ENGLISH LANGUAGE LEARNERS IN K-12: TRENDS, POLICIES, AND RESEARCH IN WASHINGTON STATE

Appendices

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Washington State Institute for Public Policy

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WASHINGTON STATE INSTITUTE FOR PUBLIC POLICY

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APPENDIX A: PRIOR REVIEWS OF BILINGUAL EDUCATION IN WASHINGTON STATE

During the 1990s, Washington State conducted three reviews of the Transitional Bilingual Instructional Program (TBIP). The following state entities performed the reviews:

- Legislative Budget Committee (LBC), 1991;
- Washington State Institute for Public Policy (Institute), 1993; and
- Office of the Superintendent of Public Instruction (OSPI), 1999.

Each of the reviews is summarized in this appendix.

1991: Legislative Budget Committee

In 1991, the Legislative Budget Committee (now the Joint Legislative Audit and Review Committee) reviewed the TBIP in response to "legislative concerns over rapidly increasing student enrollment and program expenditures."[1] Committee staff reviewed program trends based on OSPI student data, visited ten school districts, interviewed officials in other states, and conducted a literature review. The LBC found that the scope and quality of state TBIP data were insufficient to identify predictors of students' length of stay and academic achievement. The LBC also indicated that research in Washington and other states was insufficient to make conclusions about what instructional programs were most effective.

Recommendations from the 1991 LBC study include the following:

- OSPI should propose new exit criteria for the program and methods for tracking the progress of students after program exit and report to the legislature the expected fiscal impact of the proposed changes.
- Districts should report to OSPI the reasons students stay in TBIP more than three years and their plans for addressing these students' needs.
- OSPI should limit funding to students in the TBIP to no more than three years, unless the district has documented special needs that prevent students from achieving English language competency and has provided a plan for addressing these special needs.
- The legislature should consider the needs of bilingual and other special education students in reviewing teacher education requirements.
- OSPI should enhance program guidelines to include sharing information on exemplary district programs, clarifying policy questions, and instructing districts on how to calculate and report program length of stay.

[1] Legislative Budget Committee, *K–12 Transitional Bilingual Instruction Program,* Report 92-3 (Olympia, WA: LBC, February 25, 1992), 1.

1993: Washington State Institute for Public Policy

The 1993 Washington State Legislature directed the Institute to disseminate information on best practices in bilingual instruction and to develop strategies to incorporate such practices into the state TBIP curriculum.[2] The Institute held a symposium on bilingual education on September 15, 1993. Experts in the field summarized recent research findings in the following areas:

- Effective teaching methods;
- Length of time needed for English Language Learners (ELL) to acquire academic competence in English; and
- Evaluation of California's ELL programs.

Findings from the symposium[3] identified the following effective teaching strategies:

- Actively involving students in developmentally appropriate instruction;
- Including academic content in instruction while students learn English;
- Encouraging native language development and literacy;
- Ensuring opportunities for parent involvement; and
- Regularly assessing students' growth in English language skills.

The symposium summary notes that it may take four to seven years for ELL students to become proficient in academic-level English.

The researcher who led a 1992 evaluation[4] of California's programs for ELL students presented the results at the symposium. The study found that both native language and English as a Second Language (ESL) instruction were used in California schools and different school environments influenced which model was implemented. The study concluded that the most important strategy in improving bilingual education is training teachers in second language acquisition. Increased emphasis on tracking student outcomes was also encouraged.

1999: Office of the Superintendent of Public Instruction

In 1999, the Governor requested that OSPI expand its annual report to the legislature to cover current research on bilingual education.[5] For its December 2000 report, OSPI prepared a summary of research findings and analyzed data on a sample of over 15,000 TBIP students in 46 school districts.

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[2] SSB 5969 Section 501(f), Laws of 1993

[3] These findings are summarized in an Institute brochure entitled "Symposium on Bilingual Education." Copies can be obtained by contacting the Institute.

[4] P. Berman, *Meeting the Challenge of Language Diversity: An Evaluation of California Programs for Pupils With Limited Proficiency in English* (Berkeley, CA: BW Associates, 1992).

[5] Office of the Superintendent of Public Instruction, *Educating Limited English Proficient Students in Washington State* (Olympia, WA: OSPI, December 2000), 7.

Findings from this report[6] included the following:

- Developing strong first-language skills accelerates the second-language learning process and improves students' long-term academic performance. OSPI recommended that reading instruction occur initially in students' native languages.
- Acquiring a second language at a level that enables students to attain the same academic achievement levels as their English speaking peers can take five to seven years.
- Substantive, curriculum-based in students' first *and* second languages is necessary for linguistic and academic development.
- Students immigrating to the United States as teenagers, especially those who never received formal education in their home country, particularly need supplemental assistance to fulfill high school requirements.

Additional Research Review. In addition to its own review, OSPI contracted with Thomas Stritikus of the University of Washington and Patrick Manyak of California State University–Fullerton to review current research on instruction for ELL students. Key findings of this review included the following:[7]

- Evaluation studies and prior research reviews cannot answer questions about what instructional methods are most effective, because evaluations have not controlled for program quality and most have studied vaguely defined programs.
- Based on language acquisition theory, the researchers concluded that native language instruction improves students' development of academic-level English proficiency.
- "Several years of support," including a rigorous curriculum in students' native languages, are needed for the acquisition of academic-level English.
- Well-trained teachers in an environment of schoolwide commitment to bilingual education can also contribute to program success.

[6] Ibid., 96-99.
[7] Ibid., 102-117.

APPENDIX B: SCHOOL DISTRICT INTERVIEWS

The Institute conducted interviews with staff from 14 school districts in Washington State to collect qualitative information about the implementation of the state transitional bilingual instructional program (TBIP).

This appendix includes the following:

- A description of the interview methods used and the basis for selecting school districts;
- Demographic and programmatic profiles of the 14 school districts interviewed;
- A summary of district staff views regarding TBIP strengths, challenges, and suggestions to improve services to English Language Learners (ELL); and
- Questions asked in interviews with school district staff.

Interview Methods

Staff from 14 school districts across Washington State were interviewed to gather information regarding teaching methods, staff training, program entry and exit, and funding sources. Perceptions from the field regarding program strengths, challenges, and opportunities for improvement were also assessed.

Interviews were conducted by telephone due to the short time frame and budget constraints. The interviews, which took place during August and September 2004, typically lasted one hour. With the exception of some demographic information from the Office of the Superintendent of Public Instruction (OSPI) data, the district profiles summarized below are based on staff responses to interview questions. In most cases, the person interviewed was the district staff member whose job duties include oversight of services for ELL students. Typically, this individual was also responsible for other programs in the district, such as special education. In some districts, an additional staff person involved in curriculum for ELL students also took part in the interview. At the request of one district, an experienced former staff member who had left the position a month prior was interviewed.

Basis for Selecting School Districts

School districts were selected to represent geographic and programmatic diversity across the state. We used available data from OSPI[8] to identify districts to interview based on the following characteristics:

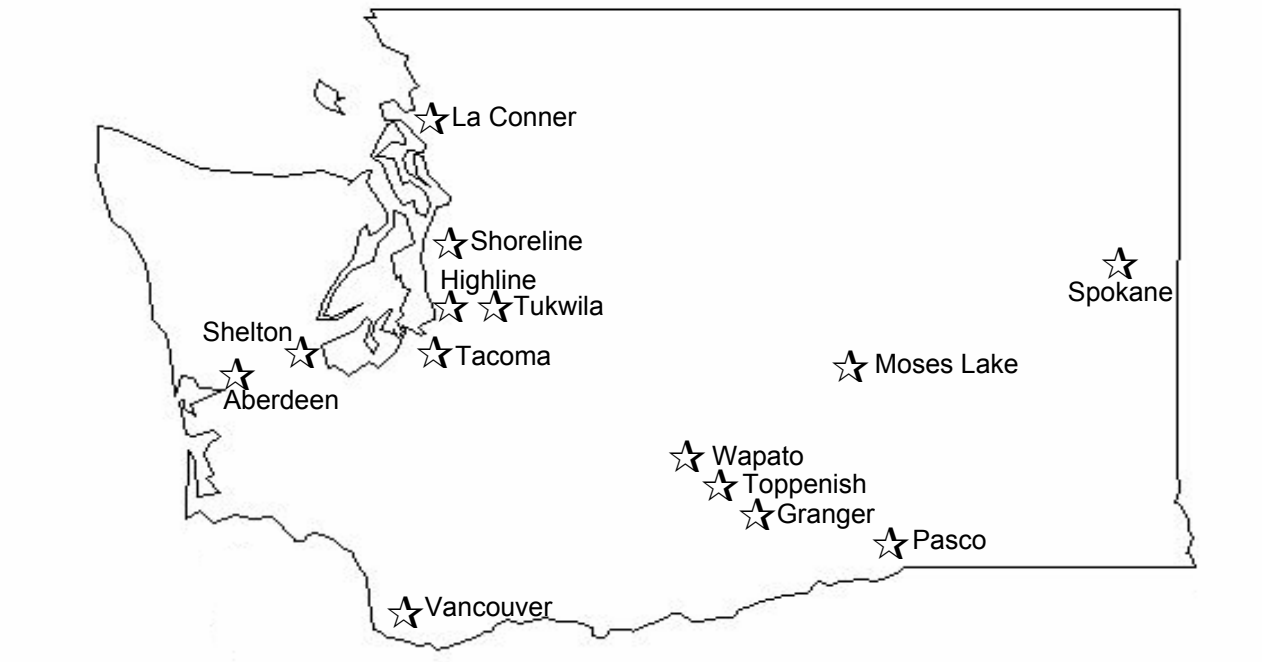
- **Program size:** Large programs were defined as having more than 200 TBIP students; small programs had less than 200.

[8] TBIP program data comes from 2001–02 OSPI program office reports, 2002–03 WASL data, and district data from OSPI School Report Card found at <http://reportcard.ospi.k12.wa.us/reports/summary>.

- **District size:** Large districts were defined as having more than 5,000 students and small districts as having less than 5,000.
- **Languages spoken:** Two measures were used to identify interviewees: districts with 30 or more languages spoken by TBIP students and districts in which 85 percent or more TBIP students speak Spanish.
- **Socioeconomics:** Proportions of students qualifying for free and reduced price meals, with high percentage defined as 60 percent or more students qualifying compared with the statewide average of 36 percent in 2002–03.
- **Academic outcomes:** Based on the percentage of fourth grade ELL students reaching the Washington Assessment of Student Learning (WASL) reading, writing, and math proficiency standards, high is defined as districts among the top 15 in percentage meeting standards; low is defined as among bottom 15 districts.
- **Length of stay:** Based on the percentage of students in the TBIP more than three years, high is defined as the top five districts with the highest percentage of students in the TBIP more than three years, and low is defined as the five districts with the lowest percentage in the TBIP for more than three years.
- **Program quality:** Among districts cited by OSPI Migrant and Bilingual Education Office staff as operating an exemplary program.

The school districts selected for interviews are shown in Exhibit B-1. Collectively, the districts represent each of the above characteristics.

Exhibit B-1
School Districts Interviewed



Data Limitations

Staff responsible for implementation of the TBIP in their school districts were interviewed. Those interviewed do not necessarily represent the views of all teachers and other staff involved in TBIP across the state. The information summarized below has not been independently verified.

School District Profiles

The school district profiles include a brief description of key district demographic factors, supplemental services provided for ELL students at the elementary and secondary levels, any recent changes to the program, funding sources, and particular features of the districts' services for ELL students.

Aberdeen School District

Demographics. The Aberdeen School District has experienced a substantial increase in TBIP enrollment over the past few years. In the 1997–98 school year, 3 percent of Aberdeen's 4,140 students were in the TBIP; by October 2003, 15 percent were in the TBIP. Nearly all (96 percent) students in the program in 2001–02 spoke Spanish, and 51 percent also qualified for migrant services.

Elementary Program. The district uses an extended day and a pull-out English as a Second Language (ESL) program aimed at increasing "cognitive English so students can function in school," according to staff interviewed. This model uses a traditional ESL approach with some vocabulary instruction related to academic content. Instructional Assistants (IAs) work with ELL students under the supervision of the students' regular classroom teachers. ELL students are dispersed among the district's six elementary schools. In one elementary school they account for 20 percent of all students, while representing a smaller proportion in the others.

Secondary Program. At the district's middle and high school, Aberdeen uses a combination of TBIP and other funding to pay for certified bilingual ESL teachers to provide students with academic content instruction in their native language as well as English language acquisition. The high school bilingual classroom, where students spend part of their school day, was established four years ago in response to the high dropout rate among ELL students in the district, according to staff interviewed. Staff state that this approach has been effective, reporting that that some students who qualify for the TBIP prefer to be in mainstream classrooms without supplemental services. Staff estimate that 10 to 20 percent of ELL high school students waive TBIP services.

Funding Sources. TBIP funds pay for IAs working with ELL students and a portion of the salaries of the bilingual ESL teachers at Aberdeen's middle and high schools. Funds from the following sources, in addition to TBIP and basic education, serve ELL students as they do all other eligible students:

- Initiative 728 funds support all-day kindergarten and, at the secondary level, after-school tutoring, Saturday school, and summer school. In addition, Initiative 728 funds are combined with local levy and Early Childhood Education and Assistance Program (ECEAP) funds to pay for pre-kindergarten programs.
- Title I and Learning Assistance Program (LAP) funds are used for tutoring, parent involvement efforts, document translation, and class size reduction. Migrant funds support health services, parent involvement, and after-school programs. Finally, federal funds from the McKinney-Vento Act, aimed at homeless students, are used for outreach to families.

Granger School District

Demographics. One-third of Granger's 1,280 students are in the TBIP. While most students in the TBIP speak Spanish, there are also Native American students and a few speakers of other languages. District staff also believe a portion of the students from Mexico speak an Indian language as their primary tongue, although families usually list Spanish as their home language on school registration forms. District enrollment is 85 percent Hispanic; 91 percent of all students are low income.

Elementary Program. Until recently, Granger's program was entirely traditional ESL pull-out. Now, the district is using a variety of funding sources, including TBIP, to pay for special support in reading. This year, they anticipate every teacher in the district will get some training in ESL. Staff note that for a district with so many ELL students, it makes sense to offer this training schoolwide so students get needed support all day rather than for just a brief period.

The district has recently moved to a three-quarter-day kindergarten. In the morning, a traditional kindergarten program is offered, with extra activities in the afternoon to build language and reading skills. From kindergarten through fourth grade, the highest elementary grade in Granger, all students participate in the Reading First program, in which 90 minutes per day of work on reading is required. For ELL students, this reading time includes some work on language development. ELL students are generally served in the regular classroom, but those with the lowest proficiency levels continue to be pulled out of class to work with a reading specialist.

Secondary Program. At the middle school, Granger has also moved away from a pull-out program and now provides special support in math and science. Students work on English language acquisition as they learn concepts and terms for these academic disciplines.

Granger's high school operates on a block schedule, in which students attend four 90-minute classes per day and attend any given class only two or three times per week. ESL students typically spend 90 minutes two or three times a week in a class focused on language acquisition; those with the lowest English proficiency levels are in this class all five days of the week.

Funding Sources. As a low-income and rural school, with many students who are struggling academically and a substantial Native American population, Granger is eligible for a variety of funding sources beyond basic education. Nearly all these programs are employed to assist ELL students. The extended-day kindergarten program is funded with TBIP, Title I, and basic education funding. Among the funding sources used to support ELL students are Title I, Title II (teacher professional development), Title III, Migrant, LAP, and Indian Education.

Other Features. Granger is considering beginning a dual language bilingual education program. One issue facing the district is finding staff who read and write fluently in Spanish. At least one teacher in each grade level is a native Spanish speaker; however, because they learned Spanish at home but received their education in English, these teachers do not feel they can read and write Spanish well enough to teach in the language. Some are willing to work on enhancing their skills in academic Spanish language.

Highline School District

Demographics. Highline School District enrolls over 2,300 TBIP students, 15 percent of the total students in the district. Highline students speak 67 different languages, although most (60 percent) speak Spanish. Somalis, a new and growing population in the district, are the second largest language group. Staff note that a recent district survey showed that about 40 percent of ELL students missed at least two years of school attendance before arriving in the district. The district is relatively low income, with 54 percent of students (compared with 37 percent statewide) qualifying for free and reduced price meals.

Elementary Program. Students with the lowest English proficiency levels are placed in self-contained classrooms with others functioning at similar levels. Students are grouped in two- or three-year grade spans, and the primary focus is on developing oral English language skills with some academic content covered. Then, as their English speaking ability improves, students move to "sheltered" classrooms where there is a mix of both native English speakers and ELL students grouped by age and grade level. In sheltered classrooms, a modified form of mainstream content is taught using ESL techniques. These methods include, for example, having students work in small groups, using charts and drawings to convey information, careful preview and review of vocabulary, and frequent checks to see that students have mastered material.

Tutoring support from IAs is provided in both settings, but more predominantly in self-contained classrooms. Students new to the district may receive help from an IA who speaks their native language. More advanced students receive tutoring in English related to their school subjects. Highline policy mandates that during the school day, when an ELL student needs extra help, the teacher or IA comes into the classroom rather than pulling the student out for services. In several schools with high numbers of ELL students, there are "coaches" who train all teachers how to help students both learn English and master academic skills before they are fluent.

In one elementary school, Highline is experimenting with having no special classrooms for ELL students. District staff state that, on the basis of how students in this setting scored on the Washington Language Proficiency Test (WLPT), school staff decided to return to a self-contained classroom in the intermediate grades, where the gap between spoken and academic English is greatest.

In the past, not all Highline schools had ESL programs, and students were bussed to those that did. Families sometimes waived TBIP services to stay in their neighborhood school.

Secondary Program. Highline's secondary TBIP operates similarly to the elementary program. There are ESL classrooms for teaching oral language, reading, and writing. There is also a sheltered classroom for math. New arrivals typically begin with three of their six classes in these settings, and, as they progress, students spend more time in mainstream settings.

Funding Sources. TBIP funds are used primarily for IAs who serve as bilingual tutors. Program funds also pay for supervision, teacher collaboration time, and some of the time ESL coaches work with teachers. Title I, LAP, and Initiative 728 funds help pay for reading coaches, ESL coaches, and the ESL coordinator. Under a union agreement, the district dedicates $1 million from basic education and local levy funds to reducing class sizes. Title III funds are used to provide training for staff in classrooms.

Other Features. Highline prefers that all their teachers have an ESL endorsement, as well as a background in literacy and reading instruction. The district pays for teachers to get the first 12 of 24 credits toward the ESL endorsement.

The district uses results from the WLPT, in concert with other information, to make decisions about whether students should be in self-contained or sheltered classrooms. Now that it has three years of WLPT data, Highline is beginning to use it to assess the effectiveness of programs in various buildings.

Highline writes a plan for every student in TBIP longer than three years. The plan includes an analysis of why the student continues to need ESL services and a strategy to meet his or her needs using multiple funding sources. Plans may involve, for example, working with a counselor on attendance or receiving an intervention such as a reading comprehension class for a student with good oral language but poor reading skills.

La Conner School District

Demographics. Of the 14 districts interviewed, La Conner is the smallest, with just 631 students as of October 2003. The number of ELL students in the district is small and declining. During the 2002–03 school year, the district served 11 students in the TBIP versus 40 in 1997–98. La Conner's TBIP students are almost entirely from migrant families who work in agriculture over the summer and through the first six weeks of the school year, leaving the district after the harvest. La Conner did not apply for TBIP funding for the 2003–

04 school year and has delayed applying for the 2004–05 school year until it determines how many ELL students enroll in the fall.

Elementary Program. Because its TBIP is so small, the district believes its best strategy is to ensure that all teachers know ESL strategies; La Conner district staff describe their program as "immersion with support." The district makes an effort to place ELL students in classes with teachers fluent in Spanish and where at least one other student speaks Spanish. The elementary school has a full-time IA who is fluent in Spanish and provides training in language acquisition strategies. This IA provides assistance in kindergarten and first grade classes, runs an after-school program for students in all grades, and serves as a connection with the community. Students in grades three to five receive pull-out tutoring and language assistance, funded by Title I. In the past, the district has offered Spanish language classes for teachers, IAs, and administrative staff.

Secondary Program. Last year, there were no ELL students at La Conner's middle school. At the high school, there is a study skills class for migrant students. Although it is not currently doing so, in the past La Conner helped students make use of a program that allows migrant high school students to complete accredited high school classes by extension and semi-independently.[9]

Funding Sources. The district primarily uses Migrant and Title I funds to meet the needs of ELL students. The elementary school IA and a fraction of the high school teacher's time (0.2 FTE) are funded by Migrant Education. Title I funds are also used to assist ELL students with tutoring and language support. Because La Conner enrolls only a few ELL students for short periods of time, and the district serves them through other programs, TBIP funding is not an important source of support.

Other Features. District staff believe the number of ELL students in La Conner is declining, because migrant farmers are more frequently coming to the area without families. They also suspect migrant families are choosing to enroll their children in districts with larger numbers of ELL students and better known programs. Staff note two difficulties peculiar to their situation. First, sustaining staffing for a temporary influx of students is difficult. Second, completing language assessments within ten days after the first day of school is a challenge, because La Conner employs only one staff member qualified to assess students' language skills, and she has many other responsibilities.

Moses Lake School District

Demographics. Approximately 10 percent of the 6,700 students in Moses Lake qualify for the TBIP. One in six ELL students in the district speaks Russian, and most others speak Spanish. Enrollment among ELL students has been steady the in the last two school years, but, for two years prior to that, increased by 50 to 75 students per year, an influx that

[9] The Portable Assisted Study Sequence (PASS) program is operated by the state-funded Secondary Education for Migrant Youth program in cooperation with the Sunnyside school district; see <http://www.semy.org/semy.cfm?content=pass&title=aboutpass>.

prompted the district to revamp its services for ELL students. Just over half (53 percent) the students in Moses Lake qualify for free and reduced price meals.

Elementary Program. Moses Lake has operated a pull-out program in the past, but, in the 2004–05 school year, the district is shifting to a mix of services within and outside the mainstream classroom. Beginning-level students, those scoring as Levels 1 and 2 on the WLPT, will continue to receive pull-out assistance. Those at Level 3 will remain in the regular classroom with IA support using a special reading program. The district also offers a special half-day ELL kindergarten program.

During the 2004–05 school year, one elementary school in the district is experimenting with keeping all ELL students in a combined K–1 classroom. All instruction will be in English, with IA support in students' primary languages.

Secondary Program. There are special ESL classrooms in one middle school (to which all middle school ELL students are bussed) and at the high school. Students are in this classroom for up to half a day, depending on their English proficiency. There is also IA support in academic classes for students at Levels II and III.

Funding Sources. TBIP funding is used primarily to pay for IA time but also covers portions of teacher salaries for middle and high school immersion classes. The TBIP also pays for ELL facilitator time. Finally, the TBIP covers part of the cost of staff who oversee ELL programs and handle recordkeeping at the district level.

Title III funds are used for the half-day kindergarten for ELL students. Migrant funds also pay for IA time as well as evening classes for parents. Title I funds go to elementary schools and, although used somewhat differently in every building, include a Title I teacher who uses the pull-out method to work with small groups of students.

Other Features. In each building, one teacher is paid for extra hours to serve as the ELL facilitator. The facilitator's role is to reach out to new bilingual students and arrange testing. The district's ESL/Migrant program facilitator conducts lesson planning for the ELL curriculum and provides monthly training for IAs. It is a district requirement that IAs with more than 45 minutes of their time paid with TBIP or Migrant funds be bilingual in Spanish, Russian, or Ukrainian.

In Moses Lake, 14 percent of TBIP students (but only 11 percent of all students) are also in special education. This is an issue of concern the district hopes to address in the 2004–05 school year. When a dually eligible student has been in TBIP for four or more years, the district asks the student's Individual Education Plan (IEP) team to assess whether the primary factor in his or her writing and reading performance is a disability rather than lack of English proficiency.

Pasco School District

Demographics. Approximately one-third of Pasco's 10,000 students qualify for the TBIP, making the district's program the third largest in the state. Three-quarters of TBIP students also qualify for the migrant program. The district's ELL students come from several language groups, including a recently arrived community of Russian speakers, but the vast majority speak Spanish. Two-thirds of all students in Pasco qualify for free or reduced price meals.

Elementary Program. Pasco began a late-exit transitional bilingual program to serve ELL students in the 1980s. ELL students begin kindergarten with 80 percent of their day taught in their native language—Spanish or Russian. By the time they enter third grade, instruction is half in the native language and half in English; by fifth grade, only 30 percent of instruction is in the native language.

As a late-exit program, Pasco keeps students in bilingual classrooms through fifth grade, whether or not the student continues to qualify for TBIP and Title III funding. When the WASL was introduced, some principals had students in their buildings move into all-English instruction earlier, fearing they would not score well on the WASL if they were being taught in another language. District staff state that students transitioned to all-English instruction early have not scored as well on the seventh grade WASL as those who spent more time in native language instruction.

The district would like to see some native language instruction continued into at least seventh grade. Pasco also has a bilingual program for highly capable third through fifth grade students.

A few years ago, when Pasco had an influx of Russian immigrants, the district hired a single Russian-speaking teacher and instituted a kindergarten through fifth grade classroom with Russian language instruction. Now, with a larger Russian-speaking enrollment, the district has three bilingual Russian classrooms: kindergarten, first/second grade, and third through fifth grade.

In the fall of 2004, the district added two dual language bilingual classrooms at a new elementary school. Over the past year, it has also put into effect a number of recommendations for program improvement made by a consultant from the Center for Language Minority Education and Research (CLMER) who reviewed the program at the district's request. These include the following:

- Guided Language Acquisition Design (GLAD) training, including teachers observing GLAD-trained staff teach summer school; and
- Paying more attention to consistency across classrooms about when and in what subjects to introduce English.

Secondary Program. At the middle and high school levels, Pasco uses an accelerated version of the transitional bilingual approach used in the elementary school. Newly arrived students with little or no English receive instruction in their primary language. Over the last

two years, Pasco has begun to split middle and high school students into two tracks based on how much prior schooling students have in their primary language. Those with a stronger educational background transition to English more rapidly than those with little literacy in their native language. Pasco offers a variety of classes, including algebra and advanced math in Spanish, in English, and in a sheltered environment with ESL strategies. Pasco also offers an advanced class in Spanish literature for native speakers.

During elective class periods, all middle and high school ELL students are in mainstream classes. Since 70 percent of the student body speaks Spanish, there is usually a fellow student who can assist newly arrived students with little or no English proficiency.

Recent changes to the secondary program include the following:

- A teacher coach for mainstream classroom teachers to strengthen services offered as ELL students transition from sheltered classrooms to the mainstream; and
- A special coach for ninth grade teachers and a 20:1 student-teacher ratio in ninth grade classrooms as a strategy to reduce dropouts and other problems ELL students face that occur beginning in the freshman year.

Funding Sources. TBIP and Title III funding pay for staff training and other professional development activities. These sources also pay for English reading material to expand the reading-level range of materials available in the classrooms, as well as books for ELL students to take home. The TBIP also helps fund a literacy (Reading Recovery program) specialist who works with ELL children. Title I and LAP pay for a literacy coach. Migrant and Title I funds support a home visitor. Finally, combined funding from many programs helps reduce ninth grade class size.

Shelton School District

Demographics. Approximately 5 percent of the 4,000 Shelton students are in the TBIP. All but a few ELL students speak Spanish. ELL student enrollment has increased very quickly over the past decade. In 1993, the district had only 33 non-English speaking students; currently it has over 225, including 36 preschool-age ELL children. More than half of Shelton students qualify for free and reduced price meals.

Elementary Program. Shelton offers a dual language bilingual program at Evergreen Elementary, one of the district's three elementary schools. Classes consist of a mix of native English speakers and ELL students. Approximately half the subjects are taught in English and half in Spanish. All students learn to read first in their native language, with language arts instruction in both languages starting in second grade.

Elementary ELL students are bussed to Evergreen Elementary if they live outside its attendance area. Shelton is a geographically compact district, so bus rides are short, and the district has historically allowed transfers among attendance areas. These factors made bussing to the bilingual program uncomplicated and acceptable to families, according to staff interviewed. English-speaking neighborhood students also attend Evergreen, and

those living outside the attendance area may also petition to transfer in. Staff note that more English-speaking families want their children at Evergreen than there is room to accommodate.

The district studied its services to ELL students in 1997 with the help of a consultant. Staff note that teachers found research on the academic impact of instruction in students' native languages through high school to be compelling. In the 1998–99 school year, Shelton began one bilingual classroom in grades one through three at Evergreen; by 2000–01, there was at least one dual language classroom at all grades (kindergarten through five). In the spring of 2002, Evergreen faculty voted to expand the bilingual program schoolwide. In the 2002–03 school year, all kindergarten through second grade classrooms became bilingual. The all-bilingual structure was extended to third grade in 2003–04. The plan is that in 2004–05 all fourth grade classrooms will be dual language bilingual, and in 2005–06 all fifth grade classrooms will be as well.

Oral and writing fluency in Spanish is a priority in staff hiring—even above ESL and bilingual education endorsements. The district also makes an effort to hire native Spanish speakers to work as IAs at Evergreen.

The few Samoan, Chinese, and Russian-speaking students in the district are served with ESL tutoring in their neighborhood school. These languages represent about 2 percent of Shelton's ELL population.

Secondary Program. Shelton's middle school (serving grades six and seven), junior high (grades eight and nine), and high school each have a language arts support class taught by a bilingual teacher. ELL students spend up to two periods a day with the bilingual teacher at the middle school and junior high and up to half a day at the high school. Students with the lowest English proficiency work on oral language. More advanced students study reading and writing. The teacher uses Spanish to help the students understand assignments, but students work to develop skills primarily in English.

IAs support the bilingual teacher and also assist ELL students in their mainstream classes. They sometimes work with small groups to ensure students understand lessons and what is expected. Some IAs shadow newly arrived students.

Middle school staff are studying the possibility of beginning a part-school dual language bilingual program for the 2005–06 school year. The district has also considered a secondary newcomer program to ease the introduction of newly arrived students with no English-speaking ability. However, there are few of these students, and they span many grades; therefore, the district does not believe this to be feasible.

Funding Sources. Evergreen elementary teachers are paid out of basic education funding. Title I, TBIP, and local district funds cover the cost of additional IAs in the elementary program as well as some program materials. Pre-kindergarten services are funded through the state Initiative 728[10] and are provided to four-year-old ELL children. Due to budget constraints, services for 3-year-olds were discontinued in the 2004–05 school year.

[10] See <http://www.k12.wa.us/I728/> for details on I-728.

At the secondary level, bilingual education staff are funded through a variety of sources. State TBIP and Migrant funds help pay for teachers and IAs at middle and high schools. State LAP funds also support teachers and IAs at middle schools. Title I and Title III funds contribute to staff training; Title III funds are also used to buy instructional materials.

For three years, the district has received competitive emergency immigrant grant awards. These funds have been used for staff training, evening parent classes at Evergreen, and program materials. The district also contributes approximately $45,000 per year toward bilingual education, beyond what state and federal sources provide, from local levy funds.

Other Features. Shelton offers GLAD training in the elementary bilingual program. Sheltered Immersion Observation Protocol (SIOP) is used with both bilingual and mainstream classroom secondary staff. Reading instruction for ELL students is a particular focus of district training.

Shoreline School District

Demographics. Six percent of Shoreline's 9,800 students are in the TBIP. Total enrollment in the district has declined in recent years, and TBIP students represent an increasing proportion of the student body. Twenty percent of students in the district qualify for free or reduced price meals. The largest ethnic minority group in the district is Asian/Pacific Islanders (17 percent of enrollment in October 2003). Shoreline serves students from 56 language backgrounds, with Korean the largest language group (spoken by 22 percent of ELL students) followed closely by Spanish, according to OSPI data.

Elementary Program. Six of the district's 12 elementary schools offer TBIP, with ELL students bussed to the nearest school with services. The program is primarily ESL pull-out, although at some schools staff come into the classroom to work with students. Students are pulled out for an average of 45 minutes per day and work in groups, determined by English proficiency level, with a certified teacher who has an ESL or bilingual endorsement. Each of the six schools has one full-time certified teacher as well as between three and ten hours of IA time, depending on the number of students. The IAs assist teachers in working with small groups during pull-out sessions. Shoreline's Title I and LAP programs are also pull-out, which staff point out can be problematic for students in both the TBIP and these programs, as, they note, there is a limit to how much time a student should be removed from his or her regular classroom.

Secondary Program. Each of the district's two middle and high schools has a TBIP program operating out of separate ESL classrooms. Students who score as beginners (Level 1) on the WLPT spend two to three periods in ESL classrooms. Those at Levels 2 and 3 spend one or two periods a day in the ESL classroom. Many ELL students also receive assistance through the district's reading intervention program. This reading program is not specifically for ELL students but provides help in strengthening literacy skills.

Funding Sources. TBIP funds pay for IAs who work with ELL students in elementary schools and for about 65 percent of middle and high school ESL teachers. Basic education

funds pay for all elementary school ESL teachers and for the remaining 35 percent of secondary ESL teachers. At the secondary level, the district maintains constant staffing as the number of ELL students fluctuates by varying the proportion of TBIP and basic education funds.

Other Features. The district tests new students from non-English speaking homes in English reading and writing, as well as oral language. If a student does not test into the TBIP, based on oral proficiency, but scores poorly on reading and writing, the district will still offer services, although this does not happen frequently. Shoreline seeks teachers with both ESL and regular classroom experience, believing the latter gives the ESL teacher credibility with regular classroom teachers. The district also stresses the importance of ESL teachers communicating and sharing strategies with regular classroom teachers about meeting the needs of ELL students. One of Shoreline's major goals is to provide staff development so all teachers have the skills and knowledge to serve ELL students.

Spokane School District

Demographics. Three percent of Spokane's approximately 31,000 students are in the TBIP. As of 2001–02, nearly 60 percent of Spokane's TBIP students speak Russian, 10 percent Ukrainian, 12 percent other eastern European languages, and 6 percent Spanish. In the last few years, students from Sudan and Somalia have enrolled. Just under half (48 percent) of all students in Spokane qualify for free and reduced price meals.

Elementary Program. Spokane's elementary schools use an ESL model, described by staff as "we teach in English to learn English." The district offers native language support primarily from bilingual IAs. Usually, ELL students stay in the mainstream classroom, and ESL teachers and IAs come into the classroom to work with them. A visit lasts between 40 minutes and 1 1/2 hours, depending on the number of ELL students in the classroom. Newcomers receive this support every school day, and more advanced students, three times a week. Students with the lowest English proficiency are also pulled out of the class for oral language instruction.

Spokane School District is very careful about the role of IAs in the program, partially as a result of a focus on this issue by the teacher's union. ESL teachers meet with IAs each week to go over lesson plans. In the mainstream classroom, the bilingual IA works under the supervision of the regular classroom teacher.

The district is working to increase the connection between regular classroom teachers and ESL staff through monthly meetings and encouraging the regular classroom teacher to provide feedback to ESL staff regarding where an ELL student needs help. Teachers in the ESL program are required to have an ESL endorsement, which is seen as key to credibility with mainstream classroom teachers. To offer ESL services at all elementary schools, many ESL teachers travel from school to school, using laptop computers for record-keeping.

Secondary Program. At the middle and high schools, most ELL students spend two to three periods of the six-period day in separate sheltered classes in which a modified form of mainstream content is taught using ESL techniques. Students are separated by English proficiency levels for these classes. The district is working to align the curriculum taught in sheltered ESL classes with mainstream curriculum. For example, when the district purchased a new Washington State history textbook, it was also purchased for the sheltered history classes, but the material must be taught in a modified format to be understood by students with limited English skills.

The high school also has a newcomer class. For one semester, students new to the country who did not study English in their home country spend all day in a self-contained classroom with no more than 20 students. They study English, math, social studies, and physical education together. Staff note that when Spokane revamped its ESL program in the mid-1990s, it was felt that this type of short-term intensive support was needed—at the high school level only—to meet both academic and social needs of newly arrived teenagers.

Funding Sources. State TBIP funds (39 percent) and district levy funds (61 percent) together pay for all ESL teachers, IAs, and an ESL specialist who works with families of ELL students on registration and other issues. These two funding sources also partially cover supplies, materials, and books. Title III pays for staff development, the remainder of supplies and materials, after-school tutoring, and staff time for parent meetings and curriculum development. Translation of material is paid for by a combination of basic education, TBIP, and Title III funds.

Other Features. Until the mid-1990s, all services for ELL students were at a center within one school, to which ELL students were bussed. Families didn't like this; they wanted their children to attend the school closest to home. ELL students whose families chose to keep them in the neighborhood school weren't getting support in mainstream classrooms, and the union objected on behalf of mainstream classroom teachers. The district spent two years reviewing research and working with the union; it shifted to the current system in the 1996–97 school year.

When families come into a school to register, those who indicate their child's primary language is not English are directed to the bilingual family registration and orientation center. There they can register for all programs and services for all their children in one place. Material is available in five languages.

The district has not had high attendance among mainstream teachers when classes specific to ELL students and ESL were offered. Now it focuses on having ESL teachers be part of the teaching team whenever a school is training staff so all topics include modifications for working with ELL students.

Tacoma School District

Demographics. Seven percent of Tacoma's approximately 32,000 students are in the TBIP. Students come from 36 language backgrounds, but most ELL students speak one of five languages: Spanish (35 percent), Russian (21 percent), Cambodian (10 percent), Vietnamese (10 percent), or Ukrainian (9 percent). Slightly more than half of all students in Tacoma qualify for free or reduced price meals.

Elementary Program. Tacoma uses an ESL instruction model, with services available in 26 of the district's 36 elementary schools. Most ELL students attend their neighborhood school, but those living in the attendance area of a school with no ESL program are bussed to the nearest school with services. Models vary by school and sometimes by classroom, with ESL staff going into the classroom at some sites and pulling students out for assistance in others. Often students are grouped by English proficiency level. Bilingual IAs from the major language groups provide tutoring in students' native languages, helping to introduce and explain concepts.

Although the district has many languages represented, students from certain language groups are fairly concentrated in particular elementary schools. The district is considering bilingual Spanish programs at two elementary schools.

The district has recently increased its emphasis on hiring bilingual IAs and, with their help, working to involve the parents of ELL students in the school. Efforts include offering parenting classes and a forum to gather parent input about how to shape the ESL program, as well as seeking school volunteers from among parents of ELL students.

Secondary Program. Six of Tacoma's 11 middle schools and all the high schools have ESL programs. In high school, students attend separate ESL classes based on proficiency level. Students at Level 1, and sometimes Level 2, are in an ESL classroom with other students at the same proficiency levels for half the day. Each classroom has a certified teacher and an IA, almost always bilingual. They provide traditional ESL instruction, with some work on specialized vocabulary related to academic subject areas. The district is training staff so that subjects taught in ESL classrooms are more closely linked to the mainstream curriculum. Students at a higher level of English proficiency are in an ESL class one period a day. Bilingual IAs sometimes assist in mainstream classes to support ELL students.

Funding Sources. Half the cost of ESL staff, both teachers and IAs, is paid by TBIP funds, with the remaining half paid from local district levy funds. ELL students also make use of LAP and Title I funds. At schools eligible for schoolwide Title I funding, there are after-school and summer tutoring programs in which ELL students may participate, although the programs are not designed specifically for them.

Other Features. It is the district's understanding that students cannot be funded by the TBIP for more than five years. After five years, Tacoma no longer counts a student for TBIP funding, although it continues to serve students if they are not yet proficient in English. Training efforts focus on ESL strategies, involving parents, and integrating instruction with mainstream curriculum. In the past, the district has offered Spanish language classes for staff.

Toppenish School District

Demographics. Just under 60 percent of the 3,400 students in the Toppenish School District are enrolled in the TBIP. Thirty percent of students in the program are from migrant families. The student body is 78 percent Hispanic and 15 percent Native American. In 2001–02, 85 percent of Toppenish students in the TBIP were listed as speaking Spanish and 15 percent as speakers of Sahaptian, a language of Yakama Native Americans. Children qualifying for free or reduced price meals make up 87 percent of the student body.

Elementary Program. Toppenish uses two models for working with ELL students at the elementary level. Five elementary schools provide content ESL taught within the mainstream classroom. To implement this model, the district places strong emphasis on training teachers. Staff can receive tuition reimbursement for taking classes on ESL-related topics at the University of Washington, Central Washington University, and Heritage University. The district also offers training in ESL strategies for teachers and IAs during the summer and on several teacher professional days.

One Toppenish elementary school offers a dual language bilingual program that began with kindergarten two years ago and is now offered through second grade. Students are taught in Spanish for reading, language arts, and science; English is used for math. Students begin English reading instruction in the third grade. The district has found it challenging to recruit bilingual teachers qualified to teach intermediate grade content but intends to expand to the sixth grade. In Toppenish, because so large a fraction of the student body speaks Spanish, it has been difficult to find English-speaking students for the dual language program.

The district receives federal Reading First funds and must offer a structured reading program 90 minutes per day. A part-time teacher and IAs provide additional pull-out tutoring in reading in some schools. Because the Reading First assessment is conducted in English, teachers in the dual language bilingual program find the program a barrier to teaching children to read in Spanish.

In the past, Toppenish used a mix of pull-out and early-exit bilingual instruction, as well as classrooms specifically for newcomers. They shifted away from these approaches based on an understanding that research showed other methods are more effective.

Secondary Program. Toppenish's middle school and high schools offer ESL instruction. The schools are working to shift from offering solely English language instruction to an approach that is more connected to academic content areas. The schools provide some native language instruction for migrant and bilingual students.

Students with the lowest English proficiency are taught in separate classrooms for two to three periods a day, with ESL teachers and some Spanish language support from IAs. There is one such classroom at the middle school and one at the main high school, each with 20 or fewer students. Newcomers with little formal education in their home country spend three periods in this class, others just one or two. More advanced English language learners spend their entire day in mainstream classrooms.

In the 2004–05 school year, the district is, for the first time, offering dual language bilingual social studies and math classes in high school.

Funding Sources. Reading First funds pay for reading coaches in each Toppenish elementary school. The TBIP pays half the cost of IAs and, in some schools, teachers who provide additional pull-out reading tutoring and language support beyond the 90 minutes specified in Reading First. Migrant funds pay for an ESL teacher at the high school, a portion of the high school counselor, a portion of summer school, parent involvement efforts, and a portion of a bilingual teacher at the alternative high school. Funding sources used for staff training include Title I, Title II, Title III, special higher education grants, and TBIP.

Initiative 728 and Title II funds are used to reduce class size—important for mainstream teachers responsible for providing supplemental services to ELL students. Title I and Title III funds also support the district's "kinder-academy," a two-week summer program for incoming kindergarteners.

Other Features. Toppenish employs a district-wide coordinator for the TBIP whose role is to support mainstream classroom teachers. The district is working to increase understanding among staff of Native American students' culture and experience.

Tukwila School District

Demographics. Approximately 30 percent of the 2,500 students in the Tukwila School District are in the TBIP, and staff report nearly half of all students in the district are not native-English speakers. More than 40 different languages are represented among students in the program. One elementary school has 50 percent of the student population qualifying for the TBIP, with the majority being Spanish speakers; the two other elementary schools, the middle school, and the high school have more language diversity and varying proportions of Spanish speakers.

Elementary Program. Two elementary schools keep ELL students in the regular classroom and provide English language acquisition strategies by adapting the schoolwide curriculum using content ESL with assistance from IAs. The third elementary school pulls ELL students out of the regular classroom for English instruction. District staff state that teachers who favor the pull-out approach argue ELL students need a concentrated focus on learning English to succeed.

Secondary Program. The middle school keeps ELL students in the regular classroom and uses English language acquisition strategies by adapting the regular curriculum. The high school has separate classrooms where ELL students work on academic content and English language acquisition. District staff note that high school staff who favor continuing this approach state that ELL students will not graduate unless they have the support of specialized classes and that it is "too much" to ask general education teachers to teach English while also teaching regular class content.

Funding Sources. TBIP funding pays for all but one of the program's certified staff and one IA. Title III funds are used to pay for professional development and materials. Title I and LAP funds are used for literacy development efforts that benefit ELL students, although they are not specifically targeted to them. Initiative 728 funds one certified staff who works specifically with ELL students. Finally, local levy funds are used for IAs who work with ELL students.

Other Features. Tukwila is considering a bilingual program of some sort at the elementary school, where half the ELL students speak Spanish. The district will be looking into bilingual options during the 2004–05 school year as they conduct a review of their services for ELL students. However, staff worry about how to implement a bilingual program in concert with ESL instruction for students from other language backgrounds who attend the same school; they are concerned it might be perceived as inequitable.

In the past three years, the district has focused on multicultural awareness training for all staff. Now teachers in regular classrooms are interested in more specific training on how students acquire English.

Vancouver School District

Demographics. In 2003–04, Vancouver served approximately 1,760 TBIP students, about 8 percent of all students in the district. The number of students in the TBIP has decreased by about 6 percent from two years earlier, while overall district enrollment increased. Nearly half (44 percent) of students in Vancouver qualify for free or reduced price meals.

In the 2001–02 school year, 36 language groups were represented among ELL students in Vancouver. Almost nine of ten TBIP students spoke one of three languages: Spanish (42 percent), Russian (36 percent), or Ukrainian (11 percent). There were 20 or more speakers of only four additional languages (Vietnamese, Bosnian, Cambodian, and Rumanian).

Elementary Program. Vancouver serves elementary students primarily with content ESL, with varying levels of primary language support. Newcomers with little English-speaking ability are pulled out of the mainstream class and work on basic oral language vocabulary, most often with an IA. Other ELL students are served in the classroom by either an ESL teacher or an IA. In this "push-in" model, ESL staff typically blend in and work with a group of ELL students at times the entire class is breaking into small groups to work on reading, writing, or another subject. Some, but not all, IAs and a few teachers are bilingual in Spanish, Russian, or Ukrainian and provide support to students who speak those languages.

The ESL program is available at all 21 Vancouver elementary schools, with the number of children served within each school ranging from five to 235. Staff note that having an ESL program at every elementary school leaves schools that enroll just a handful of ELL students with only a few hours of IA time per week. However, staff report that parents are not comfortable having young children bussed outside the neighborhood.

At one elementary school, nearly all the ELL students speak Spanish. This school is spending the 2004–05 school year planning for a shift to dual language bilingual instruction.

At the elementary school with the most ELL students, Russian is the predominant language. Extra Russian language support is available there, and in two kindergarten/first grade classrooms, students are learning to read in Russian.

Secondary Program. Secondary content ESL services are offered at one "magnet" middle school and high school, to which all ELL students at those grade levels are bussed. The program operates similarly at both sites. There are both traditional ESL classes and "sheltered and scaffolded" classes that teach the mainstream curriculum in a format modified to be understood by students not yet fluent in English. Students are grouped by English proficiency levels. In both schools, there are a small number of teachers, as well as IAs, who speak either Russian or Spanish and offer primary language support to students from those language backgrounds. At the middle school, there is a Heritage Language class, in which students work on strengthening reading skills in their primary language as a means of building competence in English.

In the 2002–03 school year, 84 students (4 percent) in Vancouver waived enrollment in the TBIP. Waivers happen most often when a student enters middle school and does not want to leave peers to attend the school where the ESL program is offered. Staff also note that waivers occur when parents think their child, with good spoken English, is able to function without further support. Students who waive enrollment frequently return to the program after encountering academic difficulties.

Vancouver has a set number of ESL classes and is committed to limiting class size, so as new ELL middle and high school students enroll during the school year, a form of triage occurs: more advanced ELL students are "bumped" into mainstream classes. Although they receive tutoring support, staff feel this shift is not an ideal solution for the bumped students.

Funding Sources. In Vancouver, TBIP funding pays for IAs serving ELL students at both the elementary and secondary levels as well as for ESL and sheltered classroom teachers in the high school and middle school. TBIP funds also support three FTEs for interpreting and translating and pay part of staff professional development costs. Title III funds are used for professional development and materials.

Migrant funds serve a small number of students at one elementary and at the magnet middle and high schools. At the elementary school, it helps pay for after-school programs, literacy tutoring, and parent outreach. Migrant funds support tutoring offered during the school day at the middle school. At the high school, migrant funds support a "case management" approach to helping migrant students graduate.

In past years, the district received emergency immigrant funding, but it no longer does. Some schools have received special grants for programs to serve ELL students.

Other Features. Vancouver's ESL program curriculum specialist provides training for literacy coordinators, reading specialists, mainstream teachers, IAs, administrators, and school counselors on techniques for working with ELL students. IAs receive training in

language acquisition, teamwork, how to modify the district curriculum, how to build literacy, and compliance and paperwork associated with the TBIP. GLAD training has been offered to teachers for three years.

WRITE is a curriculum in place for three years for high school ELL students. Three novels relating stories to the students' culture are read, with intense study and discussion. Students write three essays based on the novels. Staff report seeing improved WASL scores among participating students.

Wapato School District

Demographics. Wapato has approximately 1,000 students in the TBIP, representing 30 percent of all students in the district. This TBIP enrollment level has remained relatively stable over the past seven years. Of students in the program, 43 percent also qualify for migrant services. Nearly all ELL students speak Spanish, although there are a few speakers of Ilokano, a language of the Philippines. District enrollment is 62 percent Hispanic and 26 percent Native American. Eighty-five percent of students in the district qualify for free or reduced price meals.

Elementary Program. Wapato is gradually adopting a one-way dual language bilingual program, starting with bilingual kindergarten classes during the 2004–05 school year. The district is shifting from a late-exit transitional bilingual program that begins with all content instruction in Spanish. Staff state they are making this change to meet the requirements of the federal No Child Left Behind (NCLB) Act to help students develop English earlier and lay a more solid foundation for academic achievement in the secondary grades.

The new model will differ from the existing approach in several ways. English will be introduced earlier and in a more structured way. Math will be taught in English beginning in kindergarten, but students will still learn to read and write first in Spanish. Every other day will be taught primarily in English. By the second grade, students will be learning to read in English. Under the existing system, English comes later, and when it is introduced depends on how students are progressing.

Currently, students who test out of the TBIP move out of the bilingual classrooms, but in the dual language program they will remain as English models. The district is not moving to a two-way dual language program because, staff report, too few native English-speaking families, primarily Native American, see value in having their children learn Spanish.

The few ELL students who speak Ilokano receive tutoring from a bilingual IA who speaks their language.

Secondary Program. In Wapato, a variety of approaches to serving middle and high school ELL students have been tried in recent years. The current program is primarily content ESL. The high school has a number of sheltered classes in which a modified form of the mainstream curriculum is taught by teachers with ESL training. The district has found

that high school students are not testing out of the TBIP, although many in the early elementary grades do so each year.

During the 2004–05 school year, Wapato is experimenting with dividing middle school students by English proficiency level. Students at Level 1 spend the entire day in a newcomer's room focused on language development. Those at Level 2 attend sheltered classes in which a modified form of the regular curriculum is taught. Students at Level 3 attend all mainstream classes and receive tutoring support.

Funding Sources. A combination of Title I, LAP, TBIP, and Migrant funds pay for IAs and teachers serving ELL students. Title III funds pay for college courses and other training in bilingual and ESL instruction. During the 2003–04 school year, 17 teachers and IAs earned 24 college credits in these fields, paid for by the Wapato School District.

Competitive school improvement and school reform grants were used to pay for a visit to other schools with dual-language bilingual programs and for a consultant to help modify the district's elementary program, as well as for staff development and materials.

Other Features. Wapato focuses on hiring staff who speak TBIP students' native languages and on providing intensive training, particularly for IAs. Training emphasizes not just ESL techniques but also underlying theory, described by staff as "why we teach what we teach." Teachers and IAs attend the same training. In shifting to a dual language approach at the elementary level, the district did not hire new staff but instead provided intensive training and consulting to re-shape the math and reading programs.

Summary of District Staff Perspectives

Diverse views were expressed among district staff interviewed regarding the best way to serve ELL students and the impact of various policies, teaching methods, tests, and student characteristics. The following section summarizes staff views, based on the 14 districts interviewed, regarding the strengths, challenges, and opportunities for improvement in serving ELL students in Washington State.

Strengths in Serving ELL Students

District staff commented that the following program components were strengths in working with ELL students within districts and across the state:

- Community support, parent outreach, and involvement of ELL students in school life;
- Accountability for student achievement under the requirements of the WASL and the NCLB Act;
- Staff training;
- Certain state program office efforts; and
- Coordination of services to ELL students with efforts to help students learn to read.

Community Involvement. One district with a large ELL population noted that the local community was strongly supportive of their program. Another district described its ESL and migrant programs as helpful to parents as well as students. Bilingual paraprofessional IAs, people who have "lived the life" and understand what it is to come to the U.S. and not know English, were cited as an effective link between schools and families of ELL students.

One district that recently shifted from serving all elementary ELL students in one site to keeping these children in their neighborhood schools called this change valuable. Another district noted that a concerted effort at the high school led to more involvement by ELL students in extracurricular activities.

New Accountability Standards. One district noted that in the past teachers sometimes protected ELL students from academic challenges in ways that were not beneficial. Several staff stated there are clear benefits to requiring ELL students to take the WASL and including their scores in the calculation of schools' adequate yearly progress (AYP), as required by the NCLB Act. Staff noted it is no longer acceptable for mainstream teachers to say ELL students are "the ESL program's kids." There is a new understanding, according to those interviewed, that it is primarily the responsibility of mainstream teachers to educate all students, that even ELL students should receive a rigorous academic program. Some staff see WASL and NCLB requirements as a mixed blessing for ELL students; related difficulties and challenges are discussed below.

Staff Training. Many district staff described training for teachers and IAs who work with ELL students as effective. Particular curricula and methods, including GLAD and SIOP, were mentioned several times as successful training options. District staff also noted that new accountability standards have sparked interest in training on ESL strategies at all-staff meetings. Regular classroom teachers often look for workshops in more general subjects, such as teaching literacy, with a partial focus on ELL students, according to district staff.

OSPI Migrant and Bilingual Program Office Efforts. Staff interviewed described areas of both strengths and weaknesses in state TBIP administration. Noted accomplishments include publishing English language development standards, issuing written program guidelines, assigning program staff to work with particular districts, and holding video conferences with district staff.

Coordination With Other Literacy Efforts. One district noted that reading coaches who assist elementary classroom teachers have helped integrate services to ELL students with school-wide efforts to build literacy. Another staff stated Reading First has helped all elementary teachers focus on providing exemplary instruction to all students, including those with limited English skills.

Challenges to Improving ELL Student Services

District staff interviewed felt that the following were aspects of working with ELL students in which either their district, or the state as a whole, faced particular challenges. Comments fell into ten categories, three of which deal with issues that are, by and large, outside the arena of public policy. The remaining seven categories are more closely connected to public policy choices and program implementation at the state and school district levels.

Three areas of concern are factors over which state government and school districts have limited or no control:

- Student body characteristics;
- Small program issues; and
- Community attitudes.

Seven areas where district staff see weaknesses in serving ELL students are related to public policy choices and program implementation:

- Staffing;
- Student assessment requirements;
- State program office efforts;
- Tracking ELL students;
- Funding;
- Three-year student length of stay expectation; and
- Data reporting requirements.

Each of these challenges is described here.

Student Body Characteristics. There are two demographic trends that impact district ELL services: (1) having many language and cultural groups represented within the district, and (2) highly mobile populations.

- **Many Languages.** All districts with significant populations of students from multiple language backgrounds indicated that this presented unique challenges. Staff noted that this situation limits or eliminates the option to group students for instruction in students' native languages and even to provide native language support using bilingual IAs. Staff also stated that multiple languages and cultural groups make communicating with families more complicated. Finally, multiple backgrounds make it more difficult to offer staff training on students' various cultures and home languages.

- **Student Mobility.** Several districts reported high mobility among ELL students. For example, one staff described an elementary school in which only 200 of the 700

students enrolled in September were still enrolled at that school in June. Staff explained that this makes providing English language and academic content instruction difficult and providing continuous education impossible. Staff also indicated that high mobility makes measuring a school's year-to-year progress less meaningful than it would be if the same children were being assessed each year.

Small Program. Two districts noted that where there are only one or two ELL children per grade level within a district or school, it is difficult to provide the intensity of service that might best facilitate acquisition of English.

Community Attitudes. Two districts described their local communities as somewhat lacking in understanding of the situations of ELL students and their families. They noted that prejudices exist that make it difficult for ELL children to be accepted in the community.

Staffing. Many district staff indicated that while they understood that research about the value of bilingual education might be compelling, the logistics of offering it are difficult. Staff noted it is difficult to find bilingual and ESL certified staff. They noted that bilingual teachers must have good oral and writing skills in both languages, particularly at the secondary level. Staff also described contractual issues and a commitment to current staff that complicates efforts to shift to native language instruction. Two districts stated that, although it was a district goal, staff did not come close to reflecting the ethnic make-up of their student body.

Districts noted that it is difficult to retain trained bilingual IAs, as their skills are in demand in the community and the pay-scale for public school IAs is low. One individual noted that under union contract, the district cannot pay bilingual IAs more than other IAs but was aware that this is not the case in all districts statewide. Several districts noted that under the NCLB Act, IAs are required to have two-year degrees or pass a proficiency test and that this policy presents a challenge for some bilingual IAs who do not have those qualifications.

One district whose ELL population is composed almost entirely of migrant families stated it was nearly impossible to find staff willing to work for only the part of the school year when migrant students are present. As a result, they assign work with migrant students as an extra duty to current staff.

Student Assessment Requirements. Staff from several districts stated it is discouraging to fail to make adequate yearly progress (AYP) in the ELL category. Districts worry that people see these results and then believe ELL students cannot learn. Staff from one district stated that the push to make AYP leads to spreading ELL students among schools even though they could be served better if grouped at a few schools with trained ESL bilingual staff.

Several staff expressed uncertainty about the WLPT. One individual believes the WLPT tests literacy rather than English language knowledge. Several staff cited concerns that students sometimes fail to test out of the TBIP because they are asked to perform at a level that is not developmentally appropriate. Some staff indicated that few or no high school students had exited the TBIP since the WLPT was implemented as the primary exit criterion.

Although staff interviewed are generally supportive of ELL students taking the WASL, one sees little sense in giving children with low English oral proficiency the WASL, because, in her view, it is clear these students cannot pass, which lowers their self-esteem.

One district noted it has difficulty accessing students' English proficiency levels within the required ten days following registration on the first day of the school year. Several staff also object to the federal requirement that they continue testing every ELL student annually on speaking and listening—even after students demonstrate mastery of oral language—asserting that it is a waste of money and staff time.

State Migrant and Bilingual Program Office Efforts. Staff from several districts indicated persistent frustration with OSPI Migrant and Bilingual Program Office operations. Problem areas cited included consistency, organization, and timely response. One individual noted that state-level guidance is always provided orally, and promised written instructions are never sent. Two staff stated they received conflicting direction from different staff within the office. Several staff mentioned that it is frequently difficult to reach program office staff. One staff indicated there is a long time span between when program applications must be submitted and when notice of approval is sent. Some districts claimed the office is understaffed.

Tracking ELL Students. Staff noted they frequently do not receive complete information about ELL students who move into the school district. Districts often do not know how long a student has been in the U.S. or if the student has ever been in an ESL program. Unlike in special education, one staff noted, there is not an established protocol for contacting prior schools regarding ELL students.

Staff also explained that where it cannot be documented that a child moving into the district has already tested into the TBIP, they must re-test the child. When this occurs, a child may not qualify for the program based on oral language even though he or she would not test out based on reading and writing.

Funding. Some staff felt the amount of TBIP funding per student limited the program's effectiveness. One staff noted that not all districts keep in mind ELL students are also generating basic education funding, but others mentioned that even when basic education funds and other funding sources are included, they do not have enough to serve students adequately. Translation of documents, modifying curricula, and providing coaches for mainstream classroom teachers were all cited as areas where districts need more resources.

Three-Year Length of Stay Expectation. Nearly all staff stated that expecting students to remain in the TBIP for three years or less is inappropriate, although only three districts reported it as an actual problem. Staff often indicated that research shows it takes five to seven years to learn academic-level English. Beyond filing documentation at the school or district level, few districts conduct student reviews or alter services after three years. Program exit is determined by students reaching pre-established levels on the WASL or WLPT.

Data Reporting. A few staff described state requirements for data collection as difficult to meet. One staff noted that with the newly implemented student identifier, they were

collecting 70 data points on each child. Another staff indicated they need more lead time to adjust data collection systems when new data collection requirements are implemented.

Opportunities for Improvement

District staff suggested a number of changes at the district and state levels to improve services to ELL students and make the TBIP more efficient. District staff recommendations include the following:

- Improve state program office practices;
- Increase staff training opportunities;
- Increase community and parent outreach;
- Change expectations about maximum length of stay in TBIP;
- Increase TBIP funding;
- Assist small districts; and
- Reconsider the WLPT.

Improve State Program Office Practices. District staff suggest improving program office practices as follows:

- Increase the timeliness and consistency of answers to district staff questions;
- Give greater lead time on new reporting requirements;
- Create a statewide database of ELL students so districts can quickly get information on students moving among districts;
- Monitor school district programs more closely and frequently; and
- Provide assistance targeted to the specific situations of both multi-language and all-Spanish district programs because the needs are different.

Increase Staff Training Opportunities. District staff expressed a need for more in-service training on language acquisition methods for teachers and IAs. Some staff contended that training in ESL techniques should be required for teacher certification. Staff also wanted the state program office to take a larger role in providing intensive training using curricula such as GLAD and SIOP.

Increase Community Outreach. Some district staff stated more should be done to educate local communities about the benefits immigrants bring to the community and how significantly the demographic profile of the state is changing as a result of immigration. Many staff indicated that increased outreach to parents of ELL students is crucial for student success. One staff noted that parents can foster literacy in the home even if they do not speak or read English.

Change Expectations About Maximum Length of Stay in the TBIP. One individual stated the expectation should be simply that students stay in the TBIP until they achieve English language proficiency. Another staff felt the expected length of stay in the program should be raised from three to four years.

Increase TBIP Funding. One individual recommended increasing per-student funding for the TBIP. Another staff suggested that districts should be funded to serve ELL preschool-age children, presuming earlier intervention is likely to reduce length of stay in the program.

Assist Small Districts. One staff stated it would be helpful if small districts could call upon other districts to conduct initial language assessments at the beginning of the school year. Another small district envisioned a cooperative effort with other districts to offer a brief intensive newcomer program for older students arriving with no English skills and limited school experience.

Reconsider the WLPT. Although several staff expressed concerns about the WLPT, only one specifically recommended that it be reconsidered. This individual stated a comparison should be made of the achievement level required to exit the TBIP based on the WLPT versus other tests used previously, and noted that the WLPT appears to be a more difficult test than earlier criteria. This staff felt it was important that ELL students not stay in the program too long and have the opportunity to challenge themselves in more rigorous classes.

District Staff Interview Questions

1. Describe your district's TBIP program. Is this what you were doing in 2001–02? How has the program changed in recent years?
2. Are bilingual education programs the same throughout the district, or do schools operate differently? If they vary, tell me more about the various models being used and why?
3. What factors caused your district or school to choose the model(s) used?
4. What roles do IAs play in your program?
5. What education, skills, and experience do you look for in TBIP staff? What kind of training do you provide for teachers and IAs involved in the program?
6. What funding sources help pay for your services to ELL students? How are funds blended? What, specifically, are TBIP funds used for?
7. My data shows your district/school has ELL students from ___ language backgrounds. How do you think the number of languages and the particular background of ELL students in your school/district affect how you go about educating these students?
8. How do you determine that a student needs to be in TBIP? How do you decide that a student is ready to function without the bilingual education program? (Note: Do they say anything other than the tests? How do they distinguish between their program and the state funding source?)
9. How frequently do parents waive participation in TBIP? What reasons do parents give for waiving? How do you handle it when parents request a waiver? Has your response changed in recent years?
10. How has implementing the WLPT affected your services to ELL students? Length of stay? Program implementation?
11. State law and rules say students may stay in TBIP only three years, except when they don't meet proficiency standards. What documentation do you provide to OSPI regarding students who stay in the program more than three years? Are rules regarding length of stay appropriate, or should students, on average, stay in the program a shorter or longer amount of time?
12. How are the WASL and NCLB affecting your services to ELL students?
13. What is effective in the services you provide for ELL students? What is going well?
14. What difficulties and challenges does the district face in teaching these students?
15. Statewide, students are spending more time in transitional bilingual education than they used to. Do you have any thoughts on why this is the case?
16. What changes do you think would improve efforts to help students learn English?
17. What changes in the state TBIP do you think would help make the program more effective? Follow up if the answer is more funding: Beyond more funding, what changes in the structure of the program would be helpful in your district?
18. If we are able to interview building staff in your district, who would you recommend we talk to?

APPENDIX C: STATE BILINGUAL EDUCATION LAWS

The Institute reviewed laws and regulations in the 50 states related to providing instructional services for English Language Learners (ELL). This review was conducted primarily with Internet searches of state legislative and education agency websites and, in some cases, contact with agency representatives.

Each of these topics is discussed below, followed by a checklist of state legislative provisions for bilingual instruction in Exhibit C-1. Specific sources of information for each state can be obtained by contacting the Institute.

Instructional Program. Forty states have legislative provisions regarding instruction for ELL students in public K–12 schools. In statute, most of these states do not specify the type of instructional program to be provided or, like Washington, mention bilingual (i.e., native language) instruction only generally. Three states—California, Arizona, and Massachusetts—specifically authorize use of sheltered English immersion, also known as content-based ESL. Exhibit C-2 describes California's recent experiences with requiring school districts to implement short-term sheltered English immersion programs for ELL students.

Funding. Only eight states do not provide funding for ELL student services through the legislative budget process.[11] Forty-two states fund ELL student services in legislation in one of two ways, both of which are closely tied to enrollment:

- 31 states appropriate a lump sum for ELL services, which is typically administered by a state education agency and allocated based on the number or percentage of ELL students enrolled in each school district; and
- 11 states establish a per-student funding formula.

Washington State provides a total allocation for the TBIP in its biennial operating budget and also stipulates the amount per student to be provided to districts based on average monthly enrollment of eligible students.

Length of Stay. Most state statutes do not limit how long students are eligible to continue receiving ELL services. Of the 39 states that set no time limit in legislation, 36 mandate that language or academic assessments be used as exit criteria. Eight states specify a maximum time for students to remain in the state bilingual program, ranging from one to three years. Washington's statute sets a three-year target, but the ultimate criterion for program exit is achieving a certain threshold on standardized language (WLPT) or academic (WASL) assessment tests.

Teacher Training. Nearly all states (46) have legislative provisions for ESL teacher endorsement. The four states that do not are Alaska, Michigan, Mississippi, and Oklahoma.

[11] Two of these states authorize the state education agency to allocate funds for this purpose; the remaining six use only federal funds for ELL student services.

Fewer states (32) have legislative provisions for bilingual teacher endorsements. The 18 that do not are mostly in the Southeast and Midwest.

Exhibit C-1
State Legislative Provisions for Educating ELL Students

State	Laws cover ELL student instruction program?	Type of ELL program specified	Laws cover ELL student funding?	Funding allocated on a per-student basis?	Limits on ELL students' length of stay in program?	Students' program exit depends on academic performance?	Law provides for ESL teacher endorse-ments?	Law provides for bilingual teacher endorse-ments?
Alabama	No	N/A	No	N/A	Not mentioned	Yes	Yes	Yes
Alaska	Yes	Bilingual	Yes	Yes	Not mentioned	Yes	No	Yes
Arizona	Yes	Sheltered English Immersion	Yes	Yes	1 year	Yes	Yes	Yes
Arkansas	Yes	None specified	Yes	No	Not mentioned	Not specifically stated	Yes	No
California	Yes	Sheltered English Immersion	Yes	No	1 year	Yes	Yes	Yes
Colorado	Yes	None specified	Yes	No	2 years	Yes	Yes	Yes
Connecticut	Yes	Bilingual	Yes	No	2.5 years	Yes	Yes	Yes
Delaware	Yes	Bilingual	Yes	No	Not mentioned	Yes	Yes	Yes
Florida	Yes	None specified	Yes	Yes	Not mentioned	Yes	Yes	No
Georgia	Yes	None specified	Yes	Yes	Not mentioned	Yes	Yes	No
Hawaii	No	N/A	Yes	No	Not mentioned	Yes	Yes	No
Idaho	Yes	Other	Yes	No	Not mentioned	Yes	Yes	Yes
Illinois	Yes	Bilingual	Yes	No	3 years	Yes	Yes	Yes
Indiana	Yes	Bilingual	Yes	No	Not mentioned	Yes	Yes	Yes
Iowa	Yes	Various programs allowed	Yes	Yes	Not mentioned	Yes	Yes	No
Kansas	Yes	None specified	Yes	No	Not mentioned	Yes	Yes	Yes
Kentucky	Yes	Other	Yes	No	Not mentioned	Not specifically stated	Yes	No
Louisiana	No	N/A	No	N/A	Not mentioned	Yes	Yes	Yes
Maine	Yes	Bilingual	Yes	Yes	District decision	District decision	Yes	Yes
Maryland	Yes	Various programs allowed	Yes	No	Not mentioned	Yes	Yes	No
Massachusetts	Yes	Sheltered English Immersion	Yes	No	1 year	Not specifically stated	Yes	Yes

State	Laws cover ELL student instruction program?	Type of ELL program specified	Laws cover ELL student funding?	Funding allocated on a per-student basis?	Limits on ELL students' length of stay in program?	Students' program exit depends on academic performance?	Law provides for ESL teacher endorse-ments?	Law provides for bilingual teacher endorse-ments?
Michigan	Yes	Bilingual	Yes	No	Not mentioned	Yes	No	Yes
Minnesota	Yes	Various programs allowed	Yes	No	Up to districts	Yes	Yes	Yes
Mississippi	No	N/A	No	N/A	Not mentioned	Yes	No	Yes
Missouri	Yes	None specified	Yes	No	Not mentioned	Yes	Yes	No
Montana	No	N/A	No	N/A	Not mentioned	Yes	Yes	No
Nebraska	Yes	None specified	Yes	Yes	Up to districts	Not specifically stated	Yes	No
Nevada	Yes	None specified	Yes	No	Not mentioned	Yes	Yes	Yes
New Hampshire	Yes	Bilingual	Yes	No	Not mentioned	Yes	Yes	Yes
New Jersey	Yes	Bilingual	Yes	No	Not mentioned	Yes	Yes	Yes
New Mexico	Yes	Bilingual	Yes	Yes	Not mentioned	Yes	Yes	Yes
New York	Yes	None specified	Yes	No	6 years	Not specifically stated	Yes	Yes
North Carolina	Yes	Various programs allowed	Yes	No	Not mentioned	Yes	Yes	No
North Dakota	Yes	None specified	Yes	Yes	Not mentioned	Yes	Yes	Yes
Ohio	No	N/A	No	N/A	Not mentioned	Yes	Yes	Yes
Oklahoma	No	N/A	Yes	Yes	Not mentioned	Yes	No	No
Oregon	Yes	Bilingual	Yes	No	Not mentioned	Yes	Yes	Yes
Pennsylvania	Yes	None specified	Yes	No	Not mentioned	Yes	Yes	No
Rhode Island	Yes	None specified	Yes	No	Not mentioned	Yes	Yes	Yes
South Carolina	No	N/A	No	N/A	Not mentioned	Yes	Yes	No
South Dakota	Yes	None specified	No	N/A	Not mentioned	Yes	Yes	No
Tennessee	No	N/A	Yes	No	Not mentioned	Yes	Yes	No
Texas	Yes	Bilingual	Yes	No	Not mentioned	Yes	Yes	Yes
Utah	Yes	ESL	Yes	No	Not mentioned	Not specifically stated	Yes	Yes
Vermont	No	N/A	Yes	Yes	Not mentioned	Yes	Yes	Yes
Virginia	Yes	None specified	Yes	No	Not mentioned	Yes	Yes	No

State	Laws cover ELL student instruction program?	Type of ELL program specified	Laws cover ELL student funding?	Funding allocated on a per-student basis?	Limits on ELL students' length of stay in program?	Students' program exit depends on academic performance?	Law provides for ESL teacher endorse-ments?	Law provides for bilingual teacher endorse-ments?
Washington	Yes	Bilingual and ESL	Yes	Yes	3 years (unless students do not meet academic standards)	Yes	Yes	Yes
West Virginia	Yes	Other	No	N/A	Not mentioned	Yes	Yes	No
Wisconsin	Yes	Bilingual	Yes	No	Not mentioned	Yes	Yes	Yes
Wyoming	Yes	None specified	Yes	No	Not mentioned	Yes	Yes	Yes

Exhibit C-2

Sheltered English Immersion in California

California schools enroll hundreds of thousands of ELL students. During the 2003–04 school year, 25 percent of California's 1.6 million K–12 students were English language learners. Most (85 percent) of these students speak Spanish.

In June 1998, California voters approved Proposition 227, which mandates that ELL students attending public schools be taught in English using sheltered English immersion. ELL students are grouped by proficiency in English and taught in separate classrooms. The law sets a one-year target for ELL students to transition into mainstream classrooms full-time.[a]

Previously, 30 percent of California's ELL students were taught using their native language at least part of the time, and participation in bilingual and ESL instruction typically lasted more than one year. According to statements for and against Proposition 227, the law was enacted in response to poor performance of ELL students in California schools, which was viewed as a failure of bilingual education. Opponents of the law noted that the measure mandates a single unproven method of instruction and urged voters to allow school districts to determine what programs to offer.

After the law's passage, many districts discontinued all native language instruction, although some—particularly those with strong community and school staff support for bilingual education—pursued parental waivers that have allowed them to maintain bilingual programs.[b] Approximately 10 percent of California's ELL students currently receive native language instruction.[c]

Since 1998, a handful of studies comparing students in sheltered English immersion with students in bilingual programs have been released, concluding that sheltered English immersion programs are associated with better test scores. However, the researchers used non-comparable groups, and the results should not be considered conclusive.[d]

In 2000, California's Department of Education initiated a five-year study of the law's impacts. The 2003 interim report[e] presented the following results:

- ELL students have improved test scores statewide but continue to lag behind their native English-speaking peers in academic performance.
- Schools that offer bilingual instruction tend to have higher poverty rates and enroll students with lower English proficiency levels.
- ELL students are transitioning to mainstream classes at slightly higher rates each year.

The final report on Proposition 227 will be released in 2005.

[a] There are exceptions to this mandate: bilingual education is permitted if a child has special needs or if parents prefer native language instruction. The law also provides funds for setting up tutoring.
[b] E.E. Garcia and J.E. Curry-Rodriguez, "The Education of Limited English Proficient Students in California Schools: An Assessment of the Influence of Proposition 227 in Selected Districts and Schools," *Bilingual Research Journal* 24, no. 1/2 (2000): 11.
[c] C.H. Rossell, "The Near End of Bilingual Education," *Education Next* 3, no. 4 (2003): 49.
[d] See, for example, J. Amselle and A.C. Allison, "Two Years of Success: An Analysis of California Test Scores After Proposition 227," *READ Abstract* (Washington, DC: Institute for Research in English Acquisition and Development, August 2000), <http://www.ceousa.org/READ/227.doc>.
[e] A. Merickel, R. Linquanti, T.B. Parrish, M. Perez, M. Eaton, and P. Esra, *Effects of the Implementation of Proposition 227 on the Education of English Learners, K–12: Year 3 Report* (Sacramento, CA: American Institutes for Research and WestEd, October 2003), <http://www.wested.org/online_pubs/prop227_2004.pdf>.

APPENDIX D: OSPI DATA ANALYSES

This appendix describes the data and methods of analysis used to examine factors associated with length of stay in Washington's Transitional Bilingual Instructional Program (TBIP) and with academic outcomes as measured the Washington Assessment of Student Learning (WASL). The appendix is organized as follows:

1. Data Sources and Issues
2. Analytic Approach
3. Factor Analysis
4. Bivariate Correlations
5. Regression Models
6. Results Summary

1. Data Sources and Issues

Data used in these analyses were provided by the Washington State Office of the Superintendent of Public Instruction (OSPI). The OSPI data encompass various student and district characteristics, which are described below. The specific variables are defined in Exhibits D-1 and D-2.

- **TBIP data** include information related to the number of students enrolled in the TBIP, service delivery strategies, instructional staff, languages spoken, other services received by TBIP students, and length of stay in the program. Districts operating a TBIP submit these data annually to OSPI's Bilingual Education office.
- **WASL data** include students identified as English Language Learners (ELL). The WASL variables are calculated as the percentage of ELL students meeting reading, math, and writing proficiency statewide standards in 4th, 7th, and 10th grades.
- **District-wide data** cover district characteristics such as student ethnicity and socioeconomic status. These data are intended to tap into variability in the broader school environments in which TBIP students are educated.

Data Limitations

OSPI is the only entity that regularly collects K–12 bilingual education information on a statewide basis. Because the timeline for this study was too short to collect and analyze new data, we used OSPI data despite the following limitations:

- School district as the unit of analysis;
- Few years of data are available electronically; and
- Data quality issues.

Exhibit D-1

TBIP Variables Included in Analysis

TBIP Enrollment

- Total number of TBIP students
- TBIP relative program size: TBIP enrollment as percentage of total district enrollment
- Percentage of TBIP students in grades 6–12
- TBIP new students as a percentage of total TBIP students
- Percentage of TBIP students in grades 6–12 new to the district with no prior formal education

TBIP Instructional Focus (regarding language)

Percentage of TBIP students with…

- Native language development instruction
- Academic native language development instruction
- Limited assistance in native language
- No native language support
- Alternative instructional focus

TBIP Service Delivery (regarding setting)

Percentage of TBIP students…

- In mainstream classroom
- In self-contained classroom
- Receiving services in a center
- Pulled out of class for services
- Being tutored
- In other instructional setting

TBIP Instructional Staff

- Percentage of TBIP teachers with bilingual endorsement
- Percentage of TBIP teachers with ESL endorsement
- TBIP instructional assistant to teacher ratio

TBIP Student Native Language (includes languages spoken by 1 percent or more of TBIP students in 2001–02)

TBIP languages: Number of different native languages of TBIP students in district

Percentage of TBIP students who speak…

- Cambodian
- Chinese-Cantonese
- Korean
- Russian
- Somali
- Spanish
- Tagalog
- Ukrainian
- Vietnamese

TBIP Students: Other Services

Percentage of TBIP students in…

- State Learning Assistance Program (LAP)
- State Migrant program
- Special Education
- Federal Title I program

TBIP Length of Stay in Program

All students	TBIP all students: average length of stay
Graduating and transitioning students	TBIP graduated or transitioned students: average length of stay

Exhibit D-2
WASL and District-Wide Variables

WASL Scores for English Language Learners (ELL)
• Mean of WASL reading percentage meeting proficiency standard in 4th, 7th, 10th grades • Mean of WASL math percentage meeting proficiency standard in 4th, 7th, 10th grades • Mean of WASL writing percentage meeting proficiency standard in 4th, 7th, 10th grades
District-Wide Characteristics
Percentage of students district-wide … • In state Migrant program • In Special Education • Who are American Indian or Alaskan Native • Who are Asian or Pacific Islander • Who are African American • Who are Hispanic • Eligible for free/reduced price meals Students per instructional staff (ratio)

Using "School District" as the Unit of Analysis. Through 2001–02, the TBIP data that school districts reported to OSPI were aggregated at the district level, rather than by school or individual student. Lack of student- or school-level information makes it impossible to conclusively link factors, such individual ability and specific services received, to academic outcomes. Various mixes of services are provided in different schools and to different students within districts and, with data aggregated at the district level, we only know what the "mix" is and not what unique types of programs exist in various school environments.

In 2002–03, OSPI changed the report form to request data at the student and school building levels. These more detailed data provide opportunities for improved analysis in the future, as discussed in the main body of this report.

Few Years of Data Are Available Electronically. OSPI staff compile and analyze data from district TBIP data submissions to prepare an annual report to the state legislature. OSPI staff cite significant delays in receiving end-of-year data from districts as one reason for a lag in reporting in recent years. OSPI staff also state that limited time is available to review data for completeness and accuracy. There are no consequences for school districts that submit TBIP data late or with substantial errors.

Due to these ongoing difficulties, the most recent data included in these analyses are over two years old (from the 2001–02 school year). This limitation precludes us from analyzing factors associated with student performance on the Washington Language Proficiency Test (WLPT), which was implemented in 2002–03.[12]

[12] OSPI released student and school building level TBIP data covering 2002–03 and 2003–04 in the first week of December 2004. The Institute was required to submit this report by January 2005. This timeline was too short to complete a full analysis of these complex datasets. Some basic statistics using 2002–03 data are included in the main body of this report, based on the Institute's preliminary analysis conducted in December 2004.

Additionally, as a result of computer changes at OSPI, no electronic TBIP data are available prior to the 1997–98 school year. At the state level, some data related to bilingual education have been collected since 1985 and are available from the annual reports OSPI submits to the legislature. These data are not available electronically or at the district level, and long-term trends therefore cannot be analyzed using multivariate techniques.

The TBIP data that *are* included in the analyses in this appendix cover four school years: 1998–99 through 2001–02.[13]

Data Quality Issues. There are two issues related to TBIP data quality: unclear service delivery reporting categories and questions regarding data reliability.

First, the categories OSPI asks districts to use to describe their TBIP instructional focus and service delivery strategies are unclear and overlapping. The categories used are defined in Exhibit D-1 and are analyzed in later sections of this appendix. According to interviews with OSPI and district staff, school staff who fill out TBIP data forms are often unsure which categories to use to describe the instructional strategies implemented. Many districts report serving students using a mix of strategies and in a variety of settings, and the "other" category is often chosen. In 2001–02, 10 percent of TBIP students were reported as having an "alternative" instructional focus, and 18 percent were reported as being taught in a setting other than those described.

For the 2002–03 school year, OSPI changed the instructional focus and service delivery categories in an attempt to make them clearer. The analysis below regarding the "program type" variables is not a definitive answer as to how different types of programs affect length of stay and academic outcomes. This is an exploratory analysis that can be more thoroughly examined using data collected after 2001–02.

Second, there are questions regarding TBIP data reliability. OSPI staff scan district-submitted data forms for obvious errors but do not conduct a thorough auditing. In preparing district-level data for analysis, we found some inconsistencies—such as instances where the number of students in a certain instructional focus or service delivery category was higher than the total number of students enrolled in that district's program. In those cases, we assumed that the percentage was 100. In some cases, such as with data fields related to the amount of training provided to TBIP teachers and instructional assistants, the inconsistencies were so great that we excluded the variables from analysis altogether.

As a result of these issues, OSPI and district staff express concerns about the accuracy of some of the data collected, and we share their uncertainty about the reliability of data collection procedures through the 2001–02 school year.

2. Analytical Approach

In response to the data limitations, this study employs multiple methods of analysis to identify factors associated with variation in students' average length of stay in the TBIP and ELL students' academic performance. First, we conduct a **factor analysis** to detect and

[13] The 1997–98 data were missing too many variables to be included in multivariate analyses.

interpret inter-relationships among the TBIP, WASL, and district-wide variables. Second, we examine **bivariate correlations** between student, program, and district characteristics and the dependent variables of average length of stay and students' performance on WASL reading, math, and writing tests. Third, using **multivariate regression analysis,** we attempt to estimate the impact of the program type variables on length of stay and WASL scores while statistically controlling for all other independent variables.

Constructing the Dependent Variables

Because available data are aggregated at the district level, preliminary work was required to put the dependent variables in a format amenable to multivariate analysis.

Average Length of Stay in the TBIP. How long students stay in the TBIP cannot be precisely estimated, not only because OSPI collects data at the district level, but also because of how the data fields are structured. Rather than calculating and reporting an average length of stay (in school years) based on how long individual students have been in the TBIP, districts report the number of students who have been in the program for a specified amount of time based on the categories listed in Exhibit D-3.

To conduct multivariate statistical analysis, we assigned values to each of these categories, in most cases using the midpoint of the category (e.g., "one to two years" was assigned the value of 1.5 years). The district average length of stay is calculated by multiplying the number of students in each category by the assigned value, summing these products, and dividing the sum by total TBIP enrollment (see Exhibit D-3).

Exhibit D-3
Length of Stay Assigned Values and Average Calculation Example

Time in Program	Assigned Values	# of TBIP Students (N) (District X 2001–02 example)	N * Assigned Value
Less than one year	0.5	453	226.5
One to two years	1.5	303	454.5
Two to three years	2.5	241	602.5
Three to four years	3.5	106	371.0
Four to five years	4.5	29	130.5
Five years or more	6.0	25	150.0
		Total N: 1,157	Sum of Products: 1,935
		Average length of stay = 1935/1157 = 1.67 school years	

This measure of average length of stay is based on the total number of students enrolled in the program—including those who have recently begun receiving TBIP services. Including recent entrants reduces average length of stay (because they all fall into category 1, less than one year), and those districts with influxes of new students have lower average lengths of stay using this measure. Also, when students move among districts, their student history file does not always accompany them, which artificially reduces statewide average length of stay. It is unknown how many continuing TBIP students move to another district and are counted as "new" students.

Average Length of Stay: Graduating and Transitioning TBIP Students. OSPI also collects length of stay data on TBIP students who leave the program because they either graduate from high school or transition (test) out. This measure is a better indicator of how long students actually stay in the program from beginning to end; however, the measure excludes students who leave the program for unknown reasons and those who drop out.

The average length of stay for graduating and transitioning students is 2.81 school years; this average is higher than the 2.23 school years for all students, since the graduation/transition measure excludes new students. The Pearson correlation coefficient between the two measures is high (0.69, significant at the 0.01 level).

Because many districts have so few students in the TBIP that no students graduate or test out in a given year, there is a significant amount of missing data in the graduating/transitioning average length of stay. Using the graduating/transitioning measure reduces the number of cases used in analysis from 741 to 220 districts. Since the two length of stay variables are highly inter-correlated, we use the average length of stay for all students to avoid dropping school districts from analysis.

WASL Performance. To examine measures of academic achievement, OSPI provided district-level WASL data for ELL students. The WASL data are the percentage of ELL students in the district meeting proficiency standards in the 4th, 7th, and 10th grades in reading, math, and writing. We use these measures as outcome variables in multivariate analyses. To simplify our analysis, we reduce the number of WASL performance variables associated with each district from nine to three by averaging reading, math and writing scores across grade levels. The grade-level WASL variables are sufficiently inter-correlated within each subject area to support our use of composite scores (see Exhibit D-4).

Exhibit D-4

Inter-Correlations of WASL Scores for ELL Students, By Subject

WASL READING		Grade 4	Grade 7	Grade 10
Grade 4	Pearson Correlation	1	0.30	0.30
	N	*255*	*169*	*152*
Grade 7	Pearson Correlation	0.30	1	0.33
	N	*169*	*187*	*132*
Grade 10	Pearson Correlation	0.30	0.33	1
	N	*152*	*132*	*165*
WASL MATH		**Grade 4**	**Grade 7**	**Grade 10**
Grade 4	Pearson Correlation	1	0.46	0.34
	N	*255*	*169*	*152*
Grade 7	Pearson Correlation	0.46	1	0.38
	N	*169*	*187*	*132*
Grade 10	Pearson Correlation	0.34	0.38	1
	N	*152*	*132*	*165*
WASL WRITING		**Grade 4**	**Grade 7**	**Grade 10**
Grade 4	Pearson Correlation	1	0.51	0.52
	N	*255*	*169*	*152*
Grade 7	Pearson Correlation	0.51	1	0.58
	N	*169*	*187*	*132*
Grade 10	Pearson Correlation	0.52	0.58	1
	N	*152*	*132*	*165*

All correlations are significant at the .01 level. Source: OSPI WASL district-wide data for ELL students, 1998–99 through 2001–02. The variables are defined as the percentage meeting proficiency standards in each subject.

The number of observations is much smaller for the WASL data than for the length of stay data. The WASL data for districts with fewer than ten ELL students were not included in the dataset provided by OSPI. In the 2001–02 school year, WASL data were included for 59 percent of school districts operating a TBIP. The analysis of ELL students' WASL performance is therefore restricted to larger school districts with at least ten ELL students in fourth, seventh, or tenth grades.

3. Factor Analysis

We conduct factor analyses of the variables in our dataset to understand underlying relationships among them. This analysis is necessary because many of the variables in the dataset tap similar concepts. For example, there are four variables that measure, in different ways, how many students are Hispanic: the percentage of TBIP students who speak Spanish, the percentage of TBIP students who receive migrant services, the percentage of students district-wide who are Hispanic, and the percentage of students district-wide who receive migrant services.

We use principle components factor analysis to determine the number of factors needed to adequately describe each set of variables. An *eigen value* that is greater than one is the criterion used to establish the number of factors. Varimax rotation is then used to produce more interpretable factor loadings. A minimum factor loading of .40 is used as a cutoff point for including variables in each factor. We did two factor analyses: one among the program type variables and then another analysis among all other independent variables in our dataset.

Factor Analysis of Program Type Variables

We first factor analyze program type variables to determine whether there are clear relationships among variables that would allow us to characterize districts by type of TBIP services provided. The program type variables are defined in Exhibit D-5.[14]

Exhibit D-5
Program Type Variable Definitions

TBIP Instructional Focus (regarding language)	**Short Name Used in Tables**
Percentage of TBIP students with…	
• Native language development instruction	Native lang
• Academic native language development instruction	Academic native lang
• Limited assistance in native language	Some native lang
• No native language support	No native lang
• Alternative instructional focus	Alternative
TBIP Service Delivery (regarding setting)	
Percentage of TBIP students…	
• In mainstream classroom	Mainstream
• In self-contained classroom	Self-contained
• Receiving services in a center	Center
• Pulled out of class for services	Pull-out
• Being tutored	Tutoring
• In other instructional setting	Other

[14] These variables are also listed in Exhibit D-1.

Exhibit D-6 displays the bivariate correlations among the program type variables, and Exhibit D-7 displays the variable loadings on each factor. Each underlying factor identified through this analysis is described following these exhibits. Approximately 70.5 percent of the variance among these 11 variables was explained through the five identified factors.

Exhibit D-6
Program Type Variables Bivariate Inter-correlations

	Native lang	Academic native lang	Some native lang	No native lang	Alternative	Mainstream	Center Services	Self-contained	Pull-out	Tutoring	Other setting
Native lang	1.00	0.23*	-0.15*	-0.24*	-0.11*	-0.01	-0.00	0.23*	-0.01	0.08	-0.06
Academic native lang	0.23*	1.00	-0.06	-0.26*	-0.12*	0.13*	0.06	0.28*	-0.10*	0.07	-0.06
Some native lang	-0.15*	-0.06	1.00	-0.63*	-0.25*	0.33*	0.14*	0.03	-0.10*	0.01	-0.18*
No native lang	-0.24*	-0.27*	-0.63*	1.00	-0.25*	-0.21*	-0.05	-0.14*	0.26*	0.00	-0.03
Alternative	-0.11*	-0.12*	-0.25*	-0.25*	1.00	-0.17*	-0.07	-0.10*	-0.14*	0.00	0.45*
Mainstream	-0.01	0.13	0.33*	-0.21*	-0.17*	1.00	0.20*	0.01	-0.42*	-0.03	-0.21*
Center	-0.00	0.06	0.14*	-0.05	-0.07	0.20*	1.00	0.27*	-0.11*	0.06	-0.08*
Self-contained	0.23*	0.28	0.03	-0.14*	-0.10*	0.01	0.27*	1.00	-0.28*	-0.06	-0.04
Pull-out	-0.01	-0.10	-0.10*	0.26*	-0.14*	-0.42*	-0.11	-0.28*	1.00	-0.19*	-0.36*
Tutoring	0.08	0.07	0.01	0.00	0.00	-0.03	0.06	-0.06	-0.19*	1.00	-0.15*
Other setting	-0.06	-0.06	-0.18*	-0.03	0.45*	-0.21*	-0.08	-0.04	-0.36*	-0.15*	1.00

** Correlation is significant at the .05 level. Source: OSPI TBIP dataset, based on 1998–99 through 2001–02 school years.*

Exhibit D-7
Program Type Variables Factor Analysis

	Factor 1	Factor 2	Factor 3	Factor 4	Factor 5
	Bilingual Instruction	**Mainstream**	**Alternative Instruction**	**Setting**	**Tutoring**
Native lang	0.78	0.01	-0.06	-0.15	0.08
Academic native lang	0.68	0.08	-0.06	0.13	0.07
Self-contained	0.58	-0.07	0.03	0.53	-0.25
Some native lang	-0.14	0.87	-0.22	0.13	-0.06
Mainstream	-0.10	0.45	-0.17	0.56	0.17
No native lang	-0.35	-0.87	-0.24	0.04	0.02
Other setting	-0.06	-0.12	0.84	0.03	-0.13
Alternative	-0.07	0.02	0.80	-0.21	0.03
Pull-out	-0.08	-0.21	-0.51	-0.61	-0.35
Center	0.04	-0.01	-0.13	0.68	-0.07
Tutoring	0.09	-0.05	-0.06	-0.01	0.93

Interpretation of Five Program Type Factors:

Program Type Factor 1: Bilingual Instruction. The first factor includes three variables related to providing instructional support in students' native languages. The percentage receiving native language support—with a focus on academic-level native language development (Academic native lang) or with a general focus on native language development (Native lang)—and the percentage of TBIP students receiving services in separate, self-contained classrooms (Self-contained) all positively correlate with one another. This result suggests that providing instruction in students' native languages appears to typically occur in separate, self-contained classrooms.

Program Type Factor 2: Mainstream. The second factor includes variables that are also related to the extent of instructional support in students' native languages. The percentage of TBIP students who receive no native language support (No native lang) is negatively associated with the percentage who receive limited assistance in the native language (Some native lang) and the percentage who receive services in the mainstream classroom (Mainstream). That is, providing no assistance in students' native languages tends to occur in the mainstream classroom.

Program Type Factor 3: Alternative Instruction. Districts that submit data showing students are served using an alternative instructional focus with regard to language (Alternative) also indicate that they provide TBIP services in some other setting (Other setting) than those listed on the data form. These two variables are negatively associated with the variable measuring the percentage of students who are pulled out of class for TBIP services (Pull-out).

Program Type Factor 4: Setting. Districts indicating that students are served in a specific setting—such as providing services in a center (Center), in a self-contained classroom (Self-contained) or in the mainstream classroom (Mainstream)—usually indicate that few or no students are pulled out of class for services.

Program Type Factor 5: Tutoring. The tutoring variable (Tutoring) is not strongly associated with any other program type variables. Interestingly, it is negatively associated with the percentage of TBIP students pulled out of class for services but not positively associated with the percentage of students remaining in the regular classroom for services.

The 11 program variables are not measuring 11 different concepts. The factor analysis indicates that the 11 program variables together represent 5 aspects of programs: support in students' native languages, mainstreaming, alternative instruction, instructional settings, and tutoring. The inter-correlations among the program variables make it difficult to obtain unbiased estimates of the effectiveness of these approaches in reducing length of stay and improving WASL scores. School-level data would likely reduce these correlations and present a clearer picture of the types of programs available in each school.

Factor Analysis of All Independent Variables

Exhibit D-8 displays the variable loadings for all independent variables in our dataset. The principal components analysis indicated that 11 factors account for approximately 60 percent of the variance among all variables in the dataset:

1. Student Characteristics
2. District Diversity
3. Non-Bilingual Instruction
4. Bilingual Instruction
5. New TBIP Students
6. "Other" Program Type
7. TBIP Teacher Endorsements
8. Slavic Languages
9. Instructional Setting
10. Miscellaneous District Characteristics
11. Tutoring

Interpretation of 11 Independent Variable Factors:

Factor 1: Student Characteristics. Variables measuring the proportion of Hispanic students and socioeconomic status are closely associated with one another. The percentage of students in the district who are Hispanic, receive migrant services, and are eligible for free and reduced price meals, and the percentage of TBIP students who speak Spanish and receive migrant, LAP, or Title I services are all closely related to one another and positively inter-correlate. This set of characteristics is also negatively associated with the percentage of students in the district who are white.

Factor 2: District Diversity. Measuring ethnic diversity in a district is the commonality among variables included in the second factor. Districts with many different languages spoken by TBIP students tend to have higher percentages of TBIP students who speak Somali and Vietnamese and higher percentages of students district-wide who are Asian and African American.

Factor 3: Non-Bilingual Instruction. Two program type variables are included in factor 3, and they have an inverse relationship with one another: districts with high percentages of students who receive no native language instruction tend to have few or no students who receive limited assistance in the native language. The percentage of TBIP students who speak Korean is also included in this factor and is positively related to students receiving no native language development, possibly reflecting difficulty in finding educators who speak Korean.

Factor 4: Bilingual Instruction. Variables included in factor 4 are all program type variables: the percentage of TBIP students receiving native language instruction is associated with instruction in a self-contained classroom. These variables made up factor 1 in the program type analysis, and their close relationship persists.

Factor 5: New TBIP Students. Factor 5 picks up on the strong relationship between the two "new students" variables: the percentage of TBIP students in grades 6–12 who

are new to the program and have had no prior formal education and the percentage of TBIP students in all grades who are new to the program.

Factor 6: "Other" Program Type. Factor 6 variables match those in program type factor 3 and capture districts reporting that their program is not well described by the categories on the TBIP data collection form. "Pull-out" might be a clearer category, as it tends not to be selected when "other" and "alternative" are, reflected by its negative factor loading in Exhibit D-8.

Factor 7: TBIP Teacher Endorsements. The two variables measuring TBIP teacher endorsements positively correlate with one another: having higher percentages of TBIP teachers with an ESL endorsement is associated with higher percentages with a bilingual education endorsement. Interestingly, these variables do not sufficiently correlate with any of the program type variables to be included in program-related factors.

Factor 8: Slavic Languages. Variables measuring the percentage of TBIP students speaking two Slavic languages (Ukrainian and Russian) are included in factor 8. The TBIP instructional assistant to teacher ratio variable[15] is probably included in this factor because more frequent use of IAs is associated with higher percentages of TBIP students who speak Ukrainian.

Factor 9: Instructional Setting. The variables included in factor 9 are similar to those in program type factor 4: a common definition is "not pull-out." Districts indicating that students are served in a specific setting—such as providing services in a center or in the mainstream classroom—usually report that few or no students are pulled out of class for services. The percentage of students who speak Vietnamese correlates positively with higher percentages of TBIP students receiving services in a center. The Vietnamese-speakers variable was also included in factor 4 (district diversity) and pull-out was also in factor 6 (other program types).

Factor 10: Miscellaneous District Characteristics. The percentage of students in the district who are American Indian and the percentage in special education are positively associated with one another. The percentage American Indian is negatively associated with the students to instructional assistant ratio district-wide; in other words, districts with higher percentages of American Indian students tend to employ more instructional assistants.

Factor 11: Tutoring. Providing higher percentages of TBIP students with tutoring is positively associated with large numbers of TBIP students in middle or high school (versus having a large elementary TBIP population). This relationship affirms findings from interviews with district staff. Based on district-level data, tutoring is also associated with higher percentages of TBIP students in special education.

[15] Higher values for the TBIP instructional assistant to teacher ratio indicate there are more assistants per student.

Exhibit D-8

Factor Analysis Variable Loadings

	Factor 1	Factor 2	Factor 3	Factor 4	Factor 5	Factor 6	Factor 7	Factor 8	Factor 9	Factor 10	Factor 11
	Student char.	Diversity	Non-bilingual instruction	Bilingual Instruction	New students	Other Prog. Type	Teacher endorse-ments	Slavic langs.	Instr. Setting	Misc.	Tutoring
District % Hispanic	0.89	-0.10	-0.15	0.14	-0.05	0.00	0.11	-0.07	0.00	-0.16	-0.12
District % migrant	0.84	-0.16	-0.11	0.13	-0.07	0.00	0.13	-0.06	0.00	-0.17	-0.09
TBIP relative program size	0.84	0.01	-0.06	0.19	-0.14	0.04	0.10	-0.03	0.04	-0.07	-0.18
District % free/reduced price meals	0.77	-0.03	-0.25	0.06	-0.03	-0.01	-0.02	0.00	-0.08	0.29	-0.03
TBIP % Title 1	0.65	0.01	-0.07	-0.05	-0.04	-0.01	-0.25	0.03	-0.07	0.26	0.15
Some lang	0.60	-0.13	-0.03	-0.11	-0.08	-0.10	-0.13	0.00	-0.05	0.13	0.18
TBIP % migrant	0.49	-0.27	-0.20	0.24	-0.17	-0.11	0.14	-0.12	-0.06	-0.09	0.12
TBIP % speak Spanish	0.40	-0.37	-0.40	0.23	-0.12	-0.13	-0.09	-0.35	-0.28	-0.12	0.17
District % white	-0.85	-0.21	0.09	-0.14	0.03	0.02	-0.23	0.09	-0.05	-0.09	0.12
TBIP # languages in district	-0.15	0.85	0.10	-0.06	-0.02	0.07	0.10	0.21	0.01	-0.12	-0.04
District % Asian	-0.20	0.85	0.24	-0.12	0.06	-0.03	0.15	-0.07	0.05	-0.03	0.01
District % black	-0.06	0.83	0.13	-0.05	0.07	-0.06	0.08	-0.07	0.07	0.07	-0.01
TBIP % speak Somali	0.02	0.77	-0.09	0.13	0.01	-0.08	-0.14	0.04	-0.08	0.02	0.01
TBIP total program size	0.29	0.70	-0.10	0.15	-0.12	0.14	0.02	0.12	-0.03	-0.11	0.00
TBIP % speak Vietnamese	-0.20	0.42	0.12	-0.10	-0.03	0.04	0.03	0.01	0.41	-0.07	-0.03
No native lang	-0.19	0.08	0.77	-0.24	0.02	-0.25	-0.05	0.18	-0.09	-0.06	0.01
TBIP % speak Korean	-0.16	0.22	0.47	-0.19	0.15	0.08	0.27	-0.19	0.18	-0.02	0.00
Some native lang	0.19	-0.03	-0.76	-0.16	-0.09	-0.22	0.15	-0.10	0.23	0.05	-0.03
Native lang	-0.01	-0.04	-0.04	0.67	0.09	-0.06	-0.09	-0.12	-0.17	0.10	0.16
Self-contained	0.19	0.13	0.06	0.62	-0.12	0.00	0.14	0.06	0.26	-0.07	-0.14
Academic native lang	0.25	-0.05	0.05	0.59	-0.05	-0.05	0.00	-0.12	0.11	0.01	0.03
TBIP % new students no prior ed	-0.14	0.02	0.08	-0.01	0.89	0.01	0.00	-0.01	-0.06	-0.07	0.05
TBIP students % new	-0.13	-0.02	0.09	-0.04	0.88	-0.02	-0.01	0.01	0.00	-0.11	-0.08
Other setting	-0.02	0.03	0.11	-0.05	0.01	0.82	-0.01	0.02	-0.09	-0.03	-0.08
Alternative	-0.14	-0.03	-0.10	-0.09	0.00	0.79	-0.04	0.02	-0.11	-0.02	-0.03
Pull-out	-0.40	-0.03	0.07	-0.13	0.04	-0.51	0.03	-0.02	-0.43	-0.02	-0.26
TBIP % teachers ESL endorsed	-0.02	0.14	-0.03	-0.02	0.01	-0.05	0.76	0.19	-0.03	0.04	-0.04
TBIP % teachers bilingual endorsed	0.24	-0.05	-0.22	0.06	-0.04	-0.02	0.72	-0.01	-0.02	0.04	0.14
TBIP % speak Ukrainian	-0.14	0.16	0.06	-0.10	-0.03	-0.01	0.13	0.67	-0.08	-0.07	0.03
TBIP % speak Russian	-0.24	-0.02	0.02	-0.09	0.12	0.22	-0.11	0.65	0.10	0.08	-0.31
TBIP IA to teacher ratio	0.10	0.02	0.07	-0.04	-0.05	-0.08	0.17	0.41	-0.07	-0.21	0.18
Center	-0.10	0.12	-0.13	0.24	-0.08	-0.10	0.06	0.18	0.53	0.11	0.00
Mainstream	0.39	-0.04	-0.21	-0.08	-0.11	-0.13	-0.06	0.02	0.50	0.25	0.15
District % American Indian	0.07	-0.08	-0.05	0.11	-0.03	-0.02	0.22	-0.01	0.07	0.74	-0.01
District % special ed	-0.10	-0.06	-0.03	-0.22	-0.06	0.00	-0.29	-0.08	-0.03	0.52	0.21
District IA to students ratio	-0.26	-0.01	-0.03	-0.11	0.24	0.04	0.01	0.13	0.09	-0.50	0.21
Tutoring	-0.07	-0.07	-0.05	0.10	0.08	0.00	0.05	0.03	0.14	-0.10	0.66
TBIP % in grades 6–12	-0.29	0.16	0.17	0.23	-0.04	0.15	0.12	0.11	-0.14	0.17	0.43
TBIP % in special ed	0.14	-0.11	0.04	-0.02	-0.24	-0.14	-0.01	-0.03	-0.14	0.04	0.42
TBIP % speak Cambodian	-0.10	0.20	0.14	-0.15	0.07	0.00	-0.11	-0.10	0.19	0.07	0.33
TBIP % speak Chinese	-0.07	0.03	0.32	0.08	0.02	-0.02	-0.07	-0.02	0.06	0.00	0.03
TBIP % speak Tagalog	-0.13	0.13	0.23	-0.25	-0.02	-0.01	0.28	-0.30	-0.05	-0.03	-0.05

Factor Analysis Summary

Presumably because the data are at the district level, the factor analyses found a high degree of inter-correlation among many of the variables in the dataset. This inter-relatedness affects the use of multivariate regression models (explored below), and makes it difficult to obtain unbiased estimates of the impact of student, program, and district characteristics on length of stay and WASL performance. Student and school level data are required.

4. Bivariate Correlations

We compute bivariate correlations to understand the association between each independent variable and the dependent variables. This allows us to identify all characteristics associated with variation in length of stay and WASL scores. These associations are not causal but indicate that the characteristics systematically vary with values on the dependent variables. For the sake of simplicity, only the more strongly associated variables having a correlation of at least 0.20 are in the tables.

Average Length of Stay Correlations

Exhibit D-9 lists the bivariate correlations of at least 0.20 between average length of stay for all students and all TBIP and district-wide variables.

Exhibit D-9
Significant Bivariate Correlations With Average Length of Stay

Definition	Correlation With Average Length of Stay
TBIP relative program size: TBIP total enrollment as % of total district enrollment	0.36
District-wide students: % eligible for free/reduced price meals	0.30
District-wide students: % who are Hispanic	0.28
District-wide students: % receiving migrant services	0.27
TBIP students: % receiving migrant services	0.25
TBIP teachers: % with a bilingual education endorsement	0.24
TBIP total enrollment	0.23
TBIP students: % receiving special education services	0.22
District-wide students: % who are American Indian	0.22
TBIP students: % new to the program	-0.60
TBIP students: % new to the program in grades 6–12 who have had no prior formal education	-0.49
District-wide students: % who are white	-0.33
District-wide students to instructional assistants ratio	-0.21

All correlations are significant at the .001 level. N=741, except for TBIP relative program size (N=739) because two districts were missing district-wide enrollment data in 2000–2001. Source: OSPI 1998–99 through 2001–02 district-wide and TBIP data.

The two variables measuring students new to the program (with or without prior formal education) are both strongly negatively correlated with length of stay. That is, higher

percentages of new students are associated with lower district-wide average lengths of stay.

Higher percentages of Hispanic or migrant students are associated with higher district-wide lengths of stay. Other student characteristics related to ethnicity and socioeconomic status (e.g., percentage eligible for free or reduced price meals, percentage American Indian) also correlate with longer average lengths of stay.

Having a high percentage of teachers who have a bilingual education teaching endorsement is associated with longer average lengths of stay in the TBIP. Using more instructional assistants in the TBIP (measured by the instructional assistant to student ratio) is associated with shorter average length of stay.

Larger TBIP programs in general are associated with high average length of stay and are also strongly associated with larger Hispanic populations (see Exhibit D-10).

Exhibit D-10
Significant Correlations With TBIP Relative Program Size

Definition	Correlation With Program Size
District-wide students: % who are Hispanic	0.87
District-wide students: % receiving migrant services	0.82
District-wide students: % eligible for free/reduced price meals	0.63
TBIP students: % receiving migrant services	0.41
TBIP students: % receiving Title I services	0.36
TBIP students: % receiving LAP services	0.35
TBIP students: % who speak Spanish	0.34
District-wide students: % who are white	-0.81

N=739 except for percentage of students who are white (N=738). All correlations are significant at the .01 level. Data source: OSPI 1998–99 through 2001–02 district-wide and TBIP data.

WASL Correlations

Significant bivariate correlations with WASL composite scores for ELL students are presented below. Again, only correlation coefficients above 0.20 are included to simplify the results.

WASL Reading. Certain ethnicity, language, and socioeconomic status variables are associated with higher and lower WASL reading scores for ELL students (see Exhibit D-11). Higher percentages of TBIP students who speak Korean or Chinese-Cantonese and the percentage of students who are Asian in each district are associated with higher percentages of ELL students meeting WASL reading proficiency standards. Concentrations of Hispanic, migrant, and Spanish-speaking students, as well as students eligible for free or reduced price meals, are associated with lower WASL scores. Districts with relatively large TBIP programs tend to have lower percentages of ELL students meeting reading proficiency standards on the WASL.

Exhibit D-11
Significant Correlations With WASL ELL Percentage Meeting Reading Proficiency Standards

Definition	Correlation With WASL Reading Mean*
TBIP students: % who speak Korean	0.29
District-wide students: % who are white	0.25
TBIP students: % who speak Chinese-Cantonese	0.24
District-wide students: % who are Asian	0.21
District-wide students: % who are Hispanic	-0.27
District-wide students: % receiving migrant services	-0.24
TBIP students: % who speak Spanish	-0.23
District-wide students: % eligible for free/reduced price meals	-0.22
TBIP relative program size: TBIP enrollment as % of total district enrollment	-0.21

**Mean % of ELL students meeting WASL reading proficiency standards in grades 4, 7, and 10. All correlations are significant at the .01 level. N=283. Source: OSPI 1998–99 through 2001–02 district-wide and TBIP data.*

WASL Math. Higher percentages of students who speak Korean, Chinese-Cantonese, and Vietnamese, as well the percentage of students who are Asian, White, and African American, are all associated with higher levels of district-wide ELL WASL performance in math. The number of different languages spoken in a district is also positively associated with WASL math performance (see Exhibit D-12).

The percentage of students who are Hispanic or migrant, the percentage eligible for free or reduced price meals, and the percentage receiving Title I services are negatively associated with district-wide ELL WASL performance in math. As with the WASL reading correlations, relative TBIP size is negatively associated with ELL WASL math performance.

Two program type variables measuring the percentage of students receiving instruction in their native languages correlate with WASL math scores. Higher percentages of TBIP students receiving no native language instruction correlate with higher percentages meeting math proficiency standards; the opposite is true for higher percentages of students receiving academic-focused native language instruction. It is important to note that these findings do not control for other characteristics that may be influencing these bivariate associations, for example, individual student ability.

Exhibit D-12
Significant Correlations With WASL ELL Percentage Meeting Math Proficiency Standards

Definition	Correlation With WASL Math Mean*
TBIP students: % who speak Korean	0.45
District-wide students: % who are Asian	0.42
TBIP students: % who speak Chinese-Cantonese	0.39
Number of different languages spoken by TBIP students	0.37
TBIP students: % with no native language instruction	0.29
District-wide students: % who are white	0.27
TBIP students: % who are in grades 6–12	0.26
TBIP students: % who speak Vietnamese	0.22
District-wide students: % who are African American	0.21
TBIP students: % who speak Spanish	-0.39
District-wide students: % eligible for free/reduced price meals	-0.39
District-wide students: % who are Hispanic	-0.38
District-wide students: % receiving migrant services	-0.34
TBIP relative program size: TBIP total enrollment as % of total district enrollment	-0.32
TBIP students: % receiving migrant services	-0.27
TBIP students: % in Title I	-0.23
TBIP students: % with academic language development support	-0.21

**Mean % of ELL students meeting WASL math proficiency standards in grades 4, 7, and 10. All correlations are significant at the .01 level. N=283. Source: OSPI 1998–99 through 2001–02 district-wide and TBIP data.*

WASL Writing. We see similar trends in correlations with the percentage of ELL students meeting WASL writing proficiency standards as we did with reading and math (see Exhibit D-13). The percentage of students who speak Chinese-Cantonese, Korean, or Vietnamese, and the percentage who are white or Asian, all positively correlate with WASL writing scores. Having more TBIP students in middle or high school is also associated with better ELL students' WASL writing performance.

Having higher percentages of students who speak Spanish, are Hispanic, are receiving migrant services, or are eligible for free and reduced price meals are all associated with lower percentages of ELL students meeting WASL writing proficiency standards.

Exhibit D-13
Significant Correlations With WASL ELL
Percentage Meeting Writing Proficiency Standards

Definition	Correlation With WASL Writing Mean*
TBIP students: % who speak Chinese-Cantonese	0.30
District-wide students: % who are Asian	0.23
District-wide students: % who are white	0.22
TBIP students: % who speak Korean	0.22
TBIP students: % who speak Vietnamese	0.20
TBIP students: % in grades 6–12	0.20
TBIP students: % who speak Spanish	-0.34
District-wide students: % who are Hispanic	-0.28
District-wide students: % receiving migrant services	-0.26
District-wide students: % eligible for free/reduced price meals	-0.26
TBIP students: % receiving migrant services	-0.22

**Mean % of ELL students meeting WASL writing proficiency standards in grades 4, 7, and 10. All correlations are significant at the .01 level. N=283. Source: OSPI 1998–99 through 2001–02 district-wide and TBIP data.*

Summary of Bivariate Analysis

Bivariate correlations between the independent and dependent variables reveal some systematic associations. Measures of student ethnicity, language, and socioeconomic status consistently vary with WASL outcomes. School districts with more Asian and affluent students tend to have higher WASL scores for ELL students; districts with higher poverty rates and concentrations of Hispanic and migrant students tend to have lower WASL scores. Variables correlating with lower WASL scores are also associated with longer average length of stay in the TBIP.

5. Regression Models

The final analyses involve multivariate regressions of the dependent variables (length of stay and composite WASL scores) on the student, program, and district variables. These analyses are intended to estimate the association between program characteristics and the dependent variables while statistically controlling for the influence of the other independent variables. The high inter-correlations among the independent variables and the program variables, partly arising from the data being measured at the district level, make unbiased estimates of program effect difficult to obtain. This multi-collinearly produces biased estimates for all the variables involved in the analysis. These analyses are conducted to illustrate what could be done with better data.

Exhibit D-14 lists the independent variables included in the regression equations and their accompanying coefficients and statistical significance (p-values) for the four dependent variables. Negative coefficients refer to lower average length of stay and WASL performance, and positive, higher length of stay and test scores. The independent variables are grouped according to the factor analysis results.

Exhibit D-14

Multivariate Regression Results: Four Exploratory Models

Independent Variables	Dependent Variables							
	1. Average length of stay		2. WASL reading		3. WASL math		4. WASL writing	
	Adjusted R^2 = .796		*Adjusted R^2 = .218*		*Adjusted R^2 = .441*		*Adjusted R^2 = .380*	
	Coeffi-cient	P value	Coeffi-cient	P value	Coeffi-cient	P value	Coeffi-cient	P value
TBIP: Program Type Variables								
TBIP students: % academic native lang.	0.33	0.00	-0.37	0.94	-5.89	0.15	8.75	0.19
TBIP students: % primary lang. develop. instruct.	-0.04	0.64	-7.03	0.06	-6.18	0.04	-3.79	0.43
TBIP students: % in self-contained classroom	0.04	0.63	0.27	0.94	1.87	0.51	-0.62	0.89
TBIP students: % limited assist in primary lang.	0.02	0.80	-5.11	0.22	-5.58	0.09	-3.65	0.49
TBIP students: % no primary language support	-0.03	0.74	-5.33	0.20	-4.89	0.13	-3.61	0.50
TBIP students: % mainstream classroom	0.03	0.69	0.14	0.96	2.26	0.32	8.02	0.03
TBIP students: % "other" instructional setting	-0.14	0.06	4.40	0.18	5.66	0.03	8.99	0.03
TBIP students: % alternative instructional focus	-0.02	0.83	-1.56	0.74	-2.34	0.52	1.34	0.82
TBIP students: % pulled out of class for services	0.05	0.47	7.08	0.02	7.36	0.00	7.62	0.05
TBIP students: % center-type classroom	-0.18	0.22	-1.63	0.80	-2.91	0.56	2.17	0.79
TBIP students: % being tutored	-0.12	0.09	4.79	0.14	3.21	0.21	7.21	0.08
Student and District Statistical Control Variables, by Factor								
District-wide: % students Hispanic	-0.19	0.52	-4.60	0.70	-5.57	0.55	-38.41	0.01
District-wide: % students migrant	0.21	0.50	3.01	0.83	9.36	0.39	-8.95	0.61
TBIP students as % of total students in district	1.01	0.00	-15.37	0.11	-14.07	0.06	5.11	0.67
District-wide: % students eligible free/reduced price meals	-0.46	0.00	7.29	0.32	0.98	0.86	21.44	0.02
TBIP students: % also receiving LAP services	-0.25	0.00	11.21	0.00	4.75	0.04	3.59	0.34
TBIP students: % Title 1 services	0.06	0.31	-0.87	0.73	1.88	0.34	2.71	0.40
TBIP students: % also receiving migrant services	0.20	0.01	-9.11	0.01	-4.53	0.09	-5.47	0.21
TBIP student language: % Spanish	-0.05	0.63	4.48	0.34	2.54	0.49	-31.99	0.00
District-wide: % students white	-0.26	0.30	2.82	0.79	-1.35	0.87	-15.86	0.23
TBIP languages: Number of different languages	0.00	0.12	0.02	0.70	0.05	0.26	-0.11	0.15
District-wide: % of students Asian/Pacific Islander	-1.10	0.09	50.80	0.07	63.56	0.00	-32.10	0.36
District-wide: % students black	1.49	0.00	-41.05	0.07	-25.57	0.15	-77.35	0.01
TBIP student language: % Somali	-2.85	0.00	13.28	0.68	-42.80	0.09	-7.94	0.85
TBIP student language: % Vietnamese	0.15	0.65	-4.91	0.76	2.65	0.83	-5.55	0.78
TBIP student language: % Korean	-1.10	0.00	34.67	0.01	32.70	0.00	12.18	0.48
TBIP new students as a % of total TBIP students	-1.94	0.00	3.27	0.76	-0.21	0.98	14.55	0.28
TBIP students: % students no prior formal education	-0.52	0.00	-0.77	0.93	3.23	0.64	-12.61	0.26
TBIP teachers: % ESL endorsement	-0.11	0.01	4.45	0.03	1.31	0.41	4.07	0.12
TBIP teachers: % bilingual endorsement	-0.10	0.09	0.16	0.95	2.23	0.29	3.74	0.27
TBIP student language: % Ukrainian	0.27	0.25	-0.99	0.92	3.71	0.63	-19.79	0.12
TBIP student language: % Russian	-0.35	0.01	6.29	0.32	9.43	0.06	-40.52	0.00
TBIP instructional assistant to teacher ratio	0.00	0.09	-0.16	0.05	-0.13	0.05	-0.17	0.12
District-wide: % students Native American/Alaskan	1.40	0.00	-3.73	0.82	-0.16	0.10	-38.59	0.06
TBIP students: % special education services	2.00	0.00	24.39	0.13	30.61	0.02	-4.69	0.82
District-wide: Students per instructional staff (ratio)	-0.01	0.40	-0.78	0.25	-0.70	0.19	1.58	0.07
TBIP students: % in grades 6–12	1.24	0.00	5.18	0.60	8.76	0.26	9.12	0.47
District-wide: % students in special education	-1.43	0.15	3.95	0.93	-56.84	0.10	-247.02	0.00
TBIP student language: % Cambodian	1.07	0.04	5.21	0.83	-26.16	0.18	38.57	0.22
TBIP student language: % Chinese-Cantonese	0.43	0.58	-101.21	0.03	-63.10	0.08	24.19	0.68
TBIP student language: % Tagalog	0.27	0.26	2.53	0.83	-11.26	0.22	-19.52	0.19

Data source: OSPI electronic TBIP and district-wide data, 1998–99 through 2001–02. All four models use program size (number of TBIP students enrolled in district) as a weighting variable.

Regression Model Findings

As we discovered in the factor analysis, each of the independent variables does not measure an isolated characteristic; some variables measure interrelated concepts. This inter-relatedness affects coefficients in the regression models and confounds the interpretation of those coefficients.

Average Length of Stay Model. One program type variable is significant (indicated by a p-value of .05 or less) in the average length of stay model: the percentage of TBIP students receiving academic native language development, which is associated with longer average lengths of stay. Using other instructional strategies or varying the setting in which students are taught do not appear to impact the length of time students remain in the TBIP, according to these data.

The high proportion of variance explained by this model (80 percent) is due to the strong impact of the two "new TBIP students" variables, because recent program entrants by definition have shorter lengths of stay than those who complete the program. For this reason, when modeling students' average length of stay in the TBIP, it is especially important to separate out new and continuing students—which can only be done using more detailed data at the school or student level.

WASL Reading Model. The program type variable significant in the WASL reading model is "pullout": the percentage of TBIP students being pulled out of classes for specialized instruction is associated with higher reading scores. Again, other instructional strategies or settings do not appear to impact reading scores, either positively or negatively. A handful of other independent variables impact reading scores.

Only 22 percent of the variance in ELL students' WASL reading scores is explained by the variables included in this model. More detailed data are needed to isolate the specific mix of services that positively impact reading scores.

WASL Math Model. Three program type variables are significant in the WASL math model: providing services by pulling students out of class or in some "other" setting are associated with higher math scores and providing some native language development is associated with lower math scores. Certain ethnicity variables—primarily, the percentage of students who are Asian (especially Korean)—are associated with higher math scores. The math model taps into socioeconomic variables more strongly than program type.

WASL Writing Model. Four program type variables are significant in the WASL writing model, all of which are related to higher writing scores, despite being different program types: providing services in a mainstream, "other," or pullout setting, and providing tutoring. This model particularly shows how the program type variables do not correspond with WASL outcomes in a meaningful way—substantially different instructional settings are all associated with higher writing scores. This finding provides no clear direction to policymakers or school officials in implementing programs for ELL students.

Because of the inter-correlation among program type variables and the strong influence of non-program variables such as socioeconomic status and ethnicity, we cannot isolate the settings or instructional strategies that improve WASL scores or shorten length of stay.

Accurate and specific program type data are needed to determine how to improve Washington's ELL student outcomes.

6. Results Summary

- The OSPI data covering ELL students have serious limitations; primarily, the data in this study are at the district and not school and student level. This restriction results in high inter-correlation among variables, which makes it impossible to isolate the impact of different programs on the outcome variables.
- The factor and regression analyses we conducted present some interesting associations among the variables, illustrating the type of analysis that could be done with better data.

APPENDIX E: RESEARCH REVIEW

The Institute conducted a comprehensive review of research on bilingual education, focusing on evaluations of instructional programs for English language learners (ELL students). This appendix summarizes the methods and findings of this review.

Main Finding

After an exhaustive search of the entire research literature, we found few rigorous studies of recent ESL programs. Therefore, we could not complete a scientifically-based review of the research. There is a clear need for new rigorous studies of ESL programs.

Methodology

We collected all evaluations of bilingual and ESL programs we could find, searching electronic databases, the Internet, and research citations. We identified over 300 studies published in English; 98 publications were evaluations of instructional programs in schools. Exhibit E-1 provides a detailed list of those 98 evaluations; full citations are included at the end of this appendix.

At this study's outset, the Institute intended to complete a meta-analysis of bilingual and English as a Second Language (ESL) program evaluations to compile scientific evidence of effectiveness. A meta-analysis is a statistical synthesis of quantitative findings from evaluations that use strong research designs. The Institute uses this technique in other studies, including its reviews of criminal justice and prevention research.[16]

A number of limitations in the bilingual education research literature, however, prevented us from meta-analyzing the evaluations, such as:

- Weak research designs;
- Few recent studies;
- Vaguely defined bilingual programs; and
- No rigorous examination of ESL practices.

[16] Aos et al. (2004) *Benefits and Costs of Prevention and Early Intervention Programs for Youth* (Olympia: Washington State Institute for Public Policy) and Aos et al. (2001) *The Comparative Costs and Benefits of Programs to Reduce Crime, v 4.0*. (Olympia: Washington State Institute for Public Policy).

Weak Research Designs

Of the 98 program evaluations in Exhibit E-1, only seven used sufficiently rigorous research methods to be considered as scientific evidence for program effectiveness.[17] Studies meeting the minimum threshold for inclusion have the following characteristics:

- **Comparison Group:** Students who received the "treatment" (i.e., bilingual or ESL instruction) are compared with a similar group of students who did not. Experimental designs use random assignment to group students by program; quasi-experimental designs use matched pairs or statistical techniques to determine group comparability.
- **Outcomes of Interest:** Measurement of student progress must address one or both of the outcomes listed in the legislation authorizing this study: English language acquisition and academic achievement.

Most evaluations of bilingual education do not compare similar groups of students, and many suffer from sample attrition. Few evaluations track students' progress after they exit bilingual programs.

Non-Comparable Groups. A common study design involves testing students in one school that offers a bilingual program and comparing the results with students in a different school that does not operate the program. Most of these studies do not statistically control for differences in school characteristics, which can create a "school effect" that cannot be separated from program impacts. Some studies group students by whether their parents chose to place them into the program; this non-random program placement creates a "parent effect" that also cannot be separated from program impacts.

Sample Attrition. In many studies of bilingual education, there is widespread sample attrition. Often, more than half of participating students moved or dropped out by the end of the study. These students' tests scores are typically excluded from study results.

Short-Term Follow-up. Few studies track students' progress after they leave the program, and many studies simply report results at the end of the study period, before students complete the program.

Few Recent Studies

In addition to using weak research designs, many evaluations were conducted in the 1960s and 1970s, when the field of bilingual education was in its infancy. Of the seven rigorous studies identified through this review, only two were published after 1980. Studies from the 1960s and early 1970s typically compare bilingual education with "total immersion," in other words, a lack of special services for ELL students, also known as "sink or swim."

[17] Those seven studies are Carlisle and Beeman (2000); Covey (1973); Denton, Parker, and Hasbrouck (2004); Huzar (1973); Kaufman (1968); Morgan (1971); and Plante (1976).

Vaguely Defined Programs

After 1974, federal law required that ELL students receive specialized instruction to access the mainstream curriculum. Most evaluations since then examine students receiving various amounts of native language instruction, from 45 minutes a day to 90 percent of all instruction. In most cases, the comparison group is described as receiving "all English" instruction, but the specific instructional model is not identified.

As the field has evolved, the classification of instructional models for ELL students has changed, as have teaching practices. Recent research delineates different forms of bilingual education: dual and either late exit or early exit transitional; ESL is categorized as traditional and content-based. Many educators and researchers, however, define each of these differently and use different terminology. Few evaluations control for fidelity of program implementation.

No Quality ESL Evaluations

Most Washington schools teach ELL students using ESL. This research review found only eight evaluations—none of which uses a strong research design—that examine ESL instruction in K–12. Evaluations of ESL instruction typically focus on adult learners and workplace environments.

A Note on French Canadian Programs

We found several evaluations of Canadian "French immersion" programs.[18] In these programs, English-speaking students are taught in French part of the time, with the goal of becoming fluent in a minority language (French) as well as in students' native language (English). In the context of the United States, bilingual instruction is not foreign language instruction—the goal is for non-English speakers to become fluent in the majority language, not for English speakers to become fluent in a minority language. Due to this different context, studies of French Canadian programs are not directly comparable to evaluations of bilingual programs in the United States.[19]

Research Review Summary

At best, the research on instructional programs for ELL students only allows broad conclusions about the use of native language instruction. Five of the seven studies with strong research designs show that students receiving some native language instruction had higher test scores by the end of the study period, but again, most of these studies were of programs that existed more than 25 years ago.

Longitudinal evaluations of well-defined bilingual *and* ESL programs using strong research designs are needed to draw conclusions about the effectiveness of various instructional strategies for Washington's ELL students.

[18] In Exhibit E-1 these studies are identified as "French Canadian, targeting English speakers."
[19] Slavin and Cheung (2000), 10.

Exhibit E-1

Evaluations of Instructional Programs for ELL Students

Short Citation	Study Design	Program Type	Grades Covered	Measures	Study Timeline
Alanis (2000)	Non-experimental (Groups not comparable; no statistical controls. Comparison group includes native English speakers.)	Dual Bilingual	Elementary (Grades 1–3)	Texas Assessment of Academic Skills	3 years
Alvarez (1975)	Quasi-experimental (Controlled statistically for kindergarten scores on Metropolitan Readiness Test, but students/parents self-select into program.)	Bilingual, General. Possibly Late-Exit Transitional	Elementary (Grades 1–3)	California Achievement Tests	2 to 3 years
American Institutes for Research (1975)	Unable to locate a copy.				
Ames and Bicks (1978)	Quasi-experimental (Selection issues: students whose parents approve and are in school with ESL or Transitional Bilingual = program; those not = comparison. No statistical controls.)	ESL and Transitional Bilingual	Unclear	Stanford Achievement Tests and Stanford Early School Achievement Test	Unclear
Ariza (1988)	Experimental (Random assignment of program by school (school effect); student pre-test scores used as statistical controls. Report did not provide comparison group results or sample sizes.)	Bilingual, General	Elementary (Grades K–2)	Test of Basic Experiences, Peabody Picture Vocabulary Test, Comprehensive Test of Basic Skills	3 years
Bacon, Kidd, and Seaberg (1982)	Quasi-experimental (School effect: comparison group = students in schools with no program.)	Bilingual, General	Elementary (Grades 2–5)	Science Research Associates (SRA) Achievement Series	5 years
Balasubramonian, Seelye, and Elizondo de Weffer (1973)	Quasi-experimental (School effect: comparison group = students in schools with no program.)	Bilingual, General	Elementary (Kindergarten)	Test of Basic Experiences	4 months
Barclay (1969)	Quasi-experimental (Random assignment but study attrition, pre-test differences among groups, and results aggregated.)	Head Start Structured Language Program	Elementary (Kindergarten)	Peabody Picture Vocabulary Test	7 weeks
Barik and Swain (1975)	Quasi-experimental (Classrooms with total French immersion and part English instruction are compared but with unclear group assignment procedures.) French Canadian, targeting English speakers.	Bilingual, General and Immersion in French	Elementary (Grades K–2)	Metropolitan Achievement Tests, French Comprehension Test, and Otis-Lennon Mental Ability Test	3 years
Barik and Swain (1978)	Quasi-experimental (School effect: comparison group = students in schools in different city with no program). French Canadian, targeting English speakers.	Bilingual, General and Immersion in French	Elementary (Grades 1–5)	Canadian Tests of Basic Skills, Canadian Cognitive Abilities Test, Nonverbal Battery, and Metropolitan Science Test	3 to 5 years
Barik, Swain, and Nwanunobi (1977)	Quasi-experimental (School effect: comparison group = students in schools in different city with no program.) French Canadian, targeting English speakers.	Bilingual, General and Immersion in French	Elementary (Grades K–3)	French Comprehension Test	3 years

Short Citation	Study Design	Program Type	Grades Covered	Measures	Study Timeline
Bates (1970)	Quasi-experimental (Selection issues: students/parents self-select into program.)	Bilingual, General	Elementary (Grades 2–5)	SRA Achievement Series and Primary Mental Abilities Tests	6 months
Beeman (1993)	Non-experimental (no comparison group).	Dual Bilingual	Elementary (Grades 4–5)	Bilingual Listening and Reading Test	2 years
Bruck, Lambert, and Tucker (1977)	Quasi-experimental (Controlled statistically for first-grade IQ, but students/parents self-select into program.) French Canadian, targeting English speakers.	Bilingual, General	Elementary (Grades K–5)	Metropolitan Achievement Tests	6 years
Burkheimer et al. (1989)	Non-experimental (No comparison group.)	Bilingual, General	Elementary (Grades 1–3)	Raven Progressive Matrices and Stanford Achievement Tests	3 years
Campeau et al. (1975)	Non-experimental (A description of exemplary programs and associated research.)	Bilingual, General	Various	Various	Various
Carlisle and Beeman (2000)	Quasi-experimental (Assignment by classroom with multivariate statistical analysis to control for pre-test.)	Bilingual, General. Possibly Late-Exit Transitional	Elementary (Grades K–2)	Peabody Picture Vocabulary Test and Woodcock-Johnson Psycho-Educational Battery	1 to 2 years
Carsrud and Curtis (1979)	Unable to locate a copy.				
Cazabon, Nicoladis, and Lambert (1998)	Non-experimental (Groups not comparable; focus is on survey of students' attitudes; comparison group includes native English speakers.)	Dual Bilingual	Elementary and Middle School (Grades K–8)	California Achievement Tests	N/A (Snapshot)
Ciriza (1990)	Unable to locate a copy.				
Cohen, Fathman, and Marino (1976)	Quasi-experimental (School effect: comparison group = students in schools with no program.)	Bilingual, General	Elementary (Grades 1–5)	Comprehensive Test of Basic Skills and Inter-American Test of Reading	5 years
Cortez and Say (1974)	Unable to locate a copy.				
Cottrell (1971)	Quasi-experimental (School effect: comparison group = students in schools in different town with no program.)	Bilingual, General. Possibly Late-Exit Transitional	Elementary (Grade 1)	Metropolitan Achievement Tests	1 year
Covey (1973)	Experimental (Random assignment.)	Bilingual, General	High School (Grade 9)	Iowa Tests of Educational Development and Stanford Diagnostic Reading Test	1 year
Curiel, Stenning, and Cooper-Stenning (1980)	Quasi-experimental (No evidence of group comparability or program selection.)	Dual Bilingual	Elementary (Grades 1–3)	Iowa Tests of Basic Skills	6 years
Cziko (1975)	Did not obtain a copy (stopped collecting studies of French Canadian programs).				
Cziko (1976)	Did not obtain a copy (stopped collecting studies of French Canadian programs).				
Danoff (1978)	Quasi-experimental (Stratified random sample but some sites missing comparison groups and widespread study attrition.)	Bilingual, General	Elementary (Grades 2–6)	Comprehensive Test of Basic Skills	2 to 3 years

Short Citation	Study Design	Program Type	Grades Covered	Measures	Study Timeline
Day and Shapson (1988)	Non-experimental (No comparison group; a survey of a sample of students in immersion programs.) French Canadian, targeting English speakers.	Immersion in French	Elementary and Middle School (Grades 4–7)	French Reading Tests and French Listening Comprehension Test	N/A (Snapshot)
Day and Shapson (1990)	Quasi-experimental (Program randomly assigned by school/class. Some evidence of group comparability.) French Canadian, targeting English speakers.	Bilingual, General, and Special French Language Curriculum Unit	Middle School (Grade 7)	French Language "Cloze" tests, written compositions, and oral interviews.	5 to 7 weeks
de Jong (2004)	Quasi-experimental (Selection issues: students/parents self-select into program; study attrition.)	Dual Bilingual	Elementary (Grades K–5)	Language Assessment Scale	3 to 5 years
de la Garza and Medina (1985)	Non-experimental (Groups not comparable; no statistical controls. Comparison group has higher English proficiency from the outset.)	Bilingual, General	Elementary (Grades 1–3)	California Achievement Tests	3 years
Denton et al. (2004)	Experimental (Random assignment using matched pairs based on pre-test.)	After-School Tutoring	Elementary (Grade 4)	Woodcock Reading Mastery Tests Revised	10 weeks
Doebler and Mardis (1980/81)	Quasi-experimental (School effect: comparison group = students in schools that chose not to implement program).	Bilingual, General	Elementary (Grade 2)	Metropolitan Achievement Tests	6 months
Educational Operations Concepts, Inc. (1991a/b)	Unable to locate a copy.				
El Paso Independent School District (1987)	Non-experimental (Snapshots of test score data.)	Bilingual, General	All Grades (K–12)	Texas Assessment of Academic Skills	N/A (Snapshot)
El Paso Independent School District (1990)	Non-experimental (Snapshots of test score data.)	Bilingual, General	All Grades (K–12)	Texas Assessment of Academic Skills	N/A (Snapshot)
El Paso Independent School District (1992)	Non-experimental (Snapshots of test score data.)	Bilingual, General	All Grades (K–12)	Texas Assessment of Academic Skills	N/A (Snapshot)
Elizondo de Weffer (1972)	Quasi-experimental (School effect: comparison group = students in schools with no program.)	Bilingual, General	Elementary (Grade 1)	Test of Basic Experiences	1 year
Genesee and Lambert (1983)	Quasi-experimental (School effect: classes of students in different schools using different languages in instruction compared with one another. No evidence provided regarding group selection or comparability.) French Canadian, targeting English speakers.	French and Hebrew Immersion	Elementary (Grades K–5)	Metropolitan Achievement Tests and California Achievement Tests	6 years
Genesee et al. (1989)	Quasi-experimental (School effect: classes of students in different schools with different French Immersion programs compared with one another. No evidence provided regarding group selection or comparability.) French Canadian, targeting English speakers.	Immersion in French	Elementary (Grades K–5)	Raven Progressive Matrices and Canadian Achievement Tests	4 to 6 years

Short Citation	Study Design	Program Type	Grades Covered	Measures	Study Timeline
Genesee, Lambert, and Tucker (1977)	Quasi-experimental (School effect: classes of students in different schools using different languages in instruction compared with one another. No evidence provided regarding group selection or comparability.) French Canadian, targeting English speakers.	French and Hebrew Immersion	Elementary (Grades K–5)	Metropolitan Achievement Tests and California Achievement Tests	4 to 6 years
Gersten (1985)	Quasi-experimental (Some grade levels missing comparison group. No evidence provided on group selection or comparability.)	Bilingual, General and Structured English immersion	Elementary (Grades 1–6)	California Test of Basic Skills	Unclear
Gersten and Woodard (1995)	Quasi-experimental (School effect: comparison group = students in schools with no program. Results exclude students who move or dropout.)	Bilingual, General and Structured English immersion	Elementary and Middle School (Grades 4–7)	Iowa Test of Basic Skills	4 to 5 years
Ghaith (2003)	Experimental (Random assignment, but short term and without controls for prior services received.)	"Cooperative Learning" (classroom strategies, e.g., group work; not a bilingual or ESL program)	High School (Grades unclear; average age = 15.5)	Researcher-developed (non-standardized) reading assessment test	10 weeks
Gilbert (2001)	Quasi-experimental (School effect: comparison group = students in schools with no program. Results are aggregated and do not distinguish between program and comparison groups.)	Mix of Dual Bilingual, Late-Exit Transitional, and ESL	Elementary (Grade 4)	Texas Assessment of Academic Skills and Reading Proficiency Test in English	Unclear
Gonzalez (2000)	Non-experimental (No comparison group; a cross-sectional examination of test scores.)	Bilingual, General and ESL	All Grades (K–12)	Texas Assessment of Academic Skills	N/A (Snapshot)
Halpern (1976)	Did not obtain a copy (stopped collecting studies of French Canadian programs).				
Howard, Christian, and Genesee (2004)	Non-experimental (No comparison group. Results exclude students who move or drop out.)	Dual Bilingual	Elementary (Grades 1–5)	Cloze Reading Assessments and Researcher-developed (non-standardized) writing and language tests	3 years
Huzar (1973)	Experimental (Random assignment.)	Bilingual, General	Elementary (Grades 1–3)	Inter-American Test of Reading	2 to 3 years
Jones and Davis (1977)	Unable to locate a copy.				
Kaufman (1968)	Experimental (Random assignment.) A pilot program.	Bilingual, General	Middle School (Grade 7)	Durrell-Sullivan Reading Capacity Achievement Tests	8 to 15 months
Krause (1999)	Non-experimental (No comparison group.)	Dual Bilingual	Elementary (Grades K–5)	John's Basic Reading Inventory, teacher interviews, and classroom observation.	5 years

Short Citation	Study Design	Program Type	Grades Covered	Measures	Study Timeline
Lambert and Tucker (1972)	Quasi-experimental (Groups selected as classes, most from same school. Evidence provided regarding group comparability). French Canadian, targeting English speakers.	Immersion in French	Elementary (Grades 1–4)	Metropolitan Achievement Tests and Peabody Picture Vocabulary Test	4 years
Lampman (1973)	Quasi-experimental (Matched pairs based on age, IQ, family income, parents' education and occupation, home language; results are combined for English and Spanish speakers.)	Dual Bilingual	Elementary (Grades 1–2)	Peabody Picture Vocabulary Test and Stanford Achievement Tests	1 to 2 years
Layden (1972)	Experimental (Random assignment; however, the groups were found significantly different in language ability on the pre-test, and Ns were small with short-term follow-up.)	Bilingual, General	Elementary (Grade 3)	Inter-American Test of Reading	10 weeks
Legarreta (1979)	Quasi-experimental (Based on classroom assignment; significant group differences found on language and ethnicity; high study attrition; results aggregated.)	ESL	Elementary (Kindergarten)	Raven's Progressive Matrices, Revised Inter-American Oral Language Comprehension Test, Naming by Domain, and Two Person Communication Game	6 months
Leyba (1978)	Unable to locate a copy.				
Ligon (1974)	Unable to locate a copy.				
Lindholm and Aclan (1991)	Non-experimental (No comparison group.)	Dual Bilingual	Elementary (Grades K–4)	Comprehensive Test of Basic Skills	3 to 4 years
Lindholm and Fairchild (1990)	Quasi-experimental (No evidence provided on group selection or comparability. Results combine native English and Spanish speakers.)	Dual Bilingual	Elementary (Grade 1)	Comprehensive Test of Basic Skills	2 years
Lopez and Tashakkori (2004)	Quasi-experimental (Selection issues: students/parents self-select into program. Results combine native English and Spanish speakers.)	Dual Bilingual	Elementary (Kindergarten)	Kindergarten Assessment Guide and Emergent Reader Screening Assessment	1 year
Lum (1971)	Quasi-experimental (School effect: comparison group = students in schools with no program.)	Bilingual, General and ESL	Elementary (Grade 1)	Researcher-developed (non-standardized) oral language assessment tests	1 year
Maldonado (1977)	Quasi-experimental (School effect: comparison group = students in schools with no program.)	Transitional	Elementary (Grades 1–5)	Science Research Associates (SRA) Achievement Series	2 to 4 years
Maldonado (1994)	Experimental (Random assignment; but limited to special education students.)	Bilingual, General	Elementary (Grades 2–3)	Comprehensive Test of Basic Skills	3 years
Malherbe (1978)	Quasi-experimental (Some evidence of group inequalities. Results separated by IQ level rather than program type. Set in South Africa.)	Bilingual, General	Unclear	English and Afrikaans language tests	Unclear
Matthews (1979)	Non-experimental (No comparison group; a cross-sectional examination of test scores.)	Various	Elementary and Middle School (Grades 2, 4, 6, 8)	Metropolitan Achievement Test	N/A (Snapshot)

Short Citation	Study Design	Program Type	Grades Covered	Measures	Study Timeline
McConnell (1980) (4 citations)	Quasi-experimental (School effect: comparison group = students in schools with no program.)	Special Bilingual Program for migrant Mexican-American students	Elementary (Grades 1–3)	Wide Range Achievement Tests	5 years
McSpadden (1979)	Unable to locate a copy.				
McSpadden (1980)	Unable to locate a copy.				
Medina and Escamilla (1992)	Quasi-experimental (School effect: comparison group = students in schools in different city with no program. Different language groups compared with one another.)	Bilingual, General (Described as transitional and maintenance)	Elementary (Grades K–2)	Language Assessment Scale	3 years
Moore and Parr (1979)	Quasi-experimental (No evidence provided on group selection or comparability. Results combine native English and Spanish speakers.)	Bilingual, General (Described as transitional, maintenance, and other)	Elementary (Grades K–2)	Test of Basic Experience, Comprehensive Test of Basic Skills, and Primary Self-Concept Inventory	1 year
Morgan (1971)	Quasi-experimental (Assignment by classroom. Groups were equivalent on pre-tests.)	Bilingual, General	Elementary (Grade 1)	Stanford Achievement Tests	7 months
National Dissemination and Assessment Center (1978)	Quasi-experimental (Selection issues: students/parents self-select into program. Results combine native English and Spanish speakers.)	Dual Bilingual	Elementary (Grades 1–6)	Metropolitan Achievement Tests	3 to 5 years
Olesini (1971)	Quasi-experimental (No evidence provided on group selection or comparability.)	Bilingual, General	Elementary (Grades K–2)	Metropolitan Achievement Tests	1 year
Plante (1976)	Experimental (with random assignment).	Bilingual, General	Elementary (Grades K–3)	Inter-American Test of Reading and Metropolitan Achievement Tests	2 years
Powers (1978)	Quasi-experimental (Matched pairs based on age, national origin, grade, family income; however, there were key group differences on language ability with no statistical controls.)	Bilingual, General	Elementary (Grades K–5)	Stanford Achievement Tests, Gates-MacGinitie Reading Test, Wide Range Achievement Test, and GPA	4 years
Prewitt Diaz (1979)	Non-experimental (Groups not comparable; recent immigrants compared with students in U.S. schools for at least three years.)	Bilingual, General	High School (Grade 9)	Comprehensive Test of Basic Skills and Inter-American Test of Reading	1 year
Ramirez et al. (1991)	Quasi-experimental (School effect: some comparison groups from school districts with different characteristics and programs. Some evidence of group inequalities and study attrition. Only well-implemented, atypical programs included.)	Bilingual, General and Content-based ESL ("Structured Immersion")	Elementary (Grades K–5)	Comprehensive Test of Basic Skills	3 to 6 years
Rosier and Holm (1980)	Quasi-experimental (School effect: comparison group = students in schools in different town with no program. No evidence of group comparability.)	Bilingual, General	Elementary (Grades K–6)	Stanford Achievement Tests	2 to 6 years

Short Citation	Study Design	Program Type	Grades Covered	Measures	Study Timeline
Rothfarb, Ariza, and Urrutia (1987)	Quasi-experimental (School effect -- Classes in schools randomly assigned to program. No evidence of group comparability. High study attrition.)	Bilingual, General	Elementary (Grades K–2)	Comprehensive Test of Basic Skills and Test of Basic Experiences	2 to 3 years
Saenz et al. (2000)	Non-experimental (No comparison group; English-dominant speakers compared with Spanish-dominant speakers.)	Bilingual "Language Enrichment Activities Program" (as part of Head Start)	Pre-School	Pre-Idea Proficiency Test and Preschool Language Survey	1 year
Saldate, Mischra, and Medina (1985)	Quasi-experimental (Matched pairs based on Peabody Picture Vocabulary Test. School effect: comparison group = students in school with no program. High study attrition.)	Bilingual, General	Elementary (Grades 1–3)	Wide Range Achievement Tests	3 years
Saunders and Goldenberg (1999)	Quasi-experimental (School effect — retrospective analysis of student records with matched pairs of students with similar characteristics from other schools. ELL students tested in Spanish compared with native English speakers tested in English.)	Bilingual, General "Language Arts Transition Program"	Elementary (Grades 2 and 5)	Researcher-developed (non-standardized) oral language assessment tests	1 year
Skoczylas (1972)	Quasi-experimental (School effect: comparison group = students in schools in different town with no program. Results combine native English and Spanish speakers. Selection issues: students/parents opt into program.)	Bilingual, General	Elementary (Grades K–1)	Raven Progressive Matrices, Cooperative Primary Tests, and researcher-developed (non-standardized) oral language assessment tests	1 year
Slavin and Yampolsy (1992)	Quasi-experimental (School effect: comparison group = students in schools in different town with no program. Some evidence of group differences.)	Success for All: A "schoolwide improvement program," in this case, targeting ELL students.	Elementary (Grades K–3)	Woodcock Reading Mastery Tests Revised; Durrell Analysis of Reading Difficulty; IDEA Proficiency Test; and Merrill Language Screening Test	1 to 3 years
Stebbins et al. (1977)	Quasi-experimental (Some evidence of group incomparability; some sites lack comparison group.)	Bilingual, General	Elementary (Kindergarten)	Metropolitan Achievement Tests, Wide Range Achievement Test, and Peabody Picture Vocabulary Test	1 year
Stern, C. (1975)	Quasi-experimental (Evidence of group incomparability; no real comparison group used.)	Bilingual, General	Elementary (Grades K–1)	Peabody Picture Vocabulary Test and Stern Expressive Vocabulary Inventory	1 year
Stern, H. (1976)	Did not obtain a copy (stopped collecting studies of French Canadian programs).				
Stern, H. et al. (1976)	Did not obtain a copy (stopped collecting studies of French Canadian programs).				

Short Citation	Study Design	Program Type	Grades Covered	Measures	Study Timeline
Thomas and Collier (1997)	Quasi-experimental (No evidence of group comparability or program selection. No numerical results presented in report.)	All five models listed by OSPI	All Grades (K–12)	Unclear	Unclear
Thomas and Collier (2002)	Quasi-experimental (No evidence of group comparability or program selection.)	All five models listed by OSPI	Elementary and Middle School (Grades K–7)	Stanford 9 Achievement Test and Comprehensive Test of Basic Skills	1 to 4 years
Valladolid (1991)	Quasi-experimental (Selection issues: students/parents self-select into program.)	Bilingual, General and ESL	Elementary (Grades 2–5)	Comprehensive Test of Basic Skills	3 years
Vasquez (1990)	Non-experimental (No comparison group; ELL students in program over 3 years compared with those in program for less than 3 years. Selection issues: program participation depends on parent choice.)	Dual Bilingual	Elementary (Grades K–6)	Metropolitan Achievement Tests and California Achievement Tests	7 years
Walsh and Carballo (1986)	Unable to locate a copy.				
Webb, Clerc, and Gavito (1987)	Unable to locate a copy.				
Yap, Enoki, and Ishitani (1988)	Quasi-experimental (No evidence of group comparability or program selection. No actual test score results reported.)	Bilingual, General, and ESL	All Grades (K–12)	Metropolitan Achievement Tests and G.P.A.	1 year
Zirkel (1972)	Quasi-experimental (School effect: comparison group = students in schools in different city with no program).	Transitional	Elementary (Grades 1–3)	Inter-American Test of General Ability	1 year

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