in the ESOL program during selected school years, with particular samples of ESOL students being specified to meet the purpose of each evaluation question. R-ELLs were not part of the analytical samples because they were no longer receiving direct instruction for English language development. Details about ESOL enrollments and completion of the LAS-Links test are shown in Appendix C.

Samples for investigating question one. The analytical samples included middle and high school students who had complete LAS-Links scores in two adjacent test administrations (spring in a particular school year vs. spring in the previous year) when they moved to a higher grade level. There were three cohorts of each grade in the study: spring 2007 vs. spring 2008, spring 2008 vs. spring 2009, and spring 2009 vs. spring 2010.

Samples for investigating question two. The analytical samples included middle and high school students who had complete or partial LAS-Links test scores (all test takers) in selected school years. Because the criterion for AMAO II has been modified since 2008−2009, the analysis only included two school years for each grade: 2008−2009 and 2009−2010.

Samples for investigating questions three and four. The analytical samples for addressing question three included Grade 8 ESOL students who had valid MAP-R RIT scores in three cohorts: 2007−2008, 2008−2009, and 2009−2010. To address question four, ESOL students' MSA reading and mathematics scale scores in the same cohorts constituted the analytical samples.

Samples for investigating question five. The original analytical sample for addressing question five included Grade 12 LEP students from the classes of 2008−2009 and 2009−2010. These students were selected because 1) passing HSAs as a graduation requirement started with the class of 2008−2009; and 2) students who receive ESOL services tend to complete HSAs in the latter two years of high school. The two selected classes had the most complete HSA data for tracing their ESOL instructional level back to the time they received the highest HSA score. The demographic characteristics of LEP students in the two classes were similar, justifying the combination of students from the two classes for the analysis (Table F1 in Appendix F). The final analytical sample included students who were still receiving ESOL instruction at the time they maximized their HSA score for each content area and also had complete background information. For HSA outcome comparisons, students were grouped based on their ESOL instructional level corresponding to their highest HSA score. For example, students receiving higher-level ESOL instructions (i.e., level 5 or 4) were grouped together and their HSA performances were compared to those groups of students receiving lower-level ESOL instructions (i.e., level 3). In some of the comparisons, combinations of instructional levels were compared. In addition, due to the low frequency of students in ESOL Level 1 in the analytical sample (for the majority of HSAs subjects), they were not included in the advanced comparisons.

The HSA passing status by ESOL instructional level and grade level corresponding to the highest HSA score are shown in Tables F2 and F3 in Appendix F.

Analytical Procedures

Different analytical procedures were applied to investigate the evaluation questions.

Analytical Procedures for Question One

In order to examine whether secondary ESOL students made the expected annual progress toward ELP as set for the state AMAO I targets, the study computed the number and percentage of ESOL students whose overall scale scores in LAS-Links tests increased by 15 or more points from the previous year. Data were disaggregated by grade level, ESOL instructional level, and student subgroup as defined by race/ethnicity, receipt of special services including FARMS and special education, and gender. Findings were compared against the AMAO I target rates.

Analytical Procedures for Question Two

In order to examine whether secondary ESOL students attained the advanced English proficiency as set for the state AMAO II targets, the study computed the number and percentage of LAS-Links test takers who achieved level 5 (above proficient or advanced) in overall ELP and at least level 4 (proficient) for each domain of speaking, listening, reading, and writing in the tests. Data were disaggregated by grade level, ESOL instructional level, and subgroup on students' demographics and service receipt measures. Findings were compared against the AMAO II target rates.

Analytical Procedures for Questions Three and Four

Analysis of covariance (ANCOVA) was employed to assess the yearly achievement differences in mean scores across two consecutive years as measured by MAP-R or MSA scale scores for Grade 8 students. The goal of the ANCOVA was to test significant differences and to provide adjusted means for calculation of effect sizes across cohorts of students by statistically controlling for the effects of students' characteristics. The propensity score was calculated based on students' demographics, service receipt measures, and ESOL instructional levels. For both MAP-R and MSA, the 2007−2008 Grade 8 ESOL students' scores were used as the baselines. The ESOL students' MAP-R and MSA scores for the 2008−2009 and 2009−2010 were employed to document changes by comparing them to the baseline data. The detailed procedures for each question are described below.

For the MAP-R outcome measures, the covariates in the ANCOVA models included propensity scores, students' prior performance (previous spring MAP-R RIT scores) as well as interaction terms. To control for non-parallelism or interaction (homogeneity of regression slopes), the product terms between covariate (pretest scores) and independent measure (group variable—baseline (2007−2008) vs. 2008−2009 or vs. 2009−2010) were also included in each of the ANCOVA models.

For MSA reading and mathematics outcome measures, the covariate was the propensity scores. Students' prior performances were not included in the ANCOVA models due to the fact that so many students did not have scores on both MSA reading and mathematics outcome measures as well as their LAS-Links scores from the previous school year (that were intended to be used as students' prior performance). The use of students' prior performance would have resulted in a much smaller number of ESOL students in the analytical samples.

The ANCOVA findings were supplemented with the computation of effect size measures to provide standardized indices of how much student achievement increased over the years and observe achievement trends in MAP-R and MSA reading and mathematics scores. The effect size index is scale invariant or metric-free and can be used to make inferences about the pattern of test score differences over time between groups of students and across different measures. One of the most common effect size measures is the standardized mean difference, Cohen's *d*. Therefore, the yearly effect size (ES) for each outcome measure was estimated using Cohen's *d* convention by which an ES of 0.2 is considered small, an ES of at least 0.5 is considered medium, and an ES of 0.8 or greater is considered large (Cohen, 1988).[1] Increases of *d* in Year 2 (2008−2009), or Year 3 (2009−2010) would indicate increases in achievement of ESOL students over time.

Analytical Procedures for Question Five

Logistic regression procedures were used to compare likelihoods of passing HSA subjects (i.e., algebra, English, biology, and government) between students receiving higher- and lower-level ESOL instruction while several student characteristic variables were held constant. The procedure is an appropriate one to use because the outcome measures are dichotomous (i.e., passing vs. not passing HSA in the four subject areas). Odds ratios from the logistic regression models were reported to show whether or not the probability of passing an HSA is higher for students receiving higher-level ESOL instruction than for those receiving lower-level ESOL instruction.

When the odds ratio is equal to one, it means that students in the higher level are as likely to pass the HSA as those in the lower level as suggested by the literature (Rosenthal & Rubin, 1982). When the odds ratio is greater than one for an HSA subject, it means that students in the higher instructional level were more likely to pass the HSA in that subject than students in the lower level. The analyses included only those ESOL students who had information on all of the demographics, grade levels, service receipt measures, and outcome indicators.

In addition to statistical significance tests, effect sizes were calculated to estimate the magnitude of the differences in the probability of passing HSAs between higher and lower instructional

[1]The following formula was used to calculate the effect size in this part of the evaluation: effect size = (M – Mb) / SD. The M and M_b are adjusted group means for ESOL students I Year 1 (2008–2009) or Year 2 (2009–2010). M_b is the adjusted group means for the baseline year (2007–2008). SD is the standard deviation of the pooled outcome scores (either MAP-R or MSA).

levels. Odds ratio and Cohen's *d* statistics are not on the same scale; therefore, odds ratios were converted to the Cohen's effect sizes[2] for the interpretation of findings.

Strengths and Limitations Associated with This Study

Through disaggregating data of secondary ESOL students' English language development and attainment by grade and student subgroup on sociodemographic characteristics, this study sheds light on ESOL students who were at a disadvantage in acquiring English language skills. However, the study suffered from a weakness of the small group size for special education and White students; the great fluctuation in percentages of special education and White ESOL students who achieved AMAO I and AMAO II targets may be attributed to the limited number of students in these subgroups.

A particular group of ESOL students was specified for the study purpose of each evaluation question. Therefore, the results cannot be inferred to all ESOL students of selected years in MCPS secondary schools.

Causality cannot be inferred from the analyses presented in this report due to the lack of an experimental design in this evaluation. This study used a quasi-experimental design to address the evaluation questions 3 through 5. A major problem with employing the stated design in educational settings is that the two groups of students have important preexisting differences that may influence their achievement after exposure to an intervention, and this will consequently threaten the internal validity of the findings (Gay & Airasian, 2000). To minimize this threat for continuous outcome measures, the evaluators employed the ANCOVA technique to control statistically for preexisting differences between the groups of ESOL students across time (Campbell & Stanley, 1963; Kirk, 1995). Another advanced statistical technique (logistic regression) was used for dichotomous outcome measures HSAs (i.e., algebra, English, biology, and government) to compare likelihoods of passing between students receiving higher- and lower-level ESOL instruction while several student characteristic variables were held. In closing, the intent of this evaluation was not to establish causality; rather it was to provide in-depth information on the achievement status of the ESOL students in MCPS as measured by several outcome indicators.

Results

Findings are organized by evaluation question.

Findings for Evaluation Question One

1) *To what extent did secondary ESOL students make annual progress (a 15-point or more increase in LAS-Links overall scale scores from spring to spring) in acquiring English language proficiency skills towards AMAO I targets?*

[2]The following formula was used to calculate the effect size from odds ratio: $\text{logit}\, d = \frac{\ln(OR)}{pi/\sqrt{3}}$.

Analyses for this question were conducted for three cohorts of Grades 6 through 12; cohorts 1, 2, and 3 referred to ESOL students with two data points in spring 2007 vs. spring 2008, spring 2008 vs. spring 2009, and spring 2009 vs. spring 2010, respectively. AMAO I defines the progress toward English language proficiency as a 15-point or more annual increase on the LAS-Links test. The state AMAO I targets for the three selected cohorts were 48%, 56%, and 58% of students who received ESOL services. The study computed numbers and percentages of secondary ESOL students in each grade level who made the expected annual progress toward ELP and compared the percentages against the target rates for AMAO I.

AMAO I Results for All Students by Grade Level

Middle school. All middle school grades made the expected annual progress toward ELP (a 15-point or more increase in the LAS-Links test) by exceeding the percentage targets set for AMAO I in the three cohorts (Figure 1 and Table D1 in Appendix D). For cohort 1, 70% or more of the ESOL students in Grades 6 to 8 received at least a 15-point annual increase in LAS-Links overall scale scores, exceeding the target of 48% (Figure 1 and Table D1 in Appendix D). For the later two cohorts, nearly two thirds to more than four fifths of the ESOL students in Grades 6 to 8 received a gain of 15 points or more, which was also beyond the targets of 56% and 58% set for the two years, respectively.

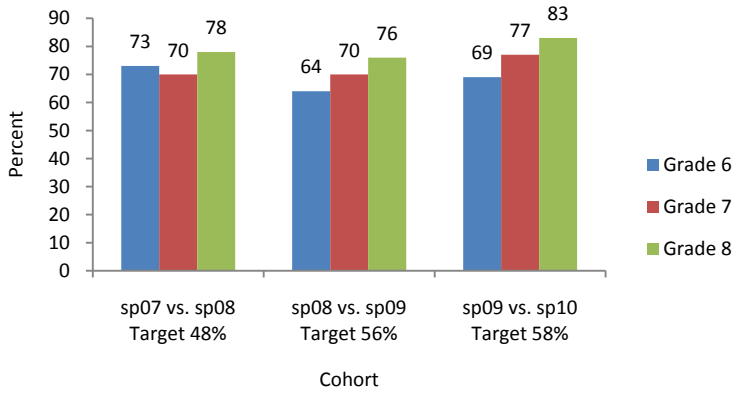

Figure 1. Percentage of middle school ESOL students making expected annual progress toward ELP on state AMAO I targets, by grade.
Note. AMAO I targets referred to the percentage of ESOL students receiving a 15-point or more annual increase in LAS-Links overall scale scores, with state-set 48%, 56%, and 58% for the three cohorts, respectively.

The trend of percentages of students who made the expected progress toward ELP is also shown in Figure 1. Comparing cohort 3 to cohort 1, the percentage dropped four points for Grade 6 but rose seven and five points for Grades 7 and 8, respectively. In addition, the percentages in the later two cohorts increased by grade, with the highest for Grade 8 (76% and 83%), followed by Grade 7 (70% and 77%) and Grade 6 (64% and 69%).

High school. Findings were mixed among high school grades. All cohorts of Grade 10 made the expected annual progress toward ELP (a 15-point or more increase in the LAS-Links test) by exceeding the percentage targets set for AMAO I, whereas all Grade 9 cohorts did not meet the targets (Figure 2 and Table D2 in Appendix D). Grades 11 and 12 in cohort 1 and Grade 11 in

cohort 2 were above the target rates for AMAO I; however, Grade 12 in cohort 2 and Grades 11 and 12 in cohort 3 did not meet the targets.

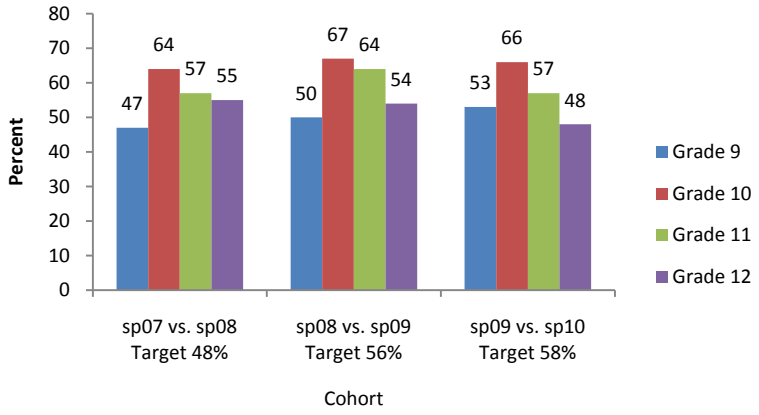

Figure 2. Percentage of high school ESOL students making expected annual progress toward ELP on state AMAO I targets, by grade.
Note. AMAO I targets referred to the percentage of ESOL students receiving a 15-point or more annual increase in LAS-Links overall scale scores, with state-set 48%, 56%, and 58% for the three cohorts, respectively.

For cohort 1, 55% or more of the Grade 10 to 12 ESOL students received at least a 15-point increase in LAS-Links overall scale scores, beyond the target of 48%; Grade 9 fell below the target (Figure 2 and Table D2 in Appendix D). For cohort 2, about two thirds of the Grades 10 and 11 ESOL students made the expected annual progress toward ELP, beyond the target of 56%; Grades 9 and 12 fell below the target. For cohort 3, 66% of Grade 10 ESOL students received the expected gain, beyond the target of 58%; all other grades (9, 11, and 12) fell below the target.

The trend of percentages of students who made the expected progress toward ELP is also shown in Figure 2. Comparing cohort 3 to cohort 1, the percentage rose six points for Grade 9 and two points for Grade 10, remained the same for Grade 11, and dropped seven points for Grade 12. In addition, the percentages for the three cohorts were relatively high for Grade 10 (64%, 67%, and 66%), low for Grade 9 (47%, 50%, and 53%) and Grade 12 (55%, 54%, and 48%), with Grade 11 in the middle (57%, 64%, and 57%).

AMAO I Results by ESOL Instructional Level and Student Subgroup of Each Grade

Percentages of ESOL students who made a 15-point or more increase in LAS-Links overall scale scores (AMAO I) are presented in text and bar charts below as well as in Appendix D. The results are organized by ESOL instructional level and student subgroup defined by race/ethnicity, receipt of special services including FARMS and special education, and gender in each grade cohort.

Findings show that percentages of students who made the expected annual progress toward ELP exceeded the AMAO I targets in most student subgroups across the grade cohorts, but not in some subgroups, especially the special education groups. Differences in the percentage points

between the female and male groups are not discussed in text or shown in bar charts because the differences were none, negligible, or small across all grade cohorts.

It is worthy to note that the percentages of students gaining the expected annual progress in the special education groups showed large fluctuations across cohorts in several grades and mostly fell below the AMAO I targets (Tables 3 to 16 and Appendix D). The fluctuation in the percentages may be due to the extremely small size of these groups (none, a few, or less than 20 students) in contrast to the large size of the non-special education groups across all grade cohorts. Meanwhile, the number of White students was also small (less than 30 in most grade cohorts). Therefore, interpretations of the results about special education and White students should take into consideration the small group size.

Grade 6

AMAO I results by ESOL instructional level. Percentages of Grade 6 ESOL students with a 15-point or more increase in LAS-Links overall scale scores were far above the AMAO I target rates for students receiving beginning ESOL instruction (97%, 93%, and 95%) and intermediate instruction (76%, 67%, and 80%) in the three cohorts (Figure 3 and Table D1 in Appendix D). The percentage remained high across the cohorts for beginning ESOL students and increased for intermediate ESOL students in cohort 3 after a decrease in cohort 2. However, the percentages for advanced ESOL students fell a few points below the targets in cohort 2 (51%) and cohort 3 (53%) which also showed a decrease from cohort 1 (60%). In addition, a higher percentage of students receiving lower-level instruction made the expected annual progress toward ELP than those receiving higher-level instruction; lower-level ESOL students, usually starting with a lower test score in the previous year, had more room for improvement on the scale score than higher-level students.

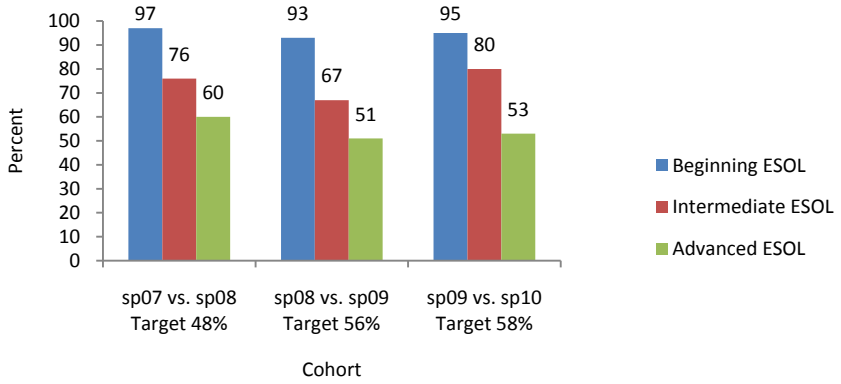

Figure 3. Percentage of Grade 6 ESOL students making expected annual progress toward ELP on state AMAO I targets, by ESOL instructional level.
Note. AMAO I targets referred to the percentage of ESOL students receiving a 15-point or more annual increase in LAS-Links overall scale scores.

AMAO I results by student subgroup. Among Grade 6 subgroups defined by race and ethnicity and receipt of FARMS and special education services, the percentages of students who made the

annual progress toward ELP set for AMAO I targets ranged from 45% to 81%, 53% to 74%, and 52% to 78% for cohorts 1, 2, and 3, respectively (Figure 4 and Table D1 in Appendix D).

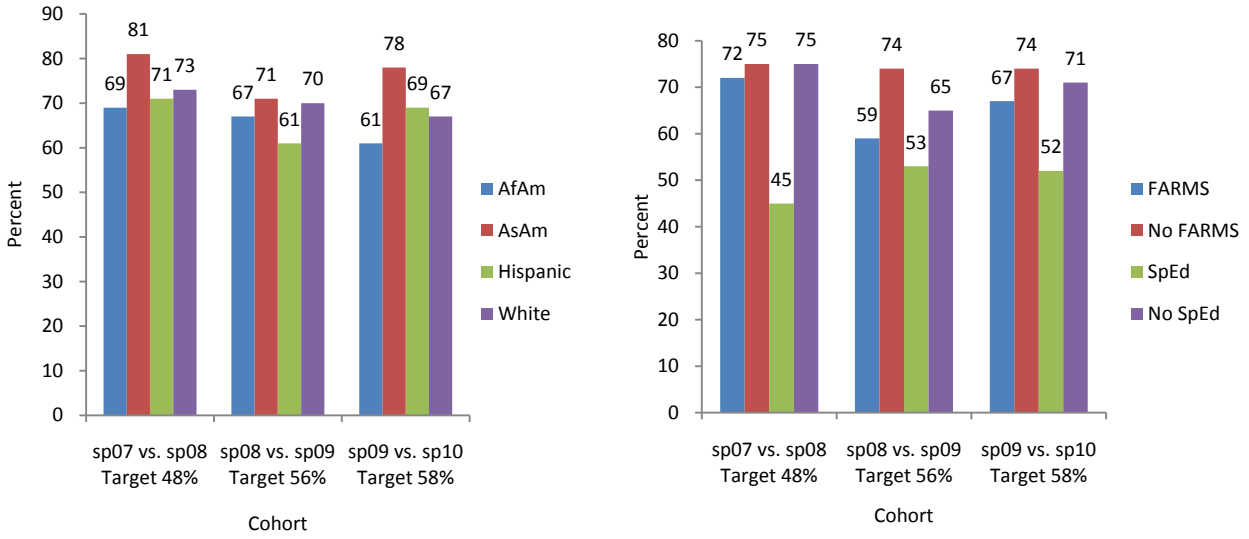

Figure 4. Percentage of Grade 6 ESOL students making expected annual progress toward ELP on state AMAO I targets, by student subgroups for race and special services.
Note. AMAO I targets referred to the percentage of ESOL students receiving a 15-point or more annual increase in LAS-Links overall scale scores.

All Grade 6 racial and ethnic subgroups made the expected annual progress toward ELP set for the AMAO I targets in the three cohorts (Figure 4). Asian American students had the highest percentage of students gaining the expected annual progress in cohort 1 (81%), with 12, 10, and 8 points more than African American, Hispanic, and White students, respectively (Figure 4 and Table D1 in Appendix D). The percentage for Asian American students decreased to 71% and then increased to 78% in the later two cohorts, with the difference from African American students growing to 17 points in cohort 3 after dropping to 4 points in cohort 2; the difference from Hispanic students remaining similar in cohorts 2 and 3 (10 and 9 points); and the difference from White students negligible in cohort 2 (one point) and then rising to 11 points in cohort 3.

All Grade 6 subgroups defined by receipt of special services, except the special education groups, also exceeded the AMAO I targets in the three cohorts (Figure 4 and Table D1 in Appendix D). The non-FARMS groups had a higher percentage making the expected progress than the FARMS groups. The percentage point difference between the non-FARMS and FARMS groups was small in cohort 1 (3 points), growing to 15 points in cohort 2 and then decreasing to 7 points in cohort 3. The difference between the non-special education and special education groups was large in cohort 1 (30 points) and decreased to 12 and 19 points in the later two cohorts; there was a large discrepancy of sizes between the two groups.

Grade 7

AMAO I results by ESOL instructional level. Percentages of Grade 7 ESOL students with a 15-point or more increase in LAS-Links overall scale scores were far above the AMAO I target rates for students receiving beginning ESOL instruction (85%, 93%, and 88%) and intermediate instruction (76%, 75%, and 87%) in the three cohorts (Figure 5 and Table D1 in Appendix D). The percentages for advanced ESOL students (60%, 62%, and 68%) also exceeded the targets. For all instructional levels, the percentages remained stable, and most showed an increase in the later two cohorts. In addition, students receiving lower-level instruction had a higher percentage making the expected annual progress toward ELP than those receiving higher-level instruction; lower-level ESOL students, usually starting with a lower test score in the previous year, had more room for improvement on the scale score than higher-level students.

Figure 5. Percentage of Grade 7 ESOL students making expected annual progress toward ELP on state AMAO I targets, by ESOL instructional level.
Note. AMAO I targets referred to the percentage of ESOL students receiving a 15-point or more annual increase in LAS-Links overall scale scores.

AMAO I results by student subgroup. Among Grade 7 subgroups defined by race and ethnicity and receipt of FARMS and special education services, the percentages of students who made the annual progress toward ELP set for AMAO I targets ranged from 60% to 79%, 39% to 84%, and 64% to 89% for cohorts 1, 2, and 3, respectively (Figure 6 and Table D1 in Appendix D).

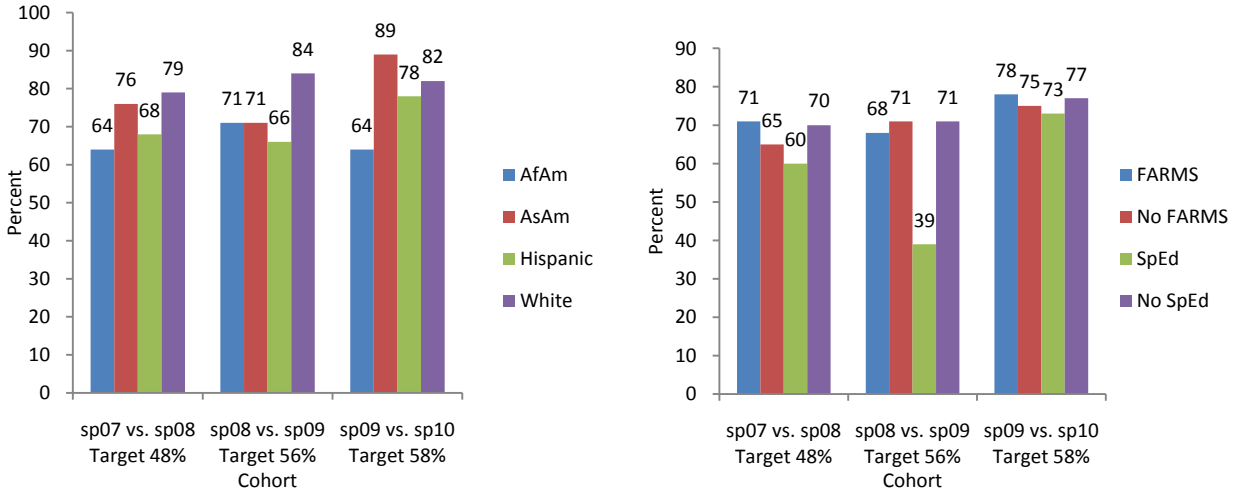

Figure 6. Percentage of Grade 7 ESOL students making expected annual progress toward ELP on state AMAO I targets, by student subgroup for race and special services.
Note. AMAO I targets referred to the percentage of ESOL students receiving a 15-point or more annual increase in LAS-Links overall scale scores.

All Grade 7 racial and ethnic subgroups made the expected annual progress toward ELP set for the AMAO I targets in the three cohorts (Figure 6 and Table D1 in Appendix D). White students had the highest percentage gaining the expected annual progress in cohort 1 (79%), with 15 and 11 points more than African American and Hispanic students, respectively; the difference between White and Asian American students was small (3 points). The percentage for White students increased slightly in the later two cohorts (84% and 82%), with the difference from African American students remaining similar in cohort 2 (13 points) and then rising to 18 points in cohort 3, the difference from Hispanic students rising to 18 points in cohort 2 before falling to 4 points in cohort 3, and the difference from Asian American students rising to 13 points in cohort 2 and then reversing to -7 points in cohort 3.

All Grade 7 subgroups defined by receipt of special services also exceeded the AMAO I target rates in the three cohorts, except the special education group in cohort 2 (Figure 6 and Table D1 in Appendix D). The FARMS group slightly led the non-FARMS group by six points in the percentage of at least a 15-point increase in cohort 1 and by three points in cohort 3; a small reversed difference of three points was found in cohort 2. While the percentage point difference between the non-special education group and the special education group was relatively small in cohort 1 (10 points) and cohort 3 (4 points), the non-special education group led the special education group by 32 points in cohort 2; there was a large discrepancy of sizes between the two groups.

Grade 8

AMAO I results by ESOL instructional level. Percentages of Grade 8 ESOL students with a 15-point or more increase in LAS-Links overall scale scores were far above the AMAO I target rates for students receiving beginning ESOL instruction (95%, 81% to 94%), intermediate instruction (82%, 75%, and 90%), and advanced instruction (70%, 75%, and 76%) in the three cohorts (Figure 7 and Table D1 in Appendix D). For beginning and intermediate ESOL students, there was a percentage decrease in cohort 2, followed by an increase in cohort 3. For advanced ESOL students, the percentage showed a slight increase in cohorts 2 and 3. In addition, students receiving lower-level instruction had a higher percentage making the expected annual progress toward ELP than those receiving higher-level instruction; lower-level ESOL students, usually starting with a lower test score in the previous year, had more room for improvement on the scale score than higher-level students.

Figure 7. Percentage of Grade 8 ESOL students making expected annual progress toward ELP on state AMAO I targets, by ESOL instructional level.
Note. AMAO I targets referred to the percentage of ESOL students receiving a 15-point or more annual increase in LAS-Links overall scale scores.

AMAO I results by student subgroup. Among Grade 8 subgroups defined by race and ethnicity and receipt of FARMS and special education services, the percentages of students who made the annual progress toward ELP set for AMAO I targets ranged from 64% to 94%, 63% to 82%, and 56% to 93%for cohorts 1, 2, and 3, respectively (Figure 8 and Table D1 in Appendix D).

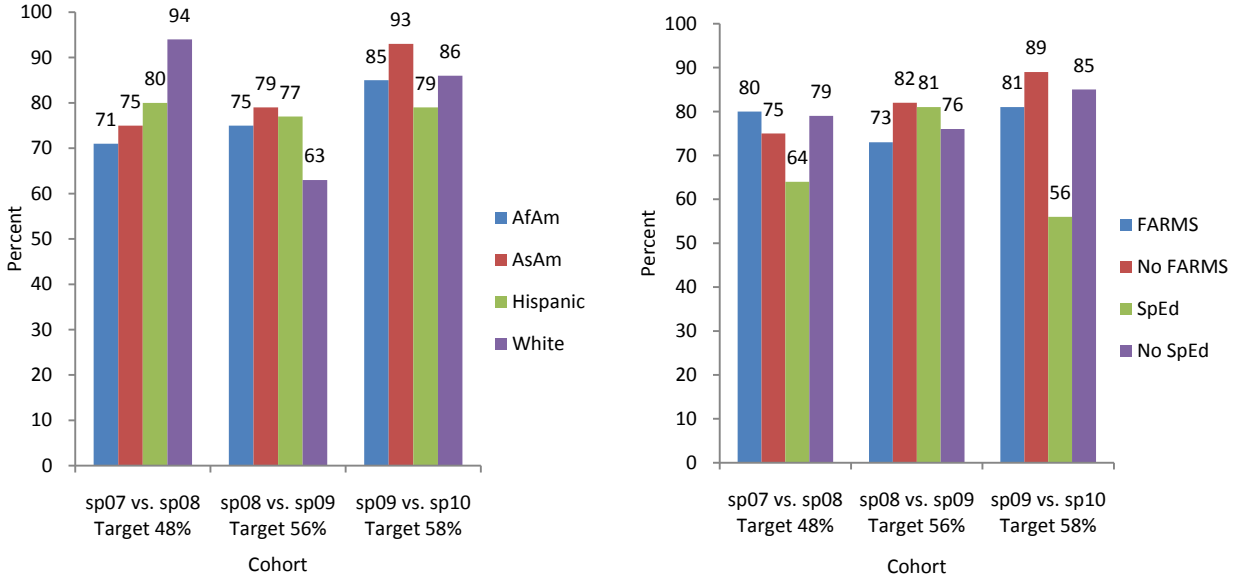

Figure 8. Percentage of Grade 8 ESOL students making expected annual progress toward ELP on state AMAO I targets, by student subgroup for race and special services.
Note. AMAO I targets referred to the percentage of ESOL students receiving a 15-point or more annual increase in LAS-Links overall scale scores.

All Grade 8 racial and ethnic subgroups made the expected annual progress toward ELP set for the AMAO I targets in the three cohorts (Figure 8 and Table D1 in Appendix D). White students had the highest percentage gaining the expected progress in cohort 1 (94%), with 23, 19, and 14 points more than African American, Asian American, and Hispanic students, respectively. In cohort 2, however, the percentage for White students (63%) fell below all other racial and ethnic groups by 12−16 points. In cohort 3, the percentage for White students increased to 86%, being a few points higher than African American and Hispanic students but lower than Asian American students. (Note that the percentage fluctuation for White students may be due to the small group size of 16, 19, and 14 in the three cohorts.)

All Grade 8 subgroups defined by receipt of special services also exceeded the AMAO I targets in the three cohorts, except the special education group in cohort 3 (Figure 8 and Table D1 in Appendix D). The non-FARMS group led the FARMS group by 9 and 8 points in the percentage of at least a 15-point increase in cohorts 2 and 3, respectively; a reversed difference of 5 points was found in cohort 1. While the percentage point difference between the non-special education group and the special education group was large, with 15 points in cohort 1 and 29 points in cohort 3, the reversed difference of 5 points in cohort 2 was the smallest; there was a large discrepancy of sizes between the two groups.

Due to the small number of ESOL instructional level 1 students in high schools, instructional level 1 students are combined with instructional level 2 students in Grades 9 to 12 in result discussions.

Grade 9

AMAO I results by ESOL instructional level. Grade 9 students receiving low and high beginning ESOL instruction exceeded the AMAO I targets and showed a slight increase across the cohorts; the percentage of a 15-point or more increase in LAS-Links overall scale scores was 66%, 70%, and 68% in the three cohorts, respectively (Figure 9 and Table D2 in Appendix D). Students receiving low and high intermediate or advanced instruction, except for low intermediate students in cohort 1, did not meet the targets. However, the percentage remained comparable or increased across the cohorts, with 48%, 47%, and 54% for low intermediate; 28%, 42%, and 37% for high intermediate; and 24%, 26%, and 40% for advanced ESOL students. In addition, students receiving lower-level instruction (beginning or low intermediate ESOL) had a higher percentage making the expected annual progress toward ELP than those receiving higher-level instruction (high intermediate or advanced ESOL); lower-level ESOL students, usually starting with a lower test score in the previous year, had more room for improvement on the scale score than higher-level students.

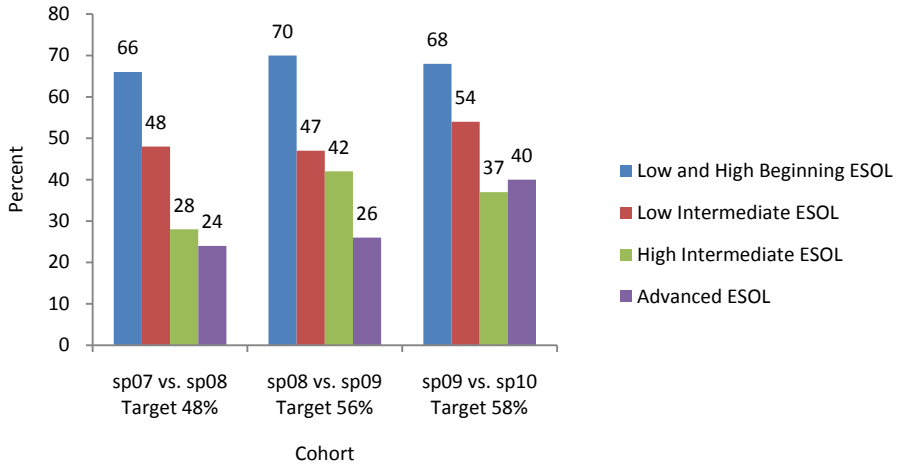

Figure 9. Percentage of Grade 9 ESOL students making expected annual progress toward ELP on state AMAO I targets, by ESOL instructional level.
Note. AMAO I targets referred to the percentage of ESOL students receiving a 15-point or more annual increase in LAS-Links overall scale scores.

AMAO I results by student subgroup. Among Grade 9 subgroups defined by race and ethnicity and receipt of FARMS and special education services, the percentages of students who made the annual progress toward ELP set for AMAO I targets ranged from 27% to 55%, 31% to 56%, and 24% to 71% for cohorts 1, 2, and 3, respectively (Figure 10 and Table D2 in Appendix D).

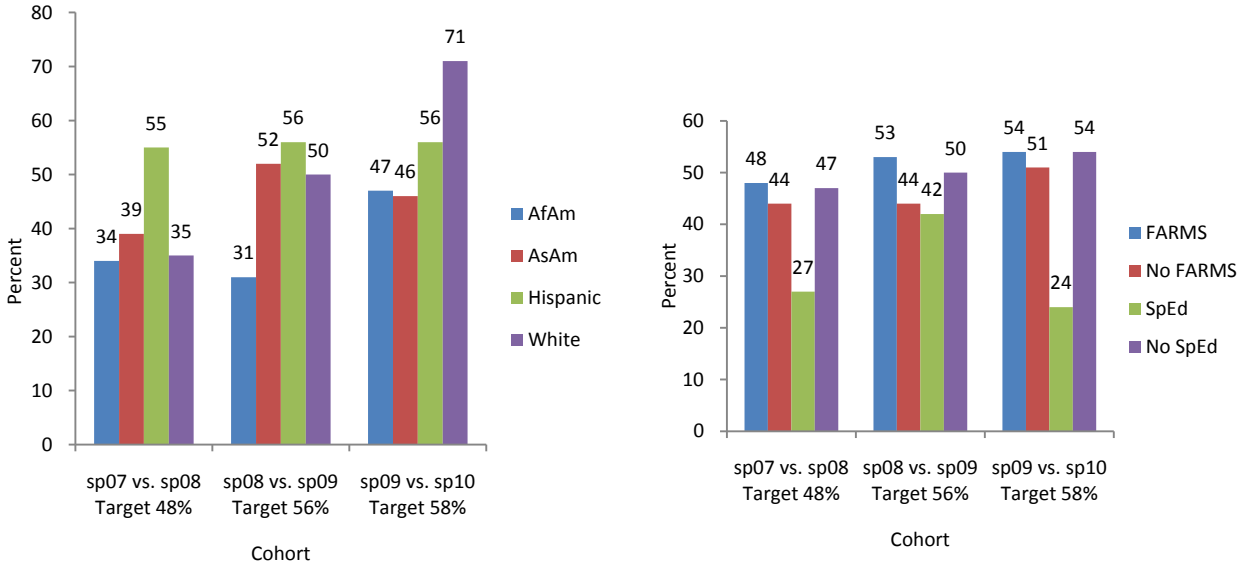

Figure 10. Percentage of Grade 9 ESOL students making expected annual progress toward ELP on state AMAO I targets, by student subgroup for race and special services.
Note. AMAO I targets referred to the percentage of ESOL students receiving a 15-point or more annual increase in LAS-Links overall scale scores.

Most Grade 9 racial and ethnic subgroups did not make the expected annual progress toward ELP set for the AMAO I targets in the three cohorts (Figure 10 and Table D2 in Appendix D); Hispanic students met the targets in cohorts 1 and 2, as did White students in cohort 3. Hispanic students had the highest percentages of at least a 15-point increase in cohort 1 (55%), with 21, 20, 16 points more than African American, White, and Asian American students, respectively. In cohort 2, the percentage for Hispanic students stayed the highest (56%), but showed a smaller difference from White students (6 points) and Asian American students (4 points); the difference between Hispanic and African American students (25 points) increased slightly. In cohort 3, the percentage for Hispanic students (56%) became lower than White students by 15 points, but still about 10 points above African American and Asian American students; there was a large discrepancy of sizes between the two groups.

All Grade 9 subgroups defined by receipt of special services did not meet the AMAO I targets in the three cohorts, except the special education group in cohort 1 (Figure 10 and Table D2 in Appendix D). The FARMS group slightly led the non-FARMS group in the percentage making the expected annual progress toward ELP by four, nine, and three points in cohorts 1, 2 and 3, respectively. The percentage point difference between the non-special education group and the special education group was 20 points in cohort 1 and increased to 30 points in cohort 3 after dropping to 8 points in cohort 2; there was a large discrepancy of sizes between the two groups.

Grade 10

AMAO I results by ESOL instructional level. Grade 10 students of all ESOL instructional levels exceeded the AMAO I targets set for the percentage of a 15-point or more increase in LAS-Links overall scale scores, except for advanced ESOL students in cohort 2 and high intermediate ESOL students in cohort 3 (Figure 11 and Table D2 in Appendix D). The percentages were 76%, 80%, and 77% for low and high beginning; 66%, 67%, and 75% for low intermediate; 54%, 60%, and 52% for high intermediate; and 55%, 55%, and 59% for advanced ESOL students. For all the instructional levels, the percentage remained stable or slightly increased across the cohorts, except for an 8-point decrease from cohort 2 to 3 for high intermediate ESOL students. In addition, students receiving lower-level instruction (beginning or low intermediate ESOL) were more likely to make the expected annual progress toward ELP than those receiving higher-level instruction (high intermediate or advanced ESOL); lower-level ESOL students, usually starting with a lower test score in the previous year, had more room for improvement on the scale score than higher-level students.

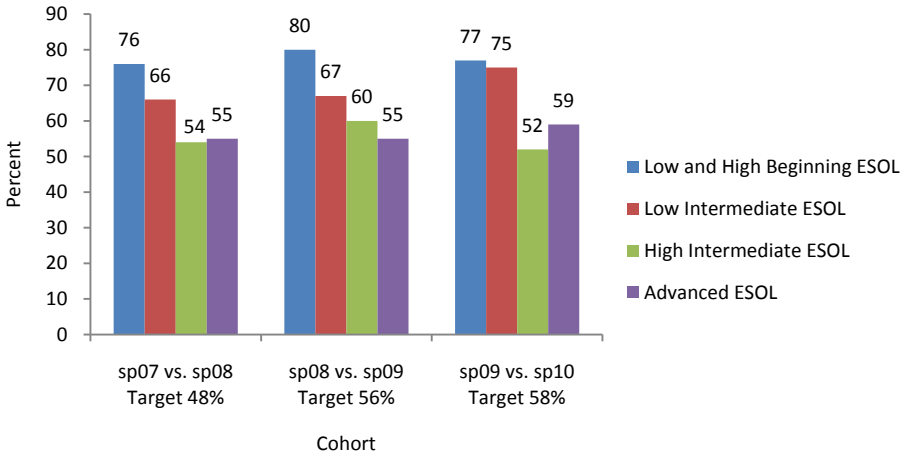

Figure 11. Percentage of Grade 10 ESOL students making expected annual progress toward ELP on state AMAO I targets, by ESOL instructional level.
Note. AMAO I targets referred to the percentage of ESOL students receiving a 15-point or more annual increase in LAS-Links overall scale scores.

AMAO I results by student subgroup. Among Grade 10 subgroups defined by race and ethnicity and receipt of FARMS and special education services, the percentages of students who made the annual progress toward ELP set for AMAO I targets ranged from 43% to 67%, 57% to 68%, and 63% to 70% for cohorts 1, 2, and 3, respectively (Figure 12 and Table D2 in Appendix D).

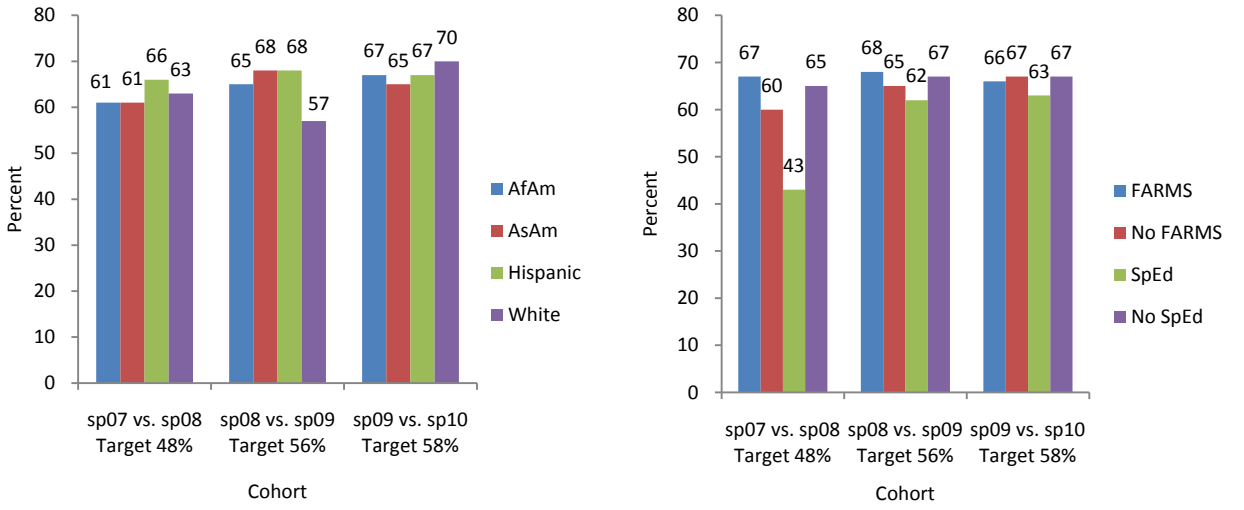

Figure 12. Percentage of Grade 10 ESOL students making expected annual progress toward ELP on state AMAO I targets, by student subgroup for race and special services.
Note. AMAO I targets referred to the percentage of ESOL students receiving a 15-point or more annual increase in LAS-Links overall scale scores.

All Grade 10 racial and ethnic subgroups made the expected annual progress toward ELP set for the AMAO I targets in the three cohorts (Figure 12 and Table D2 in Appendix D). Hispanic students had the highest percentages of at least a 15-point increase in cohort 1 (66%), with 3−5 point differences from other racial groups. The percentages for Hispanic students remained similar in the latter two cohorts (68% and 67%), with minimal or no difference from other racial groups, except for the 11-point difference between Hispanic and White students in cohort 2. In addition, Hispanic students were three points lower than White students in cohort 3; there was a large discrepancy of sizes between the two groups.

All Grade 10 subgroups defined by receipt of special services also exceeded the AMAO I targets in the three cohorts, except the special education group in cohort 1 (Figure 12 and Table D2 in Appendix D). The FARMS group slightly led the non-FARMS group in the percentage making the expected annual progress toward ELP by seven and three points in cohorts 1 and 2, respectively, but the two groups were similar in cohort 3. The percentage point difference between the non-special education group and the special education group was 22 points in cohort 1, but decreased to 5 and 4 points in cohorts 2 and 3, respectively; there was a large discrepancy of sizes between the two groups.

Grade 11

AMAO I results by ESOL instructional level. Grade 11 students of all ESOL instructional levels met or exceeded the AMAO I targets set for the percentage of a 15-point or more increase in LAS-Links overall scale scores, except for advanced ESOL students in cohort 2 and high intermediate and advanced ESOL students in cohort 3 (Figure 13 and Table D2 in Appendix D). The percentages were 69%, 76%, and 66% for low and high beginning; 56%, 67%, and 73% for low intermediate; 57%, 70%, and 50% for high intermediate; and 54%, 49%, and 47% for advanced ESOL students. For low and high beginning and high intermediate ESOL students, the percentage decreased in cohort 3 after an increase in cohort 2. While the percentage increased for

low intermediate ESOL students, it decreased for advanced ESOL students across the three cohorts. In addition, students receiving lower-level instruction (beginning or low intermediate ESOL) had a similar or higher percentages making the expected annual progress toward ELP as those receiving higher-level instruction (high intermediate or advanced ESOL); lower-level ESOL students, usually starting with a lower test score in the previous year, had more room for improvement on the scale score than higher-level students.

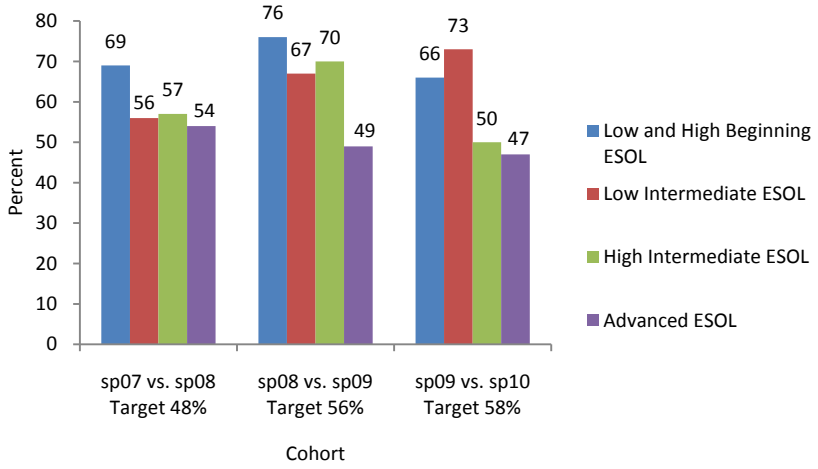

Figure 13. Percentage of Grade 11 ESOL students making expected annual progress toward ELP on state AMAO I targets, by ESOL instructional level.
Note. AMAO I targets referred to the percentage of ESOL students receiving a 15-point or more annual increase in LAS-Links overall scale scores.

AMAO I results by student subgroup. Among Grade 11 subgroups defined by race and ethnicity and receipt of FARMS and special education services, the percentages of students who made the annual progress toward ELP set for AMAO I targets ranged from 29% to 82%, 54% to 80%, and 29% to 59% for cohorts 1, 2, and 3, respectively (Figure 14 and Table D2 in Appendix D).

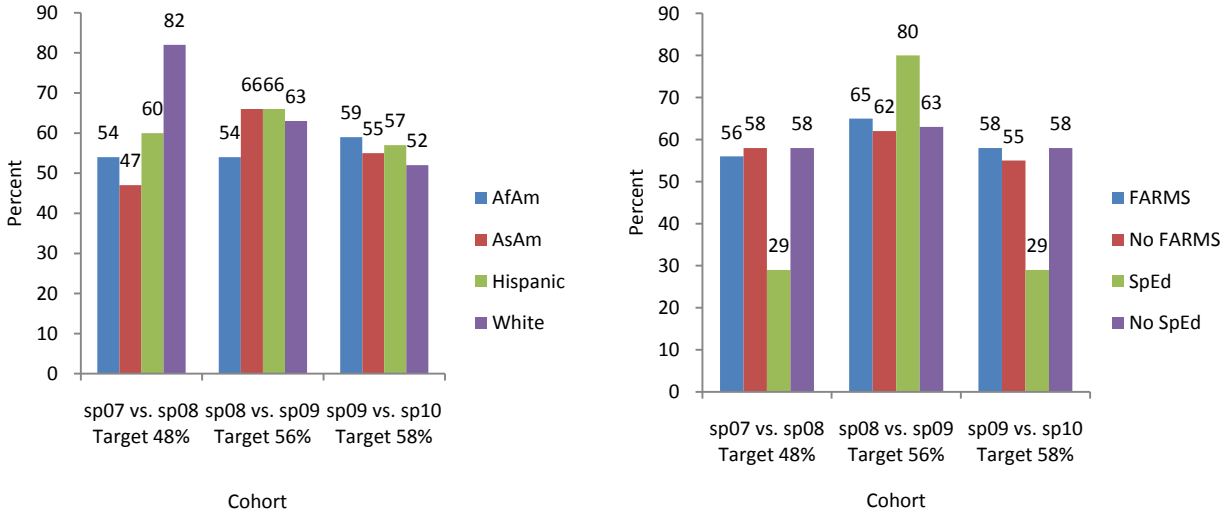

Figure 14. Percentage of Grade 11 ESOL students making expected annual progress toward ELP on state AMAO I targets, by student subgroup for race and special services.
Note. AMAO I targets referred to the percentage of ESOL students receiving a 15-point or more annual increase in LAS-Links overall scale scores.

All Grade 11 racial and ethnic subgroups made the expected annual progress toward ELP set for the AMAO I targets in cohorts 1 and 2, except Asian American students in cohort 1 and African American students in cohort 2 (Figure 14 and Table D2 in Appendix D). In cohort 3, however, only African American students met the target. White students had the highest percentages of at least a 15-point increase in cohort 1 (82%), with 35, 28, and 22 points more than Asian American, African American, and Hispanic students, respectively. In cohort 2, the percentage for White students (63%) was three points lower than Asian American and Hispanic students and showed a smaller difference from African American students (nine points). In cohort 3, the percentage for White students (52%) became a few points lower than all other racial and ethnic groups; there was a large discrepancy of sizes between the two groups.

Most Grade 11 subgroups defined by receipt of special services also exceeded the AMAO I targets in the three cohorts, except the special education group in cohorts 1 and 3 and the non-FARMS group in cohort 3 (Figure 14 and Table D2 in Appendix D). The difference between the non-FARMS and FARMS groups in the percentage making the expected annual progress toward ELP was negligible in mixed directions. The non-special education group led the special education group by 29 percentage points in cohort 1; however, the former group fell behind the later one by 17 points in cohort 2 before leading 29 points again in cohort 3. There was a large discrepancy of sizes between the two groups.

Grade 12

AMAO I results by ESOL instructional level. Grade 12 students of all ESOL instructional levels exceeded the AMAO I targets set for the percentage of a 15-point or more increase in LAS-Links overall scale scores, except for advanced ESOL students in cohort 2 and high intermediate and advanced ESOL students in cohort 3 (Figure 15 and Table D2 in Appendix D). The percentages were 80%, 100%, and 75% for high beginning ESOL with extremely small group size in all the cohorts; 61%, 77%, and 62% for low intermediate ESOL; 58%, 57%, and 46% for high intermediate ESOL; and 49%, 47%, and 48% for advanced ESOL students. At high beginning and low intermediate instructional levels, the percentage decreased in cohort 3 after an increase in cohort 2. While there was a decrease in cohort 3 for high intermediate, the percentage remained stable across the cohorts for advanced ESOL students. In addition, students receiving lower-level instruction (beginning or low intermediate ESOL) had a higher percentage making the expected annual progress toward ELP than those receiving higher-level instruction (high intermediate or advanced ESOL); lower-level ESOL students, usually starting with a lower test score in the previous year, had more room for improvement on the scale score than higher-level students.

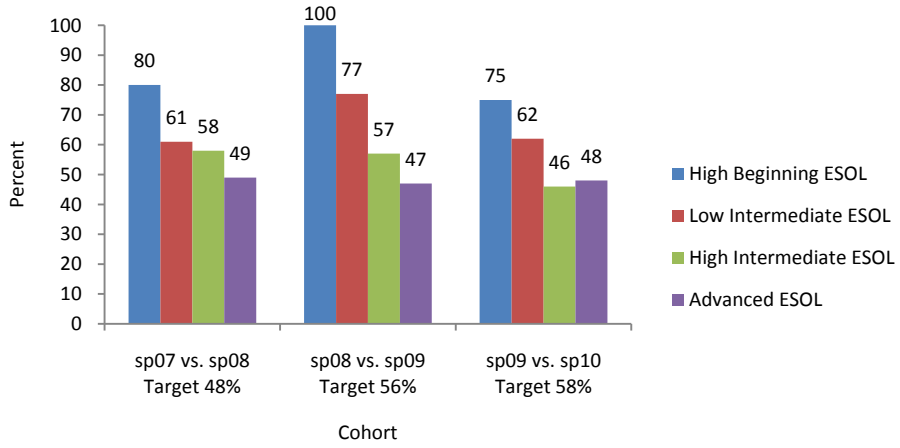

Figure 15. Percentage of Grade 12 ESOL students making expected annual progress toward ELP on state AMAO I targets, by ESOL instructional level.
Note. AMAO I targets referred to the percentage of ESOL students receiving a 15-point or more annual increase in LAS-Links overall scale scores. There were no low beginning ESOL students in this grade.

AMAO I results by student subgroup. Among Grade 12 subgroups defined by race and ethnicity and receipt of FARMS and special education services, the percentages of students who made the annual progress toward ELP set for AMAO I targets ranged from 0% to 81%, 47% to 67% (no special education students in cohort 2), and 25% to 62% for cohorts 1, 2, and 3, respectively (Figure 16 and Table D2 in Appendix D).

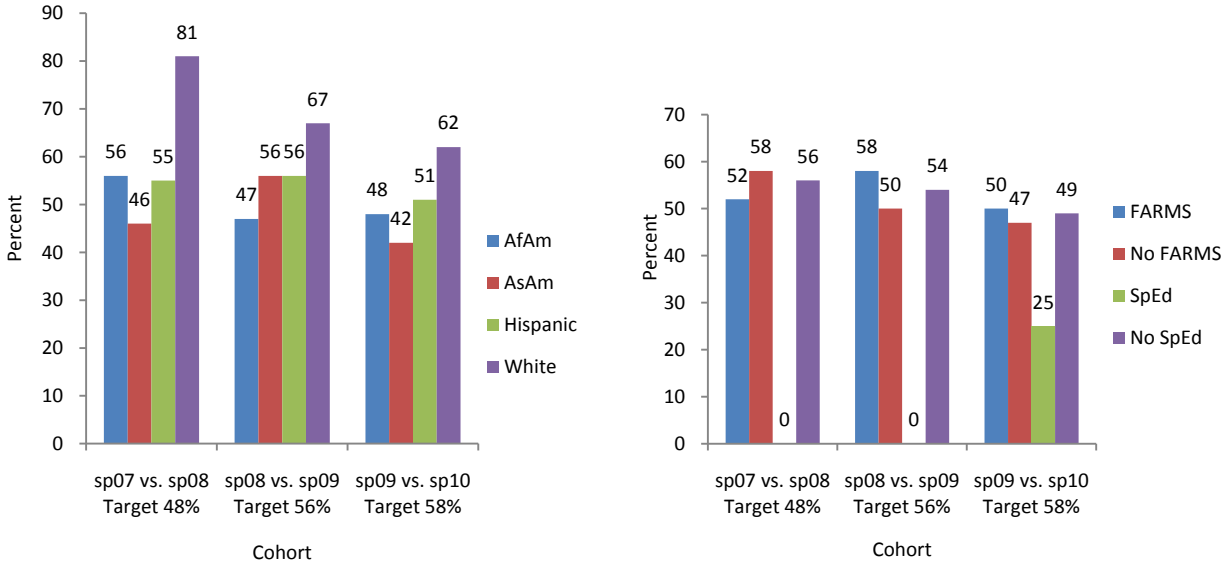

Figure 16. Percentage of Grade 12 ESOL students making expected annual progress toward ELP on state AMAO I targets, by student subgroup for race and special services.
Note. AMAO I targets referred to the percentage of ESOL students receiving a 15-point or more annual increase in LAS-Links overall scale scores. There were no special education students in the sp08 vs. sp09 cohort.

All Grade 12 racial and ethnic subgroups made the expected annual progress toward ELP set for the AMAO I targets in cohorts 1 and 2, except Asian American students in cohort 1 and African American students in cohort 2 (Figure 16 and Table D2 in Appendix D). In cohort 3, however, only White students met the target. White students had the highest percentages of at least a 15-point increase in cohort 1 (81%), with 35, 26, 25 points more than Asian American, Hispanic, and African American students, respectively. In the later two cohorts, the percentage for White students stayed the highest but decreased to 67% and 62%. The percentage difference between White and Asian American students dropped to 11 points in cohort 2 but increased to 20 points in cohort 3. The difference between White and Hispanic students dropped to and remained at 11 points in cohorts 2 and 3. There was a consistent decrease in the difference between White and African American students in cohort 2 (20 points) and cohort 3 (14 points); there was a large discrepancy of sizes between the two groups.

While three of four Grade 12 subgroups, defined by special services, in cohort 1 also exceeded the AMAO I targets, almost all the subgroups in cohorts 2 and 3 did not (Figure 16 and Table D2 in Appendix D). The difference between the non-FARMS and FARMS groups in the percentage making the expected annual progress toward English proficiency was small in mixed directions. The difference between the non-special education and special education group was dramatic; there was a large discrepancy of sizes between the two groups.

Findings for Evaluation Question Two

2) *To what extent did secondary ESOL students attain English language proficiency (achieving level 5, advanced level of proficiency, on the LAS-Links overall English language proficient level and at least level 4, proficient, on each specific language domain) toward AMAO II targets?*

Analyses for this question were conducted for Grades 6 through 12 LAS-Links test takers in 2008−2009 and 2009−2010 referred to as year 1 and year 2, respectively. To meet the AMAO II criterion for attaining ELP, the student must be above the proficient level on the overall score and on or above the proficient level in each domain of speaking, listening, reading, and writing in the LAS-Links test. The state AMAO II targets in the two selected years were 15% and 16% of LAS-Links test takers. The study computed numbers and percentages of secondary LAS-Links test takers in each grade level who attained the advanced English proficiency and compared the percentages against the target rates for AMAO II.

AMAO II Results for All Students by Grade Level

Middle school. Percentages of middle school LAS-Links test takers (ESOL students having complete or partial test scores) who achieved the AMAO II criteria are shown by grade in Figure 17 (also see Table E1 in Appendix E).

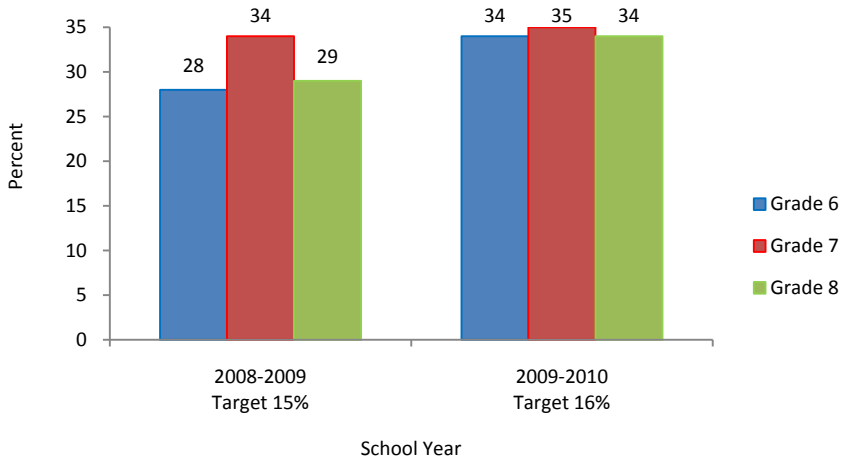

Figure 17. Percentage of middle school LAS-Links test takers attaining advanced English proficient level on state AMAO II targets, by grade.
Note. AMAO II targets referred to the percentage achieving English language proficient level 5 (above proficient) in overall scores and at least level 4 (proficient) in each domain of speaking, listening, reading, and writing on LAS-Links tests.

In year 1, nearly 30% or more of the ESOL students in each grade attained the ELP defined by AMAO II, far above the target of 15% (Figure 17 and Table E1 in Appendix E). In year 2, slightly more than one third of the ESOL students in each grade demonstrated the advanced English proficient level, which was also far above the target of 16%. From year 1 to year 2, the percentage remained high in Grade 7 and increased a few points in Grades 6 and 8.

High school. Percentages of high school LAS-Links test takers who met the AMAO II criteria are shown by grade in Figure 18 (also see Table E2 in Appendix E).

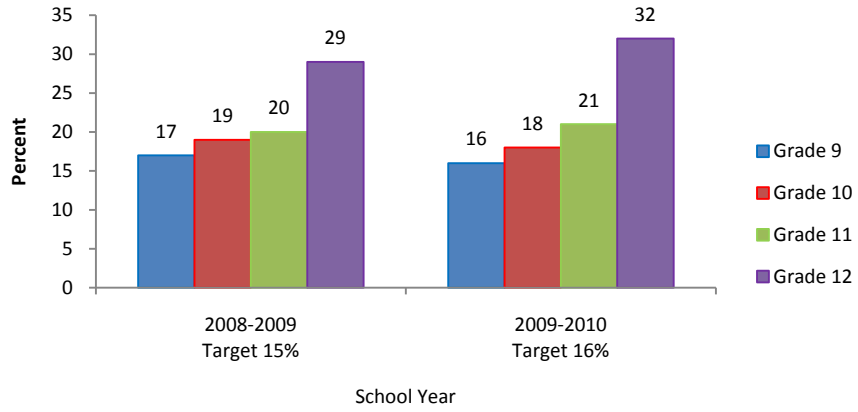

Figure 18. Percentage of high school LAS-Links test takers attaining advanced English proficient level on state AMAO II targets, by grade.
Note. AMAO II targets referred to the percentage achieving English language proficient level 5 (above proficient) in overall scores and at least level 4 (proficient) in each domain of speaking, listening, reading, and writing on LAS-Links tests.

In year 1, nearly 30% of Grade 12 ESOL students attained the ELP defined by AMAO II, twice the target of 15%; the percentages (20% or slightly less) in Grades 9 to 11 were also above the target (Figure 18 and Table E2 in Appendix). In year 2, the percentages for all the grades, between 16% and 32%, met or exceeded the AMAO II target of 16%. From year 1 to year 2, the percentage achieving the AMAO II target were relatively high and increased three points in Grade 12; the percentages remained similar in Grades 9 to 11.

AMAO II Results by ESOL Instructional Level and Student Subgroup of Each Grade

Percentages of ESOL students achieving AMAO II targets for ELP levels on LAS-Links overall and subtest scores are presented in text and bar charts below as well as in Appendix E. The results are organized by ESOL instructional levels and student subgroups defined by race/ethnicity, receipt of special services including FARMS and special education, and gender in each grade cohort.

Findings show that, among middle school LAS-Links test takers in the two years, percentages of students who demonstrated the ELP attainment exceeded the AMAO II targets in most student subgroups; however, one half of the special education groups and beginning ESOL students did not meet the targets (Figures 19 to 23 and Appendix E). Among high school LAS-Links test takers, although most student subgroups reached the AMAO II target rates for ELP attainment, nearly one third of the subgroups did not (Figures 24 to 32 and Tables in Appendix). The subgroups that did not meet the targets included—

- all Grades 9 to 12 special education groups in both years,
- all Grades 9 to 12 groups receiving beginning and low intermediate ESOL instructions in both years, except for Grade 9 low intermediate ESOL students that just met the targets;
- Grade 9 Hispanic and African American students in both years and Grade 10 Hispanic students in year 2; and
- the Grade 9 FARMS group in both years and the Grade 10 FARMS group in year 2.

It is worthy to note that special education groups had extremely small sizes, with less than 40 students in middle school grades and less than 20 students in high school grades. Differences between the female and male groups are not discussed in text or shown in bar charts.

Grade 6

AMAO II results by ESOL instructional level. Percentages of Grade 6 ESOL students attaining the advanced ELP level in the LAS-Links test were far above the target rates for AMAO II in both years for advanced ESOL students (56%), and also above the targets for intermediate ESOL students (21% and 32%) (Figure 19 and Table E1 in Appendix E). In the meantime, very few beginning ESOL students showed attainment of the advanced English proficient level. From year 1 to year 2, the percentage remained high at the advanced ESOL instructional level and increased 11 points at the intermediate level. In addition, the higher the ESOL instructional level, the higher the percentage of the advanced ELP attainment was; higher-level ESOL students had a greater opportunity to attain the advanced English proficiency than lower-level ESOL students.

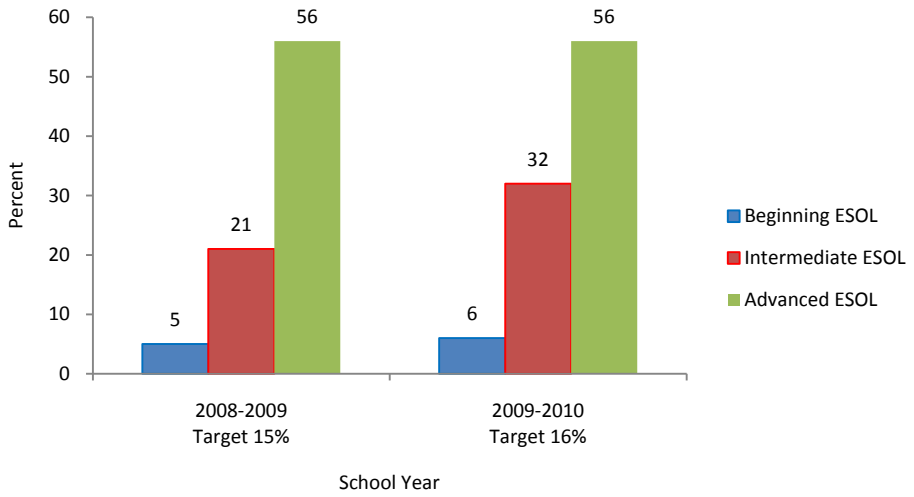

Figure 19. Percentage of Grade 6 LAS-Links test takers attaining advanced English proficient level on state AMAO II targets, by ESOL instructional level.
Note. AMAO II targets referred to the percentage achieving English language proficient level 5 (above proficient) in overall scores and at least level 4 (proficient) in each domain of speaking, listening, reading, and writing on LAS-Links tests.

AMAO II results by student subgroup. Among Grade 6 subgroups defined by race and ethnicity and receipt of FARMS and special education services, the percentages of students who attained the advanced ELP level set for the AMAO II targets ranged from 10% to 54% and 28% to 60% in the two years, respectively (Figure 20 and Table E1 in Appendix E).

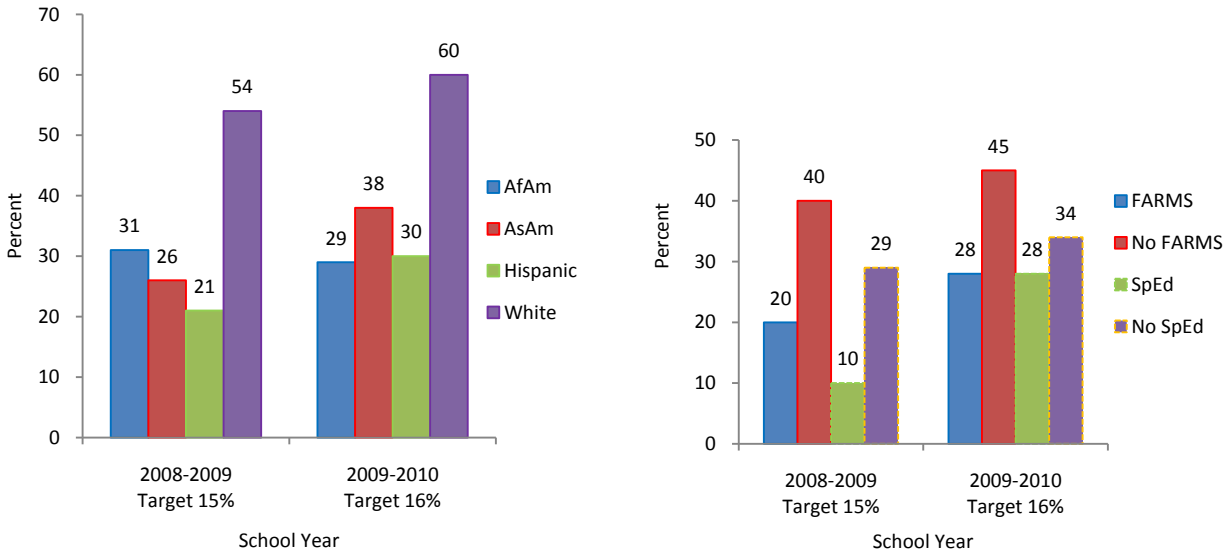

Figure 20. Percentage of Grade 6 LAS-Links test takers attaining advanced English proficient level on state AMAO II targets, by student subgroup for race and special services.
Note. AMAO II targets referred to the percentage achieving English language proficient level 5 (above proficient) in overall scores and at least level 4 (proficient) in each domain of speaking, listening, reading, and writing on LAS-Links tests.

All Grade 6 racial and ethnic subgroups exceeded the AMAO II targets for the ELP level in both years (Figure 20 and Table E1 in Appendix E). White students had the highest percentage attaining the advanced ELP level in year 1 (54%), with 33, 28, and 23 points more than Hispanic, Asian American, and African American students, respectively. White students increased the percentage to 60% in year 2, with the differences from Hispanic and Asian American students decreasing to 30 and 22 points, respectively, and the difference from African American students growing to 31 points.

All Grade 6 subgroups defined by receipt of special services demonstrated the advanced ELP attainment in both years, except the special education group in year 1 (Figure 20 and Table E1 in Appendix E). The non-FARMS and non-special education groups had a higher percentage achieving the advanced ELP level than their counterparts. The percentage point difference between the non-FARMS and FARMS groups was large in year 1 (20 points) and slightly decreased to 17 points in year 2. The difference between the non-special education and special education groups was 19 points in year 1 and decreased to 6 points in year 2; there was a large discrepancy of sizes between the two groups.

Grade 7

AMAO II results by ESOL instructional level. Percentages of Grade 7 ESOL students attaining the advanced ELP level in the LAS-Links test were far above the target rates for AMAO II in both years for advanced ESOL students (60% and 59%), and also above the targets for intermediate ESOL students (22% and 27%) (Figure 21 and Table E1 in Appendix E). At the same time, very few beginning ESOL students met the AMAO II criteria. From year 1 to year 2, the percentage remained high at the advanced ESOL instructional level and increased five points at the intermediate level. In addition, the higher the ESOL instructional level, the higher the percentage of the advanced ELP attainment was; higher-level ESOL students had a greater opportunity to attain the advanced English proficiency than lower-level ESOL students.

Figure 21. Percentage of Grade 7 LAS-Links test takers attaining advanced English proficient level on state AMAO II targets, by ESOL instructional level.
Note. AMAO II targets referred to the percentage achieving English language proficient level 5 (above proficient) in overall scores and at least level 4 (proficient) in each domain of speaking, listening, reading, and writing on LAS-Links tests.

AMAO II results by student subgroup. Among Grade 7 subgroups defined by race and ethnicity and receipt of FARMS and special education services, the percentages of students who attained the advanced ELP level set for the AMAO II targets ranged from 12% to 59% and 20% to 65% in the two years, respectively (Figure 22 and Table E1 in Appendix E).

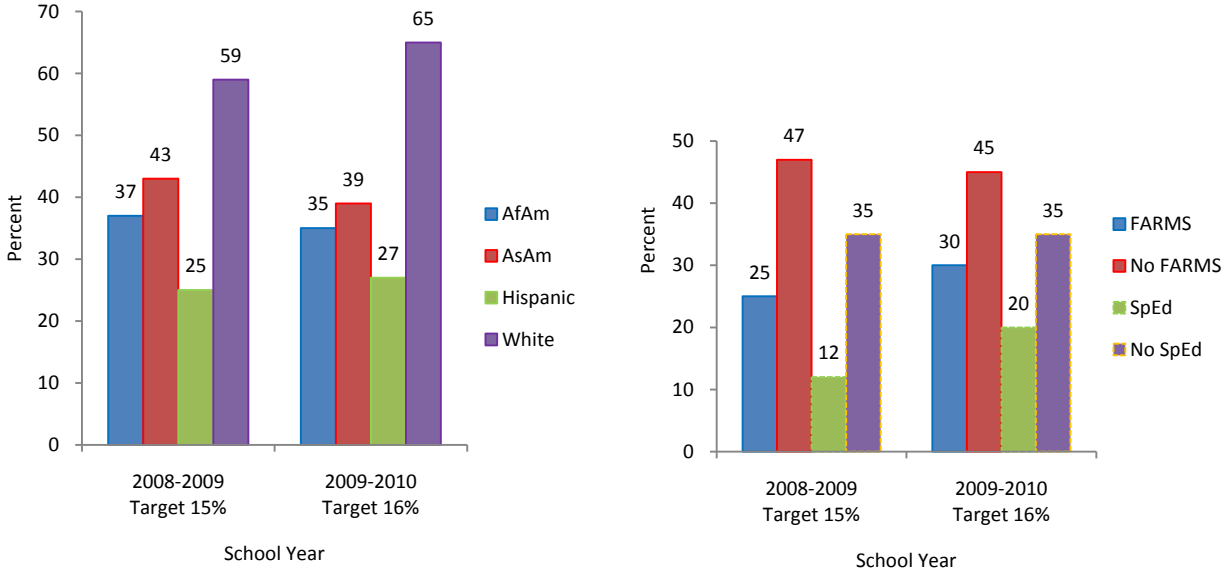

Figure 22. Percentage of Grade 7 LAS-Links test takers attaining advanced English proficient level on state AMAO II targets, by student subgroup for race and special services.
Note. AMAO II targets referred to the percentage achieving English language proficient level 5 (above proficient) in overall scores and at least level 4 (proficient) in each domain of speaking, listening, reading, and writing on LAS-Links tests.

All Grade 7 racial and ethnic subgroups exceeded the AMAO II targets for the ELP level in both years (Figure 22 and Table E1 in Appendix E). White students had the highest percentage attaining the advanced ELP level in year 1 (59%), with 34, 22, and 16 points more than Hispanic, African American, and Asian American students, respectively. White students increased the percentage to 65% in year 2, with the differences from Hispanic, African American, and Asian American students growing to 38, 30, and 26 points, respectively.

All Grade 7 subgroups defined by receipt of special services demonstrated the advanced ELP attainment in both years, except the special education group in year 1 (Figure 22 and Table E1 in Appendix E). The non-FARMS and non-special education groups had a higher percentage achieving the advanced ELP level than their counterparts. The percentage point difference between the non-FARMS and FARMS groups was large in year 1 (22 points) and decreased to 15 points in year 2. The difference between the non-special education and special education groups was 23 points in year 1 and decreased to 15 points in year 2; there was a large discrepancy of sizes between the two groups.

Grade 8

AMAO II results by ESOL instructional level. Percentages of Grade 8 ESOL students attaining the advanced ELP level in the LAS-Links test were far above the target rates for AMAO II in both years for advanced ESOL students (55% and 57%), and also above the targets for intermediate ESOL students (16% and 26%) (Figure 23 and Table E1 in Appendix E). At the same time, few beginning ESOL students showed the advanced ELP attainment. From year 1 to year 2, the percentage remained high at the advanced ESOL instructional level and increased 10 points for at the intermediate level. In addition, the higher the ESOL instructional level, the higher the percentage of the advanced ELP attainment was; higher-level ESOL students had a greater opportunity to attain the advanced English proficiency than lower-level ESOL students.

Figure 23. Percentage of Grade 8 LAS-Links test takers attaining advanced English proficient level on state AMAO II targets, by ESOL instructional level.
Note. AMAO II targets referred to the percentage achieving English language proficient level 5 (above proficient) in overall scores and at least level 4 (proficient) in each domain of speaking, listening, reading, and writing on LAS-Links tests.

AMAO II results by student subgroup. Among Grade 8 subgroups defined by race and ethnicity and receipt of FARMS and special education services, the percentages of students who attained the advanced ELP level set for the AMAO II targets ranged from 24% to 52% and 5% to 56% in the two years, respectively (Figure 24 and Table E1 in Appendix E).

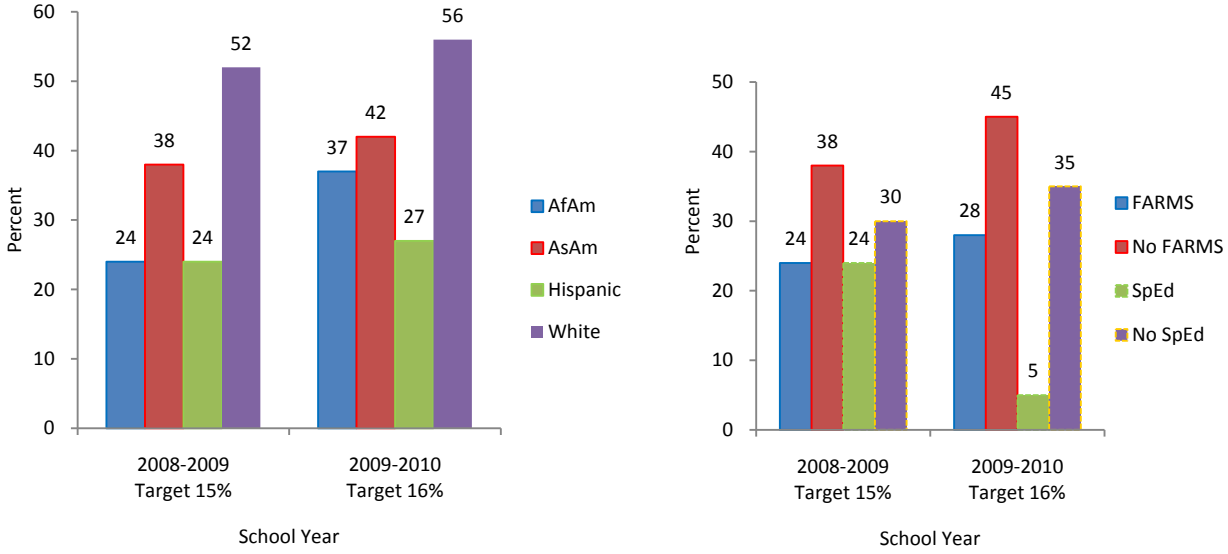

Figure 24. Percentage of Grade 8 LAS-Links test takers attaining advanced English proficient level on state AMAO II targets, by student subgroup for race and special services.
Note. AMAO II targets referred to the percentage achieving English language proficient level 5 (above proficient) in overall scores and at least level 4 (proficient) in each domain of speaking, listening, reading, and writing on LAS-Links tests.

All Grade 8 racial and ethnic subgroups exceeded the AMAO II targets for the ELP level in both years (Figure 24 and Table E1 in Appendix E). White students had the highest percentage of the advanced ELP attainment in year 1 (52%), with 28, 28, and 14 points more than Hispanic, African American, and Asian American students, respectively. White students increased the percentage to 56% in year 2, with the differences from Hispanic (29 points) and Asian American students (14 points) remaining similar and the differences from African American students decreasing to 19 points.

All Grade 8 subgroups defined by receipt of special services reached the AMAO II target rates of advanced ELP attainment in both years, except the special education group in year 2 (Figure 24 and Table E1 in Appendix E). The non-FARMS and non-special education groups had a higher percentage achieving the advanced ELP level than their counterparts. The percentage point difference between the non-FARMS and FARMS groups was 14 points in year 1 and increased to 17 points in year 2. The difference between the non-special education and special education groups was 6 points in year 1 and increased to 30 points in year 2; there was a large discrepancy of sizes between the two groups.

Grade 9

AMAO II results by ESOL instructional level. Percentages of Grade 9 ESOL students attaining the advanced ELP level in the LAS-Links test were far above the target rates of AMAO II in both years for advanced (63% and 66%) and high intermediate (41% and 34%) ESOL students, and also met the targets for low intermediate ESOL students (15% and 16%) (Figure 25 and Table E2 in Appendix E). At the same time, very few low and high beginning ESOL students met the AMAO II criteria. From year 1 to year 2, the percentage increased three points at the advanced ESOL instructional level, decreased seven points at the high intermediate level, and

remained similar at the low intermediate level. In addition, the higher the ESOL instructional level, the higher the percentage of the advanced ELP attainment was; higher-level ESOL students had a greater opportunity to attain the expect advanced English proficiency than lower-level ESOL students.

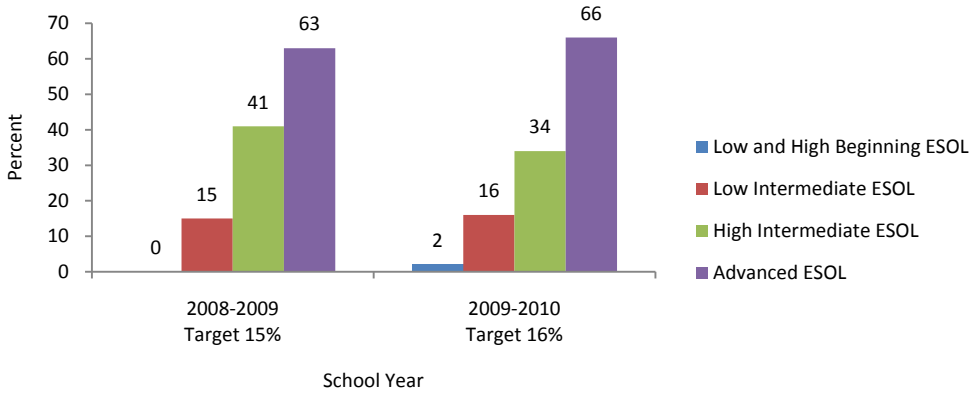

Figure 25. Percentage of Grade 9 LAS-Links test takers attaining ELP on state AMAO II targets, by ESOL instructional level.
Note. AMAO II targets referred to the percentage achieving English language proficient level 5 (above proficient) in overall scores and at least level 4 (proficient) in each domain of speaking, listening, reading, and writing on LAS-Links tests.

AMAO II results by student subgroup. Among Grade 9 subgroups defined by race and ethnicity and receipt of FARMS and special education services, the percentages of students who attained the advanced ELP level set for the AMAO II targets ranged from 6% to 37% and 10% to 40% in the two years, respectively (Figure 26 and Table E2 in Appendix E).

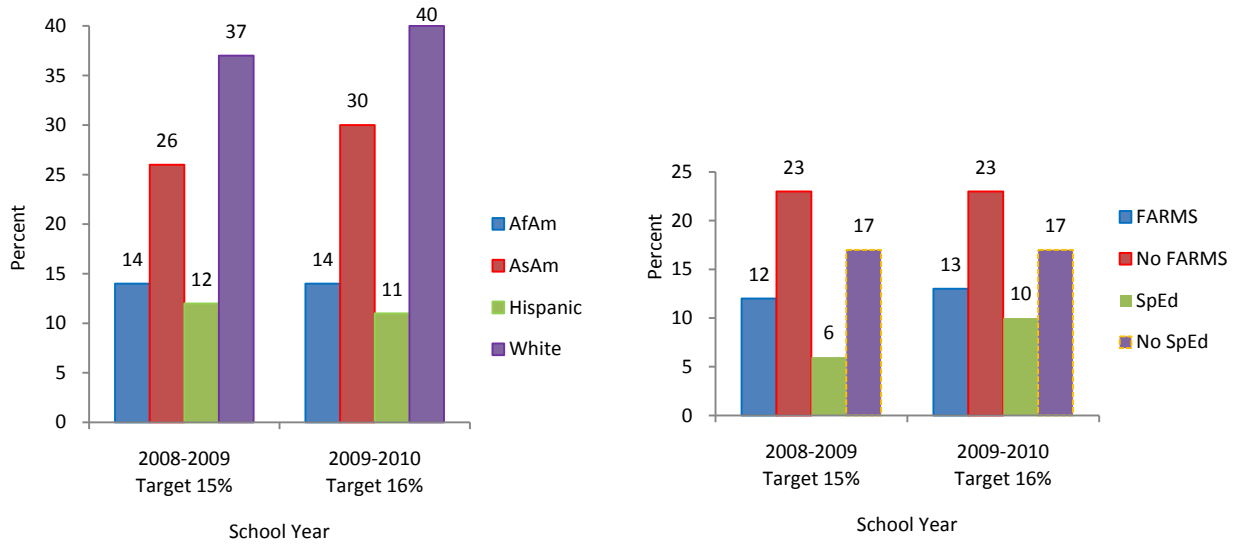

Figure 26. Percentage of Grade 9 LAS-Links test takers attaining ELP on state AMAO II targets, by student subgroup for race and special services.
Note. AMAO II targets referred to the percentage achieving English language proficient level 5 (above proficient) in overall scores and at least level 4 (proficient) in each domain of speaking, listening, reading, and writing on LAS-Links tests.

The percentages of attaining the advanced ELP level in Grade 9 were above the AMAO II target rates for Asian American and White students but not for African American and Hispanic students in both years (Figure 26 and Table E2 in Appendix E). White students had the highest percentage of the advanced ELP attainment in year 1 (37%), with 25, 23, and 11 points more than Hispanic, African American, and Asian American students, respectively. White students increased the percentage to 40% in year 2, with the differences from Hispanic and African American students increasing to 29 and 26 points, respectively, and the difference from Asian American students (10 points) remaining similar.

The percentages of students attaining the advanced ELP level in Grade 9 were above the AMAO II target rates for nonrecipients of FARMS and special education services, but not for recipients of these services (Figure 26 and Table E2 in Appendix E). The percentage point difference between the non-FARMS and FARMS groups was 11 points in year 1 and remained the same in year 2. The difference between the non-special education and special education groups was 11 points in year 1 and decreased to 7 points in year 2; there was a large discrepancy of sizes between the two groups.

Grade 10

AMAO II results by ESOL instructional level. Percentages of Grade 10 ESOL students attaining the advanced ELP level in the LAS-Links test were far above the AMAO II target rates in both years for advanced ESOL students (53% and 57%), and also above the targets for high intermediate ESOL students (26% and 19%) (Figure 27 and Table E2 in Appendix E). At the same time, very few low intermediate, and even fewer low and high beginning ESOL students, showed the advanced ELP attainment. From year 1 to year 2, the percentage increased four points at the advanced ESOL instructional level and decreased seven points at the high intermediate level. In addition, the higher the ESOL instructional level, the higher the percentage of the advanced ELP attainment was; higher-level ESOL students had a greater opportunity to attain the advanced English proficiency than lower-level ESOL students.

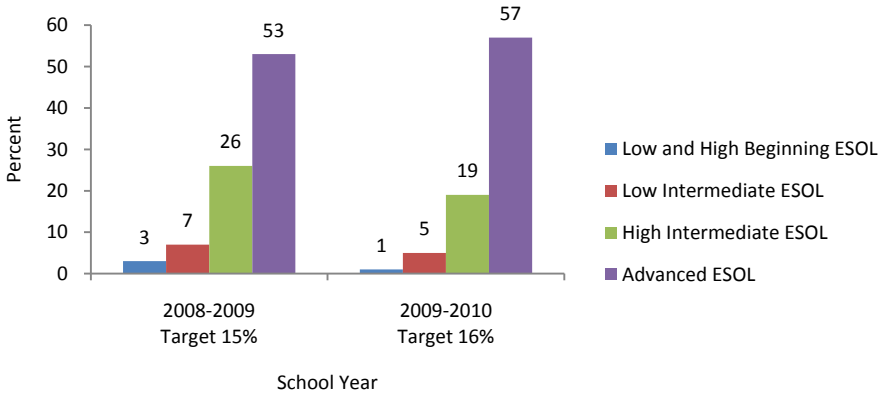

Figure 27. Percentage of Grade 10 LAS-Links test takers attaining ELP on state AMAO II targets, by ESOL instructional level.
Note. AMAO II targets referred to the percentage achieving English language proficient level 5 (above proficient) in overall scores and at least level 4 (proficient) in each domain of speaking, listening, reading, and writing on LAS-Links tests.

AMAO II results by student subgroup. Among Grade 10 subgroups defined by race and ethnicity and receipt of FARMS and special education services, the percentages of students who attained the advanced ELP level set for the AMAO II targets ranged from 13% to 36% and 6% to 37% in the two years, respectively (Figure 28 and Table E2 in Appendix E).

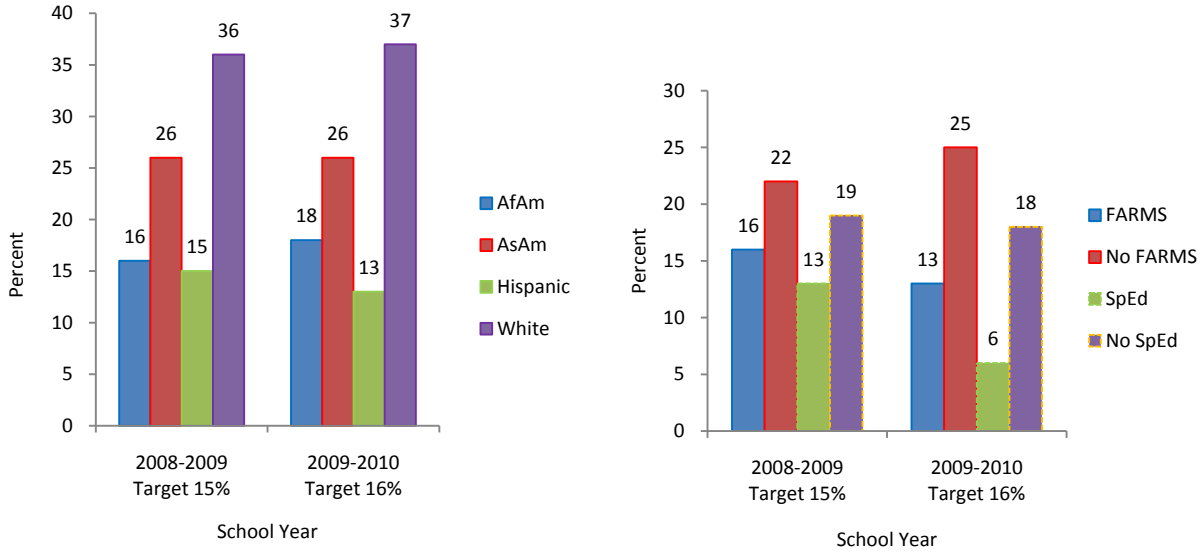

Figure 28. Percentage of Grade 10 LAS-Links test takers attaining ELP on state AMAO II targets, by student subgroup for race and special services.
Note. AMAO II targets referred to the percentage achieving English language proficient level 5 (above proficient) in overall scores and at least level 4 (proficient) in each domain of speaking, listening, reading, and writing on LAS-Links tests.

All Grade 10 racial and ethnic subgroups, except for Hispanic students in year 2, exceeded the AMAO II targets for the ELP level in both years (Figure 28 and Table E2 in Appendix E). White students had the highest percentage attaining the advanced ELP level in year 1 (36%), with 21, 20, and 10 points more than Hispanic, African American, and Asian American students, respectively. White students had a similar percentage in year 2 (37%), with the differences from other racial and ethnical groups remaining similar as well.

In Grade 10, the non-FARMS and non-special education groups in both years and the FARMS group in year 1 reached the AMAO II target rates of the advanced ELP attainment, but the special education groups in both years and the FARMS group in year 2 did not (Figure 28 and Table E2 in Appendix E). The non-FARMS group had a higher percentage attaining the advanced ELP level than the FARMS group in year 1. The percentage point difference between the non-FARMS and FARMS groups was 6 points in year 1 and increased to 12 points in year 2. The difference between the non-special education and special education groups was 6 points in year 1 and increased to 12 points in year 2; there was a large discrepancy of sizes between the two groups.

Grade 11

AMAO II results by ESOL instructional level. Percentages of Grade 11 ESOL students attaining the advanced ELP level in the LAS-Links test were far above the AMAO II target rates in both years for advanced ESOL students (44% and 48%), and also above the targets for high intermediate ESOL students (23% and 19%) (Figure 29 and Table E2 in Appendix E). At the same time, very few low intermediate and no low or high beginning ESOL students showed the advanced ELP attainment. From year 1 to year 2, the percentage increased four points at the advanced ESOL instructional level and decreased four points at the high intermediate level. In addition, the higher the ESOL instructional level, the higher the percentage of the advanced ELP attainment was; higher-level ESOL students had a greater opportunity to attain the advanced English proficiency than lower-level ESOL students.

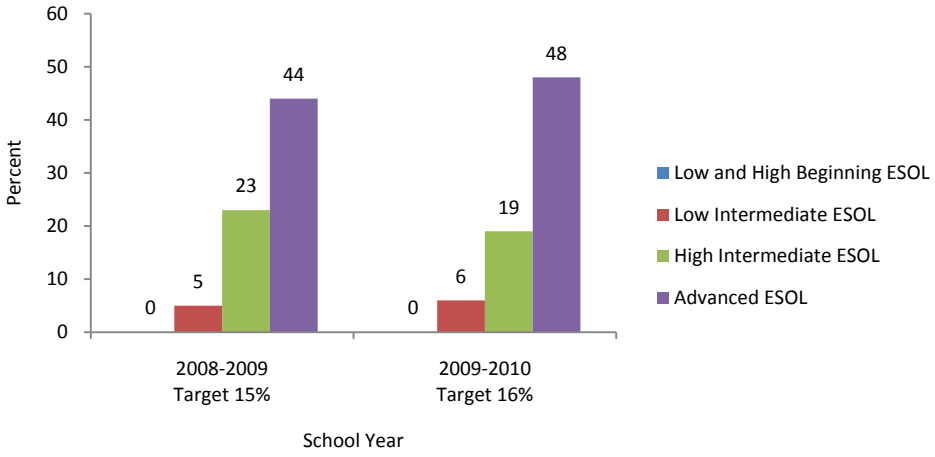

Figure 29. Percentage of Grade 11 LAS-Links test takers attaining ELP on state AMAO II targets, by ESOL instructional level.
Note. AMAO II targets referred to the percentage achieving English language proficient level 5 (above proficient) in overall scores and at least level 4 (proficient) in each domain of speaking, listening, reading, and writing on LAS-Links tests.

AMAO II results by student subgroup. Among Grade 11 subgroups defined by race and ethnicity and receipt of FARMS and special education services, the percentages of students who attained the advanced ELP level set for the AMAO II targets ranged from 13% to 33% and 6% to 58% in the two years, respectively (Figure 30 and Table E2 in Appendix E).

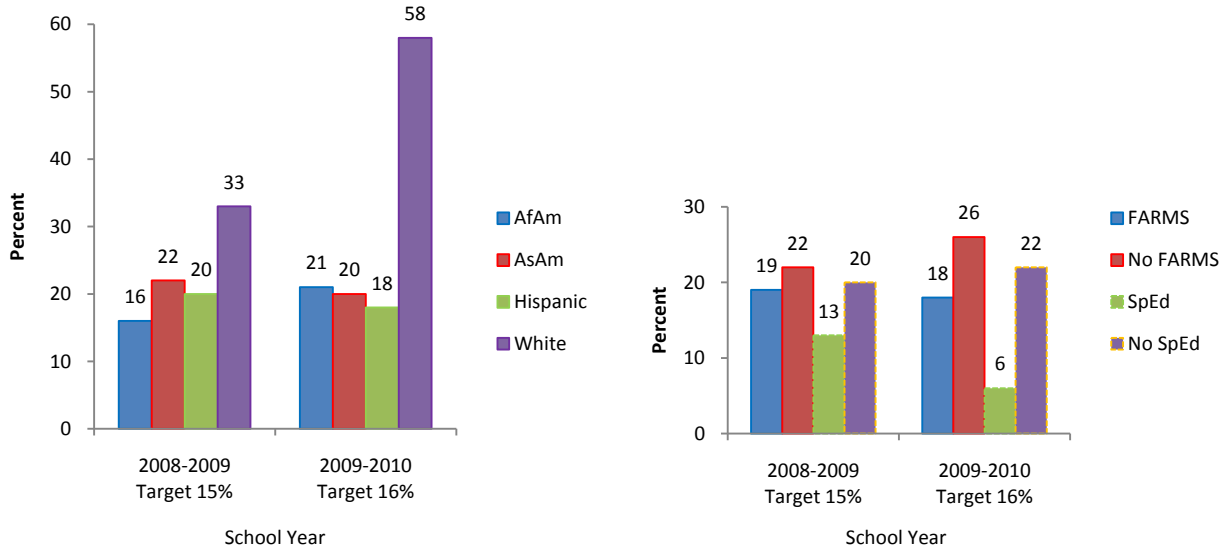

Figure 30. Percentage of Grade 11 LAS-Links test takers attaining ELP on state AMAO II targets, by student subgroup for race and special services.
Note. AMAO II targets referred to the percentage achieving English language proficient level 5 (above proficient) in overall scores and at least level 4 (proficient) in each domain of speaking, listening, reading, and writing on LAS-Links tests.

All Grade 11 racial and ethnic subgroups exceeded the AMAO II targets for the ELP level in both years (Figure 30 and Table E2 in Appendix E). White students had the highest percentage attaining the advanced ELP level in year 1 (33%), with 17, 13, and 11 points more than African American, Hispanic, and Asian American students, respectively. White students increased the percentage to 58% in year 2, with the differences enlarging to about 40 points from other racial and ethnic groups.

All Grade 11 subgroups defined by receipt of special services exceeded the AMAO II target rates of the advanced ELP attainment in both years, except the special education group in both years (Figure 30 and Table E2 in Appendix E). The non-FARMS groups had a higher percentage achieving the advanced ELP level than the FARMS groups. The percentage point difference between the non-FARMS and FARMS groups was three points in year 1 and increased to eight points in year 2. The difference between the non-special education and special education groups was 7 points in year 1 and increased to 16 points in year 2; there was a large discrepancy of sizes between the two groups.

Grade 12

AMAO II results by ESOL instructional level. Percentages of Grade 12 ESOL students achieving the advanced ELP level in the LAS-Links test were far above the AMAO II target rates in both years for advanced ESOL students (39% and 48%), and also met the targets for high intermediate ESOL students (21% and 16%) (Figure 31 and Table E2 in Appendix E). At the same time, very few low intermediate and no low or high beginning ESOL students showed the advanced ELP attainment. From year 1 to year 2, the percentage increased nine points for at the advanced ESOL instructional level and decreased five points at the high intermediate level. In addition, the higher the ESOL instructional level, the higher the percentage of the advanced ELP attainment was;

higher-level ESOL students had a greater opportunity to attain the advanced English proficiency than lower-level ESOL students.

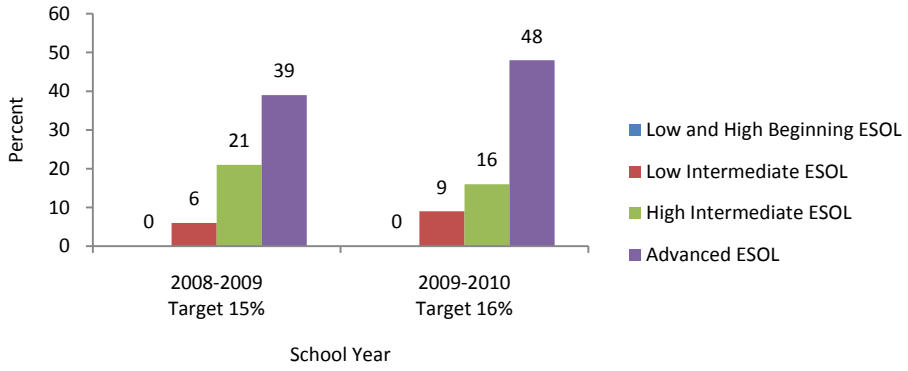

Figure 31. Percentage of Grade 12 LAS-Links test takers attaining ELP on state AMAO II targets, by ESOL instructional level.
Note. AMAO II targets referred to the percentage achieving English language proficient level 5 (above proficient) in overall scores and at least level 4 (proficient) in each domain of speaking, listening, reading, and writing on LAS-Links tests.

AMAO II results by student subgroup. Among Grade 12 subgroups defined by race and ethnicity and receipt of FARMS and special education services, the percentages of students who attained the advanced ELP level set for the AMAO II targets ranged from 24% to 31% and 11% to 75% in the two years (no special education students in year 1), respectively (Figure 32 and Table E2 in Appendix E).

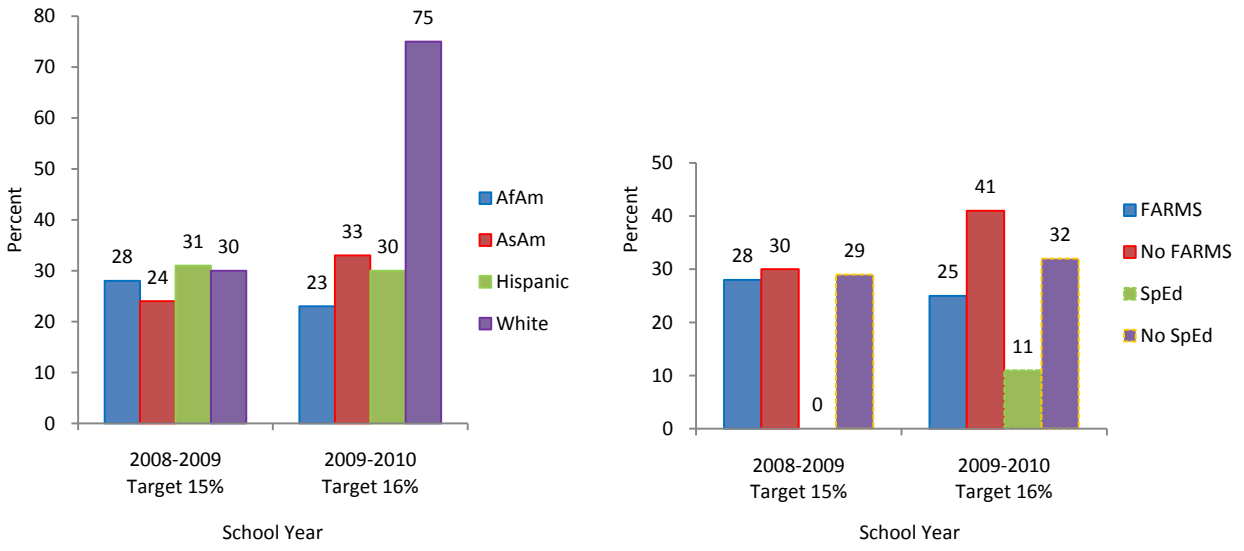

Figure 32. Percentage of Grade 12 LAS-Links test takers attaining ELP on state AMAO II targets, by student subgroup for race and special services.
Note. AMAO II targets referred to the percentage achieving English language proficient level 5 (above proficient) in overall scores and at least level 4 (proficient) in each domain of speaking, listening, reading, and writing on LAS-Links tests. There were no special education students in 2008–2009.

All Grade 12 racial and ethnic subgroups exceeded the AMAO II target rates of the advanced ELP attainment in both years (Figure 32 and Table E2 in Appendix E). White and Hispanic students had similar percentages of attaining the advanced ELP level in year 1, 30% vs. 31%, which were a few points more than Asian American and African American students. In year 2, the percentage for White students jumped to 75% and was 52, 45, and 42 points more than African American, Hispanic, and Asian American students. (Note that the percentage fluctuation for White students may be due to the small group size of 20 and 16 in the two years.)

All Grade 12 subgroups defined by receipt of special services reached the AMAO II target rates of the advanced ELP attainment in both years, except the special education group in year 2 (there were no special education students in year 1) (Figure 32 and Table E2 in Appendix E). The non-FARMS groups had a higher percentage attaining the advanced ELP level than the FARMS groups. The percentage point difference between the non-FARMS and FARMS groups was only 2 points in year 1 but increased to 16 points in year 2. The difference between the non-special education and special education groups was 21 points in year 2; there was a large discrepancy of sizes between the two groups.

Findings for Evaluation Question Three

3) *How did Grade 8 ESOL students perform on MAP-R (reading)?*

Table 3.1 and Table 3.2 present findings from the comparisons of Grade 8 ESOL students' MAP-R achievement in 2008–2009 and 2009–2010 with the achievement of ESOL students in the 2007–2008 school year. Analysis of covariance (ANCOVA) was conducted to assess the yearly achievement differences in students' mean scores across years. Results revealed that performance of the Grade 8 ESOL students as measured by spring 2009 (Table 3.1) and spring 2010 (Table 3.2) MAP-R were statistically the same when compared to ESOL students' MAP-R in the baseline year (2007–2008). Specifically, after controlling for students' background variables including prior ability,[3] there were no significant differences between ESOL students' MAP-R performance in 2008–2009 compared with the performance of their peers in 2007–2008 ($F = 1.16$; $df = 1$; $p > .05$). The same analyses[4], comparing the MAP-R performance of ESOL students in 2009–2010 with those attending in 2007–2008 ($F = 0.58$; $df = 1$; $p > .05$) did not reach a significant level either.

[3] The correlation coefficient of the outcome measure (Grade 8 spring 2009 MAP_R RIT score) with the spring 2008 MAP_R RIT score (measure of students' prior ability) was significant *at 0.01 level* ($r = 0.76$; $p < .01$).
[4] The correlation coefficient of the outcome measure (Grade 8 spring 2010 MAP_R RIT score) with the spring 2008 MAP_R RIT score (measure of students' prior ability) was significant *at 0.01 level* ($r = 0.73$; $p < 0.01$).

Table 3.1
Adjusted Means and Mean Difference Comparing Spring 2008 with Spring 2009 MAP-R

	Adjusted Means				Yearly Achievement	
	2007–2008 (Baseline)		2008–2009 (Year 1)		Adjusted Mean Difference	Std. Error
Outcome Measure	Mean	*N*	Mean	*N*		
MAP-R (RIT Scores)	204.47	251	205.49	271	+1.02*	0.95

* $t = 0.82$; $p = .28$

Table 3.2
Adjusted Means and Mean Difference Comparing Spring 2008 with Spring 2010 MAP-R

	Adjusted Means				Yearly Achievement	
	2007–2008 (Baseline)		2009–2010 (Year 2)		Adjusted Mean Difference	Std. Error
Outcome Measure	Mean	*N*	Mean	*N*		
MAP-R RIT Scores	206.10	251	205.34	234	-0.77*	0.99

* $t = 1.41$; $p = .44$

The effect size measures were used to judge the practical significance of the observed differences, as recommended by several researchers (e.g., Cohen, 1988; Carver, 1993; Levin, 1993; Thompson, 1995; American Psychological Association, 2001). Table 3.3 provides yearly effect sizes associated with the performance of successive cohorts of Grade 8 ESOL students as measured by MAP-R RIT scores. The analysis of effect sizes for MAP-R supported the findings from the ANCOVA. There were no educationally significant changes in ESOL students' MAP-R achievement from 2007–2008 to 2008–2009 (ES = 0.05) or from 2007–2008 to 2009–2010 (ES = -0.04). These findings suggest comparable performances on MAP-R reading for the two years compared.

Table 3.3
Comparison of MAP-R Year-Cohorts Over Time using Effect Sizes

2007–2008 Year 0	2008–2009 Year 1 *d*	2009–2010 Year 2 *d*
Baseline	(Adjusted mean year 1 – adjusted mean year 0)/Pooled SD	(Adjusted mean year 2 – Adjusted mean year 0)/Pooled SD
Effect Size	0.05	-0.04

Findings for Evaluation Question Four

4) *How did Grade 8 ESOL students perform on MSAs (reading and mathematics)?*

The MSA performance of Grade 8 ESOL students in both reading and mathematics were used to examine achievement improvement over a 3-year period. Both statistical significance tests and effect size measures were used to examine ESOL students' yearly performance and progress

over time. The comparisons of MSA reading and mathematics scores across years produced mixed results. Overtime, the MSA reading achievement was more pronounced when compared to MSA mathematics achievement. Detailed findings addressing this evaluation question are described below.

In reading, the findings as shown in Table 4.1 and Table 4.2 indicated that there was an upward trend in ESOL students' performance from 2007–2008 to 2009–2010 school years. The yearly analysis revealed that on average, the reading mean score in 2008–2009 was greater than 2007–2008 (adjusted mean difference = 5.1) and the difference was statistically significant ($F = 6.09$; $df = 1$; $p < .05$). Students' reading scores, on average, continued to increase in 2009–2010 when compared to the baseline year (2007–2008) by 6.29 points and the increase was statistically significant ($F = 7.06$; $df = 1$; $p < .05$). The calculated effect sizes (Table 4.3) also showed a yearly growth since 2007–2008 school year. The growth was very close to be educationally significant (ES = 0.18) in the first comparison (year 1 vs. baseline) and reached a significant level (ES = 0.20) in the second comparison (year 2 vs. baseline).

Table 4.1
Adjusted Means and Mean Difference comparing Spring 2007–2008
With Spring 2008–2009 MSA

	Adjusted Means				Yearly Achievement	
Outcome Measure	2007–2008 (Baseline) Mean	*N*	2008–2009 (Year 1) Mean	*N*	Mean Difference	Std. Error
MSA Reading	377.25	350	382.35	347	5.1*	2.07
MSA Math	392.26	483	399.07	352	6.80*	2.58

Note. Reading: $t = 2.47$; p =.01; Mathematics: $t = 2.64$; p = .008

Table 4.2
Adjusted Means and Mean Difference Comparing
Spring 2007–2008 with Spring 2009–2010 MSA

	Adjusted Means				Yearly Achievement	
Outcome Measure	2007–2008 (Baseline) Mean	*N*	2009–2010 (Year 2) Mean	*N*	Mean Difference	Std. Error
MSA Reading	377.25	350	383.35	322	6.29*	2.37
MSA Math	391.87	483	389.53	444	-2.34	2.60

Note. Reading: $t = 2.66$; $p = .008$; Mathematics: $t = 0.90$; $p = 0.37$

In mathematics, the analysis of the MSA scores (Table 4.1 and 4.2) indicates that on average, there was a scale point increase of 6.80 in the first comparison (Year 1 vs. baseline) and a scale point decrease of 2.34 in the second comparison (Year 2 vs. baseline). The significant test revealed that after controlling for students' characteristics, there was a statistically significant difference between ESOL students' MSA mathematics performance in 2008–2009 compared with the performance of their peers in 2007–2008 ($F = 6.98$; $df = 1$; $p < .05$). The same analyses, comparing the MSA mathematics performance of ESOL students in 2009–2010 with performance of ESOL students attending in 2007–2008 ($F = 0.81$; $df = 1$; $p > .05$) did not reach a significant level. Table 4.3 summarizes the ESOL students' performance and progress by

providing yearly effect sizes on the MSA mathematics performances for 2007–2008 through 2009–2010. The analyses of the effect sizes for the mathematics achievement from 2007–2008 to 2008–2009 showed a nearly significant effect (ES = 0.18) and no effect from 2007–2008 to 2009–2010 school year (ES = -0.06).

Table 4.3
Comparison of MSA Year-Cohorts Over Time using Effect Sizes

2007–2008 Year 0 Baseline	2008–2009 Year 1 *d_All* (Adjusted mean year 1 – Adjusted mean year 0)/Pooled SD	2009–2010 Year 2 *d_All* (Adjusted mean year 2 – Adjusted mean year 0)/Pooled SD
MSA Reading	0.18	0.20
MSA Math	0.18	-0.06

Findings for Evaluation Question Five

5) *Were students receiving higher-level ESOL instruction more likely to pass HSAs than those receiving lower-level ESOL instruction?*

Logistic regression procedures were used to compare likelihoods of passing HSA subjects (i.e., algebra, English, biology, and government) at any high school grade between students receiving higher- and lower-level ESOL instructions while several student characteristic variables were held. Overall, subject level analyses revealed that students in higher ESOL instructional levels had significantly higher chances of passing HSA than those in the lower instructional levels in the majority of comparisons. Detail findings at the HSA subject level are described below.

HSA Algebra

Four comparisons (Table 5.1) were made to evaluate the odds of passing HSA Algebra among groups of ESOL students in different instructional levels. In a couple of the comparisons, ESOL students in adjacent instructional levels were combined to have a more meaningful comparison due to low frequency of ESOL students in a few of the instructional levels. The odds of passing HSA Algebra was the highest for ESOL students in instructional levels 5 and 4 combined when compared to levels 3 and 2 combined (odds = 1.87). The rest of the comparisons produced a similar odds ranging from 1.56 (level 5 vs. level 4) to 1.41 (level 4 vs. level 3). These findings indicated that passing HSA Algebra were: a) 1.87 times as high for ESOL students in level 5 combined with level 4 when compared with those students in level 3 plus level 2; b) 1.56 as high for ESOL students in level 5 compared with level 4; and c) 1.41 times as high for ESOL students in level 4 compared to their counterparts in level 3. The calculated effect sizes for the four comparisons (Table 5.2) were small ranging from 0.19 (level 4 vs. level 3) to 0.35 (levels 5+4 vs. levels 3+2). These small effect sizes were large enough to have educational significance.

Table 5.1
Odds of Passing HSA Algebra by ESOL Students' Instructional Level

HSA Algebra	N	Odds Ratio	*P* value	Effect Size
Instructional Level				
Level 5 Level 4	363 404	1.56	0.007	0.25
Level 4 Level 3	404 294	1.41	0.052	0.19
Levels 5+4 Levels 3+2	767 389	1.87	0.000	0.35
Level 3 Levels 2+1	294 120	1.49	0.144	0.22

HSA Biology

In the three comparisons made (Table 5.2), the odds of passing HSA Biology was the largest (2.42) when comparing level 5 ESOL students with those in levels 4 and 3 combined. Moreover, there was a significantly higher chance of passing HSA Biology for level 5 ESOL students than for their peers in level 4 (odds = 2.12). Finally, the odds of passing HSA Biology was higher for level 4 ESOL students compared with those ESOL students in level 3 (odds = 1.99). The effect sizes associated with the three comparisons ranged from small (ES = 0.38) to roughly medium (ES = 0.49), suggesting the observed significant differences in all three comparisons were also educationally significant (Table 5.2).

Table 5.2
Odds of Passing HSA Biology by ESOL Students' Instructional Level

HSA Biology	N	Odds Ratio	*P* value	Effect Size
Instructional Level				
Level 5 Level 4	615 373	2.12	0.000	0.41
Level 4 Level 3	373 79	1.99	0.009	0.38
Level 5 Levels 4+3	615 452	2.42	0.000	0.49

HSA English

Similar to HSA Biology, the odds of passing HSA English was the largest (2.98) when comparing level 5 ESOL students with those in levels 4 and 3 combined (Table 5.3). The same patterns in HSA Biology also were observed in the comparison of ESOL students' achievement in level 5 with level 4 students. The odds associated with passing HSA English was 2.68 times higher for ESOL level 5 students when compared to the passing rates of their peers in level 4. In both of these comparisons the effect sizes were in moderate range (0.60 and 0.55, respectively). Finally, the comparison of level 4 ESOL students to their peers in level 3 produced the lowest but educationally significant odds, indicating that a) level 4 ESOL students were 1.63 times as likely to pass HSA English as those students in level 3, and b) the difference in passing rates between the two groups of students (level 4 vs. level 3) was small but educational significant (ES = 0.27).

Table 5.3
Odds of Passing HSA English by ESOL Students' Instructional Level

HSA English	N	Odds Ratio	*P* value	Effect Size
Instructional Level				
Level 5	501	2.68	0.000	0.55
Level 4	321			
Level 4	321	1.63	0.14	0.27
Level 3	66			
Level 5	501	2.98	0.000	0.60
Levels 4+3	387			

HSA Government

Similar analyses for HSA Government revealed relatively comparable patterns as those found in HSA English (Table 5.4). The odds ratios calculated from logistic regression analyses revealed that the probability of passing HSA Government were significantly higher for students in higher instructional levels than their peers in lower ESOL instructional levels across all three comparisons (level 5 vs. levels 4+3; odds = 2.50), (level 5 vs. level 4; odds = 2.17), and (level 4 vs. level 3; odds = 2.11). The effect size was moderate (0.51) when comparing ESOL students level 5 with those in levels 4 and 3 combined and small for the comparison of level 5 with level 4 (ES=0.43) as well as the comparison of level 4 ESOL students to their peers in level 3 (0.41). All three effect sizes were large enough to be educationally significant (Table 5.4).

Table 5.4
Odds of Passing HSA Government for ESOL Students' Instructional Level

HSA Government	N	Odds Ratio	*P* value	Effect Size
Instructional Level				
Level 5 Level 4	701 384	2.17	0.000	0.43
Level 4 Level 3	384 58	2.11	0.013	0.41
Level 5 Levels 4+3	701 442	2.50	0.000	0.51

Discussions and Conclusions

The purpose of this evaluation research was to investigate the effects of ESOL instructional services in promoting secondary school ESOL students' language acquisition and academic achievements.

Overall, findings provided evidence that the majority of selected secondary grade cohorts and student sociodemographic subgroups made the annual progress toward English proficiency and attained the advanced English proficiency expected by the state. Significant improvement across three Grade 8 cohorts was found for MSA reading and mathematics, with achievement being more pronounced for reading than for mathematics. In addition, the odds of passing HSA subjects were significantly higher for students in higher ESOL instructional levels when compared to the passing rates of their peers in lower instructional levels, with a small to moderate effect size.

The above findings supported the literature about positive associations between ESOL instructional services and student achievement (e.g., Wilkinson, et al., 2008). Also consistent with the literature (e.g., Genesee et al. 2006; Corallo & McDonald, 2002), the positive program effects may be explained by the alignment of the ESOL curriculum with the state English language proficient standards and standardized assessments. Moreover, the less significant across-cohort improvement for MSA mathematics than for reading may be due to a large proportion of Hispanic students in the ESOL group whose achievement, especially in mathematics, was hindered by English barriers and other factors (e.g., Freeman and Crawford, 2008; NCELA, 2007).

Findings also revealed that lower-level ESOL students were more likely than higher-level students to make annual progress toward English proficiency expected for AMAO I. This may be because lower-level ESOL students had more room for improvement (a 15-point or more increase) than higher-level students on the scale score. On the other hand, higher-level ESOL students were more likely than lower-level students to meet the AMAO II targets. This may be because higher-level students were more academically ready than lower-level students in

attaining the advanced English proficient level expected for AMAO II. These findings were in alignment with the literature about how ESOL program outcome measures affect study results (De Avila, 1997; Anstrom, 1997). According to the literature, prior test scores should be considered when expecting the same growth for students. Specifically, a lower-level ESOL student, starting with a lower test score, may show a great gain in scores but make no increase in the proficient level; on the other hand, a higher-level ESOL student, starting with a higher test score, may meet the advanced English proficient level with just a small score increase.

Findings for Evaluation Question One Related to AMAO I

Analyses for this question were conducted for three cohorts of Grades 6 through 12; cohorts 1, 2, and 3 referred to ESOL students with two data points in spring 2007 vs. spring 2008, spring 2008 vs. spring 2009, and spring 2009 vs. spring 2010, respectively. AMAO I defines the progress toward English language proficiency as a 15-point or more annual increase on the LAS-Links test. The state AMAO I targets for the three selected cohorts were 48%, 56%, and 58% of students who received ESOL services. The study computed numbers and percentages of secondary ESOL students in each grade level who made the expected annual progress toward English proficiency and compared the percentages against the target rates for AMAO I.

Findings About AMAO I by Grade Level

- Students in each of the middle school grade cohorts made the expected annual progress toward English proficiency by exceeding the percentage targets for AMAO I.
- Findings for high school grades were mixed. Grade 10 exceeded the percentage targets for AMAO I in all three cohorts, whereas all cohorts in Grade 9, one cohort in Grade 11, and two cohorts in Grade 12 did not make the expected annual progress toward English proficiency.

Findings About AMAO I by ESOL Instructional Level

- Beginning, intermediate, and advanced ESOL students in each of the middle school grade cohorts, except for Grade 6 advanced ESOL students in cohorts 2 and 3, made the expected annual progress toward English proficiency by greatly exceeding the percentage targets for AMAO I.
- Beginning and low intermediate ESOL students in all three cohorts of high school grades, except Grade 9 intermediate ESOL students, met or exceeded the percentage targets for AMAO I. However, high intermediate ESOL students in most high school grade cohorts (7 of 12) and advanced ESOL students in all high school grade cohorts did not make the expected annual progress toward English proficiency.
- The percentages meeting the AMAO I targets remained similar or increased from cohort 1 to 3 for most instructional levels in Grades 6 to 10 and not in Grades 11 and 12.
- Lower-level ESOL students were more likely than higher-level students to make the expected annual progress toward English proficiency in all secondary grade cohorts.

Findings About AMAO I by Student Subgroup

- All middle school student subgroups defined by race and ethnicity and receipt of special services made the expected annual progress toward English proficiency by exceeding the percentage targets for AMAO I in all three cohorts, with the exception of some special education groups including the three Grade 6 cohorts and one cohort in each of Grades 7 and 8.
- Findings for high school subgroups:
  - In Grade 9, 20 of 24 subgroups did not make the expected annual progress toward English proficiency.
  - All the Grade 10 subgroups, except for one special education group, made expected progress toward English proficiency in all three cohorts.
  - Almost all Grade 11 and 10 of 16 Grade 12 subgroups in cohorts 1 and 2 exceeded the targets, whereas 12 of 16 subgroups in cohort 3 of these two grades fell below the target.
- Findings about differences between racial and ethnic groups:
  - Asian American or White students in Grades 6 to 8 led other racial and ethnic groups in percentages making the expected annual progress toward English proficiency in all three cohorts.
  - Hispanic students in Grades 9 to 11 showed similar or higher percentages making the expected annual progress toward English proficiency, relative to African American and Asian American students, in all three cohorts.
  - The percentage point differences between the racial and ethnical groups mentioned above became smaller, negligible, none, or even reversed across the cohorts in Grades 8 to 11.
  - White students led other racial and ethnic groups for the Grade 12 cohorts and had larger fluctuations of percentages across the cohorts than other groups in most secondary grade levels.
- The non-FARMS group led the FARMS group in percentages making the expected annual progress in almost all cohorts of Grades 6 and 8. However, the relationship between the two groups was reversed in Grade 7 cohorts 1 and 3 and in most high school grade cohorts. The percentage point differences between the two groups were small or negligible in general.
- Almost all the non-special education groups in Grades 6 to 12 led the special education groups in percentages making the expected annual progress in all three cohorts. The percentage point differences between the two groups varied across the cohorts due to large fluctuations of the special education groups in the percentages of expected annual progress for AMAO I.

Findings for Evaluation Question Two Related to AMAO II

Analyses for this question were conducted for Grades 6 through 12 LAS-Links test takers in 2008−2009 and 2009−2010 referred to as year 1 and year 2, respectively. To meet the AMAO II criterion for attaining English language proficiency, the student must be above the proficient level on the overall score and on or above the proficient level in each domain of speaking, listening, reading, and writing in the LAS-Links test. The state AMAO II targets in the two

selected years were 15% and 16% of LAS-Links test takers. The study computed numbers and percentages of secondary LAS-Links test takers in each grade level who attained the advanced English proficiency and compared the percentages against the target rates for AMAO II.

Findings About AMAO II by Grade Level

- All middle and high school grades demonstrated the advanced ELP attainment by meeting or exceeding the percentage targets for AMAO II in both years.
- The percentages achieving the AMAO II targets increased from year 1 to 2 for Grades 6 and 8 and remained similar for all other secondary grades.
- The percentages achieving the AMAO II targets were higher for Grade 7 than for Grades 6 and 8 and increased by high school grade level with Grade 12 being much higher than Grades 9 to 11.

Findings About AMAO II by ESOL Instructional Level

- Intermediate and advanced ESOL students in all middle school grades attained the advanced English proficient level by meeting the percentage targets for AMAO II in both years, whereas beginning ESOL students did not. The percentages of the advanced ELP attainment remained similar for advanced and increased for intermediate ESOL students from year 1 to 2 in all middle school grade levels.
- High intermediate and advanced ESOL students in all high school grades and low intermediate ESOL students in Grade 9 met the AMAO II targets in both years, whereas beginning (low and high) and low intermediate ESOL students in Grades 10 to 12 did not. The percentages of the advanced ELP attainment increased slightly for advanced and decreased slightly for high intermediate ESOL students from year 1 to year 2 in all high school grade levels.
- Higher-level ESOL students were more likely to meet the percentage targets for AMAO II in all secondary grade cohorts. The positive correlation between percentages achieving the AMAO II targets and ESOL instructional levels may be because AMAO II requires the highest ELP attainment measured by the LAS-Links test.

Findings About AMAO II by Student Subgroup

- All middle school subgroups defined by race and ethnicity and special services, with the exception of some special education groups, attained the advanced English proficient level by meeting the percentage targets for AMAO II in both years.
- Findings for high school subgroups:
    - All racial and ethnic subgroups in Grades 10 to 12 met the AMAO II targets in both years, except for Grade 10 Hispanic students in year 2. In Grade 9, Asian American and White students also met the targets in both years, whereas Africa American and Hispanic students did not.
    - All the high school FARMS and non-FARMS groups met the AMAO II targets in both years, except for the two FARMS groups in Grade 9.
    - All the high school non-special education groups met the AMAO II targets in both years, whereas none of the special education groups did.

- Findings about differences between racial and ethnic groups:
  - White students in Grades 6 to 8 had a much higher percentage attaining the advanced English proficient level than other racial and ethnic groups in both years.
  - White students in Grades 9 to 12 led nearly all other racial and ethnic groups in percentages attaining the advanced English proficient level in both years.
  - The percentage point differences between White and other racial and ethnic groups remained similar or became larger (much larger in Grades 11 and 12) from year 1 to year 2.
- The non-FARMS groups largely led the FARMS groups in attaining the advanced English proficient level in all secondary grade levels in both years. The percentage point differences between the two groups remained similar from year 1 to year 2 for Grades 6 to 9 and became larger in Grades 10 to 12.
- The non-special education groups largely led the special education groups in attaining the advanced English proficient level in all secondary grade levels in both years.

Findings for Evaluation Question Three

- Results from ANCOVA revealed that performance of the Grade 8 ESOL students, as measured by spring 2009 and spring 2010 MAP-R scores, were statistically the same when compared to MAP-R scores of ESOL students' who attended schools during the baseline year (2007–2008). Specifically, after controlling for students' background variables, there were no significant differences between ESOL students' MAP-R performance in 2008–2009 compared with the performance of their peers in 2007–2008. The same analyses, comparing the MAP-R performance of ESOL students in 2009–2010 with those attending in 2007–2008 also did not reach a significant level. The analysis of effect sizes for MAP-R supports the findings from the ANCOVA. There were no educationally significant changes in ESOL students' MAP-R achievement from 2007–2008 to 2008–2009 (ES=0.05) or from 2007–2008 (baseline year) to 2009–2010 (ES = -0.04).

Findings for Evaluation Question Four

- The comparisons of MSA reading and mathematics scores across years produced mixed results for Grade 8. Over the study period, the MSA reading achievement was more pronounced when compared to MSA mathematics achievement.
- The yearly analysis revealed that on average, the reading mean score in 2008–2009 was greater than 2007–2008 with a statistical significance. The ESOL students' average reading scores continued to significantly increase in 2009–2010 when compared to the baseline year (2007–2008). The calculated effect sizes associated with the observed differences in the first comparison (2008–2009 vs. 2007–2008) was very close to being educationally significant (ES = 0.18) and reached a significant level (ES = 0.20) in the second comparison (2009–2010 vs. 2007–2008).
- In mathematics, there was a statistically significant difference between ESOL students' MSA performance in 2008–2009 compared with the performance of their peers in 2007–2008. However, the same analyses, comparing the MSA mathematics performance

of ESOL students in 2009–2010 with performance of ESOL students attending in 2007–2008 did not reach a significant level. The yearly effect sizes for the mathematics achievement from 2007–2008 to 2008–2009 shows a nearly small effect (ES = 0.18) and no effect from 2007–2008 to 2009–2010 school year (ES = -0.06).

Findings for Evaluation Question Five

- The odds of passing the Algebra HSA were: a) 1.87 times as high for ESOL students in level 5 combined with level 4 when compared with those students in level 3 plus level 2; b) 1.56 as high for ESOL students in level 5 compared with level 4; and c) 1.41 times as high for ESOL students in level 4 compared to their counterparts in level 3. The calculated effect sizes for the four comparisons were small but educationally significant ranging from 0.19 (level 4 vs. level 3) to 0.35 (levels 5+4 vs. levels 3+2).
- The odds of passing the Biology HSA were: a) 2.42 times higher for level 5 ESOL students than their peers in levels 4 and 3 combined; b) 2.12 times higher for level 5 ESOL students compared with their level 4 peers; and c) 1.99 times higher for level 4 ESOL students than those ESOL students in level 3. The effect sizes ranged from small (ES = 0.38) to roughly medium (ES = 0.49), suggesting the observed significant differences in all the above comparisons were educationally significant.
- The odds of passing the English, HSA were 2.98 times higher for level 5 ESOL students than those in levels 4 and 3 combined (level 5 vs. level 4+3) and 2.68 times higher than their level 4 peers (level 5 vs. level 4). The effect sizes associated with the two comparisons were in a moderate range (0.55 and 0.60, respectively). The comparison of level 4 ESOL students with their peers in level 3 produced the lowest odds (odds ratio = 1.63) but educationally significant effect sizes (ES = 0.27), indicating the difference in passing rates between the two groups of students (level 4 vs. level 3) was small but educational significant (ES = 0.27).
- Similar analyses for the Government HSA revealed relatively comparable patterns as those found in HSA English. The odds ratios revealed that the odds of passing the Government HSA were significantly higher for students in higher ESOL instructional levels than their peers in lower ESOL instructional levels (level 5 vs. levels 4+3; odds = 2.50), (level 5 vs. level 4; odds = 2.17), and (level 4 vs. level 3; odds = 2.11). The calculated effect sizes ranged from moderate (0.51) for comparing ESOL students level 5 with those in levels 4 and 3 combined and small for the comparison of level 5 with level 4 (ES = 0.43) as well as for the comparison of level 4 ESOL students with their peers in level 3 (ES = 0.41).

Recommendations

Based on findings from the evaluation, the following recommendations are provided for improving ESOL instructional services in the secondary schools:

- Continue to implement effective ESOL instructional services to ensure secondary students make consistent progress toward English language proficiency and attain the advanced ELP level, given positive findings for AMAO I and AMAO II targets.

- Provide more intensive English language instructional services to ESOL students in Grade 9, given that this grade level was least likely to meet the AMAO I and AMAO II targets among all secondary grade levels.
- Encourage ESOL students to take HSA tests when they have sufficient proficiency in English. This recommendation is based on positive and significant findings about the relationship between the odds of passing the HSA and student ESOL instructional levels.

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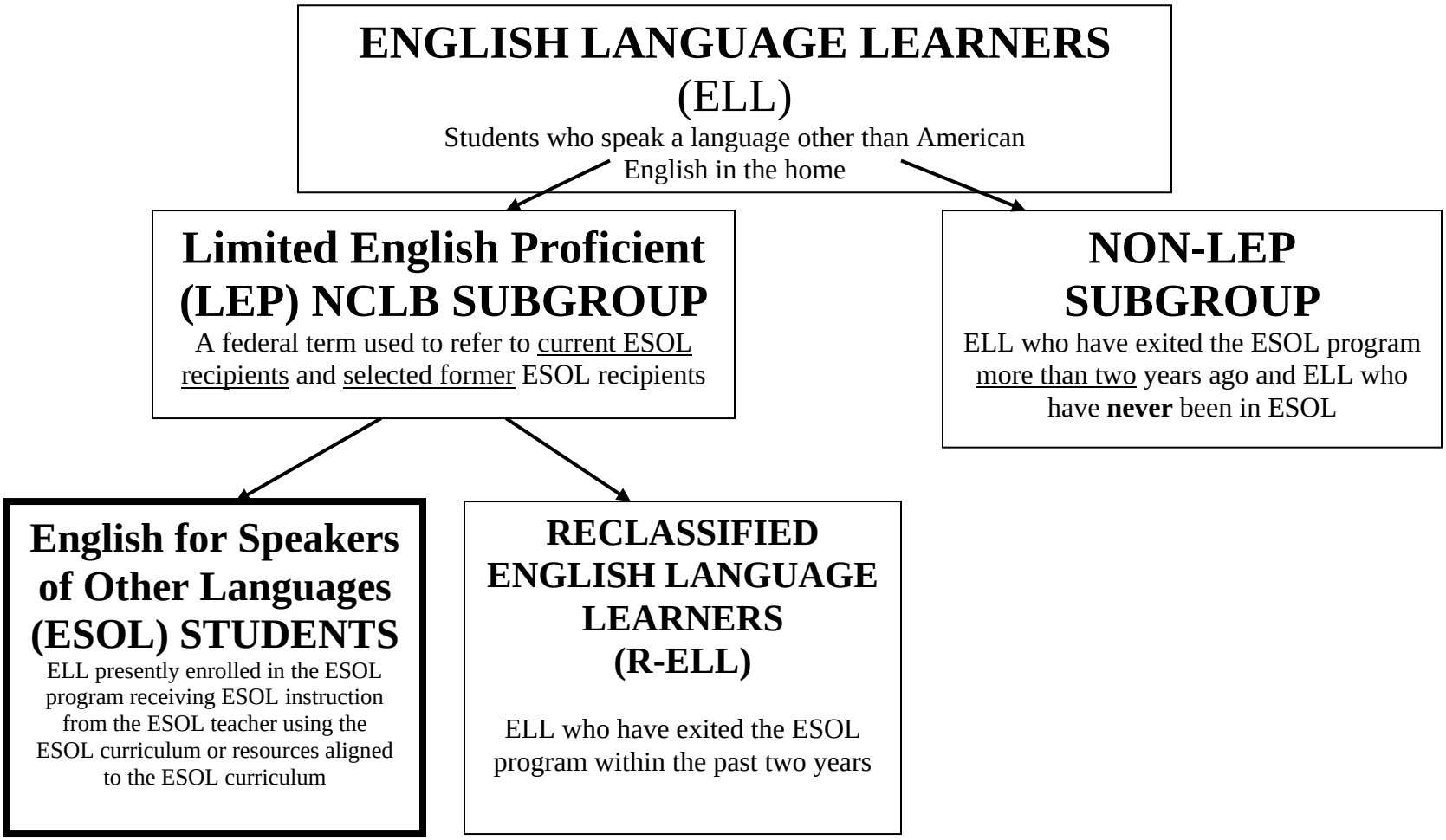
Appendix A: Classification of English Language Learners

ELL/LEP/R-ELL/ESOL
Understanding the Connection in Montgomery County Public Schools



Appendix B: LAS-Links English Proficient Levels and Descriptors

The LAS-Links Assessment measures English language proficiency within five grade spans: K–1, 2–3, 4–5, 6–8, and 9–12. Within each grade span, a student can be assigned to one of five proficient levels (Gomes, 2010), as described below:

Beginning (proficient level 1). A level 1 student is beginning to develop receptive and productive uses of English in the school context, although comprehension may be demonstrated nonverbally or through the native language, rather than in English.

Early intermediate (proficient level 2). A level 2 student is developing the ability to communicate in English within the school context. Errors impede basic communication and comprehension. Lexical, syntactic, phonological, and discourse features of English are emerging.

Intermediate (proficient level 3). A level 3 student is developing the ability to communicate effectively in English across a range of grade-level-appropriate language demands in the school context. Errors interfere with communication and comprehension. Repetition and negotiation are often needed. The student exhibits a limited range of lexical, syntactic, phonological, and discourse features when addressing new and familiar topics.

Proficient (proficient level 4). A level 4 student communicates effectively in English across a range of grade-level-appropriate language demands in the school context, even though errors occur. The student exhibits productive and receptive control of lexical, syntactic, phonological, and discourse features when addressing new and familiar topics.

Above proficient (proficient level 5). A level 5 student communicates effectively in English across a wide range of grade-level-appropriate language demands in the school context, with few if any errors. The student commands a high degree of productive and receptive control of lexical, syntactic, phonological, and discourse features when addressing new and familiar topics.

Appendix C: Secondary ESOL Enrollment and LAS-Links Completion

Table C1
Secondary School ESOL Enrollments and Completion of LAS-Links Tests by Year and Grade

		ESOL Enrollment	Completed Test		Partial Test		No Test	
Year	Grade	*N*	*n*	*%*	*n*	*%*	*n*	*%*
2007–2008	Grade 6	853	662	77.6	2	0.2	189	22.2
	Grade 7	689	581	84.3	2	0.3	106	15.4
	Grade 8	616	485	78.7	1	0.2	130	21.1
	Grade 9	952	793	83.3	7	0.7	152	16.0
	Grade 10	928	794	85.6	10	1.1	124	13.3
	Grade 11	740	609	82.3	10	1.4	121	16.3
	Grade 12	446	342	76.7	9	2.0	95	21.3
	Total	5224	4266	81.7	41	0.8	917	17.5
2008–2009	Grade 6	723	627	86.7	0	0.0	96	13.3
	Grade 7	684	628	91.8	1	0.2	55	8.0
	Grade 8	562	502	89.3	0	0.0	60	10.7
	Grade 9	937	797	85.2	7	0.7	132	14.1
	Grade 10	826	734	89.0	3	0.4	88	10.6
	Grade 11	751	658	87.6	1	0.1	92	12.3
	Grade 12	440	365	83.0	5	1.1	70	15.9
	Total	4923	4311	87.6	17	0.3	593	12.1
2009–2010	Grade 6	585	544	93.0	0	0.0	41	7.0
	Grade 7	574	533	92.9	2	0.3	39	6.8
	Grade 8	508	483	94.9	0	0.0	26	5.1
	Grade 9	808	739	91.5	7	0.9	62	7.6
	Grade 10	791	736	93.0	5	0.6	50	6.4
	Grade 11	659	604	91.7	5	0.8	50	7.5
	Grade 12	376	359	95.5	2	0.5	15	4.0
	Total	4301	3998	92.9	21	0.5	283	6.6

Note. ESOL enrollment is from each appropriate end-of-year Edload file, which is a comprehensive file of the school year. Students counted as "no test" takers could be a result of those who exited MCPS or exited ESOL during the school year.

Appendix D: Analyses of Data Related to Evaluation Question One

Table D1
Number and Percentage of Middle School ESOL Students Making Expected Annual Progress Toward English Proficiency on State AMAO I Targets[a] by Grade, ESOL Instructional Level, and Student Subgroup

		Spring 2007 vs. Spring 2008			Spring 2008 vs. Spring 2009			Spring 2009 vs. Spring 2010		
		N	*n*	*%*	*N*	*n*	*%*	*N*	*n*	*%*
Grade 6										
	All Students	456	331	73	423	272	64	367	254	69
ESOL Instructional Levels[b]	Beginning	66	64	97	67	62	93	41	39	95
	Intermediate	212	162	76	181	121	67	157	125	80
	Advanced	176	105	60	174	89	51	169	90	53
Race and Ethnicity[c]	AfAm	86	59	69	79	53	67	57	35	61
	AsAm	78	63	81	68	48	71	67	52	78
	Hispanic	262	187	71	238	145	61	228	157	69
	White	30	22	73	37	26	70	15	10	67
Special Services	FARMS	299	214	72	283	168	59	266	179	67
	No FARMS	157	117	75	140	104	74	101	75	74
	SpEd	40	18	45	34	18	53	31	16	52
	No SpEd	416	313	75	389	254	65	336	238	71
Gender	Male	259	177	68	230	148	64	204	141	69
	Female	197	154	78	193	124	64	163	113	69
Grade 7										
	All Students	370	257	70	406	282	70	354	273	77
ESOL Instructional Levels	Beginning	47	40	85	43	40	93	33	29	88
	Intermediate	145	110	76	130	97	75	142	123	87
	Advanced	178	107	60	233	145	62	179	121	68
Race and Ethnicity	AfAm	64	41	64	69	49	71	69	44	64
	AsAm	58	44	76	76	54	71	62	55	89
	Hispanic	220	150	68	229	152	66	196	152	78
	White	28	22	79	32	27	84	27	22	82
Special Services	FARMS	252	180	71	256	175	68	263	205	78
	No FARMS	118	77	65	150	107	71	91	68	75
	SpEd	25	15	60	23	9	39	26	19	73
	No SpEd	345	242	70	383	273	71	328	254	77
Gender	Male	201	132	66	229	159	69	186	140	75
	Female	169	125	74	177	123	70	168	133	79
Grade 8										
	All Students	313	244	78	335	255	76	314	260	83
ESOL Instructional Levels[b]	Beginning	39	37	95	43	35	81	32	30	94
	Intermediate	129	106	82	117	88	75	116	104	90
	Advanced	145	101	70	175	132	75	165	125	76
Race and Ethnicity	AfAm	63	45	71	59	44	75	54	46	85
	AsAm	64	48	75	57	45	79	55	51	93
	Hispanic	170	136	80	199	153	77	191	151	79
	White	16	15	94	19	12	63	14	12	86
Special Services	FARMS	210	167	80	224	164	73	231	186	81
	No FARMS	103	77	75	111	91	82	83	74	89
	SpEd	11	7	64	16	13	81	18	10	56
	No SpEd	302	237	79	319	242	76	296	250	85
Gender	Male	175	139	79	189	146	77	171	143	84
	Female	138	105	76	146	109	75	143	117	82

[a]AMAO I targets referred to the percentage of ESOL students receiving a 15-point or more annual increase in LAS-Links overall scale scores, with state-set 48%, 56%, and 58% for the three cohorts, respectively.
[b]Missing data were not reported.
[c]American Indian was not reported.

Table D2
Number and Percentage of High School ESOL Students Making Expected Annual Progress Toward English Proficiency on State AMAO I Targets[a] by Grade, ESOL Instructional Level, and Student Subgroup

		Spring 2007 vs. Spring 2008			Spring 2008 vs. Spring 2009			Spring 2009 vs. Spring 2010		
		N	*n*	*%*	*N*	*n*	*%*	*N*	*n*	*%*
Grade 9										
	All Students	404	188	47	385	193	50	381	202	53
ESOL Instructional Levels[b]	L/H beginning	140	93	66	118	83	70	137	93	68
	Low interm.	109	52	48	131	61	47	100	54	54
	High interm.	109	31	28	83	35	42	91	34	37
	advanced	42	10	24	53	14	26	53	21	40
Race and Ethnicity[c]	AfAm	79	27	34	74	23	31	70	33	47
	AsAm	74	29	39	75	39	52	63	29	46
	Hispanic	225	123	55	216	121	56	234	130	56
	White	26	9	35	20	10	50	14	10	71
Special Services	FARMS	238	115	48	249	133	53	248	134	54
	No FARMS	166	73	44	136	60	44	133	68	51
	SpEd	11	3	27	12	5	42	17	4	24
	No SpEd	393	185	47	373	188	50	364	198	54
Gender	Male	221	109	49	214	109	51	208	115	55
	Female	183	79	43	171	84	49	173	87	50
Grade 10										
	All Students	585	375	64	567	379	67	578	384	66
ESOL Instructional Levels[b]	L/H beginning	196	148	76	179	143	80	186	144	77
	Low interm.	130	86	66	134	90	67	123	92	75
	High interm.	142	77	54	135	81	60	134	69	52
	advanced	117	64	55	119	65	55	135	79	59
Race and Ethnicity	AfAm	112	68	61	100	65	65	117	78	67
	AsAm	113	69	61	122	83	68	103	67	65
	Hispanic	336	223	66	322	218	68	334	223	67
	White	24	15	63	23	13	57	23	16	70
Special Services	FARMS	331	222	67	343	233	68	374	248	66
	No FARMS	254	153	60	224	146	65	204	136	67
	SpEd	14	6	43	13	8	62	16	10	63
	No SpEd	571	369	65	554	371	67	562	374	67
Gender	Male	336	225	67	310	207	67	331	224	68
	Female	249	150	60	257	172	67	247	160	65

[a]AMAO I targets referred to the percentage of ESOL students receiving a 15-point or more annual increase in LAS-Links overall scale scores, with state-set 48%, 56%, and 58% for the three cohorts, respectively.
[b]Missing data were not reported.
[c]American Indian was not reported.

Table D2 (continued)
Number and Percentage of High School ESOL Students Making Expected Annual Progress Toward English Proficiency on State AMAO I Targets[a] by Grade, ESOL Instructional Level, and Student Subgroup

		Spring 2007 vs. Spring 2008			Spring 2008 vs. Spring 2009			Spring 2009 vs. Spring 2010		
		N	*n*	*%*	*N*	*n*	*%*	*N*	*n*	*%*
Grade 11										
	All Students	469	268	57	539	344	64	494	280	57
ESOL Instructional Levels[b]	L/H beginning	58	40	69	55	42	76	53	35	66
	Low interm.	133	74	56	177	118	67	131	95	73
	High interm.	164	93	57	160	112	70	158	79	50
	advanced	114	61	54	147	72	49	152	71	47
Race and Ethnicity[c]	AfAm	100	54	54	105	57	54	97	57	59
	AsAm	95	45	47	117	77	66	101	56	55
	Hispanic	252	151	60	298	198	66	275	156	57
	White	22	18	82	19	12	63	21	11	52
Special Services	FARMS	261	147	56	325	211	65	314	181	58
	No FARMS	208	121	58	214	133	62	180	99	55
	SpEd	7	2	29	15	12	80	14	4	29
	No SpEd	462	266	58	524	332	63	480	276	58
Gender	Male	264	152	58	305	192	63	264	150	57
	Female	205	116	57	234	152	65	230	130	57
Grade 12										
	All Students	317	174	55	340	185	54	333	161	48
ESOL Instructional Levels[b]	L/H beginning	10	8	80	4	4	100	8	6	75
	Low interm.	36	22	61	31	24	77	21	13	62
	High interm.	117	68	58	129	74	57	127	58	46
	advanced	154	76	49	176	83	47	177	84	48
Race and Ethnicity	AfAm	66	37	56	75	35	47	56	27	48
	AsAm	63	29	46	77	43	56	99	42	42
	Hispanic	172	95	55	173	97	56	165	84	51
	White	16	13	81	15	10	67	13	8	62
Special Services	FARMS	158	82	52	184	107	58	206	102	50
	No FARMS	159	92	58	156	78	50	127	59	47
	SpEd	4	0	0	0	0	0	8	2	25
	No SpEd	313	174	56	340	185	54	325	159	49
Gender	Male	155	84	54	175	96	55	170	76	45
	Female	162	90	56	165	89	54	163	85	52

[a]AMAO I targets referred to the percentage of ESOL students receiving a 15-point or more annual increase in LAS-Links overall scale scores, with state-set 48%, 56%, and 58% for the three cohorts, respectively.
[b]Missing data were not reported.

Appendix E: Analyses of Data Related to Evaluation Question Two

Table E1
Number and Percentage of Middle School LAS-Links Test Takers
Attaining Expected English Proficiency on State AMAO II Targets[a] by Grade,
ESOL Instructional Level, and Student Subgroup

		2008 – 2009			2009 – 2010		
		N	*n*	*%*	*N*	*n*	*%*
Grade 6							
	All Students	627	174	28	544	184	34
ESOL	Beginning	182	9	5	131	8	6
Instructional	Intermediate	235	50	21	209	66	32
Levels[b]	Advanced	202	114	56	195	109	56
Race and	AfAm	117	36	31	91	26	29
Ethnicity[c]	AsAm	119	31	26	107	41	38
	Hispanic	322	69	21	298	88	30
	White	68	37	54	48	29	60
Special	FARMS	392	79	20	352	98	28
Services	No FARMS	235	95	40	192	86	45
	SpEd	39	4	10	39	11	28
	No SpEd	588	170	29	505	173	34
Gender	Male	334	89	27	294	92	31
	Female	293	85	29	250	92	37
Grade 7							
	All Students	629	212	34	535	185	35
ESOL	Beginning	158	4	3	119	2	2
Instructional	Intermediate	184	40	22	186	51	27
Levels[b]	Advanced	279	167	60	220	130	59
Race and	AfAm	106	39	37	108	38	35
Ethnicity	AsAm	136	59	43	104	40	39
	Hispanic	331	81	25	269	72	27
	White	56	33	59	54	35	65
Special	FARMS	383	96	25	362	108	30
Services	No FARMS	246	116	47	173	77	45
	SpEd	26	3	12	30	6	20
	No SpEd	603	209	35	505	179	35
Gender	Male	354	130	37	280	95	34
	Female	275	82	30	255	90	35
Grade 8							
	All Students	502	147	29	483	163	34
ESOL	Beginning	117	0	0	104	1	1
Instructional	Intermediate	159	25	16	161	41	26
Levels[b]	Advanced	217	119	55	212	120	57
Race and	AfAm	86	21	24	96	35	37
Ethnicity	AsAm	102	39	38	95	40	42
	Hispanic	271	64	24	258	69	27
	White	42	22	52	34	19	56
Special	FARMS	315	76	24	321	90	28
Services	No FARMS	187	71	38	162	73	45
	SpEd	17	4	24	20	1	5
	No SpEd	485	143	30	463	162	35
Gender	Male	271	82	30	263	95	36
	Female	231	65	28	220	68	31

[a]AMAO II targets referred to the percentage achieving English language proficiency level 5 in overall scores and level 4 or level 5 in each domain of speaking, listening, reading, and writing on LAS-Links tests; the state-set targets were 15% and 16% for the two years, respectively.
[b]Missing data were not reported.
[c]American Indian was not reported.

Table E2
Number and Percentage of High School LAS-Links Test Takers
Attaining Expected English Proficiency on State AMAO II Targets[a] by Grade,
ESOL Instructional Level, and Student Subgroup

		2008 – 2009			2009 – 2010		
		N	*n*	*%*	*N*	*n*	*%*
Grade 9							
	All Students	804	134	17	746	122	16
ESOL Instructional Levels[b]	L/H beginning	390	1	0	387	6	2
	Low interm.	189	28	15	143	23	16
	High interm.	136	56	41	129	44	34
	advanced	78	49	63	73	48	66
Race and Ethnicity[c]	AfAm	151	21	14	148	21	14
	AsAm	156	41	26	118	35	30
	Hispanic	447	53	12	433	47	11
	White	49	18	37	47	19	40
Special Services	FARMS	490	61	12	486	62	13
	No FARMS	314	73	23	260	60	23
	SpEd	17	1	6	20	2	10
	No SpEd	787	133	17	726	120	17
Gender	Male	449	70	16	418	73	18
	Female	355	64	18	328	49	15
Grade 10							
	All Students	737	138	19	741	132	18
ESOL Instructional Levels[b]	L/H beginning	251	7	3	260	2	1
	Low interm.	169	11	7	154	7	5
	High interm.	180	47	26	163	31	19
	advanced	135	72	53	159	90	57
Race and Ethnicity	AfAm	140	23	16	155	28	18
	AsAm	159	41	26	141	36	26
	Hispanic	396	59	15	403	53	13
	White	42	15	36	41	15	37
Special Services	FARMS	425	69	16	453	59	13
	No FARMS	312	69	22	288	73	25
	SpEd	16	2	13	17	1	6
	No SpEd	721	136	19	724	131	18
Gender	Male	389	72	19	416	71	17
	Female	348	66	19	325	61	19

[a]AMAO II targets referred to the percentage achieving English language proficiency level 5 in overall scores and level 4 or level 5 in each domain of speaking, listening, reading, and writing on LAS-Links tests; the state-set targets were 15% and 16% for the two years, respectively.
[b]Missing data were not reported.
[c]American Indian was not reported.

Table E2 (continued)
Number and Percentage of High School LAS-Links Test Takers
Attaining Expected English Proficiency on State AMAO II Targets[a] by Grade,
ESOL Instructional Level, and Student Subgroup

		2008 – 2009			2009 – 2010		
		N	*n*	*%*	*N*	*n*	*%*
Grade 11							
	All Students	659	133	20	609	129	21
ESOL Instructional Levels[b]	L/H beginning	89	0	0	76	0	0
	Low interm.	202	11	5	156	9	6
	High interm.	188	44	23	199	37	19
	advanced	174	76	44	172	82	48
Race and ethnicity	AfAm	128	20	16	130	27	21
	AsAm	165	36	22	120	24	20
	Hispanic	336	67	20	323	57	18
	White	30	10	33	36	21	58
Special Services	FARMS	381	71	19	371	67	18
	No FARMS	278	62	22	238	62	26
	SpEd	16	2	13	16	1	6
	No SpEd	643	131	20	593	128	22
Gender	Male	356	80	23	320	76	24
	Female	303	53	18	289	53	18
Grade 12							
	All Students	370	107	29	361	114	32
ESOL Instructional Levels[b]	L/H beginning	6	0	0	10	0	0
	Low interm.	33	2	6	23	2	9
	High interm.	137	29	21	139	22	16
	advanced	193	75	39	189	90	48
Race and ethnicity	AfAm	78	22	28	61	14	23
	AsAm	84	20	24	108	36	33
	Hispanic	188	59	31	176	52	30
	White	20	6	30	16	12	75
Special Services	FARMS	200	56	28	215	54	25
	No FARMS	170	51	30	146	60	41
	SpEd	0	0	0	9	1	11
	No SpEd	370	107	29	352	113	32
Gender	Male	195	62	32	181	57	32
	Female	175	45	26	180	57	32

[a]AMAO II targets referred to the percentage achieving English language proficiency level 5 in overall scores and level 4 or level 5 in each domain of speaking, listening, reading, and writing on LAS-Links tests; the state-set targets were 15% and 16% for the two years, respectively.
[b]Missing data were not reported.
[c]American Indian was not reported.

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Appendix F: Description of Analytical Sample for Evaluation Question Five

Table F1
Demographics Corresponding to the Highest HSA Scores for ESOL Students Included in the Analysis for Evaluation Question Five

		2008–2009		2009–2010	
		n	Percent of group	*n*	Percent of group
HSA Algebra (*N* = 1181)	All	536	100.0	645	100.0
	Race and Ethnicity				
	African American	130	24.3	150	23.3
	Asian American	113	21.1	155	24.0
	Hispanic	262	48.9	312	48.4
	White	31	5.8	28	4.3
	Receipt of Services				
	FARMS	282	52.6	353	54.7
	Special Education	3	0.6	14	2.2
HSA Biology (*N* = 1078)	All	530	100.0	548	100.0
	Race and Ethnicity				
	African American	120	22.6	111	20.3
	Asian American	135	25.5	149	27.2
	Hispanic	245	46.2	265	48.4
	White	30	5.7	23	4.2
	Receipt of Services				
	FARMS	257	48.5	293	53.5
	Special Education	2	0.4	12	2.2
HSA English (*N* = 897)	All	428	100.0	469	100.0
	Race and Ethnicity				
	African American	94	22.0	89	19.0
	Asian American	103	24.1	140	29.9
	Hispanic	204	47.7	213	45.4
	White	27	6.3	27	5.8
	Receipt of Services				
	FARMS	217	50.7	252	53.7
	Special Education	1	0.2	9	1.9
HSA Government (*N* = 1157)	All	568	100.0	589	100.0
	Race and Ethnicity				
	African American	133	23.4	118	20.0
	Asian American	140	24.6	167	28.4
	Hispanic	260	45.8	266	45.2
	White	35	6.2	38	6.5
	Receipt of Services				
	FARMS	290	51.1	314	53.3
	Special Education	5	0.9	11	1.9

Table F2
HSA Passing Status by ESOL Instructional Level Corresponding to the Highest HSA Score

Content Area	ESOL Instructional Level*	HSA Passing Status					
		Pass		Fail		Total	
		n	*%*	*n*	*%*	*N*	*%*
HSA Algebra	All	795	67.3	386	32.7	1181	100.0
	Level 1	19	76.0	6	24.0	25	100.0
	Level 2	65	68.4	30	31.6	95	100.0
	Level 3	189	64.3	105	35.7	294	100.0
	Level 4	259	64.1	145	35.9	404	100.0
	Level 5	263	72.5	100	27.5	363	100.0
HSA Biology	All	731	67.8	347	32.2	1078	100.0
	Level 1	2	100.0	0	0.0	2	100.0
	Level 2	2	22.2	7	77.8	9	100.0
	Level 3	30	38.0	49	62.0	79	100.0
	Level 4	214	57.4	159	42.6	373	100.0
	Level 5	483	78.5	132	21.5	615	100.0
HSA English	All	413	46.0	484	54.0	897	100.0
	Level 1	1	100.0	0	0.0	1	100.0
	Level 2	0	0.0	8	100.0	8	100.0
	Level 3	15	22.7	51	77.3	66	100.0
	Level 4	95	29.6	226	70.4	321	100.0
	Level 5	302	60.3	199	39.7	501	100.0
HSA Government	All	838	72.4	319	27.6	1157	100.0
	Level 1	1	100.0	0	0.0	1	100.0
	Level 2	3	23.1	10	76.9	13	100.0
	Level 3	22	37.9	36	62.1	58	100.0
	Level 4	230	59.9	154	40.1	384	100.0
	Level 5	582	83.0	119	17.0	701	100.0

Note: HSA passing status was based on the highest HSA score a student received.
[a]Include students from classes of 2008–2009 and 2009–2010.
[b]The five ESOL instructional levels are low beginning, high beginning, low intermediate, high intermediate, and advanced levels.

Table F3
HSA Passing Status by Grade Level Corresponding to the Highest HSA Score[a]

Content Area	ESOL Grade Level[b]	HSA Passing Status					
		Pass		Fail		Total	
		n	*%*	*n*	*%*	*N*	*%*
HSA Algebra	All	795	67.3	386	32.7	1181	100.0
	Grade 7	1	100.0	0	0.0	1	100.0
	Grade 8	38	97.4	1	2.6	39	100.0
	Grade 9	243	88.0	33	12.0	276	100.0
	Grade 10	243	72.1	94	27.9	337	100.0
	Grade 11	175	54.5	146	45.5	321	100.0
	Grade 12	95	45.9	112	54.1	207	100.0
HSA Biology	All	731	67.8	347	32.2	1078	100.0
	Grade 9	28	82.4	6	17.6	34	100.0
	Grade 10	254	83.6	50	16.4	304	100.0
	Grade 11	315	76.1	99	23.9	414	100.0
	Grade 12	134	41.1	192	58.9	326	100.0
HSA English	All	413	46.0	484	54.0	897	100.0
	Grade 10	44	81.5	10	18.5	54	100.0
	Grade 11	139	74.7	47	25.3	186	100.0
	Grade 12	230	35.0	427	65.0	657	100.0
HSA Government	All	838	72.4	319	27.6	1157	100.0
	Grade 9	12	92.3	1	7.7	13	100.0
	Grade 10	222	89.9	25	10.1	247	100.0
	Grade 11	341	81.6	77	18.4	418	100.0
	Grade 12	263	54.9	216	45.1	479	100.0

Note: HSA passing status was based on the highest HSA score a student received.
[a]Include students from classes of 2008–2009 and 2009–2010.