REPORT OF THE VIRGINIA BOARD OF EDUCATION

Final Report: The Analysis of Statewide Data Relating to The Requirements for Obtaining a High School Diploma for Students with Limited English Proficiency

TO THE GOVERNOR AND
THE GENERAL ASSEMBLY OF VIRGINIA



SENATE DOCUMENT NO. 8

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Table of Contents

Executive Summary	1
Introduction	4
Demographics of Limited English Proficient (LEP) High School Students	6
LEP Students' Country of Origin and First Language	
Other Student Characteristics	11
School Division Programs Designed to Assist LEP Students in their	
Academic Achievement	12
Family Support and Services	
Administrative Services	
Adult Education and General Educational Development (GED) Certificate	
Instructional Resources and Interventions Targeted Classes and Instructional Activities for LEP Students	
Other	
Barriers to Graduation	15
Resource Limitations	
Academic Barriers	
Social Factors	17
Age and Time Constraints	17
Other Reported Barriers	
Reasons LEP students in grades 9-12 dropped out of school, 2005-2006	17
LEP Student Academic Achievement and Future Educational Plans	
Performance on Standards of Learning (SOL) Assessments	
Relationship Between Performance on the English SOL and Other SOL Assessments	
SOL assessments and consistency of schooling	
Class rank	
College Attendance	
Adequate Yearly Progress and the Federal No Child Left Behind Act of 2001	
Graduation Requirements	
Ongoing Activities	28
Curriculum and Instruction	
Assessment	29
Parental Involvement	
Selected Examples of Professional Development Opportunities	
General Resources to Support LEP Students	
Recommendations	
References	32
Appendix A: Legislative Mandate — 2006 General Assembly	34
Appendix B: Distribution of Grade 9-12 LEP Students in Virginia, 2005-2006	35
Appendix C: Services offered to LEP students by school division	38
Appendix D: Details of the Statistical Models of SOL Assessment Data	45

Executive Summary

Senate Bill (SB) 683 required the Virginia Board of Education (BOE) and the Virginia Department of Education (VDOE) to collect statewide data on Virginia's public school students with limited English proficiency (LEP). The bill required information on demographics, school division programs and services, and academic indicators of success such as scores on Standards of Learning (SOL) assessments for these students. The bill also required that the BOE and the VDOE analyze the relationships between these factors as they relate to LEP students and the requirements for obtaining a high school diploma as set forth in the Regulations Establishing Standards for Accrediting Public Schools in Virginia and the No Child Left Behind Act of 2001, and make recommendations on the steps to take to resolve the issues relating to the requirements for obtaining a high school diploma. A copy of SB 683 is provided in Appendix A.

To meet the requirements of SB 683, the VDOE and the BOE conducted a study that used a snapshot of data from students in grades 9-12 enrolled during the 2005-2006 school year. This report describes the results of the analyses, ongoing VDOE activities that support LEP student achievement, and recommendations for further action.

The results show that Virginia's LEP students in grades 9-12 are a diverse group that speak over 130 languages and represent more than 140 countries. They are geographically distributed across the state in urban, suburban, and rural communities. The largest concentration of LEP students is in northern Virginia. However, several school divisions with smaller populations have a large percentage of LEP students in grades 9-12. A majority (55 percent) of LEP students is economically disadvantaged, and small percentages are migrant or are experiencing homelessness. Several school divisions reported difficulty evaluating LEP students for special education services. Nine (9) percent of LEP students in grades 9-12 receive special education services, compared with 14 percent of the non-LEP student population in the same grades.

Based on data from a random sample of students, it is estimated that:

- Eighty three (83) percent of LEP students in grades 9-12 entered Virginia's schools for the first time between 2000 and 2006;
- Thirteen (13) percent of LEP students have interrupted schooling once they enter Virginia public schools; and
- LEP students arriving at Virginia public schools at age 16 or older are more likely to have a gap of two or more years in the number of years of prior education.

On average, LEP students earn lower scores and pass the SOL assessments at lower rates than non-LEP students on 10 of Virginia's 12 SOL assessments in grades 9-12. LEP students and non-LEP students have similar average scores and pass rates on the Algebra I and Algebra II SOL assessments. The largest performance gap between LEP and non-LEP students exists on the science assessments.

To understand the relationship between performance on the different SOL assessments, the Department of Education analyzed the relationship between LEP student performance on

the English 11 SOL assessment and LEP student performance on other SOL assessments. The results suggest that the skills required to be successful on the English 11 SOL assessment are critical for success on the other SOL assessments. The relationship suggests that instruction focused on improving skills needed for the English 11 SOL assessment will also support academic achievement in all other areas assessed through Virginia's SOL assessment program.

In 2006, 1,507 LEP students completed high school, comprising 69 percent of the LEP students in grade 12. Sixty one (61) percent of these students earned standard diplomas, 30 percent earned advanced diplomas, and three and two percent earned special and modified standard diplomas, respectively. Less than one percent of the students earned other types of completion certificates.

Based on reports from 112 school divisions, 97 divisions (87 percent of those reporting) offer at least one of the following services:

- Exercise the option for LEP students to remain in high school until age 22;
- Provide targeted remediation for LEP students who fail the English 11 SOL assessment;
- Offer after-school tutoring for English as a second language students; or
- Provide summer school ESL instruction.

These divisions reach more than 90 percent of LEP students enrolled in grades 9-12 during the 2005-2006 school year.

Less than 16 percent of LEP students in grades 9-12 are served by school divisions that provide weekend tutoring. School divisions reported using a variety of other programs and services to support LEP students' academic success. These include:

- Providing services that support students and their families that are linguistically accessible to speakers of other languages;
- Offering targeted subject area, literacy, language and life-skills classes for LEP students:
- Providing professional development for teachers that is focused on instructional methods for LEP students;
- Making available adult education classes and services to older LEP students; and
- Taking advantage of community resources that can support LEP students' academic achievement.

VDOE asked school divisions to report the barriers LEP students encounter in graduating from high school. Eleven (11) school divisions serving LEP students reported no barriers to graduation. Those that reported barriers listed factors such as resource limitations, challenges mastering academic materials due to language barriers, social factors, and considerations for students' age and the time it takes to learn academic English.

One thousand twenty four (1,024) LEP students in grades 9-12 (5.8 percent of all LEP students in grades 9-12) were reported by school divisions as dropping out of high school during the 2005-2006 school year. The most frequently reported reasons students dropped

out were:

- Low academic achievement (36.6 percent of those who dropped out);
- Became employed (17.8 percent of those who dropped out); and
- No longer attends school and could not be located (17.8 percent of those who dropped out).

Students also dropped out due to behavioral difficulties, family reasons, reaching the maximum age to receive services, health problems, financial hardship, and expulsion.

Based on these findings, the BOE and VDOE recommend the following actions to address the issues surrounding LEP high school students:

- 1. Review the formula that provides funding to school divisions for ESL teachers, and conduct a study to assess the impact of increasing resources available to school divisions to support LEP student achievement.
- 2. Support the National Governors Association four-year graduation rate provision that permits states to assign LEP students to different cohorts to allow them more time to graduate.
- 3. Review the BOE guidance document on General Achievement Diplomas to clarify accessibility of this diploma option for LEP students.
- 4. Continue to work with the United States Department of Education (USED) to develop equitable practices for including LEP students in the state's accountability system.
- Continue to provide technical assistance and consider the development of additional resources that can support LEP student achievement and increased high school graduation rates.

Introduction

Senate Bill (SB) 683 required the Virginia Board of Education (BOE) and the Virginia Department of Education (VDOE) to collect statewide data on Virginia's public school students with limited English proficiency (LEP). The bill required information on demographics, school division programs and services, and academic indicators of success such as scores on Standards of Learning (SOL) assessments for these students. The bill also required that the BOE and the VDOE analyze the relationships between these factors as they relate to LEP students and the requirements for obtaining a high school diploma as set forth in the Regulations Establishing Standards for Accrediting Public Schools in Virginia and the No Child Left Behind Act of 2001, and make recommendations on the steps to take to resolve the issues relating to the requirements for obtaining a high school diploma. A copy of SB 683 is provided in Appendix A.

To meet the requirements of SB 683, a snapshot of data was analyzed from the 2005-2006 school year. VDOE obtained data from three sources:

- VDOE student and assessment databases;
- A two-part survey requesting data directly from school divisions; and
- The National Student Clearinghouse¹ for information on college attendance.

Data from the VDOE student record database were updated since the BOE and VDOE submitted a preliminary report to the Governor and General Assembly on December 1, 2006. To reflect those updates, final verified data from the 2005-2006 school year are included in this final report.²

Data collection from the school divisions was conducted in two parts. The first part focused on programs and services offered to LEP students and barriers to high school graduation. School divisions were asked whether their division offered each of the following programs and services to LEP high school students:

- The option to allow LEP students to attend school until age 22 as permitted by the *Code of Virginia*, Section 22.1-5. D;
- Targeted remediation classes to students who fail the English 11 Standards of Learning (SOL) assessment;
- Summer school English as a Second Language classes;
- After-school tutoring;

• Weekend tutoring; and

• Other programs, strategies, or services for LEP high school students and their families.

¹The National Student Clearinghouse collects and maintains data on postsecondary and secondary student degree, diploma, and enrollment. For more information, see www.studentclearinghouse.com.

² In some cases, detailed numbers in this report differ from the number provided in the preliminary report. The data in this report reflect final data, as verified by school division superintendents and provided to the Virginia Department of Education. In all cases, the differences between the data in the preliminary and final reports were relatively small, and did not alter conclusions or recommendations in this report.

School divisions were also asked to report barriers LEP students encounter in graduating from high school.

The second part of the data collected from school divisions requested individual student information that VDOE does not collect on a regular basis. VDOE requested that school divisions provide data from a random sample of 30 percent of the LEP students in grades 9-12. The sample was generated with the qualification that all school divisions responsible for educating at least one LEP student in grades 9-12 be included. The sample size for each school division ranged from one to 2,771 students. School divisions were requested to provide the following information for each student included in the sample:

- The year the student first entered Virginia public schools;
- The number of years of formal education the student had prior to entering Virginia public schools;
- Whether the student's attendance since entering Virginia public schools was uninterrupted or interrupted; and
- The student's class rank (top, middle, or bottom third) of their high school class.

The data collections were conducted using the Department's secure data collection tool. One hundred and nineteen (119) school divisions responded to the survey requesting information on programs, services, and barriers to graduation, including several that do not serve LEP students in grades 9-12. This is a 90 percent response rate. Eighty-eight (88) divisions provided data on 5,444 students in response to the survey requesting individual student information, which represents 78 percent of the 113 school divisions in which LEP students were enrolled in grades 9-12 during the 2005-2006 school year. For many students, divisions reported that the information was unavailable. As a result, the number of students for which data are available varied for each question. Data were available for:

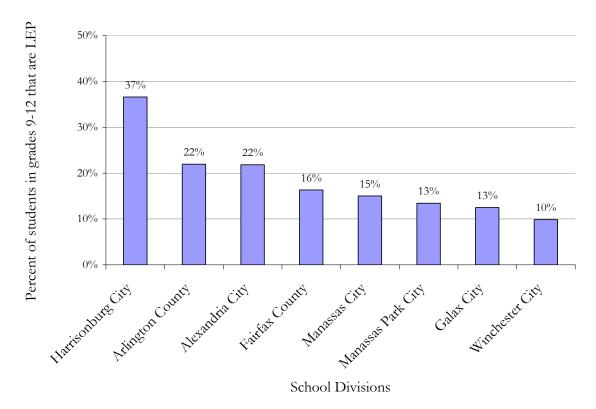
- Twenty-five (25) percent of students regarding the consistency of schooling as interrupted or uninterrupted;
- Twenty-six (26) percent of students regarding the year they first entered Virginia public schools;
- Thirteen (13) percent of students regarding the number of years of education students had prior to entering Virginia public schools; and
- Six (6) percent of students regarding class rank. The students that are in the class rank sample are not considered representative of LEP students in grades 9-12 statewide. As such, this report does not provide details of how LEP student performance ranks in Virginia's high schools.

The remainder of this report describes the results of the analyses conducted in response to SB 683. The first section of the report describes Virginia's LEP student population in grades 9-12. This is followed by information on the strategies and services school divisions implement to support LEP student academic success and the barriers that LEP students may encounter while pursuing a high school diploma. The next section focuses on LEP student achievement as measured in terms of SOL assessment data, student graduation and dropout status, and college plans and attendance. The final section of this report provides a summary of current VDOE resources to support LEP student achievement and recommendations for next steps to address the issues surrounding LEP high school students.

Demographics of Limited English Proficient (LEP) High School Students

School divisions reported that 17,656 LEP students were enrolled in grades 9-12 in Virginia's public schools in the 2005-2006 school year. Of these, 974 (5.5 percent) moved within schools in Virginia at least one time during the school year, often between Virginia school divisions. Figure 1 shows that Harrisonburg had the largest percentage of LEP students in grades 9-12 relative to its total enrollment in grades 9-12. LEP students comprised more than 10 percent of the students enrolled in grades 9-12 in Alexandria, Arlington, Fairfax, Manassas City, Manassas Park, Galax, and Winchester.

Figure 1. Percent of LEP students, grades 9-12, in school divisions in which more than 10 percent of students in grades 9-12 were LEP.



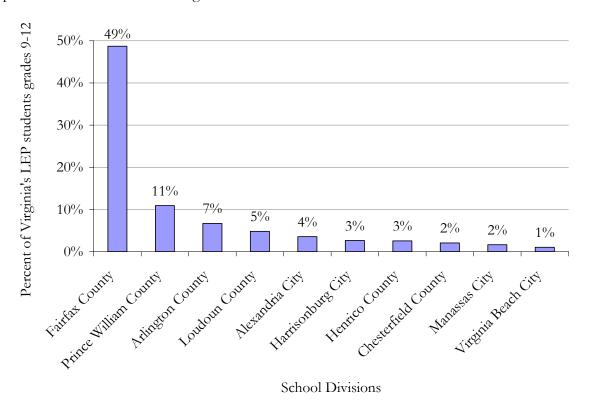
Fairfax was responsible for educating close to half of the LEP students in Virginia. Other school divisions serving more than 1 percent of LEP students in grades 9-12 were: Prince William, Arlington, Loudoun, Alexandria, Harrisonburg, Henrico, Chesterfield, Manassas City, and Virginia Beach. These data are illustrated in Figure 2, and represent divisions serving 83 percent of the LEP students in grades 9-12. Maps representing the distribution of LEP students across Virginia are provided in Appendix B.

LEP Students' Country of Origin and First Language

In addition to being enrolled in school divisions throughout the state, Virginia's LEP students in grades 9-12 are from at least 158 countries, including the United States. Table 1 lists the countries from which Virginia's LEP high school students originate. Data were available for 67 percent of the LEP high school students, as reported by school divisions.

The largest group are the nearly 22 percent of LEP students in grades 9-12 that represent 137 countries. The next largest group represented is from El Salvador, followed by Mexico, and the Republic of Korea. High school LEP students whose home country is reported as the United States are in 10 school divisions. These divisions include urban, suburban and rural municipalities throughout the state. Although these students were born in the United States, a language other than English is the dominant language at home. In addition, students may have lived in other countries during childhood.

Figure 2. Percent of Virginia's LEP students in school divisions that educate at least one percent of all LEP students in grades 9-12.



Virginia's LEP high school students' first languages are also diverse. Table 2 shows the data from 82 percent of Virginia's high school students for whom VDOE has language data. The most frequently reported language is Spanish, followed by Korean, Urdu, Arabic, Vietnamese, and Farsi. Twelve (12) percent of the students represent a group that speaks 124 other languages. These languages are spoken by less than one percent of Virginia's LEP students in grades 9-12.

Table 1. Virginia's LEP students' country of origin, grades 9-12

Country of origin	Percent of students*
El Salvador	15%
Mexico	9%
Republic of Korea	7%
Bolivia	7%
Peru	5%
Honduras	5%
Pakistan	5%
Vietnam	3%
Guatemala	3%
China	3%
Ethiopia	3%
India	2%
Afghanistan	2%
Philippines	2%
Ghana	2%
Sierra Leone	1%
Somalia	1%
Colombia	1%
United States	1%
Bangladesh	1%
Iran	1%
137 Other countries	22%

^{*}Based on data available from 67 percent of LEP students in grades 9-12.

Table 2. Languages spoken, Virginia's LEP students, grades 9-12.

Primary language	Percent of students*
Spanish	54%
Korean	7%
Urdu	4%
Arabic	3%
Vietnamese	3%
Farsi	3%
Reported as unknown or unlisted language	3%
Chinese, Mandarin	2%
Amharic	2%
Tagalog	2%
Russian	1%
Twi	1%
French	1%
Somali	1%
Other languages	12%

^{*}Based on data available for 82 percent of LEP students, grades 9-12.

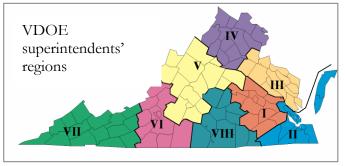
To understand regional variation among the languages that Virginia's LEP students speak, the Department calculated the five most frequently reported languages in each of Virginia's eight superintendents' regions. As shown in Table 3, Spanish is the most frequently reported language of LEP high school students in each of Virginia's eight superintendents' regions. However, the second most frequently reported language differs across regions. The second most frequently reported language in Regions II, V, and VI are not among the top five most frequently reported languages of the Commonwealth's LEP high school students. Regions VII and VIII educate a small percentage of LEP students in grades 9-12. Fewer than 10 students who speak languages other than Spanish comprise the groups of LEP high school students in these regions, and are therefore not reported.

VIRGINIA BOARD OF EDUCATION

Table 3. Top five most frequently reported languages of LEP students, grades 9-12, in Virginia's eight superintendents' regions.

Rank order of frequently reported languages	Region I	Region II	Region III	Region IV	Region V	Region VI	Region VII	Region VIII
1	Spanish	Spanish	Spanish	Spanish	Spanish	Spanish	Spanish	Spanish
2	Korean	Tagalog	Urdu	Korean	Russian	Chinese, Mandarin		
3	Serbo- Croatian	Korean	Arabic	Urdu	Unknown or language not listed	Vietnamese	~	~
4	Urdu	Vietnamese	~*	Arabic	Chinese, Mandarin	Farsi		
5	Arabic	Chinese, Mandarin	~	Vietnamese	Farsi	?		
Percent of LEP students in region, grades 9-12	5.14	4.19	2.43	79.38	5.52	2.34	< 1%	< 1%

^{*~}There were too few students to report.



Other Student Characteristics

Fifty-five (55) percent of LEP high school students are identified as economically disadvantaged. Economically disadvantaged students are defined as students who are:³

- Eligible for a free or reduced price lunch; or
- Receiving Temporary Assistance for Needy Families (TANF); or
- Eligible for Medicaid; or
- Identified as either migrant or experiencing homelessness.

Virginia's LEP population in grades 9-12 is comprised of 41 percent immigrants. According to Title III, Part C, Sec. 3301, (6) of the *No Child Left Behind Act of 2001*, the term 'immigrant children and youth' is defined as individuals who:

- Are aged 3 through 21;
- Were not born in any state; and
- Have not been attending one or more schools in any one or more states for more than 3 full academic years.

Approximately 9 percent of Virginia's LEP students, grades 9-12, are identified as eligible for special education services. As a point of reference, approximately 14 percent of all students enrolled in grades 9-12 receive special education services. The percent of students in each of these categories is shown in Table 4.

Table 4. Percent of LEP high school students identified in other categories.

	Disadvantaged	Immigrant	Experiencing homelessness	Migrant	Special Education
Percent of LEP high school students	55%	41%	< 1%	1%	9%

Data from a random sample of 4,625 (26%) of the LEP students in grades 9-12 showed that sixty-six percent of students in the sample entered Virginia schools for the first time since 2002, and that 83 percent entered since 2000.

Based on a sample of 2,351 students (13%) who were enrolled in grades 9-12 in the 2005-2006 school year, the majority of LEP students who enrolled in Virginia public schools before the age of 16 had completed a similar number of years of education as is typical for students their age. For these students, the median gap between actual and expected years of education was one year or less. In the same sample, the majority of students who entered school at or above age 16 had fewer years of education than typical public school students their age. For students entering at age 16, the median gap was 2 years, and the gap widened as age of entry increased. There were also 48 students (2 percent of students in the sample of 2,351) who reportedly entered Virginia's public middle and high schools with one year or less of formal education.

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³ Specifications for Completing the Student Records Data Collection, 2005-2006. Virginia Department of Education. Division of Technology. Revised: 6/29/2006.

Based on data from a random sample of 4,378 students, representing 25 percent of the LEP students in grades 9-12, 13 percent were reported to have had interrupted schooling, defined as education in Virginia public schools that was marked by irregular year-to-year enrollment or irregular attendance.

In summary, Virginia's LEP students in grades 9-12 during the 2005-2006 school year represent a diverse group. This diversity can create instructional challenges for school divisions. The next section of this report discusses the strategies Virginia's school divisions use to support this diverse group of students as well as the barriers they face in providing services.

School Division Programs Designed to Assist LEP Students in their Academic Achievement

As part of the data collection effort for this study, the Department of Education requested that school divisions report on the programs and services they provide to LEP high school students. One-hundred nineteen (119) of 132 school divisions (89 percent) responded to the survey, including 14 that did not have any LEP students enrolled in grades 9-12 during the 2005-2006 school year.

SB 683 specifically requested that the BOE and the VDOE collect data to learn whether school divisions:

- Exercise the option to allow LEP students to attend school to age 22;
- Provide targeted remediation classes for LEP students who have failed the English 11 Standards of Learning assessments;
- Offer summer school ESL;
- Offer after-school and weekend tutoring to assist LEP students in their academic achievement; or
- Use other strategies to assist older high school LEP students in meeting graduation requirements.

A summary of the results of the data collection on LEP programs and services are provided in Table 5. This table shows the number and percent of divisions that reported offering services, and the percent of students in Virginia's 9-12 grades that the services have the potential to reach. It includes data from 112 divisions that responded to the data request and provided information on their policies.⁴ Appendix C details responses by school division.

The number of divisions providing each service specified in SB 683 ranged from 21 to 97 (19 to 87 percent of responding divisions). With the exception of weekend tutoring, these services are provided in divisions that reach more than 90 percent of Virginia's LEP students in grades 9-12. Weekend tutoring is offered in 21 school divisions (19 percent) serving 16 percent of Virginia's LEP students in grades 9-12. Forty-three (43) school divisions (38 percent) offer ESL classes in the summer and these divisions reach 90 percent of Virginia's LEP students in grades 9-12.

⁴ An additional seven divisions that do not serve LEP students in grades 9-12 responded without providing information on their policies.

Table 5. Number and percent of school divisions that offer LEP services.

Service offered	Number (percent) of all responding divisions that reported offering service ¹	Percent of LEP students statewide served by divisions that reported offering service ²
Exercises the option to attend school to age 22	97 (87%)	94%
Remediation for LEP students that fail the English 11 SOL	93 (83%)	95%
After-school tutoring	89 (79%)	95%
Weekend tutoring	21 (19%)	16%
ESL summer school	43 (38%)	90%
Other	82 (73%)	97%

¹Based on 112 divisions that responded to the data request and reported on their policies regarding LEP students in grades 9-12, including some divisions that reported on their policies but have no LEP students enrolled in grades 9-12. An additional 7 divisions reported no LEP students enrolled in grades 9-12, and did not report on their policies.

²The percent of the total LEP students in the state, grades 9-12, that the service has the potential to reach, calculated as the number of LEP students, grades 9-12 in each school division offering the service divided by the total number of LEP students enrolled in grades 9-12, 2005-2006.

In addition to the specific services requested in the legislation, 82 school divisions (73% percent) serving 97 percent of Virginia's LEP students in grades 9-12 offer other programs and services to support LEP students' academic achievement. School divisions reported a wide variety of services. The services were grouped into the following categories:

- Family support and services;
- Administrative services;
- Adult education and General Educational Development (GED) certificate preparation classes and testing;
- Instructional resources and tutoring;
- Targeted classes and instructional activities for LEP students; and
- Other.

The following information provides a more detailed description of the strategies school divisions reported for each category. This information was provided in response to an openended question, and may not represent the comprehensive services offered to LEP students in Virginia. As such, the number of divisions reporting the services and the percent of students these programs reach should be considered minimum values.

Family Support and Services

Forty-four (44) school divisions that reach 90 percent of Virginia's LEP students reported

that they provide services to the families of LEP students. There were a wide variety of programs and services reported throughout Virginia, such as: 1) LEP family nights; 2) workshops and meetings; 3) ESL, literacy or other classes that parents can take at the school; 4) parent or family liaisons for LEP students; 5) migrant outreach and support programs; and 6) Spanish language radio programs that provide school information regularly to Spanish-speaking citizens.

Administrative Services

Twenty-two (22) school divisions that reach 76 percent of LEP students in grades 9-12 reported that they provide administrative services to support LEP students and create systems that support the accessibility of the school and school community for LEP students and their families. Examples of these services include: 1) intake and welcome centers to facilitate school registration and assess students' English and other academic skills; 2) use of an informal transcript evaluation network to support the schools' ability to transfer credits from prior school experiences; 3) interpreters for students and their families during registration, school events, and conferences; and 4) translated documents during registration and throughout the school year.

Adult Education and General Educational Development (GED) Certificate

Thirty-two (32) school divisions that reach 87 percent of LEP students in grades 9-12 reported that they provide older LEP students the opportunity to participate in adult education classes or programs that support students' ability to earn a GED certificate. School divisions also reported offering alternative high schools, which LEP students may attend. School divisions offering adult education, alternative high schools or programs, and GED programs reported different policies with regard to LEP student attendance. In some school divisions, students 18 years of age and older were reported eligible for these programs; other school divisions offer GED and adult education classes to younger students that meet specific eligibility criteria, such as the Individualized Student Alternative Education Plan (ISAEP). In addition, students may participate in alternative and adult education classes to supplement their education in K-12 programs, or to substitute for the K-12 programs. Students who enter adult education programs may seek a high school diploma or GED certificate; or continue to improve their English and other academic skills without seeking a diploma or certificate of completion. In the survey, one school division reported that 6 percent of its LEP high school students left the K-12 system to attend the adult education program in the 2005-2006 school year.

Instructional Resources and Interventions

Forty-seven (47) school divisions that reach 73 percent of LEP students in grades 9-12 reported that they provide interventions or other instructional resource services that were not specified in the Department of Education survey. Examples include: 1) scheduled periods of ESL support for content classes; 2) resource or study periods for language building; 3) daily living, community life, and study skills classes; and 4) in-school tutoring services.

Targeted Classes and Instructional Activities for LEP Students

Thirteen (13) school divisions that reach 26 percent of LEP students in grades 9-12 reported that they provide targeted classes and instructional activities for LEP students. These classes include: 1) intensive English; 2) transitional English; 3) sheltered instruction observation

protocol (SIOP)⁵; 4) computer software and laboratory-style classes that support language learning and literacy development; and 5) Spanish for Native Speakers courses.

Other

Twenty-five (25) school divisions that reach 29 percent of LEP students in grades 9-12 reported that they provide other strategies that do not fall into any of the above categories. These include: 1) collaborating with colleges and universities to support teacher education; 2) incorporating ESL staff development into teachers' professional development training; 3) providing citizenship classes; 4) creating buddy systems for LEP students; 5) partnering with local agencies, such as health services agencies, to provide students and their families with community referrals; and 6) encouraging LEP students to participate in college and job fairs, college information sessions, and other programs that increase LEP students' awareness of the opportunities beyond high school.

Barriers to Graduation

In the survey sent to school divisions, the VDOE requested that school divisions provide information on the barriers LEP students encounter in graduating from high school. The Department requested that school divisions provide information on barriers to graduation that LEP students encounter. The following 11 divisions that responded to the LEP survey reported that no barriers exist or that to date, all of their LEP students in grades 9-12 have graduated from high school or been promoted based on academic achievements.

- Alleghany
- Bristol
- Charlotte
- Colonial Beach
- Gloucester
- Greensville

- Hanover
- Nelson
- Poquoson
- Portsmouth
- Tazewell

Some school divisions offered more detail about the positive experiences of their LEP students. For example, one school division reported the following:

Over the past several years, we have noted a positive trend reflected in our LEP students. Our LEP students are proud of being affiliated with [our high school], proud of their academic and social achievements, and anxious to demonstrate their attachment to their school and community. This positive attitude is contagious and welcomed. An example of this positive attitude can be seen upon entering the front doors to the high school. The high school mascot ... is soaring above the photos of our athletic teams. The mascot was designed ... by a LEP student.

Despite many positive responses to the question, most school divisions reported some barriers to LEP student graduation. Responses to the LEP survey question about barriers to education fell into the following categories:

⁵SIOP is a program model for teaching grade-level content by controlling vocabulary and language structures, while at the same time promoting students' English language development. Teachers adapt grade level content lessons to the students' levels of English proficiency and incorporate language development into the instruction.

- Resource limitations;
- Academic challenges;
- Social factors;
- Age and time constraints; and
- Other.

The following information provides a more detailed description of the barriers reported for each category.

Resource Limitations

School divisions commented that the lack of consistent resources throughout the state has adverse effects on this population, which can be highly mobile. Divisions also reported more specific details about the resource limitations that affect LEP students.⁶

Several school divisions reported that they lack the qualified staff and other resources necessary to support their LEP students, and many commented on the need for improved and additional preparatory programs for Virginia's teachers to earn ESL endorsements. In some school divisions, the few LEP students that require services are distributed throughout a wide geographic area. This requires the staff (often one ESL teacher) to spend considerable amounts of time traveling to meet students' needs. Other staff positions that were mentioned as lacking were bilingual counselors and translators, and staff trained to evaluate LEP students for learning disabilities. School divisions also reported that they are constrained by a lack of transportation, which prevents LEP students from being able to participate in after-school activities such as tutoring, sports, and clubs. Some school divisions also reported a lack of programs for LEP students. Examples included community programs, newcomer programs, and career and technical education programs that are accessible to LEP students.

Academic Barriers

School divisions reported the following academic barriers to graduation:

- Students' lack of credits when transferring into Virginia's public schools;
- Limited access to course materials due to language barriers;
- Inability to meet standard course requirements and pass required core classes, in large part due to language barriers; and
- Difficulty passing SOL assessments.

School divisions also reported that some LEP students enter Virginia's public high schools with lower education levels than are expected of Virginia's students in grades 9-12. Data collected for this study confirm that this educational gap exists for a small group of students, and that students who enter Virginia public schools at age 16 or later are more likely to have wider gaps in education.

Students with fewer years of formal education are at a particular disadvantage as research indicates that schooling in a primary language is the strongest predictor of student achievement in a second language (Thomas and Collier, 2002). This and other research on

⁶ Some of these issues may also affect students who are not LEP.

LEP students typically focus on achievement in the younger grades. There is little research that focuses on language development for students who begin school at the middle and high school levels (Center for School and District Improvement, 2004; Genesee, Geva, Dressler, & Kamil, 2006; Lesaux & Geva, 2006).

Social Factors

School divisions frequently cited social factors that were barriers to LEP students graduating from high school. For example, school divisions report that students often have little support for their educational achievement and English language development outside of school. In addition, LEP students often have family responsibilities, such as working and providing childcare, that interfere with their ability to fully participate in school and activities.

Age and Time Constraints

School divisions reported that many LEP students enter Virginia public schools in their teen years with low levels of English proficiency, and that such students do not have enough time to learn English and earn enough credits to graduate before they age out of the system. Based on a random sample of 4,625 (26%) students, 66 percent of LEP students in grades 9-12 enrolled in the 2005-2006 school year entered high school within the past four years, and 90 percent entered Virginia public schools within the past eight years. Research suggests that it takes a minimum of four years of English language instruction for LEP students to perform on grade level (Thomas & Collier, 2002), and that students who enter school at or above age 12 typically require six to eight years to compete academically with native speakers of English (Collier, 1987). Additionally, 37 percent of students in the sample entered Virginia schools at age 16 or older. Note that this same population of students was more likely to have fewer years of formal education than is expected of Virginia's public school students. Research indicates that LEP students who have little or no prior education and who may be illiterate in their first language may take seven to ten years to achieve grade level proficiency (Thomas & Collier, 2002).

Other Reported Barriers

Several school divisions reported barriers to graduation that did not fit into a particular category. Divisions reported that some LEP students lack the motivation to succeed because of a perceived lack of opportunity beyond high school. Some divisions further specified that students may believe that they can never attend college because of their immigrant status. In addition, school divisions reported that LEP student achievement can suffer due to inconsistent attendance in Virginia's public schools, which was reported to result from trips to the home country, need to work, and health and medical issues. In a random sample of 4,378 LEP students, 13 percent reportedly had interrupted education since entering Virginia public schools.

Reasons LEP students in grades 9-12 dropped out of school, 2005-2006

In 2005-2006, 1,024 LEP students in grades 9-12 reportedly dropped out of Virginia's public schools. This represents 5.8 percent of all LEP students in these grades. ⁷ Table 6 shows the

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⁷ This is not Virginia's dropout rate for LEP students. Virginia's official dropout rate for all students in 2005-

reported reasons LEP students dropped out of school. The largest group, 375 (2.1 percent of all LEP students in these grades) dropped out for reasons relating to low academic achievement. One-hundred eighty two (182) students, or 1 percent of all LEP students in these grades, dropped out for employment reasons, and the same number were classified as dropouts because the school division reported an unknown status for students who did not graduate and did not return to school for the 2006-2007 academic year. Less than 1 percent of LEP students in grades 9-12 dropped out for other reasons, including behavioral difficulties, family reasons, maximum school age, health problems, financial hardship, and expulsion.

Table 6. Reasons LEP students dropped out of high school, grades 9-12, 2005-2006.

Table 6. Reasons LEP students dropped ou	t of nigh school		-2000.
Reason for dropping out	Number of LEP students	Percent of LEP students that dropped out as a function of the total number of LEP students enrolled in grades 9-12, 2005-2006	Percent of all LEP student dropouts who dropped out for each reason in 2005-2006
Achievement problems (low achievement,			
low motivation, low interest)	375	2.1	36.6
Employed (took a job, joined armed forces,	100	4.0	47.0
entered Job Corps or similar program)	182	1.0	17.8
Moved (no longer resided in the area and current status was unknown after appropriate investigation by the attendance officer)	182	1.0	17.8
Behavioral difficulties (suspension or expulsion, incarceration, runaway, truancy, poor relationships with peers or adults)	112	0.6	10.9
Family (pregnancy, parenthood, marriage, needed at home)	85	0.5	8.3
Reached maximum age to receive services	30	0.2	2.9
Health problems (physical or mental illness, injury, substance abuse)	15	0.1	1.6
Financial hardship (extreme poverty, working to support self or family)	24	0.1	2.3
Expulsion	19	0.1	1.9
Total	1,024	5.8	100

2006 was not available at the time this report was completed. The official rate includes data from students in grades 7-12.

LEP Student Academic Achievement and Future Educational Plans

VDOE collects limited data that relate to student graduation requirements. Information on standard credits earned and courses taken are maintained at the local level. The Department maintains data on students' SOL assessment scores. With the Department's Educational Information Management System (EIMS) in place, for the first time in the 2005-2006 school year these data could be linked so that students' scores on one SOL assessment can be linked to that students' performance on other SOL assessments during the 2005-2006 school year. However, the Department cannot make this link with previous years' data, and therefore does not have records on students' earned verified credits.

Performance on Standards of Learning (SOL) Assessments

In Virginia, LEP high school students are required to take the SOL assessments when they complete each course for which there is an associated SOL assessment. According to the Regulations Establishing Standards for Accrediting Public Schools in Virginia, 8 VAC 20-131-30, Student achievement expectations, "All students identified as limited English proficient (LEP) shall participate in the Virginia assessment program. A school based committee shall convene and make determinations regarding the participation level of LEP students in the Virginia assessment program." In 2005-2006, Virginia reported that 99 and 100 percent of LEP students across the Commonwealth participated in the appropriate SOL English and mathematics tests, respectively.

Table 7 shows the number of students who took each SOL assessment, average SOL scale scores, and the percent of LEP high school students that passed the exams. The table also shows the same information for non-LEP students in 2005-2006, and the difference in the percent of LEP and non-LEP students who passed the exams.

Average scores for both LEP and non-LEP students are above passing (i.e., ≥ 400) for all assessments. For all SOL assessments, fewer LEP students passed than non-LEP students, with the difference ranging from 2 to 32 percent. LEP students passed the Algebra I and II tests at similar rates as the non-LEP students, with only 2 to 5 percent fewer LEP students passing the tests than non-LEP students.

The largest difference in performance was in the sciences, where 21 to 32 percent fewer LEP students passed the SOL assessments than non-LEP students. This difference is larger than that of student performance on the English writing SOL, often considered the most difficult for LEP students. Figure 3 illustrates the pass rates for LEP and non-LEP students in each SOL assessment.

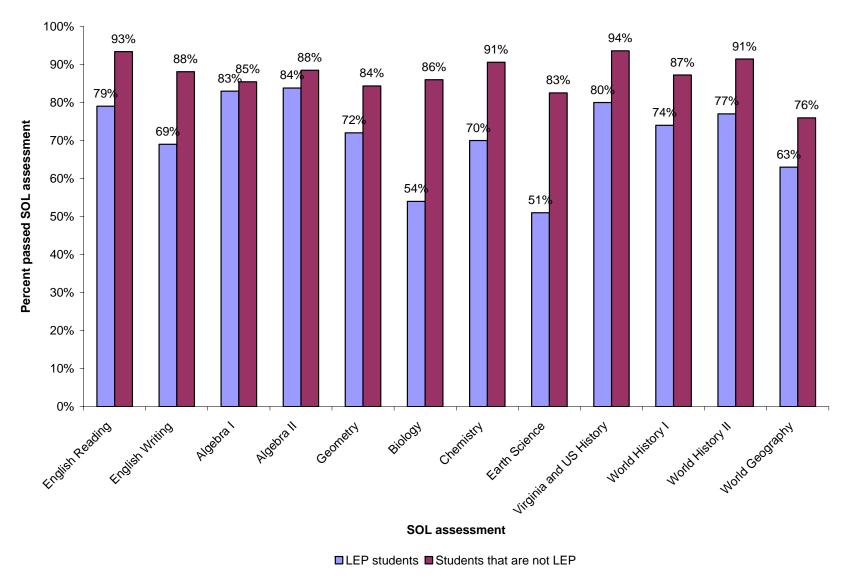
Table 7. Average score and pass rate in SOL assessment scale scores for LEP and non-LEP students, grades 9-12 during the 2005-2006 school year.¹

			Average		Percent difference
	SOL assessment	Number	score	Pass rate	in pass rates
	English Reading				
]	LEP students	2,073	435	79%	14%
English/	non-LEP students	69,573	495	93%	14%
language arts	English Writing				
	LEP students	2,724	418	69%	19%
1	non-LEP students	83,594	465	88%	1970
ı,	Algebra I				
]	LEP students ²	3,135	444	83%	20/
1	non-LEP students	53,080	442	85%	2%
]	Algebra II	•			
Mathematics	LEP students	1,748	462	84%	5 0/
	non-LEP students	53,360	463	88%	5%
	Geometry				
	LEP students	2,609	438	72%	100/
1	non-LEP students	66,362	456	84%	12%
	Biology				
	LEP students	4,105	404	54%	220/
1	non-LEP students	77,530	448	86%	32%
	Chemistry				
Science	LEP students	1,834	425	70%	21%
Science	non-LEP students	46,875	445	91%	2170
	Earth Science				
]	LEP students	2,704	402	51%	32%
1	non-LEP students	67,110	449	83%	3270
7	Virginia and US History				
]	LEP students	2,468	437	80%	14%
1	non-LEP students	69,690	487	94%	1470
7	World History I				
]	LEP students	3,414	438	74%	13%
	non-LEP students	56,944	470	87%	13/0
social sciences	World History II				
	LEP students	2,934	442	77%	14%
1	non-LEP students	58,481	477	91%	17/0
[World Geography				
	LEP students	501	425	63%	13%
1	non-LEP students	21,752	452	76%	13/0

¹ Pass rates are calculated based on each student's best score, regardless of the number of times the student participated in the assessment, and may not correspond to pass rates calculated to determine adequate yearly progress (AYP).

² Includes students that participate in the plain English version of the Algebra I SOL assessment.

Figure 3. Percent of LEP and non-LEP students passing the SOL assessments, grades 9-12, 2005-2006 school year.



Relationship Between Performance on the English SOL and Other SOL Assessments

The VDOE used the SOL assessment scale scores to statistically assess whether performance on the English 11 reading and writing SOL assessments was related to performance on the remaining 10 SOL assessments during the 2005-2006 school year. The analyses tested the hypothesis that students' academic English proficiency, as measured by the reading and writing components of the SOL assessment, is related to performance on all other SOL assessments. The prediction was that as performance on the English 11 reading and writing SOL assessment increased, so would performance on the other SOL assessments.

These analyses included simple correlations between the English 11 reading and writing SOL assessment and all other assessments, and a more complex multiple regression analysis. The regression analysis used the combination of the reading and writing components of the English 11 SOL assessment to estimate scores on each of the other SOL assessments. The statistical calculations included data for students that participated in the English 11 SOL assessments, and the other SOL assessments of interest in the 2005-2006 school year. For example, the statistical correlation between performance on the English 11 reading SOL and performance on the Virginia and U.S. History SOL assessment was calculated for students that participated in both assessments. More information on the statistical models used in these analyses is provided in Appendix D.

The results of these analyses showed that performance on the English 11 SOL reading and writing components were strongly related. As performance on the reading component of the SOL assessment increased, so did performance on the writing component of the SOL assessment. Further, the results suggested that the skills required for success on the English 11 SOL reading and writing assessments are important for success on all of Virginia's SOL assessments. More specifically, the results suggest the following:

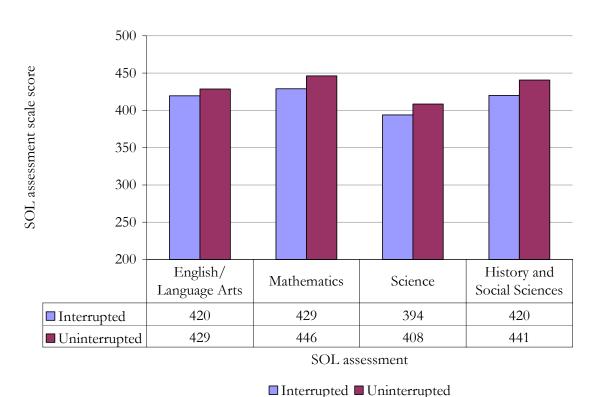
- There is a strong relationship between LEP student performance on the English 11 SOL reading and writing assessments and performance on other SOL assessments.
- This relationship suggests that the skills required to pass the English 11 SOL assessment are also required to pass the other SOL assessments.
 - The relationship is strongest in World History II and Virginia and U.S. History;
 - The relationship is smallest, but statistically significant for Algebra II and Geometry.
- The skills that contribute to performance on the reading or writing components of the English 11 SOL assessment contribute uniquely to performance on all but two of the other SOL assessments. Performance on the reading SOL assessment does not contribute to LEP student performance on the Algebra I and World Geography SOL above and beyond the contribution that performance on the reading and writing tests account for together. See Table 2 in Appendix D for further details.

SOL assessments and consistency of schooling

LEP students that experience inconsistent or interrupted schooling might be expected to have lower academic achievement than their peers that have consistent education. To test this hypothesis, LEP student performance on SOL assessments were compared for students reported to have interrupted and uninterrupted education since entering Virginia public schools.

Results are summarized in Figure 4 for each academic discipline. On average, LEP students with interrupted schooling have lower academic achievement than students with consistent and uninterrupted schooling for all academic disciplines. A review of the figure shows that the average difference in performance ranged between 9 and 21 scale score points between students with interrupted and uninterrupted education since they entered Virginia public schools. Statistically, the differences were significant for assessments in mathematics and science, and approached significance for history and social sciences. The lack of statistical differences between groups for English and the marginal results for history may be a function of the small sample of LEP students with interrupted schooling, or a true reflection of the variability of students' academic achievement on the SOL assessments, which are taken only by students enrolled in the appropriate classes.

Figure 4. Average scale scores for SOL assessments by academic discipline for students whose education since entering Virginia public schools was interrupted and uninterrupted, based on data available for 13 percent of LEP students, grades 9-12.



Diplomas and Certificates

In 2006, 1,507 LEP students completed high school, representing 69 percent of LEP students enrolled in grade 12 during the 2005-2006 school year. Table 8 shows the distribution of diplomas and certificates LEP students earned as a function of all diplomas and certificates earned.

Table 8. Number of LEP students earning Virginia Board of Education approved

diplomas and certificates, 2005-2006.

		Percent of LEP students who completed high schoo and earned each type of diploma		
Diploma or Certificate type	Number of LEP students	LEP students All studen		
Standard Diploma	916	60.8	41.6	
Advanced Studies Diploma	445	29.5	48.7	
Special Diploma	48	3.2	3.2	
Modified Standard Diploma	36	2.4	2.4	
Certificate of Program Completion	43	2.9	0.7	
General Educational Development (GED) certificate	~	~	1.4	
General Educational Development (GED) Certificate as part of an ISAEP	10	0.7	1.9	
General Achievement Diploma	~	~	0.04	
Total	1,507			

^{*}Reported by VDOE, http://www.doe.virginia.gov/VDOE/Publications/grads/gradd0506.pdf. Accessed November 28, 2006.

Class rank

VDOE requested that school divisions provide data on the class rank for a random sample of 30 percent of LEP students in 2005-2006. Data were provided for 4,954 students (26 percent). The majority of the responses indicated that class rank was not available for the student. The remaining students, representing 6 percent of LEP students in grades 9-12, are not considered representative of LEP students in grades 9-12 statewide. As such, this report does not provide details of how LEP student performance ranks in Virginia's high schools.

[~] There were too few students to report.

College Attendance

As part of their support of students' academic achievement in high school, school divisions must prepare LEP students for college. One indicator that students are being prepared for college is the degree to which students attend college. The Department's end-of-year data collection from local education agencies includes a request that school divisions report students' plans after graduation. The information is not typically reported by the students, but rather by a teacher, counselor, or school administrator. Table 9 lists the plans reported for LEP students in grade 12 in the 2005-2006 school year. Fifty five (55) percent of the 2,181 grade 12 LEP students planned to continue their education, and more than 50 percent of the students planned to attend two- or four-year colleges.

Table 9. LEP 12th grade students reported plans after graduation, 2005-2006 school year.

	Number	Percent
Two-year college	679	31
Four-year college	430	20
Other educational plans	86	4
Employment	176	8
None	76	4
Military	28	1
Unknown	706	32
Total in grade 12	2,181	

The National Student Clearinghouse identified 616 Virginia LEP students enrolled in colleges and universities nationwide. These students attended 48 four-year and 29 two-year colleges in 16 states and the District of Columbia. Table 10 shows the number of students that could be verified as enrolled in postsecondary programs in the fall of 2006.

Table 10. Number of LEP students verified by the National Student Clearinghouse as enrolled in postsecondary education in the 2006 academic year.

Type of institution	Total
Two-year college	420
Four-year college	195
Less than two-year college	1
Total number of students verified as enrolled in postsecondary education	616

It is not clear why students who reported plans after graduation were not verified as enrolled in postsecondary educational programs. Some students may be enrolled in colleges or universities that do not participate in the National Student Clearinghouse data collection program. Alternatively, students may not have pursued their plans for many different reasons, such as a lack of financial resources, family commitments and academic barriers.

Adequate Yearly Progress and the Federal No Child Left Behind Act of 2001

To comply with the No Child Left Behind Act of 2001 (NCLB), the VDOE calculates schools' adequate yearly progress (AYP) towards the goals of NCLB in accordance with the Virginia Board of Education Consolidated State Application: Amended Accountability Workbook; LEP students are a subgroup required to reach AYP goals. On an annual basis, VDOE calculates SOL assessment pass rates on the SOL assessments at the school, division, and state level for all students that participated in the assessments, and for particular subgroups, including LEP students. These pass rates are compared to annual target pass rates established by the BOE for English (reading/language arts) and mathematics. Table 11 shows the pass rates for LEP and all students participating in high school SOL assessments. The table also shows Virginia's target pass rates established by the BOE for the past three years.

Table 11. LEP and all students' pass rates for high school SOL assessments as calculated to determine Virginia's adequate yearly progress toward NCLB goals.

	Reading/language arts			Mathematics		
School year Adequate yearly progress (AYP) target pass rates	2003-04	2004-05	2005-06	2003-04	2004-05	2005-06
All students	89%	88%	90%	84%	86%	85%
LEP students	75%	70%	73%	78%	81%	80%

Statewide, Virginia's LEP high school students have exceeded the annual target pass rates for the past three school years in English (reading/language arts) and mathematics, the priority disciplines in NCLB. Student progress on the high school assessments each year has not consistently increased over these same three years in either subject area. In 2006, LEP pass rates in mathematics increased by two percentage points compared to performance in 2004, although there was a one percentage point decrease from 2005 to 2006. LEP pass rates in 2006 on English assessments have decreased by two percentage points since 2004, although there was a three percentage point increase in pass rates from 2005 to 2006. Complete information on Virginia's pass rates as calculated for AYP for the past three years is available at: https://eb02.vak12ed.edu/reportcard/report.do?division=All&schoolName=All.

Graduation Requirements

The Virginia BOE graduation requirements include flexibility that can assist LEP students in their academic achievement, and successful completion of the requirements to earn a Standard or Advanced Studies Diploma. To earn a Virginia diploma, students must earn a combination of standard credits and verified credits. Standard course credits are earned by passing a course provided by school divisions; verified credits are earned by passing a course and passing the SOL assessment or BOE-approved substitute assessment. Table 12 shows the number of standard and verified credits required to graduate for students entering ninth grade for the first time in 2003-2004; these are students who, if they graduate in four years,

will graduate in the 2006-2007 school year. 8 BOE-approved policies provide flexibility in the verified credits for science and history and social sciences, in that students may substitute assessments, credentials, and licenses earned from BOE-approved career and technical education programs to meet verified credit requirements.

Table 12. Standard and verified credits required to earn a standard diploma for students entering pinth grade for the first time in 2003-2004 or beyond (8 VAC 20-131-50 B)

Discipline	Required standard credits	Required verified credits
English Language Arts	4	2
Mathematics ¹	3	1
Laboratory Science ^{2,6}	3	1
History and Social Sciences ^{3,6}	3	1
Health and Physical Education	2	
Fine Arts or Career and Technical Education	1	
Electives ⁴	6	
Student Selected Tests ⁵		1

¹ Courses completed to satisfy this requirement shall be at or above the level of algebra and shall include at least two course selections from among: Algebra I, Geometry, Algebra II, or other mathematics courses above the level of algebra and geometry. The board may approve additional courses to satisfy this requirement.

http://www.doe.virginia.gov/VDOE/studentsrvcs/gen-grad-req.pdf.

2004 or entered ninth grade for the first time before 2003-2004, is available at

² Courses completed to satisfy this requirement shall include course selections from at least two different science disciplines: earth sciences, biology, chemistry, or physics. The board may approve additional courses to satisfy this requirement.

³ Courses completed to satisfy this requirement shall include U.S. and Virginia History, U.S. and Virginia Government, and one course in either world history or geography or both. The board may approve additional courses to satisfy this requirement.

⁴ Courses to satisfy this requirement shall include at least two sequential electives as required by the Standards of Quality.

⁵ A student may utilize additional tests for earning verified credit in computer science, technology, career and technical education or other areas as prescribed by the board in 8 VAC 20-131-110.

⁶ Students who complete a career and technical education program sequence and pass an examination or occupational competency assessment in a career and technical education field that confers certification or an occupational competency credential from a recognized industry, or trade or professional association or acquires a professional license in a career and technical education field from the Commonwealth of Virginia may substitute the certification, competency credential, or license for (i) the student selected verified credit and (ii) either a science or history and social science verified credit when the certification, license, or credential confers more than one verified credit. The examination or occupational competency assessment must be approved by the Board of Education as an additional test to verify student achievement.

⁸ Information on BOE policies that apply to students who transfer into Virginia public schools later than 2003-

In November 2006, the BOE adopted the use of the National Governors Association (NGA) graduate rate formula for implementation in 2008. The rate has a provision that allows certain LEP students to be assigned to different cohorts to allow them more time to graduate.

Ongoing Activities

The VDOE provides ongoing support and assistance to school divisions responsible for educating LEP students. These resources may be organized into the following five categories: 1) curriculum and instruction; 2) assessment; 3) parental involvement; 4) professional development opportunities; and 5) general resources. The resources available to the school divisions that support LEP student achievement at all grade levels are described below.

Curriculum and Instruction

English Language Proficiency Standards of Learning (currently under revision)

The English Language Proficiency Standards of Learning support the English language development of LEP students. The goal of these standards is to provide the foundation that will enable LEP students to be successful in the English Standards of Learning and in other content areas. The current version is available at: http://www.doe.virginia.gov/VDOE/Superintendent/Sols/EnglishSOL02.html.

Mathematics: Strategies for Teaching Limited English Proficient (LEP) Students — A Supplemental Resource to the K-12 Mathematics Standards of Learning Enhanced Scope and Sequence, April 2004

This document serves as a supplement to the K-12 Mathematics Standards of Learning Enhanced Scope and Sequence, which helps teachers align their classroom instruction with the Mathematics Standards of Learning. The purpose of the document is to provide mathematics teachers with a brief overview of second language acquisition theory and suggest effective strategies for differentiating instruction for LEP students. The resource is available at: http://www.doe.virginia.gov/VDOE/Instruction/ESL/#elpsol.

Language Arts: Strategies for Teaching Limited English Proficient (LEP) Students – A Supplemental Resource to the K-12 English Standards of Learning Enhanced Scope and Sequence, January 2006

This document serves as a supplement to the K-12 English Standards of Learning Enhanced Scope and Sequence, which helps teachers align their classroom instruction with the English Language Arts Standards of Learning. The purpose of this document is to provide language arts and content teachers with a brief overview of second language acquisition theory and suggest effective strategies for differentiating instruction for LEP students. The document is available at: http://www.doe.virginia.gov/VDOE/Instruction/ESL/#elpsol.

Using the mathematics and language arts documents as a framework, VDOE is preparing a supplemental resource to the K-12 Standards of Learning enhanced scope and sequence materials for science instruction to support LEP student instruction.

Project Graduation

Under Project Graduation, VDOE awards grants of up to \$85,000 to schools and partnerships of schools to provide remedial instruction for students who have not earned verified credits in English: Reading, and/or English: Writing, Algebra I, Geometry, History, and/or Science, and to provide additional assistance to students with disabilities who are pursuing Modified Standard diplomas. In 2006, Project Graduation grants encouraged school divisions to focus their resources on groups of students with demonstrated achievement gaps. For some divisions, this included LEP students.

Assessment

Plain English version of the Mathematics Standards of Learning Assessment for LEP Students

A plain English version of the mathematics SOL assessment for grades three through eight and Algebra I is available for LEP students at the lowest levels of English language proficiency. The plain English versions assess the same content as the regular mathematics assessments but have language modifications. More information is available at: http://www.doe.virginia.gov/VDOE/Instruction/ESL/#elpa.

A plain English version of a science end-of-course SOL assessment is being developed for use in the 2007-2008 school year. The plain English version will assess the same content as the regular assessment, but will have language modifications.

Parental Involvement

Best Practices for Inclusion of LEP Parents Guide in partnership with USED Office of Civil Rights

The purpose of this document is to help school divisions develop parental involvement programs that are accessible to LEP parents, address their unique needs, and, ultimately, have a positive influence on LEP students' academic achievement. This document serves as a vehicle for school personnel working with LEP parents to share effective practices and network with other school divisions. The document is available at: http://www.doe.virginia.gov/VDOE/Instruction/ESL/increasing-LEP-parent-involvement.pdf.

Selected Examples of Professional Development Opportunities

The VDOE offers professional development opportunities to Virginia's teachers. The following opportunities are available to support LEP student achievement.

Technical Assistance Academy for New Title I, Title II, and Title III Coordinators

Held annually, this technical assistance academy focuses on providing new coordinators with guidelines and information related to implementing the requirements of the *No Child Left Behind Act of 2001*. More information is available at: http://www.doe.virginia.gov/VDOE/suptsmemos/2006/inf051.html.

From Vision-to-Practice Annual Academy: Implementing the No Child Left Behind Act of 2001

Held annually, this technical assistance academy focuses on providing schools and school divisions with strategies and scientifically-based research for improved student achievement. More information on this academy is available at:

http://www.doe.virginia.gov/VDOE/suptsmemos/2006/inf055.html.

Parents Educating Parents (PEP) Training Academy for Title III Coordinators

Offered annually, this training academy provides school divisions with a structured program for including parents of LEP students in the education of their children. Along with a companion framework document, *Increasing Limited English Proficient (LEP) Parent Involvement*, the academy is designed to help school divisions develop parental involvement programs that are accessible to LEP parents, address their unique needs, and have a positive influence on LEP students' academic achievement. More information about this program is available on the Department's English as a Second Language (ESL) Web site at: http://www.doe.virginia.gov/VDOE/suptsmemos/2006/inf122.html.

Graduate-level course, Reading and Writing Strategies for LEP Students

VDOE in conjunction with George Mason University offers a graduate level course to support LEP student instruction. The course, offered three times per year since 2004, focuses on: 1) literacy development; 2) the reading and writing process in first and second languages; 3) research on reading comprehension; and 4) effective teaching and assessment approaches for students from diverse cultural and linguistic backgrounds. The course has been offered during the fall, spring, and summer semesters in different locations throughout the Commonwealth. More information is available at: http://www.doe.virginia.gov/VDOE/suptsmemos/2006/inf161.html.

Sheltered Instruction Observation Protocol (SIOP) Academies

To support school divisions' ability to improve instruction for LEP and other students, VDOE is conducting a series of SIOP training courses for selected school divisions. SIOP is a research-based approach to planning and implementing sheltered content lessons that has proven effective with English language learners throughout the United States (Guarino, Echevarria, Short, Schick, Forbes, & Rueda, 2001).

General Resources to Support LEP Students

The Department of Education's ESL Web site provides school divisions with information on several LEP resources, such as the *ESL Handbook for Teachers and Administrators*, several documents translated into Spanish, information on how to reach interpreters, and presentations from professional development academies and conferences. The Web site and LEP resources are available at: http://www.doe.virginia.gov/VDOE/Instruction/ESL/.

Recommendations

- 1. Review the formula that provides funding to school divisions for ESL teachers, and conduct a study to assess the impact of increasing resources available to school divisions to support LEP student achievement.
- 2. Support the National Governors Association four-year graduation rate provision that permits states to assign LEP students to different cohorts to allow them more time to graduate.
- 3. Review the BOE guidance document on General Achievement Diplomas to clarify accessibility of this diploma option for LEP students.
- 4. Continue to work with the United States Department of Education (USED) to develop equitable practices for including LEP students in the state's accountability system.
- 5. Continue to provide technical assistance and consider the development of additional resources that can support LEP student achievement and increased high school graduation rates.

References

- August, D. & Shanahan, T. Eds. (2006). Developing literacy in second-language learners: Report of the National Literacy Panel on Language-Minority Children and Youth. Mahwah, NJ: Lawrence Erlbaum Associates.
- Center for School and District Improvement (2004). English Language Learner (ELL) Programs at the Secondary Level in Relation to Student Performance. Portland, OR: Northwest Regional Educational Laboratory.
- Collier, V. P. (1987). Age and rate of acquisition of second language for academic purposes. *TESOL Quarterly, 21,* 617-41.
- Cowan, K.T. (2004). The New Title I: the Changing Landscape of Accountability. Washington, DC: Thompson Publishing Group.
- Davis, B. C. (1989). A successful parent involvement program. Educational Leadership, 47, 21-23.
- Department for Education and Employment (1997). Excellence in schools, (Education White Paper, Cm. 3681). London: HMSO.
- Education for All Global Monitoring Report 2005 The Quality Imperative. (2005). United Nations Educational, Scientific and Cultural Organization (UNESCO). Paris, France: UNESCO.
- Genesee, F., Geva, E., Dressler, C., & Kamil, M. (2006). Synthesis: Cross-linguistic relationships. In D. August and T. Shanahan's, *Developing literacy in second-language learners: Report of the National Literacy Panel on Language-Minority Children and Youth.* Mahwah, NJ: Lawrence Erlbaum Associates.
- Guarino, A.J., Echevarria, J., Short, D., Schick, J., Forbes, S. & Rueda, R. (2001). The sheltered instruction observation protocol: Reliability and validity assessment. *Journal of Research in Education*, 11, 138-140.
- Ladson-Billings, G. (1995). But that's just good teaching! The case for culturally relevant pedagogy. *Theory into Practice*, *34*(3), 159-165.
- Lesaux, N. & Geva, E. (2006). Synthesis: Development of literacy in language-minority students. In D. August and T. Shanahan's, *Developing literacy in second-language learners:* Report of the National Literacy Panel on Language-Minority Children and Youth. Mahwah, NJ: Lawrence Erlbaum Associates.
- Lucas, T. (1993). What have we learned from research on successful secondary programs for LEP students? A synthesis of findings from three studies. In *Proceedings of the Third National Research Symposium on Limited English Proficient Student Issues: Focus on middle and high school issues, vol. 1.* Washington, DC: U.S. Department of Education, Office of Bilingual Education and Minority Languages Affairs. Retrieved September 25, 2003, from http://www.ncela.gwu.edu/pubs/symposia/third/lucas.htm.

VIRGINIA BOARD OF EDUCATION

- Padron, Y. N., Waxman, H. C., and Rivera, H. H. (2002). Educating Hispanic students: Effective instructional practices (Practitioner Brief #5). Retrieved September 25, 2006, http://www.cal.org/crede/Pubs/PracBrief5.htm
- Thomas, W. & Collier, V.P. (2002). A national study of school effectiveness for language minority students' long-term academic achievement. Santa Cruz: Center for Research on Education, Diversity an Excellence, University of California, Santa Cruz.
- Walqui, A. (2000). Strategies for success: Engaging immigrant students in secondary schools. ERIC Digest, ED442300 2000-06-00. Washington, DC: ERIC Clearinghouse on Languages and Linguistics.

Appendix A: Legislative Mandate — 2006 General Assembly

CHAPTER 526, 2006 ACTS OF GENERAL ASSEMBLY

An Act relating to the requirements for obtaining a high school diploma and students with limited English proficiency.

[S 683] Approved April 4, 2006

Be it enacted by the General Assembly of Virginia:

1. § 1. Certain data collection and analysis required.

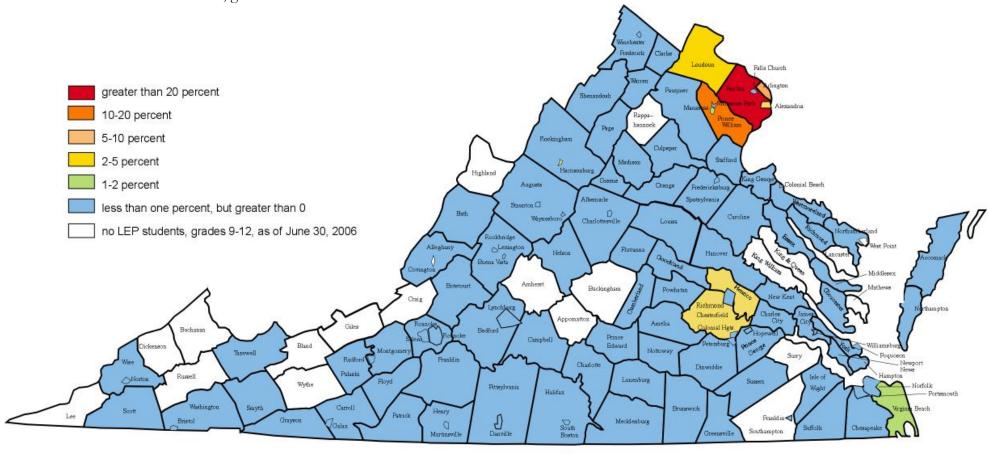
A. The Board and Department of Education shall collect statewide data on Virginia's public school students with limited English proficiency (LEP) and school division programs for LEP students that shall include, but need not be limited to, (i) the demographics of Virginia's LEP students, including country of origin, first or native language, school attendance in the country of origin, and age and grade of first enrollment in a Virginia public school; standards of learning assessment scores; reasons for dropping out of high school; barriers to high school graduation; graduation rates; kinds of diplomas awarded to LEP students, class standing, and college aspirations and attendance; and (ii) school division programs designed to assist LEP students in academic achievement, such as exercising the option to allow LEP students to attend until attaining the age of 22, providing targeted remediation classes for students who have failed the English 11 standard of learning assessments, summer school English for Speakers of Other Languages (ESOL) classes, after-school and weekend tutoring, and other strategies to assist older high school LEP students in meeting graduation requirements.

B. The Board and Department shall (i) analyze the data required to be collected by subsection A in relationship to the requirements for obtaining a high school diploma as set forth in the Standards for Accrediting Public Schools in Virginia, the federal No Child Left Behind Act, and the needs of LEP students; and (ii) by December 1, 2006, recommend to the Senate Committee on Education and Health and the House Committee on Education steps to resolve the issues relating to the requirements for obtaining a high school diploma and students with limited English proficiency that will retain high academic standards and accountability, while assisting such students in their endeavors to obtain an education and to become productive Virginians.

Appendix B: Distribution of Grade 9-12 LEP Students in Virginia, 2005-2006

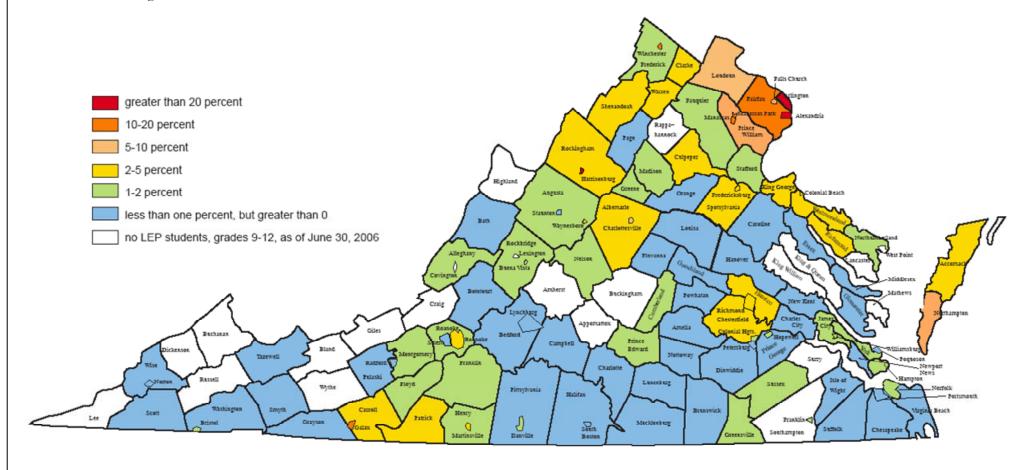
Virginia's LEP students are largely concentrated in Northern Virginia. Figure 1 shows the distribution of LEP students in grades 9-12 relative to the entire grade 9-12 LEP population in Virginia. Several school divisions with relatively small numbers of LEP students educate significant percentages of LEP students relative to their total grade 9-12 student population. This is illustrated in Figure 2.

Figure 1. Percent of LEP students in grades 9-12 enrolled at the end of the 2005-2006 school year, as a function of Virginia's total enrollment of LEP students, grades 9-12.



Information is based on data reported by local school divisions to the Virginia Department of Education

Figure 2. Percent of LEP students in grades 9-12 enrolled at the end of the 2005-2006 school year, as a function of each divisions' total enrollment in grades 9-12.



Information is based on data reported by local school divisions to the Virginia Department of Education

Appendix C: Services offered to LEP students by school division

One hundred twelve (112) school divisions reported information on the policies and services they provide to LEP students in grades 9-12. This table lists the responses from school divisions. Note that some divisions responded to the data request although they do not currently serve LEP students in these grades.

Division number	Division Name	Exercises the option to attend school to age 22	Remediation for LEP students that fail the English 11 SOL	ESL summer school	After- school tutoring	Weekend tutoring	Reported other programs and services ⁹	Serves at least 1% of Virginia's LEP students enrolled in grades 9-12	At least 10% of the division's students in grades 9-12 are LEP
1	Accomack	$\sqrt{}$	$\sqrt{}$		$\sqrt{}$		$\sqrt{}$		
2	Albemarle		$\sqrt{}$	$\sqrt{}$	$\sqrt{}$		$\sqrt{}$		
101	Alexandria	$\sqrt{}$		$\sqrt{}$	V	$\sqrt{}$	$\sqrt{}$	V	$\sqrt{}$
3	Alleghany		$\sqrt{}$		V		V		
4	Amelia	√	$\sqrt{}$		$\sqrt{}$				
7	Arlington	√	$\sqrt{}$	$\sqrt{}$	$\sqrt{}$	$\sqrt{}$	V		
8	Augusta	V	V		V		V		
9	Bath				$\sqrt{}$		$\sqrt{}$		
10	Bedford	$\sqrt{}$	$\sqrt{}$	$\sqrt{}$	$\sqrt{}$				
12	Botetourt	$\sqrt{}$		$\sqrt{}$	V		$\sqrt{}$		
102	Bristol	$\sqrt{}$	$\sqrt{}$	$\sqrt{}$	V		V		

⁹ A summary of the additional programs and services is provided in the body of this report.

Division number	Division Name	Exercises the option to attend school to age 22	Remediation for LEP students that fail the English 11 SOL	ESL summer school	After- school tutoring	Weekend tutoring	Reported other programs and services ⁹	Serves at least 1% of Virginia's LEP students enrolled in grades 9-12	At least 10% of the division's students in grades 9-12 are LEP
103	Buena Vista				$\sqrt{}$		√		
16	Campbell	√					√		
17	Caroline	$\sqrt{}$				$\sqrt{}$			
18	Carroll			$\sqrt{}$	$\sqrt{}$				
20	Charlotte	$\sqrt{}$	$\sqrt{}$		$\sqrt{}$		$\sqrt{}$		
104	Charlottesville	$\sqrt{}$	$\sqrt{}$		$\sqrt{}$		$\sqrt{}$		
136	Chesapeake	$\sqrt{}$	$\sqrt{}$	$\sqrt{}$			$\sqrt{}$		
21	Chesterfield	$\sqrt{}$	$\sqrt{}$	$\sqrt{}$	$\sqrt{}$		$\sqrt{}$	√	
22	Clarke	$\sqrt{}$	$\sqrt{}$		$\sqrt{}$		$\sqrt{}$		
202	Colonial Beach	$\sqrt{}$	$\sqrt{}$		$\sqrt{}$				
106	Colonial Heights	$\sqrt{}$	$\sqrt{}$		\checkmark				
24	Culpeper	$\sqrt{}$							
25	Cumberland		$\sqrt{}$		$\sqrt{}$				
108	Danville	$\sqrt{}$	√	$\sqrt{}$	$\sqrt{}$	$\sqrt{}$	$\sqrt{}$		
27	Dinwiddie	$\sqrt{}$			$\sqrt{}$	$\sqrt{}$	$\sqrt{}$		
28	Essex	$\sqrt{}$	\checkmark		$\sqrt{}$		$\sqrt{}$		
29	Fairfax County	V	√	$\sqrt{}$	$\sqrt{}$			V	√ ·
109	Falls Church	V			V		$\sqrt{}$		

Division number	Division Name	Exercises the option to attend school to age 22	Remediation for LEP students that fail the English 11 SOL	ESL summer school	After- school tutoring	Weekend tutoring	Reported other programs and services ⁹	Serves at least 1% of Virginia's LEP students enrolled in grades 9-12	At least 10% of the division's students in grades 9-12 are LEP
30	Fauquier	$\sqrt{}$	$\sqrt{}$	$\sqrt{}$			$\sqrt{}$		
31	Floyd	$\sqrt{}$	$\sqrt{}$		$\sqrt{}$		$\sqrt{}$		
32	Fluvanna	$\sqrt{}$	$\sqrt{}$		$\sqrt{}$				
135	Franklin City	$\sqrt{}$	$\sqrt{}$		$\sqrt{}$		$\sqrt{}$		
33	Franklin County	$\sqrt{}$	$\sqrt{}$	$\sqrt{}$	$\sqrt{}$	$\sqrt{}$	$\sqrt{}$		
34	Frederick	$\sqrt{}$	$\sqrt{}$			$\sqrt{}$	$\sqrt{}$		
110	Fredericksburg	$\sqrt{}$	$\sqrt{}$		$\sqrt{}$		$\sqrt{}$		
111	Galax	$\sqrt{}$	$\sqrt{}$		$\sqrt{}$				√
36	Gloucester		$\sqrt{}$		$\sqrt{}$	$\sqrt{}$			
37	Goochland	$\sqrt{}$	$\sqrt{}$	$\sqrt{}$	$\sqrt{}$		$\sqrt{}$		
38	Grayson	$\sqrt{}$	$\sqrt{}$	$\sqrt{}$		$\sqrt{}$			
39	Greene	$\sqrt{}$					$\sqrt{}$		
40	Greensville	$\sqrt{}$	$\sqrt{}$	$\sqrt{}$	$\sqrt{}$		$\sqrt{}$		
41	Halifax	$\sqrt{}$			$\sqrt{}$		$\sqrt{}$		
112	Hampton	$\sqrt{}$		$\sqrt{}$	$\sqrt{}$		$\sqrt{}$		
42	Hanover	$\sqrt{}$		$\sqrt{}$	$\sqrt{}$	$\sqrt{}$	$\sqrt{}$		
113	Harrisonburg	$\sqrt{}$		$\sqrt{}$	$\sqrt{}$		$\sqrt{}$	$\sqrt{}$	$\sqrt{}$
43	Henrico	$\sqrt{}$	$\sqrt{}$	$\sqrt{}$	$\sqrt{}$	$\sqrt{}$	$\sqrt{}$	$\sqrt{}$	

Division number	Division Name	Exercises the option to attend school to age 22	Remediation for LEP students that fail the English 11 SOL	ESL summer school	After- school tutoring	Weekend tutoring	Reported other programs and services ⁹	Serves at least 1% of Virginia's LEP students enrolled in grades 9-12	At least 10% of the division's students in grades 9-12 are LEP
44	Henry	$\sqrt{}$	$\sqrt{}$	$\sqrt{}$	$\sqrt{}$		$\sqrt{}$		
114	Hopewell		$\sqrt{}$	$\sqrt{}$	$\sqrt{}$		$\sqrt{}$		
46	Isle of Wight	$\sqrt{}$	$\sqrt{}$		$\sqrt{}$		$\sqrt{}$		
49	King and Queen	$\sqrt{}$	$\sqrt{}$				$\sqrt{}$		
48	King George	$\sqrt{}$	$\sqrt{}$		$\sqrt{}$				
51	Lancaster	$\sqrt{}$	$\sqrt{}$		$\sqrt{}$		$\sqrt{}$		
53	Loudoun		$\sqrt{}$	$\sqrt{}$	$\sqrt{}$		$\sqrt{}$		
54	Louisa	$\sqrt{}$	$\sqrt{}$		$\sqrt{}$		$\sqrt{}$		
55	Lunenburg	$\sqrt{}$	$\sqrt{}$	$\sqrt{}$	$\sqrt{}$		$\sqrt{}$		
115	Lynchburg						$\sqrt{}$		
56	Madison						$\sqrt{}$		
143	Manassas City	$\sqrt{}$	$\sqrt{}$		$\sqrt{}$		$\sqrt{}$		$\sqrt{}$
144	Manassas Park	$\sqrt{}$	$\sqrt{}$		$\sqrt{}$		$\sqrt{}$		$\sqrt{}$
116	Martinsville	$\sqrt{}$					$\sqrt{}$		
58	Mecklenburg	$\sqrt{}$					$\sqrt{}$		
59	Middlesex	$\sqrt{}$	$\sqrt{}$		$\sqrt{}$		$\sqrt{}$		
60	Montgomery	$\sqrt{}$	$\sqrt{}$		$\sqrt{}$		$\sqrt{}$		
62	Nelson	$\sqrt{}$			$\sqrt{}$				

Division number	Division Name	Exercises the option to attend school to age 22	Remediation for LEP students that fail the English 11 SOL	ESL summer school	After- school tutoring	Weekend tutoring	Reported other programs and services ⁹	Serves at least 1% of Virginia's LEP students enrolled in grades 9-12	At least 10% of the division's students in grades 9-12 are LEP
63	New Kent		$\sqrt{}$		$\sqrt{}$				
117	Newport News	$\sqrt{}$		$\sqrt{}$	$\sqrt{}$		$\sqrt{}$		
118	Norfolk	$\sqrt{}$	$\sqrt{}$		$\sqrt{}$		$\sqrt{}$		
65	Northampton	$\sqrt{}$	$\sqrt{}$		$\sqrt{}$		$\sqrt{}$		
66	Northumberland	$\sqrt{}$	$\sqrt{}$		$\sqrt{}$	$\sqrt{}$	$\sqrt{}$		
119	Norton	$\sqrt{}$	$\sqrt{}$		$\sqrt{}$	$\sqrt{}$	$\sqrt{}$		
67	Nottoway	$\sqrt{}$	$\sqrt{}$		$\sqrt{}$		$\sqrt{}$		
68	Orange	$\sqrt{}$	$\sqrt{}$	$\sqrt{}$	$\sqrt{}$		$\sqrt{}$		
69	Page	$\sqrt{}$	$\sqrt{}$		$\sqrt{}$		$\sqrt{}$		
70	Patrick						$\sqrt{}$		
120	Petersburg	$\sqrt{}$	$\sqrt{}$		$\sqrt{}$				
71	Pittsylvania	$\sqrt{}$	$\sqrt{}$				$\sqrt{}$		
142	Poquoson	$\sqrt{}$	$\sqrt{}$						
121	Portsmouth		$\sqrt{}$		$\sqrt{}$	$\sqrt{}$			
72	Powhatan	$\sqrt{}$	$\sqrt{}$	$\sqrt{}$		$\sqrt{}$			
73	Prince Edward	$\sqrt{}$	$\sqrt{}$		$\sqrt{}$		$\sqrt{}$		
74	Prince George	$\sqrt{}$	$\sqrt{}$				$\sqrt{}$		
75	Prince William	$\sqrt{}$	$\sqrt{}$	$\sqrt{}$	$\sqrt{}$		$\sqrt{}$		

Division number	Division Name	Exercises the option to attend school to age 22	Remediation for LEP students that fail the English 11 SOL	ESL summer school	After- school tutoring	Weekend tutoring	Reported other programs and services ⁹	Serves at least 1% of Virginia's LEP students enrolled in grades 9-12	At least 10% of the division's students in grades 9-12 are LEP
77	Pulaski	$\sqrt{}$			$\sqrt{}$		$\sqrt{}$		
122	Radford						$\sqrt{}$		
78	Rappahannock	$\sqrt{}$	$\sqrt{}$	$\sqrt{}$	$\sqrt{}$				
123	Richmond City	$\sqrt{}$	$\sqrt{}$	$\sqrt{}$	$\sqrt{}$	$\sqrt{}$	$\sqrt{}$		
79	Richmond County	$\sqrt{}$	$\sqrt{}$		$\sqrt{}$				
80	Roanoke	$\sqrt{}$	$\sqrt{}$		$\sqrt{}$		$\sqrt{}$		
81	Rockbridge	$\sqrt{}$	√	$\sqrt{}$	$\sqrt{}$		$\sqrt{}$		
82	Rockingham	$\sqrt{}$	$\sqrt{}$	$\sqrt{}$		$\sqrt{}$			
139	Salem		$\sqrt{}$						
84	Scott	V	$\sqrt{}$	V	√				
85	Shenandoah	$\sqrt{}$	V	$\sqrt{}$	$\sqrt{}$				
86	Smyth	$\sqrt{}$			√	$\sqrt{}$			
88	Spotsylvania	$\sqrt{}$	$\sqrt{}$	$\sqrt{}$		$\sqrt{}$	$\sqrt{}$		
89	Stafford	$\sqrt{}$	V		$\sqrt{}$		$\sqrt{}$		
126	Staunton	$\sqrt{}$	V	$\sqrt{}$	$\sqrt{}$				
127	Suffolk	$\sqrt{}$	$\sqrt{}$		$\sqrt{}$				
90	Surry		$\sqrt{}$		$\sqrt{}$				
91	Sussex	$\sqrt{}$	$\sqrt{}$	$\sqrt{}$	$\sqrt{}$				

Division number	Division Name	Exercises the option to attend school to age 22	Remediation for LEP students that fail the English 11 SOL	ESL summer school	After- school tutoring	Weekend tutoring	Reported other programs and services ⁹	Serves at least 1% of Virginia's LEP students enrolled in grades 9-12	At least 10% of the division's students in grades 9-12 are LEP
92	Tazewell	$\sqrt{}$	$\sqrt{}$		$\sqrt{}$				
128	Virginia Beach	$\sqrt{}$	$\sqrt{}$	$\sqrt{}$	$\sqrt{}$		$\sqrt{}$	$\sqrt{}$	
93	Warren	$\sqrt{}$	$\sqrt{}$	$\sqrt{}$		$\sqrt{}$			
94	Washington	$\sqrt{}$	$\sqrt{}$		$\sqrt{}$				
130	Waynesboro	$\sqrt{}$	$\sqrt{}$	$\sqrt{}$	\checkmark	$\sqrt{}$			
95	Westmoreland	$\sqrt{}$	$\sqrt{}$	$\sqrt{}$	\checkmark		$\sqrt{}$		
131	Williamsburg-James	V	$\sqrt{}$	$\sqrt{}$	$\sqrt{}$		$\sqrt{}$		
132	Winchester	$\sqrt{}$	$\sqrt{}$	$\sqrt{}$	$\sqrt{}$		$\sqrt{}$		V
96	Wise								
97	Wythe	$\sqrt{}$	\checkmark						
98	York	$\sqrt{}$	$\overline{\qquad}$		$\sqrt{}$		$\sqrt{}$		

Appendix D: Details of the Statistical Models of SOL Assessment Data

The Department of Education analyzed the SOL assessment scale scores to determine whether performance on the English 11 reading and writing SOL assessments was related to performance on the remaining ten SOL assessments during the 2005-2006 school year for individual students that participated in more than one assessment in 2006. For these analyses, it is noteworthy that longitudinal analyses would not be appropriate, as the underlying hypotheses of this analysis is that students' underlying academic English proficiency at a given point in time, as measured by the reading and writing components of the SOL assessment, is related to performance on all other SOL assessments. Further, it was predicted that as performance on the English 11 SOL reading and writing assessments increases, so does performance on the other SOL assessments.

Results of the analyses show that performance on the English 11 SOL reading and writing assessments are related. The Pearson correlation coefficient, r = 0.63, indicating a strong relationship between scores on the two components of the English 11 SOL assessment for LEP students. Table 1 shows the correlations between the English 11 SOL reading and writing assessments and the other SOL assessments. These relationships were moderate to strong for all SOL assessments, which indicate that for individual students, higher scores on the English 11 SOL assessments are associated with higher scores on the other SOL assessments.

Table 1. Pearson correlation coefficients (*r*) between the English 11 SOL reading and writing assessments and other SOL assessment scale scores for LEP students grades 9-12, enrolled in the 2005-2006 school year.

	English reading	Number*	English writing	Number*
Algebra I	0.37	184	0.47	241
Algebra II	0.40	551	0.37	650
Geometry	0.39	633	0.34	756
Biology	0.39	260	0.51	378
Chemistry	0.46	507	0.46	573
Earth Science	0.53	464	0.49	544
VA and US History	0.61	1,305	0.57	1,377
World History I	0.41	75	0.46	106
World History II	0.70	146	0.66	197
World Geography	0.40	39	0.59	45

^{*}Number of students who had scores in both the English component of the SOL assessment and the other SOL assessments in the analysis.

In addition, the Department conducted a multiple regression analysis in which the combination of the English reading and writing components of the English 11 SOL

assessments were used to estimate student scores on the other SOL assessments. The results of this analysis provide answers to the following questions:

- How well can scale scores on the combination of English 11 reading and writing SOL assessments estimate scores on each of the other SOL assessments?
- Do the components of the English 11 SOL reading and writing assessments independently contribute to a multiple regression model estimating performance on each of the other SOL assessments?

The Venn diagrams in Figures 1 and 2 illustrate the information that these analyses provide. The results of these analyses are shown in Table 2.

Figure 1 illustrates the relationship between performance on the English reading and writing components of the English 11 SOL assessment, and performance on the World History II SOL assessment. English writing and reading together account for 57 percent of the variance in performance on the World History II SOL assessment. In Figure 1, this is illustrated by the overlapping areas between English reading, writing, and World History II, or the combination of the sections marked A, B, and C (A+B+C). The English 11 reading component uniquely accounts for 11 percent of the variance in performance on the World History II SOL assessment. In Figure 1, this is illustrated by the section marked "A", which is the area of overlap between performance on the reading component of the English 11 SOL assessment—to the exclusion of the overlapping area that includes World History II, English reading and English writing, which is marked "C." Also, English writing accounts for 7 percent of the variance in World History II scores, above and beyond the variance accounted for by the two English SOL assessments combined, as marked by "B" in Figure 1. These results suggest that the scale scores on the English 11 SOL assessment are strong predictors of performance on the World History II SOL assessment, and that the skills required on the writing and reading components of the SOL assessment contribute independently to the performance on the World History II SOL assessment.

For comparison, consider the smaller overlapping areas in Figure 2. This figure illustrates the smaller amount of variance that the combination of performance on the English reading and writing SOL assessment account for in performance on the biology SOL assessment. In this analysis, results show that performance on the English 11 reading and writing SOL assessments combined account for 22 percent of the variance in performance on the biology SOL assessment (A+B+C). Performance on the English 11 reading and writing assessments uniquely account for 6 and 8 percent of the variance, as illustrated by "A" and "B" respectively.

Figure 1. Illustration of the results of a multiple regression analysis using English 11 SOL assessment scores to predict performance on the World History II SOL assessment.

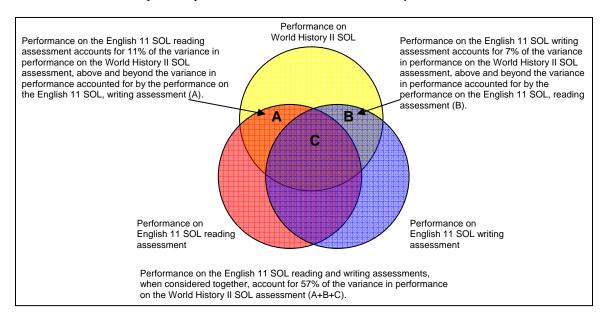
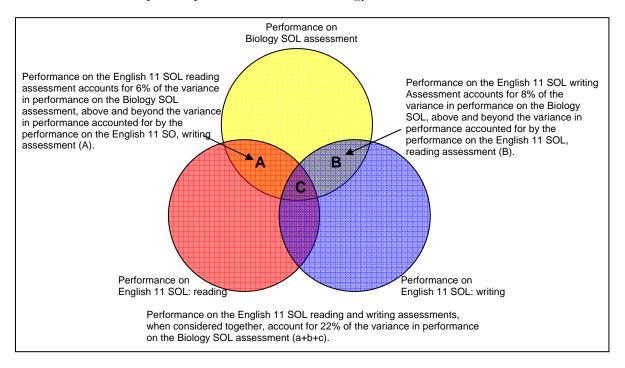


Figure 2. Illustration of the results of a multiple regression analysis using English 11 SOL assessment scores to predict performance on the Biology SOL assessment.



The results of these analyses and the multiple regression that uses performance on the English 11 reading and writing assessments to predict performance on all other SOL assessments are shown in Table 2.

Table 2. Results of the multiple regression analysis predicting SOL assessment scores with the English 11 SOL.

the English 11 SOL.				oortion of the ounted for by
SOL assessment	Number*	Variance accounted for by writing and reading combined	Writing	Reading
Algebra I	173	30%	15%	ns ⁺
Algebra II	527	19%	4%	5%
Geometry	595	20%	4%	6%
Biology	249	22%	8%	6%
Chemistry	481	27%	5%	5%
Earth Science	451	36%	8%	8%
VA and US History	1,224	42%	5%	10%
World History I	75	27%	13%	7%
World History II	141	57%	7%	11%
World Geography	37	38%	25%	ns ⁺

^{*}Number of students for which assessment data were available for three SOL assessments

+ns: the results of this component of the analysis were not statistically significant, which indicates that
performance on the component of the SOL assessment does not contribute uniquely in the equation, or that
there were not enough students in the sample to identify the relationship statistically.

These results suggest that the skills required for success on each component of the English SOL assessments are important for success on all of Virginia's SOL assessments. More specifically, the results suggest the following:

- There is a strong relationship between performance on the English 11 SOL assessment and performance on other SOL assessments.
- This relationship suggests that the skills required to pass the English 11 SOL assessment are also required to pass the other SOL assessments.
- The relationship is strongest in World History II and Virginia and U.S. History.
- The relationship is smallest, but still significant for Biology and Geometry.
- The skills that contribute to performance on the reading and writing components of the English 11 SOL assessment contribute independently to performance on all but two of the other SOL assessments.