

English Language Learner (ELL) Programs

at the Secondary Level in Relation to Student Performance

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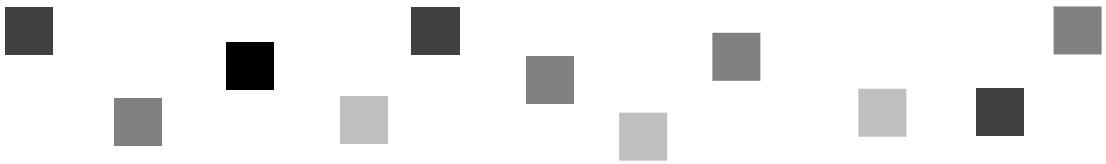


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Executive Summary

This report focuses on secondary-level (middle and high school) English language learner (ELL) programs, approaches, and student performance. It is organized by ELL instructional program model types, research or study design types, and types of outcomes. Student academic performance is highlighted. Seventy-three studies from the literature are annotated. The major questions and findings are:

What does the literature reveal about promising secondary-level ELL programs and practices?

Most of the literature reviewed does not include sufficiently detailed descriptions of ELL programs, practices, and/or interventions. Frequently, brief program or practice labels or titles (e.g., "thematically integrated instruction" or "structured immersion") are provided without defining program or practice features. Given this, it is difficult to draw substantive conclusions about the effectiveness of programs/practices from the studies without more clarification about program or practice features.

Are there specific programs, practices, and/or interventions that have a positive impact on student performance?

A number of studies report positive student gains when certain specific instructional programs, practices, or interventions are used with secondary ELL students. On the other hand, a few studies report no student gains with some specific practices.

How does the literature align with new, scientifically based research criteria and definitions?

Fewer than 20 of the 73 annotated studies meet rigorous scientifically based research standards (e.g., experimental, quasi-experimental, or multivariate models). Schools seeking cause-effect relationships so as to attempt to replicate successful practices are limited by the studies available. Comparability among studies is also a concern because studies provide various types and qualities of evidence.

What findings are described?

These are organized by four types: teacher behaviors and/or attitudes; student behaviors and/or attitudes; schoolwide outcomes; and student academic and/or achievement performance. About 20 studies provide findings related to secondary-level ELL student academic/achievement performance.

Does teaching secondary ELLs in their native language as well as English result in increased student performance?

A number of the studies/literature report that some language instruction in the native language has a positive impact on student academic performance. Some studies also report that the gains are not significant and/or that they vary by content area.

How does the literature align with a framework of ELL instructional models?

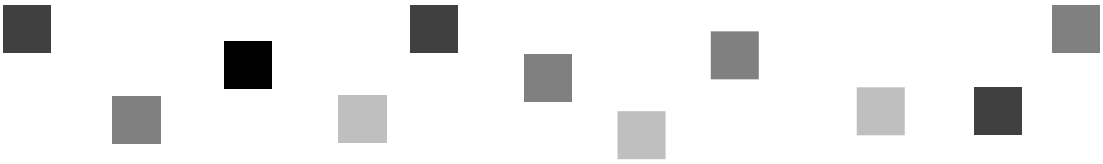
About 60 percent of the literature is organized by instructional models, such as bilingual immersion; transitional bilingual education; pullout; structured immersion; submersion with primary language; and so forth. About 40 percent is either unknown (not specified) or other. Most of the literature provides little detailed information or definitions about these instructional models/programs, other than program label.

What are other school/classroom recommendations?

Many ELL authors recommend that teachers and administrators implement effective school and classroom practices to make a long-term positive impact on student behaviors and performance. These include parent-community involvement; positive climate; strong leadership; articulation between schools; quality and relevant curricula; and effective instructional strategies.

What next steps should be taken by ELL researchers?

The field needs additional well-designed studies, particularly empirical studies. These should consist of comparison groups, random assignments when possible, and pre- and post-measures of student outcomes, and should account for other key variables, such as school context, staff qualifications, and student demographics. ELL programs should be defined better and described more thoroughly in such studies. To understand the impact of programs or approaches on student performance better, studies should be longitudinal, not simply over one or two years. Pre- and post- assessments in English, as well as specific content assessments, should include new state-level assessments being implemented under the No Child Left Behind (NCLB) Act.



1. Introduction

What is this publication about?

This publication reviews literature and presents findings concerning programs at the secondary school level that are designed to serve English language learners (ELLs). These are students who come from homes where English is not the primary language spoken and whose English language skills are assessed as needing improvement. The report organizes the reviewed literature by ELL instructional models, by the research or study design types, and by the types of outcomes. Findings related to student academic performance are of particular interest, although other outcomes reported in reviewed literature are described. Major questions for this review of the relationship of ELL programs at the secondary school level to student performance are:

- What is the nature of the literature (including empirical studies)?
- What findings have been described?
- What are the specific student performance findings?
- How does the literature align with a framework of ELL instructional models?

Audience and purpose. Key readers include secondary-level school policymakers, district decisionmakers, school principals, and those involved with developing policy and/or educating students who are learning English as a second language. The purpose is to provide the secondary education community with a research and literature base concerning ELL programs and practices so that those concerned with secondary education may use this knowledge to select or design research-based technical assistance to schools; professional development for school personnel; and, at the district and school levels, to design and refine programs to meet the needs of the ELL students in local contexts. The publication has as its ultimate goal to help ELL students learn and achieve in secondary settings by the best means possible and not to advocate for a particular program model or approach. This is not a process guide about how to implement ELL programs.

What are secondary ELL programs? For the purposes of this review, ELL programs are planned organizational, teaching, and/or curriculum activities for the purpose of assisting ELLs to meet various school/student outcomes (i.e., continued school attendance and

academic success). Included in "secondary level" are programs offered for students in middle, junior high, and high schools. Programs discussed range from newcomer programs that help recently arrived immigrant students to adjust to a new language and a new way of schooling to programs dedicated to English language learning that "pull" students out of their mainstream classes for language instruction. Instructional practices and strategies for ELL students described in the reviewed literature are wide-ranging as well. Readers will find studies that describe ELL programs using different percentages of students' home language from 100 percent to none at all and also approaches for teaching ELL students that place less emphasis on language learning and more on content-area learning. Instructional strategies for language learning vary depending on learning goals. Yet, even with all the variety in ELL students' needs and how the literature shows they are being taught, there are some commonalities across approaches and some principles for ELL education at the secondary level that can be derived. These are discussed in this publication.

There is a growing need to educate English language learners—and to do it better. Throughout the United States, students at all levels are increasingly diverse culturally, racially, and linguistically. According to the U.S. Department of Education (Kindler, 2002), during 2000–2001 nearly 10 percent of the total K–12 public school enrollment throughout the United States and territories were "limited English proficient" (estimated as more than 4,580,000 students). ELL students are the overwhelming majority in some schools. From 1990–1991 to 2000–2001, the total ELL student population grew approximately 105 percent while, by comparison, the non-ELL school population grew just 12 percent.

The percent distribution of ELLs in public schools is:
Grades K–3 .....approximately 44 percent
Grades 4–8 .....more than 35 percent
Grades 9–12 .....approximately 19 percent
Alternative schools/programs .....approximately 2 percent (Kindler, 2002)

Until recently, researchers concerned with ELL program effectiveness and student performance have focused their attention predominantly at the lower grades. The statistics above call for educational policymakers and school leaders to attend to the needs of all ELL students if they are serious about educating all the students in their schools.

There are achievement gaps and a higher likelihood for young people to be in the dropout pool within the racial/ethnic groups with high numbers of English language learners. Recent National Assessment of Educational Progress (NAEP) race/ethnicity statistics show most minority 12th-graders demonstrating lower proficiency in reading and mathematics than their white counterparts. In 2002, only 22 percent of Hispanic students, the largest language minority, scored "at or above proficient" on the NAEP Reading Assessment, compared to white students, 44 percent of whom achieved "at or above proficient"

(National Center for Education Statistics, 2003, p. 14). NAEP results for 2000, the latest year available for mathematical skills, also show a wide gap between Hispanic and white 12th-graders. In math, only 4 percent of Hispanic students scored at or above proficient. White students scored four times higher with a 20 percent proficiency rate (National Center for Education Statistics, 2001, p. 9). In 1999, 13 percent of 18- to 24-year-olds had dropped out of school; of this number, 34 percent (the largest subgroup) were Hispanic (Jamieson, Curry, & Martinez, 2001, p. 6).

As early as the fourth grade, NAEP data indicate that Latino students as a group are behind their white, non-Latino counterparts. This distance builds up through secondary school. Middle school and high school grades nine and 10 are when the problems of early schooling come to a head or are detected, when it is more of a challenge for schools to address foundational learning and for students to effectively catch up (Duran, Escobar, & Wakin, 1997, reported in Montero-Sieburth & Batt, 2001, p. 356).

About terminology used to describe learners of English. Describing, categorizing, and labeling the programs that serve learners of English is a difficult task, yet imperative in sorting the information from the studies, reviews, and opinions. The difficulty arises initially from the nonspecific vocabulary and acronyms used in the professional field. One of the original terms professionally used was "learners of English as a foreign language" (EFL) to describe those who were learning English in their non-English-speaking home countries. As more immigrants came to the United States and the government and policymakers became more interested in them learning English, the term "learners of English as a second language" (ESL) emerged. This term was commonly used both educationally and linguistically through the 1980s.

During the 1990s, emphasis moved toward cultural and linguistic recognition of the language learners. Writers proposed that students might be learning English as a third or fourth language and thus, coined the term "learners of English as an additional language" (EAL). Historically, the federal government uses its own unique term—"limited English proficient" (LEP)—in its acts, laws, and directives. However, some believe the term reflects a negative view of learners, not recognizing their abilities in other languages, and in response, terms such as "potentially English proficient" (PEP) learners came into use.

In the current decade, the terms most often seen in the literature and promoted by professional organizations are "learners of English as a second language" (ESL), "English speakers of other languages" (ESOL), and "English language learners" (ELL) (Prator, 1991; Sowers, 2000). The latter term—ELL—was selected for use in this document.

Historical factors framing ELL research and literature. When one considers the literature related to programs designed for ELLs, there is some relevant contextual framing that should be in place. Native language advocacy or non-advocacy has been as much a

human rights and political issue as a pedagogical issue. In the United States, particular civil rights court cases and ensuing federal and state civil rights legislation, federal and state legislation surrounding educational standards, and the more recent federal No Child Left Behind Act of 2001 have shaped the notions of what types of ELL programs are appropriate in our schools. There is still some debate over whether and to what extent English or students' primary language(s) should be included in ELL school programs.

Detailed discussions of the nation's ELL research history, context, and infrastructure are handled well elsewhere (see August & Hakuta, 1997, pp. 363–373, for a good overview). It is sufficient to say here that the *Lau v. Nichols* equal access to education class action suit filed in 1974 on behalf of Chinese-background students in San Francisco Public Schools was pivotal in exploring which ELL program types were thought to be appropriate for schools. Out of this case came the Supreme Court ruling that resulted in the federal government issuing "Lau Remedies" to those school districts found not to be in compliance with the ruling for equal educational access to ELL students. The Lau Remedies, implemented beginning in 1975, required school districts to develop and submit to the Office for Civil Rights specific voluntary compliance plans. Plans submitted generally opted for an instruction mode in the students' native language or bilingual instruction (August & Hakuta, 1997; Baker, 1988). During the 1970s, native language use in school programs for ELLs expanded. Programs including students' native language in instruction were combined under the term "bilingual" (although the program goals remained English proficiency, not bilingualism). During the 1980s, with the large influx of immigrants, school districts found it unfeasible to educate each child in his or her native language. The Department of Education dropped the Lau Remedies in 1981. A common way to educate ELLs toward the goal of English language proficiency became "pulling" them out of their other classes for short periods of instruction in English language skills (August & Hakuta, 1997, p. 16).

Another important court case in 1981, *Castaneda v. Packard*, served to further define legally a school district's obligations programmatically toward ELLs and, in turn, the research needs. In brief, the case ruling required that a district's ELL program be informed by an educational theory recognized as sound by experts in the field, or at least deemed a sound educational strategy; the program/practices used by a school/district be reasonably calculated to implement that theory effectively; and a school's program produce results that language barriers faced by students are actually being overcome. The *Castaneda v. Packard* case is notable from a research perspective because it placed accountability on districts/school programs—that is, the need that they be based on theory and effective implementation. The ruling also shaped research in relation to programs for ELLs because schools needed research that would consider practices in relation to effects. There was little impetus or capacity during the 1980s for underfunded state education departments to create research-based standards for school programs for ELL students.

A Nation at Risk (National Commission on Excellence in Education, 1983) did bring national accountability in K–12 educational standards to the fore; in it, all the nation's students were placed in the "at risk" category, not just some students such as ELLs. With

the growing nationwide impetus for accountability to upgrade instruction and achievement for all students and the growth in ELL student numbers, there has been a rising need for research on ELL program effectiveness.

The Reauthorized Elementary and Secondary Education Act (ESEA) of 2001—the No Child Left Behind (NCLB) Act—is an extension of educational reform that continues standards-based reform with new dimensions of accountability for state education agencies, local education agencies, school districts, and schools, which increases the need for quality research about what works to help ELL students succeed in school.

The major focus of NCLB is to ensure that by 2012 all students will achieve state standards in specified subjects; this is achieved through schools meeting "Adequate Yearly Progress" (AYP) standards. Individual states define AYP; however, NCLB specifies state AYP standards should:

- Apply the same standards for achievement to all students
- Include results of "continuous and substantial" academic improvement for all students
- Measure the progress of all students on state assessments
- Include separate, measurable, annual objectives for the achievement of set groups of students (LEP students constitute one of the set groups)
- Include graduation rates for secondary students
- Demonstrate that each group of students must meet or exceed the state's measurable objectives (U.S. Department of Education, 2002)

These items have consequences for schools because NCLB specifies that states must annually assess the English proficiency of ELLs. For ELLs who have attended school in the United States for three consecutive years, assessment for reading/language arts must be in English. NCLB puts greater pressure on schools to improve programs so ELL students achieve English proficiency.

If accountability requirements for AYP are not met, there are consequences in NCLB. In cases of schoolwide improvement and in programs targeted to assist particular student populations, Title I schools must use strategies founded on scientifically based research (Wong, Nicotera, & Manning, 2002, p. 9; NCLB Title I, Part A 1114/b/1/B/ii, 1115/c/1/C). Scientifically based research (SBR) must be applied to technical assistance, professional development activities, and instructional strategies (Wong, Nicotera, & Manning, 2002, p. 9; NCLB Title I, Part A 1116/b/4/B-C).

Language instruction for limited English proficient and immigrant students. Limited English proficient (LEP) federal funds are to be used for increasing English proficiency by providing programs based on scientifically based research that demonstrates the effectiveness of the program in increasing English proficiency and student academic achievement in the core academic subjects, as well as high-quality professional development to teachers, principals, administrators, and other school or community-based organizational

personnel. LEP funds are also authorized for use to:

- Upgrade programs and effective instructional strategies
- Improve instructional program(s) by identifying, acquiring, and upgrading curricula, instructional materials, educational software, and assessment procedures
- Provide intensified instruction (tutorials and academic or vocational education)
- Develop language instruction educational programs coordinated with other relevant programs and services
- Improve English proficiency and academic achievement for LEP students (www.state.ia.us/educate/ecese/nclb/t3pa.html)

School districts with a significant increase in their immigrant student population compared to the previous two-year period may also be eligible for immigrant funds. Activities supported through these funds may include the following:

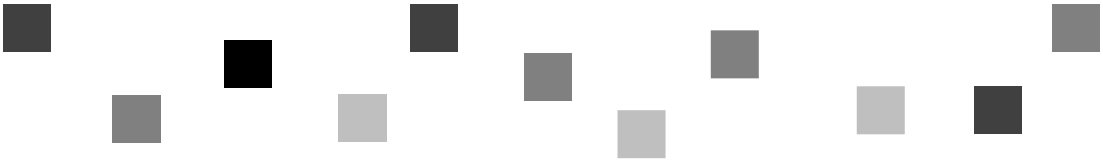
- Family literacy services, parent outreach
- Support for personnel, including aides, to provide services to immigrants
- Tutorials, mentoring, and academic or career counseling for immigrants
- Acquisition of curricular materials, educational software, and technologies
- Basic instructional services
- Other instructional services designed to assist immigrants to achieve in school
- Activities coordinated with community-based organizations or businesses to assist parents of immigrants through comprehensive community services (www.state.ia.us/educate/ecese/nclb/t3pa.html)

What is meant by scientifically based research? The term "scientifically based research" appears throughout NCLB, and is defined within the act as research that:

- Applies rigorous, systematic, and objective procedures
- Employs a systematic and empirical methodology
- Involves rigorous data analyses that test hypotheses and justify the general conclusions
- Produces results that are valid across evaluators and multiple observations
- Has been accepted by a peer-reviewed journal or a comparable review

(Wong, Nicotera, & Manning, 2002, p. 9; NCLB Title I, Part B, 1208/6)

To remain eligible for federal funding in the areas covered by NCLB, Local Educational Agencies/districts and schools are to make the determinations about the research rigor of selected programs, curricula, and materials. NCLB does not identify the specific programs or strategies proven effective through scientifically based research. NCLB specifies that schools must consider to what extent new instructional programs and curricula and models are based on SBR. The level of empirical evidence that supports such new practices, programs, and models needs to be cited, articulated, and understood by the consumers (that is, teachers, school administrators, and parents) (Wong, Nicotera, & Manning, 2002, p. 9).



2. Overview of Literature

Selection criteria for literature

These criteria were used in the literature selection process:

- Priority on studies that meet the new NCLB scientifically based research criteria and definitions
- Published since 1990 (exceptions were made if literature was deemed especially relevant or seminal)
- Programs/practices for ELL students at the secondary level (middle, junior high, and high school)
- Student performance outcomes (particularly those indicating school success, such as standardized tests, school/classroom assessments, school retention rates)
- Relevant to one or more of the focusing questions
- Provide information about ELL research history, trends
- Provide a balance of study types (expert opinion through experimental), instructional models, school characteristics, student backgrounds, emphasis on core academic content areas
- About the U.S. educational system
- In the English language

Literature search. Major search engines were used to assist in locating sources (including ERIC, Dissertation Abstracts International, Education Abstracts Full Text, Google, PsycINFO, and WORLDCAT). Tables of contents and indexes were checked in key selected peer-reviewed education journals, especially those with a research or ELL emphasis (*Bilingual Research Journal, The Bilingual Review, NABE: Journal of Research & Practice, Review of Educational Research, Social Science Quarterly, Harvard Educational Review, TESOL Journal, TESOL Quarterly*). In addition, bibliographies were checked in recent book-length studies and in key syntheses and research articles to be as comprehensive as possible in locating ELL research treating the secondary level.

Regional educational laboratory Web sites were searched, as well as key Web sites focusing on ELL topics (e.g., Center for Applied Linguistics [CAL]; Center for Research on Education, Diversity & Excellence [CREDE]; Center for Research on the Education of Students Placed at Risk [CRESPAR]; National Clearinghouse for Bilingual Education

[NCBLE]; U.S. Department of Education, Office of Bilingual Education and Minority Languages Affairs [OBEMLA]; TESOL; University of California Linguistic Minority Research Institute [UC-LMRI]).

More than 200 publications were collected and reviewed for this publication and 73 of these were selected for annotation. The annotation descriptions comprise Appendix A, Annotated Sources. Each annotation entry includes a bibliographic citation for the source, literature type, instructional program model discussed, school/student/staff characteristics described, a brief summary, major findings, and major implications or recommendations derived from the source.

Literature reviewed was organized by the literature type or study design. Information about effective ELL programs comes from a variety of sources, from empirical studies to professional wisdom or expert opinion. These approaches may provide useful information and ideas. Studies that are most likely to be replicable in other settings are the experimental, quasi-experimental, and/or multivariate models. See Table 1 for the summary of literature by source type. Below are the definitions used to sort the literature for this review:

1. **Experimental studies:** A hypothesis is generated and tested via an experiment. There are random assignments of subjects to two or more groups, including a control group. The studies preferably conduct pre- and posttests to assess cause-effect relationships between an intervention and an educational outcome, given an adequate sample size.

2. **Quasi-experimental studies:** Include comparison groups without random assignments. These studies are weaker in internal validity. Findings can shed light, however, on cause-effect relationships, but the findings are open to alternative explanations due to lack of controls.

3. **Multivariate models:** Advanced correlational analyses to explain complex relationships (e.g., factor analysis, path analysis, structural equation models, hierarchical linear models, or regression analysis). Properly conducted, these can provide evidence on the viability of hypothesized cause-effect relationships with measures taken across different points in time.

4. **Correlational studies:** Studies do not include random assignments or experimental interventions and provide no control of possible alternative explanations. It is not possible to infer direction of cause-effect. The findings in a correlational study are suggestive and warrant further study of particular variables or interventions to determine effect. Interventions are necessarily speculative.

5. **Case studies:** Provide indepth descriptions, often written by independent author(s). Ethnographic studies are a type of case study. Case studies can provide a detailed accounting of an educational interaction and its effects in one or more specific settings.

Intended to help understand dynamic relationships and views of different stakeholders, rather than offering unambiguous evidence of cause and effect.

6. **Summaries/literature reviews/syntheses of other studies:** Includes one or more of the following:

   a. Summaries provide an overview and highlight major findings of other studies; summaries may draw conclusions, but tend to be more descriptive.

   b. Literature reviews have the purpose of integrating past literature that is related to a common topic, to analyze this literature critically, and/or to identify and assess issues central to a field.

   c. A synthesis of research findings based on a number of studies and findings organized to make claims about their collective results. Some syntheses may employ formal meta-analysis techniques, a statistical procedure used to combine results of studies. Two of the reviewed syntheses used meta-analytical procedures (Gersten & Baker, 1999; Greene, 1998).

7. **Program descriptions/evaluations:** These are often authored by the program developer and/or administrator. Usually, no comparison groups are used. Includes limited data about quality or effectiveness of the program. The purpose is often to describe an interaction.

8. **Professional judgment/advocacy/expert opinions:** Written by recognized experts. There are few or no citations of specific research studies as support. Research, if used, is likely to be used selectively to support the opinion or point of view presented.

In terms of research criteria (validity, reliability, and generalizability, etc.), the literature is organized in Table 1, with the most rigorous designs (experimental and quasi-experimental and multivariate analyses) at the top and the less rigorous at the bottom of the table. Only a handful of the annotated studies, reports, and literature meet the "most-rigorous" criteria of SBR designs; this significantly limits the extent to which one can state conclusions about the effectiveness of various ELL programs and models, and to what extent they can or should be replicated in other settings and schools.

Table 1: ELL Literature by Types or Research Design

Experimental Studies

Henderson & Landesman (1992)

Quasi-Experimental Studies

Brenner (1998)
de Felix et al. (1993)
Garcia (1992)
Henderson & Landesman (1992)

Multivariate-Model Studies

Bali & Alvarez (2003)
Covey (1973)
de Felix et al. (1993)
Greene (1998)
Montecel & Cortez (2002)
Park (2002)
Thomas & Collier (2002)

Correlational Studies

Abella et al. (2003)
Ortiz (2001)

Case Studies

Adger (2000)
Freeman et al. (2003)
Genesee (1999)
Gibson & Hurd (2002)
Harklau (1994)
Langer (1999)
Lucas et al. (1990)
Minicucci (1996)
Neumann (1996)
Olsen & Jaramillo (2000)
Reed & Railsback (2003)
Robles-Rivas (2001)
Rosebery et al. (1992)
Ruiz-de-Velasco & Fix (2000)
Rumbaut (1995)
Slavin & Calderón (2001)
Spanos (1992)
Tuan (1995)

Syntheses of Other Studies (*meta-analysis)

Collier (1995)
Cornell (1995)
Costantino (1999)
Cummins (1998, Feb.)
Dolson & Mayer (1992)
Ellis (1994)
Fashola & Slavin (1997)
Fashola et al. (1997)
Garcia (1991a)
*Gersten & Baker (1999)
*Greene (1998)
Linquanti (1999)
Lucas (1993b)
Reyhmer & Davison (1992)
Salazar (1998)
Slavin & Cheung (2003)

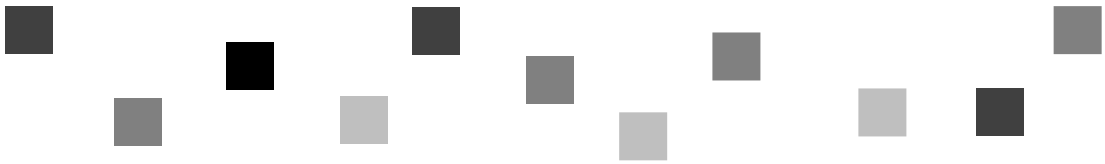
Program Descriptions/Evaluations

August & Hakuta (1997)
Berman et al. (2000)
Castaneda (1993)
Chamot (1995)
Cisneros & Leone (1995)
Cornell (1995)
Costantino (1999)
Ellis (1994)
Fashola et al. (1997)
Fashola & Slavin (1997)
Friedlander (1991)
Garcia (1991a)
Genesee (1999)
Gerner de Garcia (1995)
Gershberg (2001)
Gersten & Baker (1999)
Greene (1998)
Hewlett-Gómez & Solís (1995)
Hood (2003)
Linquanti (1999)
McCloskey (1992)
Montone & Loeb (2000)
NWREL & NCCSR (2003)
Olsen & Jaramillo (2000)
Quinoñes Feliciano de Benitez (2001)
Reed & Railsback (2003)
Region VII Comp. Center & Northrop Grumman Info. Technology (n.d.)
Short (1998)
Slavin & Calderón (2001)
Walqui (2000a)

Professional Judgment, Advocacy, Expert Opinions

Amer. Fed. of Teachers (2002)
Collier (1995)
Cummins (1998, Feb.)
Dolson & Mayer (1992)
Gándara (1997)
Genesee (2000)
Gerner de Garcia (1995)
Grey (1991)
Hakuta (1990)
Hernandez (1994)
Hood (2003)
Krashen (1998)
Ruiz (1992)
Stanford Working Group (1993)
Valdez et al. (2002)

Note: Some literature incorporates more than one literature type/research design and is included in two or more categories. Only annotated literature is included.



3. Instructional Models and the Literature

ELL programs generally include English language assistance as a central feature. ELL programs may include other components, such as teacher professional development; academic and other counseling for students; skill building, such as study- or vocational-skill building; or family/community involvement. The program may be explicit concerning:

- Who will provide instruction to the English language–learning students
- The curriculum and methods of instruction within the program (including setting[s] in which curriculum is to be implemented)
- What language will be used for instruction
- The desired outcomes for the students to become bilingual or to "transition from" or "exit" the program

However, not all school programs for ELLs are well-defined or the literature does not report these features.

Literature reviewed was organized by 10 instructional program model types/categories. Table 2 displays the reviewed literature by these models. The categories are largely based on the classification system devised by Robert Linquanti (1999). There are two major limitations to this information: first, most of the reviewed literature provided limited information about the ELL program or model (in many cases, the literature only provided a title that matched one of the model components, with very little substantive description or details of the model); second, in the case of about 40 percent of the annotated literature, the description of the program/model was so minimal that these are classified as "Unknown/Not specified." The limitations of analyzing ELL program effectiveness in relation to program model types are discussed in a later section of this report.

1. Bilingual Immersion:

- *Goal* is English language development in this program
- *Students* have the same first or home language (L1)
- *Instruction*: Most is in English; teachers teach primary-language (L1) literacy and explain concepts in students' primary language. "Sheltered English" is used for all academic content areas (that is, subject instruction is in English, modified for students' English proficiency levels)

- *Language*: Students may use their primary language, even when instructed in English.
- This is generally a transitional model, often two–four years; then, students enter "mainstream" classes
- Bilingual immersion is more likely at middle/junior high schools and below

2. Integrated TBE, Transitional Bilingual Education:

- *Goals*: In this model, the main goals are English language development and partial bilingualism
- *Students*: Targets minority-language students within majority-language classroom
- *Language*: Allows teachers and students to use native language in mainstream classrooms
- *Instruction*: Methods designed to meet needs of all students in classroom

3. Two-Way Bilingual:

- *Goal*: The overall goal is to develop strong skills and proficiency in students' first language (L1) and a second language (L2)
- *Students*: About half the students are native speakers of English and half are English language learners from the same, but other-than-English language group
- *Instruction*: Occurs in both languages (variants are: "90/10"—instruction begins with 90 percent in non-English/10 percent English, gradually increasing to 50/50 each language; or "50/50"—instruction is 50 percent non-English/50 percent English for all students from the beginning)
- Model more likely at middle/junior high schools and below

4. ELD (English Language Development)/ESL (English as a Second Language) Pullout

- *Goal*: English language fluency.
- *Students*: Program is targeted to English language learners.
- *Instruction*: English as a Second Language (ESL): ELLs are "pulled out" for instruction aimed at developing English grammar, vocabulary, and communication skills, not specific academic subjects. ELL students are integrated into mainstream, English-only classrooms in other subjects, with no special assistance.
- A variant is "Content-ESL," an augmented ESL pullout, which includes academic content, vocabulary, and beginning concepts ("academic language" learning).

5. Structured Immersion:

- *Goal*: Fluency in English.
- *Students*: All students in program are ELL, although they may be from various L1 language backgrounds.
- *Language*: ELL students are in classrooms where instruction is in English, with an attempt to adjust level of English so subject matter is comprehensible. Typically, there is no native language support.
- Content-ESL may be used with ELLs in this model; includes academic content, vocabulary, and beginning concepts.

6. Submersion With Primary Language:

- *Goal*: Fluency in English
- *Students*: Targeted to ELL students within majority-English language classrooms.
- *Language*: Uses primary language (ELLs' L1) to support English-language content instruction; develops very limited literacy skills in primary language
- *Instruction*: Bilingual teachers/paraprofessionals tutor small groups of students by reviewing particular lessons covered in mainstream classes, using students' primary language

7. Dual Language Immersion (e.g., Canadian French immersion):

- *Goal*: Bilingualism (fluency in English and a second, minority language)
- *Students*: Target population is language-majority students so they may learn a minority language (no language-minority peers are in classes)
- *Language*: Second language, then English (immerses students in second language for extended time, using sheltered language instruction, then English is introduced)
- "Late immersion" model variant: Provides intensive instruction in second language

8. Indigenous Language Immersion (e.g., Navajo):

- *Goal*: Bilingualism in indigenous language (at least oral, if not a written language) and English.
- *Students*: Supports students with endangered-minority-language background (students may have weak receptive and no productive skills).
- *Instruction*: Varies, depending on language skills. In some schools, students come to school knowing some oral native language; in others, language is little-known to students, so focus is on language revitalization. Written language may/may not be part of program, depending on language.
- A variant is "Bilingual/Bicultural" (develops academic skills in native language and culture, as well as English language and mainstream culture).

9. Unknown/Not Specified:

- In the literature reviewed and annotated, the description of a model/approach is not provided and/or is insufficient to determine a model type

10. Others (e.g., Newcomer Program, Trilingual):

- Models are described, but fewer in number and different from the more common ELL program models described in categories 1–8

Table 2: Instructional Models in ELL Literature

Models based on Linquanti (1999)

Instructional Models	Related Literature		
1. Bilingual Immersion	Brenner (1998) Cisneros & Leone (1995) Covey (1973) de Felix et al. (1993) Freeman et al. (2003)	Gándara (1997) Genessee (1999) Linquanti (1999) Montecel & Cortez (2002) Olsen & Jaramillo (2000)	Reed & Railsback (2003) Ruiz (1992) Valdez et al. (2002) Walqui (2000a)
2. Integrated TBE, Transitional Bilingual Education	Dolson & Mayer (1992) Gándara (1997) Garcia (1992)	Genessee (1999) Hakuta (1990) McCloskey (1992)	Montecel & Cortez (2002)
3. Two-Way Bilingual	Chamot (1995) Cisneros & Leone (1995) Collier (1995) Cummins (1998, Feb.)	Dolson & Mayer (1992) Gándara (1997) Hewlett-Gómez & Solís (1995)	Montecel & Cortez (2002) Montone & Loeb (2000) Salazar (1998) Valdez et al. (2002)
4. ELD (English Language Development)/ESL (English as a Second Language) Pullout	Castaneda (1993) Cisneros & Leone (1995) Cornell (1995) Gándara (1997) Genessee (1999)	Gershberg (2001) Gibson & Hurd (2002) Hood (2003) Ortiz (2001) Reed & Railsback (2003)	Robles-Rivas (2001) Ruiz-de-Valasco, Fix (2000) Valdez et al. (2002) Walqui (2000a)
5. Structured Immersion	Costantino (1999) Dolson & Mayer (1992) Gándara (1997) Genesee (1999)	Henderson & Landesman (1992) Linquanti (1999) Slavin & Cheung (2003)	Spanos (1992) Valdez et al. (2002)
6. Submersion With Primary Language	Anstrom (1997) Brenner (1998) Henderson & Landesman (1992)	Linquanti (1999) Lucas (1993b) Minicucci (1996)	Rosebery et al. (1992) Valdez et al. (2002) Walqui (2000a)
7. Dual Language Immersion (e.g., Canadian French Immersion)	Cisneros & Leone (1995) Cummins (1998, Feb.) Dolson & Mayer (1992)	Hewlett-Gómez & Solís (1995) Linquanti (1999)	Montone & Loeb (2000) Olsen & Jaramillo (2000)
8. Indigenous Language Immersion (e.g.,Navajo)	Linquanti (1999)	Reyhmer & Davison (1992)	
9. Unknown (Not specified)	Abella et al. (2003) Adger (2000) Amer. Fed. of Teach. (2002) August & Hakuta (1997) Bali & Alvarez (2003) Berman et al. (2000) Ellis (1994) Genesee (2000) Gersten & Baker (1999)	Greene (1998) Grey (1991) Hakuta (1990) Harklau (1994) Hernandez (1994) Krashen (1998) Langer (1999) Lucas et al. (1990) Neumann (1996)	Park (2002) Region VII Comp. Ctr. & NGIT (n.d.) Rumbaut (1995) Slavin & Calderón (2001) Stanford Working Group (1993) Tuan (1995)
10. Others	Fashola & Slavin (1997) Fashola et al. (1997) Friedlander (1991) Garcia (1991b)	Genesee (1999) Gerner de Garcia (1995) Hood (2003) NWREL & NCCSR (2003) Ortiz (2001)	Quinoñes Feliciano de Benitez (2001) Short (1998) Thomas & Collier (2002)

Note: Some literature discusses more than one instructional model. Only annotated literature is included.

Because most of the literature provides limited information about the characteristics and components of the "programs," it is difficult to know to what extent described programs fully adhere to these models. Some of the models (for example, model category 3: "Two-Way Bilingual") have been implemented predominantly at the elementary levels, and only recently at the middle/high school levels. Of the few citations of this model identified in this synthesis and shown in Table 2, only Montone and Loeb (2000) clearly describe this model being used at seven middle and high schools.

The linguistic, political, educational, and cultural discussions and divisions regarding the correct term for learners of English have also produced a confusing situation for categorizing the programs that serve these learners. Readers should understand that since the 1960s attempts like the Linquanti model used in this document have been made to create descriptions, charts, and grids of the types of programs and their characteristics. A consensus on which one is the most appropriate has yet to be reached in the professional field.

For example, the term "bilingual program" generally means the teaching and learning of two languages. But does this occur with two teachers, each speaking one of the languages? Or, does one teacher translate into both languages? Do the students travel between two classrooms—one representing each language? Do students learn all subjects in each language or only some students? Do they learn reading and writing, or simply speaking and listening? All these and other situations occur in schools, yet each school considers itself to have a "bilingual program." How the programs are to be charted and categorized with so many diverse characteristics and variables is indeed a challenge.

In meeting this challenge, a number of lists, descriptions, and charts were considered (Costantino, 1999; Dicker, 1993; Legarreta, 1979; Linquanti, 1999; Oregon Department of Education, n.d.). Some compare programs based upon the primary instructional mode, others by the percentage of native language or English used, and others by the actual actions of the student, for example "pullout" programs for students who are temporarily removed from their mainstream classrooms to receive English instruction. Thus, a major problem and limitation exists in writing about programs for learners of English as program labels are variable and unreliable (Krashen, 1997), and vary over time—"the continuum of programs is not static but changes in accordance with new research, local ethnic and language demographics, politics, and funding" (Sowers, 2000, p. 35).

In solving this dilemma, various definitions and charts were reviewed to determine how to address the issue of program terminology. For the purposes of classifying literature for annotations, Linquanti's chart was used because it seems to cover a large number of the program options mentioned.

However, it was impossible to classify by instructional model type about 25 of the articles/studies because in the literature their program descriptions were either not provided or incomplete (Table 2, category 9). In addition, some of the programs described appear

to be hybrids. They include elements from different models and are, thus, difficult to classify using the instructional program models classification scheme. Nearly a dozen other programs (Table 2, category 10: "Others") are so unique or varied that they do not seem to fit one of the eight instructional models. These include newcomer programs, many of which are aimed at providing pre-bilingual instruction. The same is true for locally designed programs for special purposes, such as counseling, parental involvement, or school-to-work opportunities. Table 2 provides educators with a framework that includes the characteristics and features generally associated with each ELL program model.

For conceptual simplification, one could collapse overlapping program labels. From this approach, two groups of programs emerge: those that focus on the continued learning of the student's home language/first language (L1) and those that focus on the learning of English. Programs focusing on students' L1 include newcomer/L1 submersion, two-way bilingual, and transitional bilingual (see Table 3). Programs focusing on English include structured immersion, sheltered English/content-based ESL, pullout, and English submersion (see Table 4).

Table 3: Programs Focusing on Students' First or Home Language (L1)



Program Label	Use of L1 and English	Purposes
Newcomer—L1 submersion • Students are *new* to the United States and, therefore, have *short-term* special needs • Highly appropriate for refugees and immigrants • Students remain for weeks or months, then move into other programs	L1: 100 percent English: 0 percent	To assist in initial acclimatization to U.S. schooling and culture To receive support for psychological and emotional trauma from prior experiences before entering the United States
Two-way bilingual • Students receive instruction and learn both the L1 and English *equally* • Students may also be native English speakers learning another language as their L2	L1: 50 percent (approx.) English: 50 percent (approx.)	To continually increase abilities to speak, listen, read, and write in both languages
Transitional bilingual • Students transition out of instruction in L1 after several years	L1: 100 percent declining to 0 percent (gradually decreases over several years) English: 0 percent increasing to 100 percent (more with each passing year)	To increase possibility of student achieving academically while beginning to learn English; e.g., Spanish is used as the means to become proficient in English To eventually use English-only to achieve academically

Table 4: Programs Focusing on English

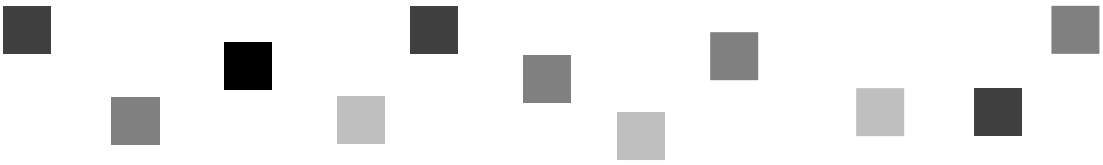
Program	Use of English and L1	Purposes
English Submersion[1] • Students are *submerged* into regular education classroom • Teachers do not use (or usually know) student's L1 • Also called "English-only" and "sink or swim"	English: 100 percent L1: 0 percent	To develop social skills, conversational English, academic English, and subject matter content in the same classroom with native speakers of English
Sheltered English or Content-Based ESL • ESL students are the only students in the classroom, thus they are *sheltered* from competing with native English speakers • Content is similar to native speakers' classes but instructional methods use techniques known to be advantageous for learners of ESL • Classes attended for one or several periods a day • Teacher may or may not be bilingual	English: Used most of the time L1: May be used occasionally if teacher is bilingual	To increase understanding and use of academic English through classes for ESL students only, content appropriate for their age and cognitive levels, and instructional practices that are appropriate for the learners' unique language needs
Pullout • Students are *pulled out* of mainstream classroom for one to several periods/day to receive small-group instruction • Teachers may or may not be bilingual, but usually have degrees or endorsements in ESL • Follows the special education "pullout model"	English: Used if teacher is not bilingual L1: Used if teacher is bilingual	To provide intensive, small-group work To introduce or review academic concepts from the mainstream classroom
Structured immersion • Students are immersed in English but they also receive selected information in their L1 • Teachers are bilingual • Student's L1 is accepted, but generally teachers respond to students in English	English: Used most of the time L1: Occasionally used by the teacher to explain new information and concepts	To increase understanding and use of academic English through students' understanding and use of L1

LEAST

amount of L1 used and taught

MOST

1 Often this is the only choice for rural and small schools as teachers of ESL are unavailable. It is also the choice in all sizes of schools when a student's L1 is highly unusual and rare to the local community.



4. Outcomes Described in the Literature

Literature reviewed was also organized by types of outcomes or results. Further investigation of the literature was conducted to determine to what extent positive student outcomes are associated with the approach/strategies described and in what settings. These are reported in Table 5. The four major outcomes depicted in the table are described below.

- **Teacher-Classroom Behaviors/Attitudes.** Outcomes reported: teachers implemented a variety of new instructional strategies, such as cooperative grouping, peer coaching, teaming, collaborative inquiry, or small-group work; teachers used processes with students for higher-level thinking or problem solving; teachers employed sheltered techniques; teachers displayed a decrease in ELL biases/stereotypes.

- **Schoolwide Components.** Outcomes reported: New organizational structures; new curriculum; changed school climate; changed instructional strategies; increased parental and/or community involvement; better school leadership.

- **Student Behaviors/Attitudes.** Outcomes reported: Improved school attendance, engagement, attitude and behavior (more positive), level of cooperation, satisfaction in school, peer socialization, school retention, postsecondary study, student confidence and diligence, and so forth.

- **Student Academic/Achievement Measures.** Outcomes reported: achievement test results; grades in classes; content-area examination scores; English oral proficiency, reading or writing improvement; English language acquisition; exit status from ELL program. Some literature in this category focused on appropriate assessment of ELLs.

Twenty-two pieces of the annotated literature (see Table 5) provide some data about the relationship of student academic achievement and/or performance. The student performance–related findings are summarized in Section 5 and detailed annotations are in Appendix A.

Table 5: Outcomes Described in ELL Literature

Teacher Classroom Behaviors/Attitudes

Castaneda (1993)
de Felix et al. (1993)
Ellis (1994)
Freeman et al. (2003)
Gándara (1997)
Garcia (1991b)
Genesee (1999)
Gersten & Baker (1999)
Harklau (1994)
Lucas et al. (1990)
Ortiz (2001)
Park (2002)
Quinõnes Feliciano de Benitez (2001)
Reed & Railsback (2003)
Rosebery et al. (1992)
Ruiz-de-Velasco & Fix (2000)
Walqui (2000a)

Student Behaviors/Attitudes

Brenner (1998)
Covey (1973)
de Felix et al. (1993)
Fashola et al. (1997)
Garcia (1992)
Gibson & Hurd (2002)
Harklau (1994)
Henderson & Landesman (1992)
Lucas et al. (1990)
McCloskey (1992)
Montecel & Cortez (2002)
Neumann (1996)
Olsen & Jaramillo (2000)
Rumbaut (1995)
Spanos (1992)
Tuan (1995)

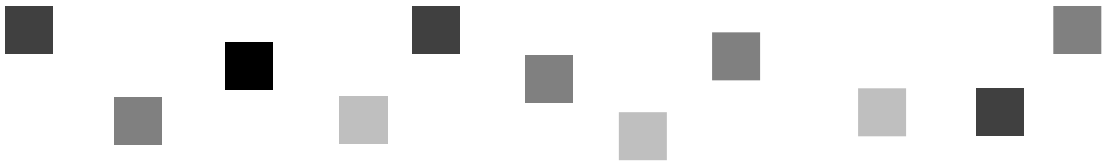
Schoolwide Components

Harklau (1994)
Hood (2003)
Lucas (1993b)
Lucas et al. (1990)
McCloskey (1992)
Montecel & Cortez (2002)
Neumann (1996)
Olsen & Jaramillo (2000)
Robles-Rivas (2001)
Walqui (2000a)

Student Achievement/Academic Performance

Abella et al. (2003)
Bali & Alvarez (2003)
Chamot (1995)
Costantino (1999)
Covey (1973)
Cummins (1998, Feb.)
Gándara (1997)
Garcia (1992)
Greene (1998)
Henderson & Landesman (1992)
Linquanti (1999)
Montecel & Cortez (2002)
NWREL & NCCSR (2003)
Olsen & Jaramillo (2000)
Ortiz (2001)
Reed & Railsback (2003)
Reyhmer & Davison (1992)
Robles-Rivas (2001)
Rosebery et al. (1992)
Rumbaut (1995)
Slavin & Cheung (2003)
Thomas & Collier (2002)

Note: Some literature includes several outcome measures; these are included in more than one category. Only annotated literature is included.



5. Summary and Discussion of Findings

Focus Question: What is the nature of the literature?

This question consists of these two components:

1. What does the literature reveal about promising secondary-level ELL programs and practices?
2. How does the literature align with new scientifically based research criteria and definitions, such as those described in NCLB?

Discussion of literature focused on ELLs at the secondary level

First, much of the literature does not include detailed descriptions of practices, interventions, or school/staff/student characteristics. Most of the literature/studies provide only a program title or a label for a practice being studied (for example, "bilingual program," "thematic instruction") and frequently fail to inform further. Second, fewer than 20 studies (out of more than 70 annotated) meet the rigor of NCLB scientifically based research standards (experimental, quasi-experimental, or multivariate models). Readers seeking cause-effect relationships have a very limited number of studies from which to make decisions concerning successful practices that may merit replication.

Research studies and literature focused exclusively on ELL programs at the secondary level are fewer than at the elementary level. Others concur. In *So Much to Say: Adolescents, Bilingualism, and ESL in the Secondary School* (1999), Faltis and Wolfe reported their effort to bring together research on adolescents, bilingualism, and ESL in secondary schools. They noted, "there was virtually no research conducted on secondary bilingual education prior to 1990" (p. 3). In their content analysis of major journals in the field of bilingual/ESL education from 1990 to 1996, fewer than 10 articles surfaced "dealing directly with the concerns of secondary-level students and programs." Journals they searched included *NABE Journal, TESOL Journal, TESOL Quarterly, Linguistics and Education*, and *Bilingual Review*. Montero-Sieburth and Batt (2001) reported a similar finding in their overview of education

models used to explain achievement of Latino students and noted, " Much of the research…is readily available for specific areas such as reading and writing, as well as bilingual education at the elementary school level, but as one scans the research for middle school and high school levels, the research tends to be descriptive and limited" (pp. 355–356). Faltis and Wolfe pondered, "Why so few studies, with so much to say?" They speculated that because the original purpose for bilingual and ESL education during the 1960s was to carry out the legal mandate to equalize educational opportunities for public school students and the majority of non-English-speaking children were in the elementary grades then, that is where programs were developed and research became focused. Few districts/schools forecast the need to continue programs for ELLs into the upper grades. Districts/schools may have assumed that by the time students reached middle or high school, students would have acquired sufficient English to participate in an all-English environment (Faltis & Wolfe, 1999, pp. 3–4).

In addition, the research is limited in terms of study design and reporting. Given the few controlled studies, many factors that may influence student achievement are not accounted for or discussed. Student, staff, and school characteristics are, generally, not accounted for as variables. Frequently, the program models studied are ill-defined and their quality of implementation unnoted. The overall historical and social contexts in which some studies occur are overlooked or ignored. The nature of the school setting, staff qualifications and patterns, and student characteristics may be important variables that influence student performance. Whether a school is urban or rural, whether faculty speak the ELL students' L1, and whether the students are low income, for example, may have a significant effect on design and/or implementation of a program or practice. In our annotations we have been deliberate in describing program models, intervention features, and school/staff/student characteristics when the literature offers it, but administrators and teachers seeking more detailed program, context, and demographic information may ultimately find they need to obtain this knowledge directly from the literature authors (some available through Web inquiries).

Focus Question: What findings are described?

The findings are organized and presented by four types: teacher classroom behaviors/attitudes, student behaviors/attitudes, schoolwide components, and student academic/achievement performance. About 20 studies provide varied findings related to secondary-level ELL student academic/achievement performance. These have been defined and presented in the text and in Table 5.

Findings regarding teacher classroom behaviors/attitudes

Teacher isolation appears to hamper knowledge sharing between teacher specialists for ELLs and content-area teachers and may also hamper staff members from sharing a strong commitment to assist ELL students schoolwide. Ongoing interactions in schools between

teacher specialists for ELLs and mainstream subject-area teachers may enable more effective instructional strategies, both in ESL and mainstream classrooms (Quinoñes Feliciano de Benitez, 2001; Lucas et al., 1990).

Some professional development appears to change some teacher attitudes about ELL capabilities. Castaneda (1992), for example, studied a yearlong training program of secondary social studies teachers who received professional development in cooperative grouping strategies and sheltered/ELD techniques; at year's end, teachers said trainings had affected their "ways of seeing" LEP students; this had an "informal impact" on placement of several students during the academic year.

Teacher pedagogical behaviors in the classroom also seem to affect English acquisition. How instruction is provided to learners may influence acquisition. For example, the following factors may affect English acquisition: the amount of interaction between teachers and students and among students, how negative and positive feedback is given, attentiveness to assisting students' academic vocabulary development so they can become part of academic "discourse communities," and the sequencing or scaffolding of content (Ellis, 1994; Lucas et al., 1990; Ortiz, 2001; Rosebery et al., 1992).

Tracking may also affect both the attitudes of teachers and the ELLs' second language experience. Some ELLs who are tracked into low academic-ability classes may feel "co-opted" and experience different, diminished L2 language environments than students who are not tracked into low-ability classes. Immigrant students may fare better within the school in negotiating their way to higher academic-ability classes and with their teachers, due to their aspirations (Harklau, 1994).

Teachers valuing ELL students' and families' language and culture appears to be an important factor. Lucas (1993) summarized this as a finding across studies that examined secondary-level programs in at least 15 high schools and districts in at least six states. Walqui (2000b) argues students' backgrounds should be the point of departure and anchor in teaching.

Findings regarding schoolwide components

Generally, secondary schools have served language-minority students without sufficient understanding of effective ELL practices or strategies. Lucas (1993), who looked at a number of earlier studies and reports, listed ways the literature found secondary-level school programs wanting:

- Failing to recognize the diversity of ELLs and complexity of their needs
- Lack of support services
- Shortage of trained teachers
- Inadequate assessment of students' language skills and content area skills

- Lack of coherent/comprehensive planning and coordination
- Insufficient content course offerings
- Lack of appropriate curriculum materials
- Failing to make ELLs' needs a priority

Lucas (1993) and Walqui (2000b), who has focused specifically on secondary ELL concerns, believe that the following features, which make schools effective for most students, also generally support ELLs regardless of program or approach:

- A positive, safe, inclusive, and caring school climate
- Adequate funding
- Quality leadership
- Professional development for teachers
- Effective instructional strategies
- Linked curriculum and assessment
- High expectations for all students
- Flexibility in scheduling
- Communication with and involvement of parents/community (Lucas, 1993; Walqui, 2000b)

Additional school factors appear to support ELLs in their language acquisition and retention. Here are some noted in specific sources reviewed:

- Teachers and other influential adults who speak students' home language are in the school (Neumann, 1996)

- District/school creates a climate that empowers ESL staff to implement best practices of their specialty and enables ESL staff to share expertise/provide professional support to other teachers (Montecel & Cortez, 2002)

- Flexibility in curriculum, both in content (relevant to age, abilities, interests, home culture of each student) and in delivery (project-based, authentic; coherent, not fragmented) (Walqui, 2000b)

Findings regarding student behaviors/attitudes

- Students in some ELL programs may have higher self-esteem and more favorable attitudes toward school (Covey, 1973; Garcia, 1992).

- ELLs' attitudes about academic content areas and their self-perceptions about their lack of ability, however, may not be changed through participation in a program targeted to their needs. Gibson and Hurd (2002) studied male student disengagement in ELL classes, for example, and found the boys' uncertain social status as Hispanics in the school was a determining variable that influenced achievement.

Focus Question: What are the specific student performance findings?

This question has two major components:

1. Does teaching ELL students in their native language as well as English result in increased student performance?
2. Are there specific programs, practices, and/or interventions that have a positive impact on student performance?

Findings at the secondary level about ELL programs/practices in relation to student performance

In regard to teaching students in native language as well as English, a number of studies (Costantino, 1999; Cummins, 1998; Gándara, 1997; Greene, 1998; Linquanti, 1999; Montecel & Cortez, 2002; Thomas & Collier, 2002) report that some native language instruction has a positive impact on certain students' academic performance. However, some of these studies also report that the gains are less significant or they vary by content area. Covey (1973), for example, found ninth-grade ELLs did not achieve significantly higher in math. Thomas and Collier (1998) found that former ELLs' English, social studies, and science scores were still less than those of regular students.

Findings on effects of ELL program models/strategies at the secondary level were mixed. Some literature reviewed reported that students in an ELL program exhibit higher achievement than like students in mainstreamed classes; however, other researchers reported no significant increases in achievement. The research with mixed results reviewed is inconclusive on why the results are mixed. Researchers generally say outcomes are influenced by other variables (student attitudes toward school, school size, and student economic background are mentioned). Researchers often indicate that the variables other than program type influence student performance and need further study. Below is a listing by authors of findings reported specifically related to ELL secondary-level student performance:

- Abella et al. (2003): Found that mathematics skills achievement tests carried out in English are not valid measures of achievement for ELL students. (Correlational study; sample size: 2,025 students)

- Bali (2003): Focus is on race (African American and Hispanic) and test scores. Finding: overall, school factors have a small effect by race on test scores. School policies that result in closer attention to student needs have a positive influence on minority scores. (Multivariate analysis; sample size: 23,485 students K–12)

- Chamot (1995): Cognitive academic language learning approach (CALLA) model and comprehensive processing (math and science instruction in middle and high

schools). Evaluations of a mathematics program showed consistently above-average achievement in the four years prior to study and more gains than the national comparison group in computation, concepts, and applications. (Program description/evaluation; sample size: 860 students)

- Costantino (1999): Findings: Initial reading instruction in immigrant ELL's first language is not detrimental to English acquisition; a positive correlation between long-term achievement and support in first language. (Synthesis of studies)

- Covey (1973): Studied English, math, and reading achievement of ninth-grade Hispanic students in Phoenix, Arizona. Major finding: ELL students in a bilingual education program achieved significantly higher in English and reading than counterparts in regular school program; they did not achieve significantly higher in math. (Multivariate model; sample size: 200 students)

- Cummins (1998): Synthesis of studies. Findings: There is a positive relationship between ELL academic development in first and second languages when ELLs are encouraged to develop both languages. There is no clear-cut agreement on which language (L1 or L2) to use in reading instruction.

- Gándara (1997): In bilingual education setting, instruction in primary language does not impede English acquisition; it may confer some advantages. In early reading of English, awareness of phonemic structure in primary language is positively associated. (Synthesis of studies; sample size unknown)

- Garcia (1992): Study of academic achievement in a middle school. Finding: ELL students taught by integrated methods showed significant reading, writing, vocabulary, and math gains compared to similar students who were not so taught. (Synthesis; sample size: 87 Hispanic students)

- Greene (1998): Meta-analysis of bilingual education studies (11 studies included; two of these were at the secondary level [Covey, 1973; Powers, 1978]; five consisted of random designs). Major finding: ELL students taught using at least some of their native language perform significantly better in English than similar students taught only in English. Specifically, bilingual programs resulted in significant student achievement gains in reading; math gains measured in Spanish were significant; math gains measured in English were not significant. (Meta-analysis; sample size: 2,719 students)

- Henderson and Landesman (1992): Study of mathematics and thematically integrated instruction (TII). Major finding: Students receiving TII surpassed control students in mathematical concepts and applications. There were no significant differences in computational skills, student attitudes toward math, or student attitudes toward math and certain self-perceptions that were measured to understand academic motivation

more clearly. (Experimental study in year one; quasi-experimental in year two; sample size: 204 Hispanic students in TII)

- Linquanti (1999): Synthesis of other major studies. Finding: Students with strong native language proficiency are more likely to develop greater English proficiency; native language instruction bolsters ELLs' academic success. (Sample sizes: various)

- Montecel and Cortez (2002): Study of promising bilingual programs based on quantitative and qualitative academic achievement. Included 11 schools in nine states (two high schools, one middle school). Data not broken out by grade levels. Provides 13 indicators of successful (defined by student performance) programs (see annotation for list of indicators). (Multivariate models; sample sizes: unknown)

- Northwest Regional Educational Laboratory and National Clearinghouse for Comprehensive School Reform (2003): A national catalog of models that have demonstrated effectiveness in improving academic achievement. Eight models (of 26) noted as having a positive impact on ELLs; these are listed and briefly described in the annotation. (Program descriptions/evaluation)

- Olsen and Jaramillo (2000): Study of restructuring of a rural high school in California with more than half ELL Hispanic immigrant students: three class periods (98 minutes each) per day; weekly tutorials in each course; teachers work with smaller numbers of students and greater teacher collaboration. Findings: After five years, ELL students were gaining English proficiency faster than previously; student retention was higher. (Case study; sample size: unknown)

- Reed and Railsback (2003): Two rural high schools are profiled. ELL reading and math scores increased. More than 20 schoolwide and classroom-based recommendations are provided, such as using sheltered English instruction, peer tutoring, full-time bilingual aides, alternative assessments, hands-on lessons, full-time ELL teachers, and Spanish classes for all teachers. (Program description; sample size: unknown)

- Reyhmer and Davison (1992): Synthesis of other studies about math, writing, and science of Native American ELL students in middle and high schools. Finding: Students will perform better in these content areas if teachers respect and are knowledgeable of their students' native culture and emphasize writing and other language activities. (Synthesis; sample size: unknown)

- Rosebery, Warren, and Conant (1992): One-year study of Haitian Creole bilingual program and the impact of a collaborative inquiry approach in teaching science. Major findings: Student science knowledge increased as well as their ability to organize reasoning around hypotheses and experiments. (Case study; sample size: 20 seventh- and eighth-grade students; 22 high school students)

- Slavin and Cheung (2003): Synthesis of K–12 ELL reading programs that included four secondary-level studies involving use of Spanish newspapers, magazines in reading classes. Findings: No significant differences were found at the high school level (grades 9–12), but one study of seventh- and eighth-graders found significant English reading gains for the seventh-grade control groups.

- Thomas and Collier (2002): Longitudinal study (1996–2001) of a variety of education services provided for language-minority students K–12 in a broad range of public schools across the United States. (Multivariate model; sample sizes listed with secondary sites below). Thomas and Collier's secondary-level findings were:

  a. Large urban area, grades nine–11. Major finding: Students from transitional bilingual programs/contexts scored highest of ELL students in both math and reading. (Sample size: more than 100,000 students)

Table 6: Thomas and Collier (2002) Findings, Large Urban Area/Grades 9–11

NCE Results	Mean Scores
Math (Stanford 9):	
Native English speakers in mainstream	47
Transitional bilingual education	46
ESL monolingual, no first language support	45
ELLs with parents who refused ELL programs	35
Reading (in English) (Stanford 9):	
Native English speakers in mainstream	47
Transitional bilingual education	46
ESL monolingual, no first language support	40
ELLs with parents who refused ELL programs	24

b. Study of mid-size urban area, 11th-grade students. Major finding: Students no longer designated ELL scored well below native English-speaking 11th-grade peers in reading, social studies, science, and writing. (Sample size: just under 2,000)

Table 7. Thomas and Collier (2002) Findings, Mid-Size Urban Area/11th grade

NCE Results	Mean Scores
Reading (in English):	
Native English-speaking students	62
Former ELLs	38
Social studies:	
Native English-speaking students	65
Former ELLs	44
Science:	
Native English	68
Former ELLs	48
Writing:	
Native English	66
Former ELLs	48

Focus Question: How does the literature align with a framework of ELL instructional models?

Summary: About 60 percent of the literature is classified and organized by eight instructional models (bilingual immersion, transitional bilingual education, two-way bilingual, pullout, structured immersion, submersion with primary language, dual language immersion, and indigenous immersion). The remaining 40 percent is classified as either "unknown" (not specified) or "other" (unique as a type).

An ELL program model may be only as effective as the whole school within which it is implemented. More general school and classroom factors may be associated with effective secondary ELL programs. As Montague (1997) notes, "the issues we face when we establish…programs for our schools are of incredible importance….In many cases, programs are initiated by well-intentioned practitioners and administrators too quickly, without many of the key components…that are ideal for success." Montague identifies criteria for schools to consider prior to implementing any ELL program model or approach:

- There should be a well-understood definition of the program to be used
- It may be best to phase in the program gradually
- The instruction that is developed should be adapted to students in the classrooms of the particular school
- The school and teachers should be committed to attaining bilingual/ELL education training
- Quality materials in the language(s) of instruction should be used
- The program should have the support of dedicated administrators who understand both the research and community needs

Then, quality implementation at the program and instructional level depends on a number of factors. Literature reviewed describes these factors as key to program and classroom quality:

- Administrative support for the program
- Instructional personnel who are qualified to implement the program
- Permeating, purposeful use of language in classrooms, based on students' language development in English and home language
- Use of learning time in an effective manner

(August & Hakuta, 1997; Garcia, 1991a,b; Lucas, Henze, & Donato, 1990; Pease-Alvarez, Garcia, & Espinosa, 1991; Tikunoff et al., 1991)

ELL students at the secondary level are more likely to achieve when a school's curriculum/classes:

- Provide students with opportunities to learn and demonstrate a variety of skills, abilities, and knowledge (i.e., native-language development, ESL, subject-matter techniques, and knowledge) (Lucas, 1993b)

- Offer levels of difficulty and sophistication among available classes (i.e., advanced as well as low-level classes) (Lucas, 1993b)

- Use multiple languages and contexts for teaching content (i.e., native-language instruction, content ESL, and specially-designed instruction in English) (Lucas, 1993b)

- Link assessments to instruction (in both English and subject areas) through timely feedback to teachers, students, and parents, both from standardized assessments and frequent, ongoing classroom-level assessment so intervention is timely and ELLs can learn English and subject-area knowledge (Gándara, 1997; Genesee, 1999; Ruiz-de-Velasco & Fix, 2000)

- It is important to use developmentally appropriate instructional materials; secondary-level ELLs may be low in English proficiency, but cognitively able and sophisticated (Genesee, 1999)

It is clear from reviewing the literature that no one program is the best for all secondary-level ELL students or schools. Student and staff characteristics and local context are important. ELL students are diverse, and their needs are also diverse. Just as students are diverse, teachers vary in their backgrounds, abilities, and training. School and community contexts also vary. In a particular school or classroom, there may be just a few or a large number of students whose first language is other than English. The school may be in an urban environment, while the ELLs who attend have immigrated from preliterate rural communities or, in another case, the ELLs in a suburban district may come from highly literate refugee families from war-torn areas halfway around the globe. Each of these situations may indicate a different approach (Gándara, 1997).

Rather than specifying a program model, a number of the ELL authors recommend that teachers and administrators understand and implement principles of general school improvement and classroom effectiveness to make a long-term positive impact on all student behaviors and performance (August & Hakuta, 1997; de Felix et al., 1993; Gándara, 1997; Ortiz, 2001; Walqui, 2000a) Briefly, the principles mentioned in this literature are:

- Quality, ongoing staff development and home-parent-community school involvement and support systems

- Effective schoolwide climate, effective school leadership, a quality learning setting, articulation and coordination within and between schools, some use of native language and culture in the instruction of ELL students, value placed on diversity (especially linguistic and cultural backgrounds of students)

- Curriculum that includes both basic and higher-order skills, explicit skills instruction, opportunities for student-directed activities, cooperative learning, use of instructional strategies that enhance understanding, peer coaching, higher-level thinking, opportunities for practice, systematic student assessment, and problem solving

- Effective instruction: Many studies stated that there is no one way to educate language-minority students

A variety of approaches are important because of the variety of contexts faced by schools. School staff and communities should consider the conditions under which one or some combination of methods is best suited and then adapt these to meet their circumstances. They should also collect, analyze, and monitor student performance data in relation to these adaptations. For example, Tikunoff et al. (1995) describe a "Structured Alternative Instructional Program" with the following characteristics:

- Effective instructional leadership, particularly by the principal
- High expectations by all staff for student academic performance
- Schoolwide emphasis on basic skills and higher order skills
- A safe, orderly school and classroom setting
- Regular and valid assessments of student academic growth

In addition, there are some student variables that appear to be associated with student academic success in programs:

- Students' age at arrival: ability to become English proficient varies depending upon age of arrival (Collier, 1987 [study included 1,548 students]; Larsen-Freeman, & Long, 1991).

- Students' level of schooling and literacy levels before arriving is a variable. Krashen indicated that students' ability to succeed in school in the United States was affected, at least in part, by being voracious readers, having access to books, being literate in their L1s, and having knowledge of academic content in their L1s (Krashen, 1997).

- Students' learning styles and strategies (Brown, 1994; Larsen-Freeman & Long, 1991; Reid, 1995).

- Students' personality factors (Brown, 1994; Larsen-Freeman & Long, 1991).

- Students' individual abilities to assimilate to the culture (Mace-Matluck, Alexander-Kasparik, & Queen, 1998).

Focus question: What next steps should be taken by the ELL research community?

After conducting a review of research concerning Latino student achievement, Montero-Sieburth and Batt (2001) discussed some future research and research policy trends in relation to Latino student achievement that are relevant for schools and across ELL groups, generally. They suggested that researchers should not define an "ideal" program or focus on English versus minority-language use. Instead, they call for defining "factors," "best practices," and "positive learning opportunities" for ELL students and for determining how to link [Latino] parents to schooling as "central players" in the education of their children

(p. 363). This vision is less interested in finding the "right" model than in documenting and understanding the broader "clusters of factors" that support ELLs learning English while maintaining home culture and language as assets.

Given the continuously rising numbers of students speaking languages other than English, improved strategies for reaching these students is critical. We need additional, well-designed longitudinal studies, particularly empirical studies, concerning ELL approaches related to student performance at the secondary level to determine what may work. These studies should include comparison groups with random assignments when possible, pre- and post- measures of student outcomes, and advanced statistical modeling, such as multivariate analysis. For clarity, ELL programs, practices, and strategies must be better defined and described in such studies. Student pre- and post- assessments in English, as well as specific content assessments should, when possible, use the same or comparable measures (i.e., NAEP [National Assessment of Educational Progress], etc.) and/or include new state-level assessments being implemented under the NCLB requirements. Researchers should more clearly describe and define their schools and classroom interventions. These should be based on a combination of indicators of process (for example, curriculum, leadership, school climate, or instructional strategies) and outcomes (for example, performance-based achievement measures, gains on standardized tests, or lower dropout rates).

In addition to the recommendations above, the Committee on Developing a Research Agenda (August & Hakuta, 1998) on ELL identified these specific issues that should be considered by those conducting and/or planning further ELL research:

- Analyze the relationship and impact of other schoolwide improvement models of strategies that have an impact on ELLs. They should explore whether these changes are positive and whether and how they affect ELLs.

- Identify attributes of effective middle and secondary schools and classrooms serving ELLs to determine if there are significant differences.

- Assess the effectiveness of newcomer programs. These should assist school-level staffs and policymakers in deciding whether such programs are effective, whether they can be easily adopted or adapted, and/or whether they can be home-grown.

- Identify linguistic and cultural adaptations that may be needed. Are there methods or strategies that offer ELLs better access to the academic and social opportunities that native English-speaking students have? If so, these may include schoolwide and classroom-level adaptations, such as the organization of classes to give ELLs optimal access to subject matter knowledge and English and classroom use of particular teaching strategies and classroom composition.

- Identify effective strategies for involvement of families, parents, and the community. Identify the challenges to such involvement and engagement, the potential benefits, and successful approaches.

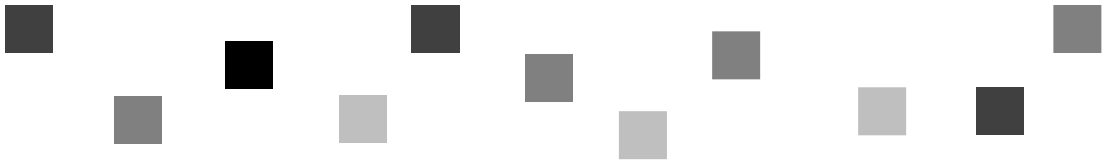
- Study the school improvement and change process at the beginning and identify the full processes and outcomes. Identify the challenges, factors, successes, difficulties, and results. Identify whether such strategies are transferable to other schools and which should be modified because of local circumstances.

To summarize

This review consisted of ELL research and literature related to secondary schools. The literature ranges in type from professional judgment to quasi-experimental; no studies are strictly experimental in their design. (Henderson and Landesman [1992] used experimental design in the first year of their study and quasi-experimental in the second year.) There is a need for research that involves more rigor and control for more of the many variables that affect student performance. Rigorous studies focused on the secondary-level ELL practices and strategies are especially needed, as most research has focused on the elementary level.

The literature shows some features that appear to support ELL student performance in a number of programs and models. No program or practice is a panacea in and of itself because schools and ELLs vary greatly. Because students, schools, and communities vary in their characteristics and needs, regional and district policymakers and decisionmakers in middle, junior high, and high schools must attend to the specifics in the research and the annotations of literature provided. An urban New York City high school may have students speaking languages from all over the world, while a small town in Idaho has Russian-speaking students whose families received sponsorship from a local church to immigrate and settle in the community. Instructional needs may be very different in these cases, and school/faculty knowledge about ELLs and access to professional development and community service resources are very different, as well. Understanding what models exist and determining their characteristics is important, but equally important is what the research says about how and how effectively models are actually implemented in specific educational settings. It is also necessary to study promising factors and best practices as well as models.

To comply with the No Child Left Behind Act, it is important for educators to be attentive to significant findings in the quality research. The research efforts mentioned above must be pursued to meet NCLB's "burden of proof" that a school program is based on scientifically based research. The ultimate purpose is more than federal and state mandates, however. The better the research and understanding about ELLs, the closer our schools will be to enabling all student to achieve in school and beyond.



Appendix A

Annotated Sources

Abella, R., Urrutia, J., & Shneyderman, A. (2003, February). *An examination of the validity of English language achievement test scores in a LEP student population*. Paper presented at the annual meeting of the National Association for Bilingual Education, New Orleans, LA.

Literature type: Correlational studies

Type of instructional program model: Unknown (Not specified)

School/student/staff characteristics: The sample for the study reported here included 2,025 Hispanic fourth- and 10th-grade LEP students recently exited from ESOL.

Summary: This paper reports on a study of the various factors that have been shown to affect LEP performance on English language achievement tests. Six factors have been identified:

1. Length of time receiving English language instruction
2. Level of English language proficiency
3. Language dependency of content area tested
4. Grade level of LEP students
5. Home language literacy
6. Socioeconomic/background variables

A sample of 2,025 Hispanic fourth- and 10th-grade LEP students recently exited from ESOL (within the previous two years) was selected for the study. The students were selected by a random sampling process to be representative of the district's LEP student population. A total of 1,821 students were tested with English language (Stanford 9) and Spanish language (Aprenda 2) standardized achievement tests and also completed a 16-item multiple-choice questionnaire that inquired about their articulation, prior education, and SES. Additionally, background data on all students were obtained from the district database.

Major findings: Following are summaries of the results of the study as they relate to each factor:

1. **Length of time receiving English language instruction**: LEP students, for the most part, were not able to exhibit their mathematics skills on English language achievement tests, regardless of the number of years they received ESOL instruction.

2. **Level of English language proficiency**: Students in both the fourth and 10th grades, LEP and recently exited LEP, performed better in the Spanish language test than in the English test.

3. **Language dependency of content area tested**: Students who were LEP, or who were recently LEP, performed better in those achievement test components that are less dependent on language.

4. **Grade level of LEP students**: Older LEP students appeared to acquire language at a slower rate. Older LEP students, on the other hand, demonstrated some of their knowledge and skills on sections of achievement tests, such as math, that are low in language content.

5. **Home language literacy**: English language achievement tests are not valid measures for LEP students in general and for secondary students who have recently become language proficient. Results also show that achievement tests particularly discriminate against students who have high levels of home language literacy.

6. **Socioeconomic/background variables**: Variables related to the student's or the family's prior education were the most predictive of test performance.

Major implication(s)/recommendation(s): The authors conclude that the results suggest that English language achievement tests are not valid measures of academic achievement when applied to the LEP student population. Additionally, achievement tests are often not valid measures of academic knowledge when applied to students who have recently been classified as English language proficient. Achievement tests appear to be particularly unable to accurately measure the content area skills of secondary students and of students with strong home language literacy backgrounds.

Adger, C.T. (2000). *School/community partnerships to support language minority student success* (CREDE Research Brief No. 5). Santa Cruz, CA: University of California, Center for Research on Education, Diversity & Excellence. Retrieved September 24, 2003, from www.cal.org/crede/pubs/ResBrief5.pdf

Literature type: Case studies

Type of instructional program model: Unknown (Not specified)

School/student/staff characteristics: The study reported here considered at-risk language-minority students, including immigrants and the American-born children of immigrants. It also looked at three types of community-based organizations (CBOs): ethnic organizations, organizations whose only function is a school partnership, and multipurpose service organizations. The majority of CBOs described in this report serve clients who are all or nearly all English language learners. One-third serve only Spanish speakers. The others serve multilingual populations in which Spanish speakers are the most numerous, followed by Vietnamese, Haitian Creole, Chinese languages, Lao, and Tongan.

Summary: This brief reports on a study that examined the partnerships of schools and community-based organizations (CBOs), groups that help people obtain health, education, and other basic human services. Most are nonprofit organizations. Specifically, researchers collected descriptive data on partnerships that promote the academic achievement of language-minority students in ways that go beyond the schools' traditional methods. A total of 32 CBOs completed a survey and 17 of those partnerships hosted a site visit. The CBOs were scattered across the country. The report presents some details on CBOs in Dade County, Florida; New York, New York; San Jose, California; Los Angeles, California; Seattle, Washington; and Pacoima, California. No mention is made of how the data were treated.

Major findings: The school/CBO partnership is far-reaching. It touches students at every age and fulfills a broad range of functions. Partnerships are highly variable in terms of who the partners are, how they relate to each other, and what contributions each brings. School/CBO partnerships adapt to the school's academic program. Successful partnerships—those that effectively help language-minority students achieve school success—are distinguished by adequate resources, partnership and program flexibility, responsiveness to the clients, and provisions for evaluation.

Major implication(s)/recommendation(s): School/CBO partnerships help to broaden the base of support for language-minority students. School that use and accept the resources of CBOs can move toward more successfully retaining and educating at-risk language-minority students.

American Federation of Teachers. (2002). *Teaching English-language learners: What does the research say?* (Educational Issues Policy Brief No. 14). Washington, DC: Author. Retrieved September 24, 2003, from www.aft.org/edissues/downloads/policy14.pdf

Literature type: Professional judgment

Type of instructional program model: Unknown (Not specified)

School/student/staff characteristics: Presents a selected collection of data on English language learners and teachers.

Summary: This brief synthesizes research on English language learners, providing only sketchy information. The brief includes background, recommendations, some facts and figures on English language learners, suggestions for choosing a program model, and 13 references.

Major findings: Among the findings mentioned here are the following: It is difficult to synthesize the program evaluations of bilingual education because of the extreme politicization of the process. There is little value in conducting evaluations to determine which type of program is best. In 2000, there were an estimated 4.1 million ELL students in U.S. schools. Native speakers of Spanish comprise the largest population of ELL students. A large percentage of ELL students score lower than their classmates on standardized reading and math tests. Only 30 percent of teachers with ELL students in their classes have received any training in teaching English language learners. When choosing a program model for teaching ELL, administrators must bear in mind demographics, student characteristics, and available resources.

Major implication(s)/recommendation(s): Among the recommendations mentioned here for teaching ELL are the following: The federal government should allow school districts to use a variety of bilingual/ESL education programs. The goal of bilingual/ESL programs should be the earliest possible acquisition of English language skills. Place students in bilingual/ESL programs only after appropriate assessment. Increase funding for bilingual/ESL programs. Use paraprofessionals and educational assistants to enhance the teacher's ability to provide appropriate instruction to students.

Anstrom, K. (1997). *Academic achievement for secondary language minority students: Standards, measures and promising practices*. Washington, DC: George Washington University, National Clearinghouse for Bilingual Education. Retrieved September 24, 2003, from www.ncela.gwu.edu/ncbepubs/reports/acadach.htm

Literature type: Program descriptions

Type of instructional program model: Submersion with primary language support

School/student/staff characteristics: Secondary-level language-minority (LM) students in mainstream classes are examined here. Also included are teacher educators at the George Washington University in Washington, D.C., and a 10th-grade biology class and an unspecified social studies class that contained both native English-speaking and LM students in an unnamed suburban high school.

Summary: This document summarizes, analyzes, and integrates findings from relevant research of the education of language-minority students in content areas. It focuses on three key questions:

1. What does the relevant literature on content-area instruction of linguistically and culturally diverse learners (LCDLs) contribute to the theory and practice of standards for LCDLs?

2. What does the literature contribute to the theory and practice of measures of achievement, proficiency, and academic literacy for LCDLs?

3. What does the relevant literature contribute to the field of promising practices in content-area instruction for LCDLs?

The intent of this document is to offer teachers and teacher educators insight into how mainstream classroom instruction can be designed and implemented to enhance the academic achievement of language-minority students. The study focused on the instruction of secondary-level LM students in mainstream social studies, science, math, and language arts classes. In addition to a search of the literature (52 references are cited), data were collected from interviews with teacher educators and from classroom observations. The study also examined national content standards documents written for the content areas and related the ideas and recommendations contained in them to what is known about effective educational practices for LM students. The report is organized into four sections representing the four content areas. Within each section, standards for the content area in question were examined and related to what research indicates is the best practice. Throughout the report are vignettes of actual classroom experiences and comments by teacher educators. Also included are sections on promising practices in the assessment of LM students within the content areas and the preparation of mainstream teachers to work with these students.

Major findings: Following are some of the theories and best practices for teaching language-minority students: Thematically organized curriculum works well with LM students. Effective social studies curriculum emphasizes depth of coverage over breadth. Flexibility is a key factor in successful curriculum development for and instruction of LM students. LM students need frequent opportunities to interact with their native English-speaking peers in academic situations. Using historical artifacts is particularly effective with students from other countries who may be able to share items that provide a different perspective on history. Effective science education for LM students provides a variety of venues through which a student can learn a particular science concept. By exploring a smaller number of science concepts in different ways, LM students have the opportunity to learn important content in depth and acquire necessary skills. Command of mathematical language plays an important role in the development of mathematical ability. LM students learn math best when problems relate to real-life situations. Portfolios are a useful assessment tool for language arts classes. Teacher education is the key to improving mainstream instruction of LM students.

Major implication(s)/recommendation(s): Following are some of the recommendations for teaching content to language-minority students: Content standards should reflect the best available knowledge about how LM students learn and how the content can best be taught to them. Standards should emphasize diversity. Offer oral history. Involve students in scientific inquiry. Adapt written materials for LM students. Teach problem-solving and learning strategies. Integrate language and content learning with learning strategy instruction. Teach the language of mathematics. Put students' needs and interests first. Encourage exploration and reflection through journal writing. Integrate reading into mathematics instruction. Vary instructional methods. Implement a whole language approach.

August, D., & Hakuta, K. (Eds.). (1997). *Improving schooling for language-minority children: A research agenda*. Washington, DC: National Academy Press. Retrieved September 24, 2003, from www.nap.edu/books/0309054974/html/

Literature type: Program descriptions

Type of instructional program model: Unknown (Not specified)

School/student/staff characteristics: Not applicable

Summary: This lengthy report presents a study on developing a research agenda on education of English language learners and bilingual students. It contains a broad range of recommendations for research directions and priorities, based on the substantive and methodological strengths and weaknesses in each of eight topical areas and in the research infrastructure. Of particular interest are three chapters. Chapter 6, "Program Evaluation," examines what is known from program evaluations conducted to date and identifies research needed in this area. It focuses on evaluation of various models for educating English language learners. Chapter 7, "Studies of School and Classroom Effectiveness," focuses on empirical studies that attempt to identify school- and classroom-level factors related to effective schooling for English language learners from early education programs through high school. Chapter 11, "Priorities for Research," presents four principles that guide the identification of research priorities and provide coherence to a proposed research agenda.

Major findings: This study of research on English language learners and programs provides the following research priorities:

1. Priority should be given to important topics to which insufficient attention has been paid, but for which there already exist promising theories and research methodologies so that sound research can be conducted in the immediate future.

2. Priority should be given to addressing important gaps in population coverage, such as certain age or language groups for whom the applicability of current findings from a more limited population can be tested.

3. Priority should be given to legitimate research questions that are of strong interest to particular constituencies, including educators, policymakers, and the public at large.

4. Priority should be given to endeavors that would build the nation's capacity to conduct high-quality research on English language learners and programs designed to serve their needs.

Major implication(s)/recommendation(s): Many and various

Bali, V.A., & Alvarez, R.M. (2003). Schools and educational outcomes: What causes the "race gap" in student test scores? *Social Science Quarterly, 84*(3), 486–507.

Literature type: Multivariate models

Type of instructional program model: Unknown (Not specified)

School/student/staff characteristics: African American, Hispanic, and white students from the Pasadena Unified School District in California participated in this study. The district was racially more diverse, poorer, and more disadvantaged than the statewide student body. The district and the state had comparable levels of English language learners. In terms of academic performance, the school district lagged behind the state in every grade. (Following data collection, the typical student was found to be a fifth-grade male, non-LEP, who lived with both parents, had mid-SES, and participated in the free and reduced-price lunch program.)

Summary: African American and Hispanic students often have lower test scores than white students at all levels of education. The study reported here examined whether school factors affect racial groups differently, helping reduce the test score gaps, and whether school policies benefit one racial group at the expense of another. For the study, individual-level test score and personal data were collected on some 23,485 students during the 1999–2000 school year in the Pasadena (California) Unified School District. To test the effects of school and family factors by race on test scores, researchers estimated four separate regression models: all students; Hispanics; African Americans; and non-minorities. All models were estimated using feasible generalized least squares assuming school-level heteroskedasticity.

Major findings: Overall, school factors have a small differential effect by race on test scores. The school policies that have a positive influence on minorities' scores often involve an environment in which closer attention is paid to the needs of students. Most school policies have a small effect on test scores, affecting all racial groups in a similar manner without distributing benefits across groups. For the typical student, the Hispanic-white gap was –0.6 points in reading and –3.3 points in math. That is, Hispanic students tested below non-minority students after proper controls. The African American white test gap for the average student was –6.4 points in reading and –10 points in math. The race gap, then, was vastly reduced for Hispanics, particularly in reading, but not so for African American students.

Major implication(s)/recommendation(s): Because the analysis is based on only one school district, generalizations to other districts should be taken with caution. Only by developing comparable studies with more variance across schools can researchers produce a more certain picture of the educational policies that might be enacted to reduce race gaps in student achievement.

Berman, P., Aburto, S., Nelson, B., Minicucci, C., & Burkart, G. (2000). *Going schoolwide: Comprehensive school reform inclusive of limited English proficient students: A resource guide. The Benchmark Study: A national study of Title VII comprehensive school programs* (NCBE Resource Collection Series Rep. No. 17). Washington, DC: George Washington University, National Clearinghouse for Bilingual Education. Retrieved January 12, 2004, from www.ncela.gwu.edu/ncbepubs/resource/resourceguide.pdf

Literature type: Program descriptions

Type of instructional program model: Unknown (Not specified)

School/student/staff characteristics: A wide range in grade level, native language, and language and academic skill sets of LEP students is mentioned in the examples. Also included in the examples is a wide range of school and staff characteristics.

Summary: This guide is meant to be a resource for conceptualizing, implementing, and measuring the success of reform efforts aimed at meeting the national mandate of all students, including language-minority students, to achieve high academic standards.

The guide provides those interested in comprehensive school reform opportunities to compare a school's work against an external research-based model; to judge the progress of a school's work against an external standard grounded in the educational field's theoretical and empirical understanding of exemplary schools; and to assess a school's level of commitment and degree of progress in serving language-minority students. It was prepared to address the following questions: What does comprehensive schoolwide reform mean for our school? How do we know where our school currently stands in terms of comprehensive reform and how do we know whether we are making progress? What do we need to focus our reform efforts on so that our school reaches the goal of all our students achieving to a high level?

The guide contains a framework for understanding comprehensive reform; rubrics for assessing a school's progress; examples of each dimension from elementary and secondary schools; evidence checklists; rubric worksheets; a literature review; and activities for using the tools contained in the guide.

The study—known as the Benchmark Study—from which the information contained in this guide was developed focused on change efforts in all domains of schooling believed to give meaning to the term "comprehensive reform," which together are thought to determine how effective a school will be in enabling all its students to achieve to high standards. The study examined Title VII comprehensive school grantees as they implemented schoolwide programs to reform, restructure, and upgrade services for language-minority students within the context of schoolwide reform. (Although the guide contains examples of reforms from

schools in the study, it does not provide detailed information on sample sizes, data gathering, or analysis of data. The authors mention in a preface that "longitudinal fieldwork" was involved in the study.)

Major findings: The major findings for serving language-minority students are organized under the following domains and preliminary dimensions:

1. School vision
   - A coherent and shared vision
   - Values and beliefs about student learning
   - Connection to students' culture

2. Curriculum and instruction
   - Curriculum goals and standards
   - Meaningful curriculum
   - Instruction for engaged learning
   - Use of technology
   - Assessment and the use of data

3. Language development
   - Equity of access to core curriculum
   - Pathways to mastery of academic English
   - Qualifications of instructional staff

4. School structure
   - Schoolwide organization
   - Use of time

5. Organizational culture
   - Decisionmaking
   - Teacher collaboration
   - Professional development

6. Community relations
   - Parent and community involvement
   - External partnerships
   - Integrated services

Major implication(s)/recommendation(s): The suggested framework should help schools understand and interpret the spirit and letter of legislative mandates calling for systemwide comprehensive school reform.

Brenner, M.E. (1998). Development of mathematical communication in problem solving groups by language minority students. *Bilingual Research Journal, 22*(2/3/4), 103–128. Retrieved September 24, 2003, from http://brj.asu.edu/v22234/pdf/ar4.pdf

Literature type: Quasi-experimental

Type of instructional program model: Submersion with primary language support and bilingual

School/student/staff characteristics: The school at which the study reported here took place was located in a small urban district in Southern California. The district contained both poor and wealthy neighborhoods. The school had about 2,000 students at the time of the study; about 50 percent were minorities, primarily Hispanics. The two teachers who participated in the study were both first-year teachers. Students were in grades 9–12. Classes examined were college prep math classes. In one teacher's class, all students were fluent in Spanish and mostly of Mexican origin. More than half felt that Spanish was their best language for studying math. In the other teacher's class, half the students were Hispanic, about 75 percent claimed to know only English, and some felt comfortable studying math in both Spanish and English. The exact number of students is not mentioned.

Summary: This report describes an examination of mathematical communication and the efforts of two teachers to teach two new algebra programs to classes with language-minority students. It discusses how small groups facilitate the development of communicative competence and the value of computers for stimulating discussion. The study was conducted during the final six weeks of the academic year. Data were collected through videotapes of class sessions and researcher's field notes. Each day two groups of students were videotaped, yielding data on four groups of students for each lesson. In addition, copies of the lessons and any other handouts such as quizzes were collected. Videotapes were transcribed verbatim. Each transcription was organized into math incidents, which varied in terms of length and content. Each incident was examined for the relevant participant structure, the kind of mathematical communication, and what language (English or Spanish) was used in the interaction.

Major findings: Students in Classroom 1 engaged in very little mathematical communication, most of which was oriented toward simple answers and fragmented procedural descriptions. This is attributed to instructional decisions that minimized the use of small groups (the teacher practiced large-group instruction even more than was suggested in the teacher materials) and to students' difficulties with the mathematical register in both English and Spanish. In contrast, students in Classroom 2 engaged in extensive mathematical communication in small- and large-group formats, prompting the researcher to conclude that the opportunity to discuss math in a small group may make students feel more competent to

participate in large-group discussions. Students from both classrooms demonstrated willingness and ability to discuss mathematics when they worked in the computer lab.

Major implication(s)/recommendation(s): A longitudinal study from early in the year might give more insight into why certain accommodations are reached by the end of the year. Are students reluctant to speak up because of lack of confidence in their language skills or content skills? Might the teacher's instructional decisions inhibit more participation? Do teachers sometimes give up trying to more actively engage students? In addition, further study is needed to determine the optimal mixture of first- and second-language speakers in classes when students are developing their second-language skills while studying complex subject matter.

Castaneda, L.V. (1993). Alternative visions of practice: An exploratory study of peer coaching, sheltered content, cooperative instruction and mainstream subject matter teachers. In *Proceedings of the Third National Research Symposium on Limited English Proficient Student Issues: Focus on middle and high school issues, vol. 1*. Washington, DC: U.S. Department of Education, Office of Bilingual Education and Minority Language Affairs. Retrieved September 24, 2003, from www.ncela.gwu.edu/ncbepubs/symposia/third/castaneda.htm

Literature type: Program descriptions

Type of instructional program model: ELD (mainstream subject classes)

School/student/staff characteristics: Participants were 10 social studies teachers selected according to their rating on a point scale. (The instrument used to select the teachers is included.)

Summary: This paper describes a secondary staff development program for mainstream social studies teachers who work with LM/LEP and FEP students in mainstream contexts. The program focused on training teachers to use cooperative grouping strategies and sheltered/ELD techniques in daily teaching. The goals of this paper were to describe the training processes and nature of peer coaching and teaming processes, to explore the implementation of the instructional strategies and theory during the academic year, and to explore the potential effectiveness of training with regard to implementation. The paper includes a review of the literature on staff development for teachers of ethnically and linguistically diverse students; information about bilingual staff development, training models, and processes; the staff development model used in the program; analyses of the teaming and peer-coaching processes; descriptive analyses of selected lessons; and a detailed analysis of an instructional event and one representative lesson. Data for analysis were gathered from observations of and interviews with 10 teachers at three school sites.

Major findings: Teachers recommend that peer coaching be implemented during the academic year and not be confined to a summer training session. Most teachers indicated a willingness to engage in the teaming process. Teachers conscientiously applied the instructional strategies and theory covered in the training during the academic year. Teachers agreed that the training had affected their ways of seeing the LM/LEP students, which had an informal impact on the placement of several students during the academic year.

Major implication(s)/recommendation(s): Continue the training throughout the academic year; and extend this type of training to other subject areas.

Chamot, A.U. (1995). Implementing the Cognitive Academic Language Learning Approach: CALLA in Arlington, Virginia. *Bilingual Research Journal, 19*(3/4), 379–394. Retrieved September 24, 2003, from www.ncela.gwu.edu/miscpubs/nabe/brj/v19/19_34_chamot.pdf

Literature type: Program descriptions

Type of instructional program model: Dual language immersion

School/student/staff characteristics: The program described here was implemented in the Arlington Public Schools, a small suburban district of approximately 16,800 students in Northern Virginia across the Potomac River from Washington, D.C. A total of 20 percent of the students at the time of the examination were enrolled in ESL programs. About 75 percent of ELL students were native Spanish speakers and less than 5 percent were Vietnamese speakers. The remaining students spoke 51 other languages from all parts of the world. The majority were from low-SES families, and many students had either interrupted or extremely limited education in their native countries.

Summary: This article describes the cognitive academic language learning approach (CALLA), an instructional model that fosters academic achievement of students learning through the medium of a second language. CALLA seeks to help students by providing them with opportunities to learn grade-appropriate content; develop the speaking, listening, reading, and writing proficiencies needed for grade-level classrooms; and focus on explicit instruction in learning strategies. CALLA is based on cognitive learning theory in which learners are viewed as mentally active participants in the teaching-learning interaction. The article describes the implementation of CALLA science and mathematics programs for secondary ELL students in one public school district. It examines CALLA with respect to program goals, curriculum and materials development, teacher education, instruction, native language support, parental involvement, and assessment and evaluation. About 450 students participated in the math program and 410 students in the science program. The CALLA math program served students who tested below fourth-grade level in their native language. The CALLA science program served all middle school beginning and intermediate-level ELL students and all high school intermediate-level ELL students.

Major findings: Findings, in this case, are descriptions of the basics of the CALLA program. The program goal was to improve student achievement in both the content area and language. Teachers and project staff worked on summer curriculum projects to identify and sequence curriculum topics and to select instructional materials. Materials selection and development took place in the summer and throughout each school year, with new materials constantly added to strengthen the program. One of the keys of the program was continuing professional development for teachers. The programs featured instructional activities that promote active student participation, such as hands-on experiences, cooperative learning, and higher-level questioning. Students in the programs were provided with assistance in

their native language in a variety of formal ways, including placement testing and bilingual instruction assistants, counselors, and parental activities. The programs had a strong commitment to parental involvement that included workshops for parents that focused on math and science. The programs have used criterion-based, standardized, self-evaluation, and performance-based assessments. Evaluations for the mathematics program have shown consistently above-average student achievement in the past four years (Thomas, 1992). Not only have CALLA students made more rapid gains than the national comparison group in computation, they made even greater gains in mathematics concepts and applications.

Major implication(s)/recommendation(s): Successful CALLA program implementation requires the following measures: ongoing professional development opportunities for teachers; close collaboration between ESL and content teachers, resource specialists, and district supervisors of the content area involved; efforts to develop and improve the curriculum and to select and design appropriate instructional materials; performance assessments designed for ELL students and normed with same-aged ELL and native speakers in major content areas; frequent parental involvement activities; adequate staffing and resources; and flexibility.

Cisneros, R., & Leone, B. (1995). The ESL component of bilingual education in practice: Critical descriptions of bilingual classrooms and programs [Editors' introduction]. *Bilingual Research Journal, 19*(3/4), 353–367. Retrieved September 24, 2003, from www.ncela.gwu.edu/miscpubs/nabe/brj/v19/19_34_cisneros.pdf

Literature type: Professional judgment

Types of instructional program model: Bilingual immersion; dual language immersion; ESL pullout; Canadian French immersion

School/student/staff characteristics: As background information, this article provides a demographic sketch—relevant at the time the article was written—of linguistically and culturally diverse learners in the United States. It also provides some projections: By 2040, the Hispanic population will constitute almost 20 percent of the total U.S. population. By 2040, the number of people in the United States who will speak languages other than English will be 96.1 million.

Summary: This article is the editor's introduction to a special issue of *The Bilingual Research Journal* that focused on critical descriptions of dual language programs and classrooms in bilingual communities across the United States. The goal of this special issue was to open a dialogue among ESL teachers. Each article describes the ESL component of bilingual programs and classrooms. The special issue supported the notion that communities of bilingual learners and teachers collectively need to name their experiences, reflect on them, and act upon them to reshape and reform schooling that is more meaningful, effective, and equitable for their own communities. The overall intent of this special issue was to provide a guide for bilingual and ESL teachers, staff, and program administrators in the process of moving classrooms and programs toward more meaningful, effective, asset-based, and equitable settings.

Major findings: The special issue of *The Bilingual Research Journal* described in this article is divided into two parts. Part I discusses secondary school and adult bilingual programs. Following is a brief summary of each article: a description of the cognitive academic language learning approach, a program that helps beginning and intermediate-level junior and senior high school students to achieve grade-level competencies in science and math (Chamot); a description of a program for college-bound Hmong-speaking students that uses a storytelling component in the first language and culture to develop academic confidence and skills in English (Werner-Smith & Smolkin); a description of a Spanish/English dual literacy program that provides schooling for recent immigrants from the Dominican Republic (Marsh); a description of a dual language program in Texas for recent immigrants in an agricultural community near the U.S./Mexico border (Hewlett-Gómez & Solís); the development of a trilingual program for Hispanic deaf children that builds on multiple sign languages and multiple literacies students brought with them

(Gerner de Garcia); a description of a visual-spatial approach to teaching ESL in a bilingual program for deaf international college students (Cordero-Martínez). Part II discusses elementary school bilingual programs. Following is a brief summary of each article: a discussion of a two-way Spanish-English program for urban poor and suburban middle class populations in New England (Schauber); a report on a nationally recognized program of two-way English/Spanish bilingual education that brings together affluent and inner city neighborhoods (Fern); a description of an exemplary two-way dual language program developed in a Chicago public school (Zucker); a description of an exemplary French immersion program for anglophones in Montreal (Schauber, Morissette, & Langlois); a discussion of a budding bilingual program in a community in a large Midwestern city that recently had become home for immigrant labor from Mexico (Curtis); a description of reforms in the schools of a Yup'ik community in Alaska that used spoken Yup'ik for many generations (Hartley & Johnson); a description of a full bilingual program for recent immigrants in a medium-sized Midwestern city with uneven administrative and staff support (Leone); a discussion of the use of two languages, social and academic ESL, and literacy classes in Spanish and English (Riojas-Clark); an analysis of a bilingual Spanish and English program in a Mexican American community in Los Angeles (Medina); and a description of second language programs for linguistically and culturally diverse students in four schools in central California. Appended to the special issue are the TESOL Statement on the Role of Bilingual Education in the United States and TESOL K–12 Access Standards Statement.

Major implication(s)/recommendation(s): None indicated

Collier, V.P. (1995). *Acquiring a second language for school* (Directions in Language & Education Vol. 1, No. 4). Washington, DC: George Washington University, National Clearinghouse for Bilingual Education. Retrieved September 24, 2003, from www.ncela.gwu.edu/ncbepubs/directions/04.htm

Literature type: Professional judgment

Type of instructional program model: Dual language immersion

School/student/staff characteristics: The research and model presented here apply to schoolchildren acquiring a second language during their school years.

Summary: This article presents a conceptual model derived from research of the length of time needed for students attending school where instruction is provided in their second language to reach deep enough levels of proficiency in the language to compete on an equal footing with native speakers of that language. The author also worked on identifying key variables that have a major impact on the acquisition of a second language for school contexts.

Major findings: The conceptual model drawn from the research has four major components. All four components are interdependent. *Sociocultural processes* are central to the model. Central to a student's acquisition of language are all the surrounding social and cultural processes occurring through everyday life within the student's past, present, and future in all contexts: home, school, community, and the larger society. *Language development, or linguistic processes*, consists of the subconscious aspects of language development innate to all humans, as well as the metalinguistic, conscious, formal teaching of language in school and the acquisition of writing. *Academic development* includes all schoolwork in language arts, math, sciences, and social studies for each grade level. *Cognitive development* has been mostly neglected by language educators until recently. The researchers have found that in U.S. schools where all instruction is given through the second language (English), non-native speakers of English with no schooling in their first language take seven to 10 years or more to reach age and grade-level norms of their native English–speaking peers. Immigrant students who have had two to three years of schooling in their first language in their home country take at least five to seven years to reach typical native-speaker proficiency. Finally, the researchers report that the key variables that have major impact on the acquisition of a second language for school contexts are the role of the first language, the role of input and interaction in language development, and the sociocultural context of schooling.

Major implication(s)/recommendation(s): After examining interactions among student background variables and instructional treatments and their influences on student outcomes, the author suggests that two-way bilingual education at the elementary school level is the most promising program model for the long-term academic success of language minority students.

Cornell, C. (1995). Reducing failure of LEP students in the mainstream classroom and why it is important. *Journal of Educational Issues of Language Minority Students, 15*, 123–145. Retrieved September 24, 2003, from www.ncela.gwu.edu/miscpubs/jeilms/vol15/reducing.htm

Literature types: Evaluations; synthesis of other studies

Type of instructional program model: ESL pullout

School/student/staff characteristics: The article focuses on limited English proficient students in general. The author does not specify grade levels.

Summary: This article offers an evaluation of ESL programs for limited English proficient (LEP) students, focusing on pullout programs, the most common program. The author contends most programs developed to assist students in acquiring English language skills by using English as the vehicle of instruction have been less than satisfying. LEP student dropout rates have been disproportionately high, and academic success appears limited to occasional rare individuals.

Major findings: From a review of the literature and some observations by the author, the author presents the following findings: During the early 1990s, there was an increasing reliance on ESL programs in which students received fewer than two hours of English instruction per day. Responsibility for instructing limited English proficient (LEP) students in both content and language fell increasingly on teachers in mainstream classrooms. The most prevalent ESL format was the pullout program, in which students are pulled from mainstream classes for brief sessions of English instruction in special ESL centers. Instruction time per student ranged from 15 to 90 minutes per day, with the norm being 30 to 45 minutes. Often pullout time was devoted to mainstream homework instead of English language learning. Self-contained classrooms were much less popular than pullout programs with most school administrators. Concern over a form of segregation and a denial of educational opportunity has led to increasing dependence on mainstream classrooms for instructing LEP students. Dropout rates for LEP students are high. Some of the factors contributing to dropout are prejudice against Hispanic students, student alienation from the curriculum, and alienation from the school as a social institution. The author includes a brief case history of an LEP student, examples of learning styles from Latin America, and 47 references.

Major implication(s)/recommendation(s): The author offers the following suggestions to teachers for providing limited English proficient (LEP) students with a positive educational experience: Create poster displays and other similar projects that showcase LEP students' accomplishments. Initiate cooperative learning activities. Choose class discussion topics in which LEP students can display expertise and draw upon their unique personal experiences. Be sensitive to and work with different learning styles. Encourage

parental interest and participation. Realize that many LEP students come from poverty conditions, and make allowances when appropriate. Develop good working relationships with ESL or bilingual education specialists. Use alternative methods of assessment. Make sure that students acquire cognitive academic as well as basic interpersonal language skills. Recognize that LEP students use a different culture-based experience pool. Avoid the creation of negative self-fulfilling prophecies. Adapt material when it seems beyond LEP students' language capacity. Apply general principles of good teaching to LEP as well as to other students in the classroom. Enjoy and learn from LEP students.

Costantino, M. (with St. Charles, J., Tepper, S., & Baird, E.). (1999). *Reading and second language learners: Research report*. Olympia, WA: Evergreen State College, Evergreen Center for Education Improvement. Retrieved September 24, 2003, from www.evergreen.edu/ecei/projects/rrsll.htm

Literature type: Synthesis of other studies

Types of instructional program model: Structured immersion, early-exit bilingual education, late-exit bilingual education, two-way developmental bilingual education, content-based ESL, sheltered instruction, and reading programs

School/student/staff characteristics: This document focuses on children of primary language acquisition age, the period between birth and the onset of puberty. Examined are first- and second-language learners, with an emphasis on English language learners.

Summary: This document provides a synthesis of research on teaching and learning to read in English as it relates to students in U.S. public schools who speak little or no English. It addresses the following three questions: What are the prerequisites that children need to meet in order to become proficient readers in English as a second language? If English language learners are experiencing difficulties reading in English, is it a language problem or a reading problem? What are the school, program, and classroom characteristics that support the reading development of English language learners? The document includes discussions on first and second language acquisition, learning to read in English, and characteristics of effective schools and classrooms that support the academic achievement of English language learners. Appended are program models for the education of English language learners in Washington state, a model of program development in relation to the language of instruction, and a discussion of reading-related programs that influence the reading achievement of English language learners. The studies included in this review fit into six general categories: prospective case study design; effective schools/classroom design; nominated schools design; experimental design; and quasi-experimental design. (This document contains 236 references.)

Major findings: For children, the acquisition of English as a second language is a developmental process similar in many respects to the first-language acquisition process. As with their first language, children learn a second language as a result of their need to communicate with others. The linguistic "errors" made by many English language learners (ELLs) are usually not random but are indicative of the learner's present knowledge of English. Children acquire language naturally and often obtain a higher level of proficiency in a second language than do adults. Initial reading instruction in an ELL's first language is not detrimental to the child's acquisition of English. Immigrant ELLs who arrive in the United States during their teenage years need extra support to meet high school requirements. Comprehensive studies of programs serving ELLs confirm a strong positive correlation

between the long-term academic achievement of ELLs and the degree of instructional support these students receive in their first language, and between the amount of formal schooling ELLs experience in their first language and the rate at which they acquire English as a second language. Programs that provide ELLs with long-term first-language instructional support have been shown to succeed in producing long-term achievement in English reading and other academic areas, whereas programs with little or no first-language support do not. Programs vary greatly. While there are several popular reading programs, many lack published research data to support their effectiveness.

Major implication(s)/recommendation(s): Formal reading instruction for English language learners (ELLs) in English should be delayed until a reasonable level of oral proficiency in English is acquired by the student. Both before and after the introduction of formal reading instruction in English, ELLs should be immersed in language-learning experiences that provide optimal conditions for building the English vocabulary necessary for school. Testing should emphasize how much an ELL has learned, not how much the child does not know in comparison to a native English speaker.

Covey, D.D. (1973). An analytical study of secondary freshmen bilingual education and its effect on academic achievement and attitude of Mexican-American students (Doctoral dissertation, Arizona State University, 1973). *Dissertation Abstracts International, 33*(09), 4789.

Literature type: Multivariate models: data subjected to one-way analysis of variance for unequal N's

Type of instructional program model: Bilingual immersion

School/student/staff characteristics: The study reported here took place at a large urban high school in Phoenix, Arizona, during school year 1970–1971. The sample population was a randomly selected group of 200 qualified ninth-grade Mexican American students representing a population of 379 Mexican American students who met at least one of the following criteria: demonstrate a limited ability to speak English; come from a bilingual home environment; manifest a reading deficiency; or possess a deficiency in English and mathematics.

Summary: Purpose of the study reported in this paper was to determine whether cognitive achievement in the academic disciplines of English, mathematics, and reading by ninth-grade Mexican American students enrolled in a bilingual program was significantly different from ninth-grade Mexican American students enrolled in a regular school program; and attitudes toward self, school, peers, and teachers were significantly different for these students. The study was designed to establish a starting point in the effort to define an educational bilingual instructional program for the Spanish-speaking Mexican American student. Iowa Test of Educational Development, tests 3 and 4, were used to measure achievement in English and math. Stanford Diagnostic Reading Test, level 11, was used to determine achievement in reading. Nebraska Attitude Inventory was used to measure student attitudes toward self, school, peers, and teachers. Data were subjected to a one-way analysis of variance for unequal N's to determine if there was a statistically significant difference at .05 level of significance.

Major findings: Mexican American students enrolled in a bilingual education program achieved significantly higher in the academic disciplines of English and reading than did their counterparts in regular school programs. Mexican American students enrolled in a bilingual education program had a more favorable attitude toward self, school, peers, and teachers than did their counterparts in a regular school program. Mexican American students enrolled in a bilingual education program did not exhibit a significantly higher ability to do quantitative thinking (math) when compared to Mexican American students in a regular education program.

Major implication(s)/recommendation(s): Author recommends the following: the study be partially replicated with a solely Mexican American student sample classified by

socioeconomic status; the study be replicated with another population to provide a measure of cross-validation; a study be made to investigate the attitudes of Mexican American students toward self, school, peers, and teachers in grades 10, 11, and 12; a study be made to investigate the academic disciplines of science, social sciences, advanced math, and advanced English and their relationship to the academic success of Mexican American students; and a study be made that compares the academic success of Mexican American students enrolled in a bilingual educational program with white students enrolled in a regular educational program.

Cummins, J. (1998, February). *Beyond adversarial discourse: Searching for common ground in the education of bilingual students*. Paper presented to the California State Board of Education, Sacramento, CA. Retrieved September 24, 2003, from www.iteachilearn.com/cummins/beyond.html

Literature types: Professional judgment; synthesis of other studies

Types of instructional program model: Canadian French immersion and dual language immersion are used as examples in the author's arguments.

School/student/staff characteristics: None specifically mentioned

Summary: This paper restates the author's own empirical research and that of others and outlines the theoretical principles that permit the explanation of these findings and predict the outcomes of various types of programs for bilingual students. The author then attempts to move beyond the divisive discourse surrounding the issue of bilingual education to search for areas of agreement in the perspectives and interpretations of both opponents and advocates of bilingual education. The author also devotes several pages to addressing Rossell and Baker's (1996) call for monolingual immersion programs taught by monolingual teachers with the goal of developing monolingualism (in opposition to the author's case for bilingualism). Finally, the author looks at the arguments of some opponents of bilingual education. The author concludes that there is much that advocates and opponents of bilingual education can agree on. The challenge is for opponents and advocates to create an ideological space to collaborate in planning quality programs for bilingual students. There appears to be consensus on the desirability of promoting students' individual bilingualism and the linguistic resources of the nation. There is also clear evidence from the research that promotion of students' primary language, in itself, will not in any way impede the development of English academic proficiency. (This document contains 61 references.)

Major findings: The author states that the research is unambiguous in relation to three issues: the distinction between conversational and academic skills in a language; the positive effects of bilingualism on the children's awareness of language and cognitive functioning; and the close relationship between bilingual students' academic development in their first and second languages in situations where students are encouraged to develop both languages. The author makes the following key points about bilingual education: Premature exit from a bilingual program into a typical mainstream program is likely to result in underachievement in both languages. Students may experience some linguistic and cognitive benefits as a result of developing literacy in both languages. Depending on the languages involved, there is no clear-cut agreement on which language (L1 or L2) to use in reading instruction.

Major implication(s)/recommendation(s): The author argues for the following in bilingual education: The promotion of literacy in bilingual students' two languages

throughout elementary school is far more important than which language is the focus for students' initial school literacy. A bilingual program should be a genuine bilingual program with coherence across grade levels and a strong overall plan. Ideally, teachers would work for two-way transfer across languages to amplify bilingual students' awareness of language. No program will promote bilingual students' academic achievement effectively unless there is a genuine schoolwide commitment to promote bilingualism, to work with parents and the community, and to instruct in ways that build on students' personal and cultural experiences.

de Felix, J.W., Waxman, H.C., & Paige, S. (1993). Instructional processes in secondary bilingual classrooms. In *Proceedings of the Third National Research Symposium on Limited English Proficient Student Issues: Focus on middle and high school issues, vol. 1*. Washington, DC: U.S. Department of Education, Office of Bilingual Education and Minority Languages Affairs. Retrieved September 24, 2003, from www.ncela.gwu.edu/ncbepubs/symposia/third/defelix.htm

Literature types: Multivariate models and quasi-experimental

Type of instructional program model: Bilingual immersion

School/student/staff characteristics: Secondary schools in a "mid-sized" urban Texas school district. Students in bilingual (English/Spanish) and English-only classrooms.

Summary: This paper reports on a study of how secondary bilingual teachers included students' cultures in the classroom, to what extent they incorporated higher-level thinking skills, and what classroom activities were taking place. The purpose of the study was to determine if secondary bilingual programs provide more opportunities for higher-level thinking than did the elementary bilingual classrooms previously studied by the authors. This study compared instruction in bilingual (English/Spanish) classrooms with English-only classrooms in all secondary schools in the school district. Similarities and differences in specific interactions from a classroom observation schedule were investigated. Interaction patterns investigated included total classroom instruction, small-group work, teacher-to-student work, student-to-student work, and independent work. Instructional behaviors were investigated through systematic classroom observation using a classroom observation rating schedule.

Major findings: Project teachers were found to use small groups significantly more than control teachers. Project teachers also used more total class instruction than control teachers. There were no significant differences between the two groups in student-engaged time, instructional activities, classroom management, classroom environment, and student satisfaction. Overall, there was not a great deal of higher-level instruction observed in the classrooms studied.

Major implication(s)/recommendation(s): The results serve as a reminder that educational reformers should go beyond the usual criticism of schools and begin to help provide teachers with supportive contexts and concrete techniques for implementing communicative, higher-level thinking activities as well.

Dolson, D.P., & Mayer, J. (1992). Longitudinal study of three program models for language-minority students: A critical examination of reported findings. *Bilingual Research Journal, 16*(1/2), 105–157. Retrieved January 14, 2004, from www.ncela.gwu.edu/miscpubs/nabe/brj/v16/16_12_dolson.pdf

Literature types: Synthesis of other studies; professional judgment

Types of instructional program model: Structured immersion; integrated TBE; dual language immersion

School/student/staff characteristics: LEP students in general

Summary: This article is a review of the reported findings and corresponding implications of the U.S. Department of Education–commissioned study, *Longitudinal Study of Immersion Strategy, Early-Exit and Late-Exit Transitional Bilingual Education Programs for Language-Minority Children* (see Ramirez, Yuen, & Ramey [with Pasta & Billings], 1991). The study sought to find out which of three alternative instructional programs designed to meet the needs of Spanish-speaking LEP students helped them to catch up to their English-speaking peers. The three programs studied were structured English immersion, early-exit bilingual, and late-exit bilingual.

This review does not scrutinize the procedures and methodology nor does it present a technical critique of the study. It is intended to assist policymakers and practitioners in identifying the key outcomes of the study and to understand these outcomes within the context of other related research on language-minority education. Additionally, the article addresses several possible misconceptions that may surface as a result of secondary reviews of the longitudinal study done by various interest groups and the media.

The review begins with an overview of the study, followed by a report of the results. It next discusses the three program models in the study and the study's analyses of the programs, often challenging the findings of the study. The next section presents the reviewers' interpretations of seven major findings of the study. The final section of the review describes the two-way (dual immersion) model, which the reviewers favor over the other models.

Major findings: The reviewers consider each of the three programs (structured English immersion, early-exit bilingual, late-exit bilingual) separately, attempting to identify the inherent limitations of the design; the conditions necessary for successful implementation; and the contexts in which the program has the greatest potential to meet the scholastic needs of LM students.

Structured immersion: Overall, this approach did not produce results equivalent to the late-exit program and showed no particular advantages over the early-exit model. The funda-

mental limitation of this program is its adherence to arbitrary prohibitions concerning the amount and type of L1 use without replacing it with an equally effective instructional element.

Early-exit programs: The primary value of this program model is as a transitory phase in the development of a late-exit design. The imperfections of the short-term bilingual approach include the following:

- The quick-exit structure does not match the developmental nature of child development in two languages.
- The use of students' native languages frequently takes on a compensatory and stigmatized character.
- The quick-exit approach conflicts with LM student enrollment and promotion patterns.

Late-exit programs: Of the three program models, this one appears to be the most effective in reversing the negative educational outcomes experienced by many LM students. The models seems especially well suited for schools in which large numbers of L2 learners form a single linguistic group. Nevertheless, the model contains some weaknesses. In some cases, late-exit programs fail to adhere to the adopted program design and revert to an early-exit model. There is sometimes a lack of understanding of the program by administrators, staff, and parents. Opposition to bilingual education diverts attention and energy from the program's primary purpose. There is no provision of instructional services for LM children who are originally FEP nor for students for whom English is the only language of the family.

Major implication(s)/recommendation(s): The reviewers make the following recommendations:

- Replace the term "structured immersion" with the term "partial bilingual immersion"

- To improve the design of the three models, schools should:
  1. Make access to the core curriculum a primary concern
  2. Design the program to meet the long-term needs of LM students
  3. Use the primary language of learners as much as resources allow
  4. Establish an environment in which the minority languages and cultures are respected and promoted
  5. Help young children talk about and understand the differences among people to help develop their skills in recognizing and responding to prejudice
  6. Provide a "survival" training component that prepares students to handle intolerance

Ellis, R. (1994). *The study of second language acquisition*. New York, NY: Oxford University Press.

Literature type: Program descriptions; synthesis of other studies

Type of instructional program model: Unknown (Not specified)

School/student/staff characteristics: Various

Summary: The main aim of this book is to develop a framework for describing the field of second language acquisition (SLA) research as it currently exists and to use this framework to provide an extensive account of what is currently known about L2 acquisition and L2 learners. It looks at the research descriptively to avoid taking up any particular position. It is intended for researchers and teachers.

The main goal of SLA research is to characterize learners' underlying knowledge of L2, that is, to describe and explain their competence. The author explains that the development in SLA research over the years has been of several kinds. One concerns the scope of the field of inquiry, which previously focused on psycholinguistic factors but increasingly has adopted a sociolinguistic perspective. Another development concerns the increasing attention paid to linguistic theory. Another development has been the emergence of research devoted to classroom L2 acquisition. As a result of these and other developments, SLA research has become an amorphous field of study with flexible boundaries.

There is no separate chapter in this book on research methodology in SLA research because the methods vary considerably according to the particular aspect of SLA being studied. Where appropriate, however, the author provides information about the methods used to investigate specific areas.

Part 1, "**Background**," examines what is meant by the term second language acquisition, identifies a number of central questions that researchers should address, presents a framework for examining four major areas of inquiry, and provides a brief survey of work done in each area. Following is a set of general questions for research into SLA:

- What do second language learners acquire?
- How do learners acquire a second language?
- What differences are there in the way individual learners acquire a second language?
- What effect does instruction have on second language acquisition?

Part 2, "**The Description of Learner Language**," reports some of the main findings regarding the nature of learner language. It considers learner errors, developmental patterns, variability, and pragmatic features. It asserts that the study of SLA entails both the description of learner language, as it develops over time, and the explanation of its char-

acteristics. While a strict separation of description and explanation is not possible, it provides a way into the study of a highly complex field.

Part 3, "**Explaining Second Language Acquisition: External Factors**," begins the task of explaining L2 acquisition by considering external influences, that is, the role of social factors and of input/interaction. This section addresses three major questions:

1. How do learners learn a second language?
2. Why do learners vary in how fast they learn a second language?
3. Why do most learners fail to achieve full target-language competence?

Part 4, "**Explaining Second Language Acquisition: Internal Factors**," continues the work of explaining L2 acquisition by examining various theories of the mental processing that learners engage in. It discusses language transfer, cognitive accounts of L2 acquisition, and linguistic universals.

Part 5, "**Explaining Individual Differences in Second Language Acquisition**," focuses on the learner. It considers individual differences from the point of view of learner strategies and such general psychological factors as motivation.

Part 6, "**Classroom Second Language Acquisition**," examines classroom-based and classroom-oriented research from the point of view of both interaction and formal instruction. It discusses, among other points, the role of interaction in shaping learning, the difference between implicit and explicit knowledge, the role of negative feedback, and the significance of orders and sequences on acquisition. The research considered in this section looks at pedagogy not in terms of techniques or activities but in terms of the kinds of classroom behaviors in which teachers need to engage to promote learning: what questions to ask, when and how to correct learner's errors, and how to instigate negotiation for meaning in a classroom.

Part 7, "**Conclusion**," takes a critical look at the current state of SLA research from the point of view of the data it works with, theory construction, and its applications.

Major findings: The major findings in this book are a framework for exploring second language acquisition. The framework contains four major areas, all of which are interrelated. (The framework is represented graphically and explained in detail in the text.)

The first area concerns the descriptions of the characteristic of learner language. Four aspects of learner language have received attention: errors; acquisition orders and developmental sequences; variability; and pragmatic features relating to the way language is used in context for communicative purposes.

While the first area of the framework is descriptive, the second and subsequent areas are more explanatory.

The second area concerns learner external factors relating to the social context of acquisition, and to the input and interaction the learner experiences.

The third area, learner internal mechanism, concerns how acquisition takes place and how learners use their resources in communication.

The fourth area, which focuses on the learner, is concerned with the question of individual learner differences and what causes them.

Major implication(s)/recommendation(s): The author warns that the information provided by second language acquisition research needs to be applied in the same way as that from other sources and that caution needs to be exercised when it comes to making use of the information. SLA research is not capable of providing teachers with formulas for successful practices.

Furthermore, the author concludes, it is not yet possible to arrive at a single, comprehensive theory to explain about learners, environments, and interlanguages through SLA research.

Fashola, O.S., & Slavin, R.E. (1997). *Effective dropout prevention and college attendance programs for Latino students*. Washington, DC: U.S. Department of Education, Hispanic Dropout Project. Retrieved January 14, 2004, www.ncela.gwu.edu/miscpubs/hdp/4/index.htm

Literature types: Program evaluations; synthesis of other studies

Type of instructional program model: Other

School/student/staff characteristics: Latino high school students at risk academically

Summary: The purpose of this paper is to review research on programs that address the dropout rates, school success, and college enrollment rates of at-risk high school Latino youth. The focus of the review is on the identification of programs that have been shown to have significant impact on dropouts, college attendance, school performance, or related outcomes in rigorous evaluations that are replicable across a broad range of secondary schools and that have been successfully evaluated among, or at least frequently applied to, schools serving many Latino students.

The criteria applied in this review are as follows:

- **Effectiveness**: Programs were considered to be effective in evaluations that compared students who participated in the program to similar students in matched or comparison schools and found the program students performed significantly better on dropout, college attendance, or related measures of school success.

- **Replicability**: Programs were considered high in replicability if, in fact, they have been replicated elsewhere, especially if there is evidence that the program was evaluated and found to be effective in sites beyond its initial pilot location.

- **Evaluation of application with Latino students**: Programs were included if they had strong evidence of effectiveness and replicability and had been disseminated to schools with many Latino students, even if the reported evaluations did not include Latino students.

Six dropout prevention and college attendance programs met the inclusion criteria. The researchers have placed them into two categories: programs designed to work with the most at-risk students in middle, junior high, or high schools to keep them from dropping out; and programs designed to increase the college attendance rates of students who may show promise but are at risk of not fulfilling it.

Major findings: Following are brief descriptions of the six programs included in this review.

1. **The Coca Cola Valued Youth** program is a cross-age tutoring program designed to decrease dropout rates and increase the self-esteem and school success of at-risk middle and high school students by placing them in positions of responsibility as tutors of younger elementary school students.

2. **Achievement for Latinos Through Academic Success** is a dropout prevention programs for high-risk middle level Latino students, particularly Mexican American students from high-poverty neighborhoods.

3. **Upward Bound** is one among a set of college entrance programs whose main goal is to increase the number of first-generation low-SES students attending college by providing them with the academic skills and additional resources they may need to make them eligible for college.

4. **SCORE** is a dropout prevention/college preparatory program aimed at the at-risk students in grades 9–12 whose likelihood of graduating from high school or enrolling in college is felt to be low by their teachers.

5. **Project Advancement Via Individual Determination** is a high school dropout prevention/college enrollment program that places low-achieving students with academic potential in rigorous college prep courses where they are taught to excel academically.

6. **Project Graduation Really Achieves Dreams** is a comprehensive dropout prevention/college attendance program that provided students at one high school a $1,000 per year college scholarship plus interventions and orientations.

This paper also briefly reviews nine programs in California that serve many Latino students but didn't meet the authors' evaluation criteria. The programs shared a common goal: to increase the number of ethnic minority students enrolling in postsecondary institutions. They differed in the regions served, specificity of program missions, components and services, demographics of schools served, and administering agencies.

Overall, the authors conclude, successful programs can have a substantial impact on dropout rates, college attendance rates, and other outcomes. They are expensive, but well within the means of society. Successful programs create meaningful personal bonds between teachers and students and among students; connect students to an attainable future; target academic assistance; and attempt to give students status and recognition within the school for academic efforts.

Major implication(s)/recommendation(s): The authors suggest that there is not enough evidence from studies of dropout prevention models to indicate which components of the comprehensive models are most effective or cost effective. There is much more to be learned about these programs.

Fashola, O.S., Slavin, R. E., Calderón, M., & Durán, R. (1997). *Effective programs for Latino students in elementary and middle schools*. Washington, DC: U.S. Department of Education, Hispanic Dropout Project. Retrieved September 24, 2003, from www.ncela.gwu.edu/miscpubs/hdp/2/

Literature types: Program evaluations; synthesis of other studies

Type of instructional program model: Other

School/student/staff characteristics: Latino elementary and middle school students at risk academically are the focus of this paper.

Summary: The purpose of this paper is to present research on the effectiveness of instructional programs for Latino students in the elementary and middle grades. Without minimizing the importance of the debate over language of instruction, the authors state, it is time to move beyond this debate and to ask what instructional programs are most effective for Latino students regardless of their language proficiency and the availability of native-language instruction. The focus of the review is on the identification of programs that have been shown to be effective in rigorous evaluations that are replicable across a broad range of elementary and middle schools and that have been successfully evaluated among, or at least frequently applied to, schools serving many Latino students.

The criteria applied in this review are as follows:

- **Effectiveness**: Programs were considered to be effective in evaluations that compared students who participated in the program to similar students in matched or comparison schools and found the program students performed significantly better on dropout, college attendance, or related measures of school success.

- **Replicability**: Programs were considered high in replicability if, in fact, they have been replicated elsewhere, especially if there is evidence that the program was evaluated and found to be effective in sites beyond its initial pilot location.

- **Evaluation of application with Latino students**: Programs were included if they had strong evidence of effectiveness and replicability and had been disseminated to schools with many Latino students, even if the reported evaluations did not include Latino students.

To find programs that met the criteria, the authors conducted an extensive literature search. Only two programs met the evaluation criteria. Consequently, to include a broad range of programs, the authors compromised on one or more criteria. This review, then, includes programs that have excellent outcome data that show positive effects for Latino students, even if the program has not been widely replicated; programs that have excellent outcome

data and evidence of replicability but were not directed at Latino students; and programs that may lack hard evidence of effectiveness but are well-known, widely replicated, and appropriate to the needs of Latino students.

The outcomes of the evaluations summarized are quantified as effect sizes. These are computed as the difference between experimental and control group means divided by the control group's standard deviation. If effect sizes could not be computed, study outcomes are still included if they meet all other inclusion criteria.

Major findings: Following are brief descriptions of programs that met the evaluation criteria.

Success for All is a comprehensive schoolwide reform program that provides schools with innovative curricula and instructional methods in writing, reading, and language arts for K–6 students. The review also discusses the following programs and program types: the School Development program; Consistency Management & Cooperative Discipline; the Goldenberg and Sullivan program; Bilingual Cooperative Integrated Reading and Composition; Complex Instruction/Finding Out/Descubrimiento; Student Teams-Achievement Divisions; Teams-Games-Tournaments; Jigsaw; Learning Together; Group Investigation; Direct Instruction; Exemplary Center for Reading Instruction; Reciprocal Teaching; Profile Approach to Writing; Multicultural Reading and Thinking; Comprehensive School Mathematics program; Cognitively Guided Instruction; Project SEED; Skills Reinforcement Project; Maneuvers with Mathematics; Head Start; Perry Preschool/High Scope; Early Intervention for School Success; Reading Recovery and Descubriendo La Lectura, the Spanish adaptation; Helping One Student to Succeed; and 14 Title VII academic excellence award-winning programs.

While the programs reviewed in this paper vary in focus, design, measures, and other aspects, the authors have concluded that the following factors contribute to program effectiveness:

1. Effective programs have clear goals, emphasize methods and materials linked to those goals, and constantly assess students' progress toward the goals.
2. Effective and replicable programs have well-specified components, materials, and professional development procedures.
3. Effective programs provide extensive professional development.
4. Effective programs are disseminated by organizations that focus on the quality of implementation.

Major implication(s)/recommendation(s): The authors suggest that the research presented in this paper supports two conclusions. There is a broad range of replicable programs from which elementary and middle schools can choose to meet the needs of their Latino students. On the other hand, there are enormous gaps in the knowledge base, and much more research needs to be done.

Freeman, Y., Freeman, D., & Mercuri, S. (2003). Helping middle and high school age English language learners achieve academic success. *NABE: Journal of Research and Practice, 1*(1), 110–122. Retrieved September 24, 2003, from www.uc.edu/njrp/pdfs/Freeman.pdf

Literature type: Case studies

Type of instructional program model: Bilingual immersion

School/student/staff characteristics: Three distinct types of older English language learners are presented through case studies; each study examines only one individual.

Type 1: Recent arrivals who have adequate formal schooling in their native country and have developed literacy in their first language. The subject of this case study is a female, born in Argentina to an upper middle class, well-educated family who moved to the United States five years earlier. She had adapted well to her new country and did well in junior high school college preparatory classes. She was the most proficient user of conversational English in her household.

Type 2: Recent arrivals who have had limited formal schooling and who have not developed literacy in their primary language. The subject of this case study was a female Hmong from Laos who received no schooling in Laos but later attended a sort of school at a refugee camp where she learned some survival English but few academic concepts. She attended a newcomer school in a large California district for one year before enrolling in the 10th grade at the regular high school. She received her diploma with a great deal of tutoring help from an aunt who was a teacher.

Type 3: Students who have been schooled in the United States for at least seven years but have not developed adequate literacy skills or academic concepts in their first language or in English. Subject of this study was a 15-year-old female born in California to a disadvantaged family. All her schooling has been in the United States. She did experience a bilingual program but never developed literacy in Spanish nor academic proficiency in either language.

Another case study examines a classroom in which the teacher put together a theme study, using the four keys for academic success drawn from the research. The theme was health and nutrition. Throughout the theme study, students read and wrote as they learned important concepts related to health and nutrition. The teacher involved parents in the study. The fourth-, fifth-, and sixth-grade classroom promoted literacy and learning. Materials were in Spanish and English. Most students (no numbers given) were children of migrant farm workers from Mexico. All three types of English learners mentioned in the case studies were present in the class. The class frequently worked in heterogeneous groups so students could help each other. Students were encouraged to take responsibility for leading activities.

Summary: This article presents brief case studies of students who represent three distinct types of older English language learners. All three types face a considerable challenge. They need to learn academic English and subject-area content to succeed academically. The article presents four research-based keys teachers can use to plan the kind of instruction that will enable their middle and high school age English language learners to succeed. The article then describes a thematic unit one teacher developed to put the four keys into action in her bilingual classroom. It concludes by considering the implication for best practices for older bilingual students.

Major findings: Newly arrived students with adequate formal schooling need knowledgeable teachers who can make English instruction comprehensible. Students with limited schooling and long-term English learners need a research-based curriculum that will challenge them without overwhelming them. Authors describe four keys to academic success:

1. Engage students in challenging, theme-based curriculum to develop academic concepts
2. Draw on students' background, experiences, cultures, and languages
3. Organize collaborative activities and scaffold instruction to build students' academic English proficiency
4. Create confident students who value school and value themselves as learners

Major implication(s)/recommendation(s): Authors suggest that the first step in providing effective instruction for older English language learners is to recognize differences among them. The second step is to follow the four keys identified in the article.

Friedlander, M. (1991). *The newcomer program: Helping immigrant students succeed in U.S. schools* (NCBE Information Guide Series No. 8). Washington, DC: George Washington University, National Clearinghouse for Bilingual Education. Retrieved January 14, 2004, from www.ncela.gwu.edu/ncbepubs/pigs/pig8.htm

Literature type: Program descriptions

Type of instructional program model: Other: newcomer programs

School/student/staff characteristics: Three programs are described in this report.

Program 1 was an all-day school-within-a-school at Crenshaw High School in Los Angeles. At the time of the study, it served some 450 LEP students in grades 9–11 from 19 countries. Major languages served were Spanish (90 percent), Cantonese, and Korean. The centerpiece of the program was its intensive bilingual instruction.

Program 2 was a half-day program at a site separate from schools in Hayward, California. At the time of the study, it enrolled 412 students from 29 countries who spoke 19 different languages. The major languages served were Chinese, Dari, Spanish, and Vietnamese. A key feature of the program was that staff connected students and parents with advocates and liaisons who stayed in touch with them after they left the program. The curriculum emphasized the natural approach to English language acquisition.

Program 3 was an all-day program for high school students at a community college in Long Island City, New York. Some 400 students were enrolled in the program at the time of the study. Major languages served were Cantonese, Korean, Polish, Romanian, and Spanish. The school offered comprehensive high school and college curricula that included specially designed high school courses taught by college professors. English was the primary language of instruction.

Summary: The article describes newcomer programs in general and three programs in particular. It also contains legal guidelines for newcomer programs. Appended are sample curricula from the three programs singled out in the article and a checklist for developing a newcomer program.

Major findings: Newcomer programs differ tremendously in terms of general structure and set-up, curriculum, length of stay, and language of instruction. But many share the following characteristics:

- A dedication to helping LEP newcomer students make the transition to the U.S. school system as quickly and painlessly as possible
- An education approach that emphasizes English language acquisition while recognizing that development of language skills is only one step in the transition process

All newcomer programs share these **general goals**:

- To provide students with a firm academic foundation
- To develop English language proficiency
- To give students orientation and basic survival skills
- To develop multicultural understanding and promote intercultural communication
- To encourage secondary students to continue their education and increase their access to long-term educational opportunities
- To enhance newcomers' self-esteem

Following are **common features** of newcomer programs:

- Orientation to school and society
- A specialized curriculum that emphasizes rapid English acquisition and academic content instruction
- Access to a wide range of support services
- Specialized teacher training
- Multicultural education

Following are some of the important **structural differences** that define various models of newcomer programs:

- School-within-a-school versus self-contained separate site
- Full-day versus half- or part-day programs
- Single language versus multilingual programs

Assessments of newcomers typically include the following:

- Skills tests for
  1. Oral English proficiency and comprehension
  2. English reading and writing proficiency
  3. Native language proficiency
  4. Mathematics/computation ability
- Interviews with parents regarding their children's education history
- Transcripts from schools previously attended
- All tests and interviews in the students' native languages

Following are typical **components** of newcomer programs:

- English language development
- Content area courses
- Orientation classes
- Use of nontraditional methodologies, including an integrated whole language thematic approach to language and content learning

Finally, many newcomer programs provide some or all of the following **support services**:

- Academic counseling
- Health services

- Parent outreach
- Liaison with community services
- Special programs and extracurricular activities
- Career education

Major implication(s)/recommendation(s): The article concludes that no consensus exists among experts in the field on what constitutes the ideal structure or ideal language of instruction for newcomer programs.

The article suggests that, no matter what the program model, school districts must keep in mind that newcomer programs must be designed with consideration to legal requirements.

Gándara, P. (1997). *Review of research on the instruction of limited English proficient students: A report to the California legislature.* Santa Barbara, CA: University of California, Linguistic Minority Research Institute. Retrieved September 24, 2003, from http://lmri.ucsb.edu/resdiss/2/pdf_files/gandara.pdf

Literature type: Professional judgment

Types of instructional program model: Bilingual immersion, integrated TBE, transitional bilingual immersion, dual language immersion, ELD, and structured immersion

School/student/staff characteristics: This report addresses limited English proficient students in California public schools.

Summary: The report is organized into 10 sections, including an introduction that contains background information. Section titles reflect the report's contents: "How Are Limited English Proficient Students Currently Being Served in California?"; "Status of the Teaching Force"; "What Do We Know From the Research About How Limited English Proficient Students Learn?"; "What Do We Know About the Effectiveness of Instruction of LEP Students in the Classroom Context?"; "Measurement Issues and the Problem of 'Closing the Gap'"; "The Costs of Instruction for LEP Students"; "Parent Involvement and Support of Education Among LEP Families"; "The State of Assessment of LEP Students"; and "Policy Implications of the Foregoing Review."

Following are some highlights of the report:

- Primary language instruction does not impede acquisition of English and may even confer certain cognitive advantages.
- Students with a strong background in their home language are more likely to develop high levels of English proficiency than those who do not have such a background.
- Awareness of the phonemic structure of one's native language is a significant predictor of early reading acquisition in English.
- Parents of LEP children can best develop their children's academic strengths by introducing them to reading and writing in the language the parents know best.
- Large-scale evaluation studies are of limited usefulness in knowing how to instruct LEP students.
- Primary language instruction offers certain benefits to students in terms of producing bilingual outcomes and does not impede the acquisition of spoken English.

- A program's effectiveness is dependent on more than just the quality of instruction. Other important factors are economic opportunity in the region; stability in the community; and opportunities for exposure to English in the general environment.

- No program for LEP students has been shown to consistently close the gap between the performance of native English speakers and LEP students on tests of English reading in the primary grades.

- The most cost-effective method of instruction of LEP students is the self-contained bilingual classroom.

- Immigrant students who maintain their native language academically outperform those immigrant students who speak English only.

- Assessment strategies (at the time of the study) are piecemeal and serve neither the purpose of accountability nor the needs of teachers to know how their students are learning.

Major findings: The report concludes that while no single program is best for all children in all circumstances, a well-implemented bilingual program can provide outcomes at least as positive as a well-implemented English-only program and has the added advantage of potentially providing students with a second language.

Major implication(s)/recommendation(s): The report makes the following major recommendations:

1. California needs to redouble its efforts and recruit, train, and retain a sufficient corps of bilingual teachers to provide the option of primary language instruction for all students of major language groups.

2. Limited English proficient students should be included in the fabric of the state's assessment system for all students and held to the same high standards as all other students.

3. A unit should be established within the California Department of Education to gather information, provide technical assistance, and act on behalf of the welfare of English language learners.

Garcia, E.E. (1991a). *Education of linguistically and culturally diverse students: Effective instructional practices* (Educational Practice Rep. No. 1). Santa Cruz, CA: University of California, National Center for Research on Cultural Diversity and Second Language Learning. Retrieved September 24, 2003, from www.ncela.gwu.edu/miscpubs/ncrcdsll/epr1/index.htm

Literature types: Program descriptions and case studies

Type of instructional program model: Other

School/student/staff characteristics: This paper looks at linguistically and culturally diverse students who enter the formal education process from homes and communities in which English is not the primary language and who are at risk academically. The largest population in this broad grouping is Hispanic students.

Summary: This paper presents summaries and analyses of some common attributes that descriptive research has documented in classrooms in which linguistically and culturally diverse students have been particularly successful. The case study approach adopted by these studies included examination of preschool, elementary, and high school classrooms. Teachers, principals, parents, and students were interviewed and specific classroom observations were conducted to assess the dynamics of the instructional process. Much of these data have concentrated on Latino students.

The report also discusses studies of language of instruction that show that students in these kinds of classrooms made the transition from their own language to English without pressure from teachers to do so.

The author has identified a number of common attributes in the instructional organization of the classrooms studied. Functional communication between teacher and students and among students was emphasized more than might be expected in a regular classroom. The instruction of basic skills and academic content was consistently organized around thematic units. In the majority of the classrooms studied, the students actually selected the themes in consultation with their teachers. Collaborative learning was strongly emphasized. It was during student-student interactions that most higher order cognitive and linguistic discourse was observed.

Another feature noted in the classrooms studied was the language of instruction. In classes with Spanish speakers, teachers in the lower grades used both Spanish and English, whereas teachers in upper grades used mostly English. Students, however, were allowed to use either language.

Major findings: From the research, the author found the following key points on significant practices and effective academic environments for linguistically and culturally diverse students:

- The schools in these studies consider native language instruction key in the early grades (K–3).

- No common curriculum was identified in these studies. However, a well-trained instructional staff implementing and integrating student-centered curriculum with literacy present in all aspects of instruction was consistently observed across grade levels.

- Teachers consistently organized instruction to ensure heterogeneous small-group collaborative academic activities requiring a high degree of student-to-student intervention.

- School administrators and parents play important roles, but teachers play the most critical role in student academic success.

- Overall, the research indicates that linguistically and culturally diverse students can be served effectively and they can achieve academically at levels at or above national norms.

Major implication(s)/recommendation(s): Based on the research, the author created the following guidelines:

- Any curriculum, including one for diverse students, must address all categories of learning goals. Educators should not lower their expectations for this population.

- Teachers must relate academic content to the students' environment and experiences.

Garcia, E. (1992). Project THEME: Collaboration for school improvement at the middle school for language minority students. In *Proceedings of the Third National Research Symposium on Limited English Proficient Student Issues: Focus on middle and high school issues, vol. 1.* Washington, DC: U.S. Department of Education, Office of Bilingual Education and Minority Languages Affairs. Retrieved September 24, 2003, from www.ncela.gwu.edu/ncbepubs/symposia/third/garcia.htm

Literature type: Quasi-experimental

Type of instructional program model: Integrated TBE

School/student/staff characteristics: The student population in the middle school where the project was conducted was 90 percent Hispanic, of which 60 percent were limited English speakers, with academic achievement one to two grades below statewide averages. The school was in Pajaro Valley, California, in a largely working-class area. Eight project teachers participated in preservice and inservice training programs specific to LEP instructional strategies.

Summary: This paper describes Project THEME, a collaborative research and development project at a middle school. The sample consisted of 110 seventh-graders and one parent. Of the 110, 23 were Caucasian and 87 Mexican in origin. The project worked to maximize academic learning by integrating instruction in reading, writing, social studies, science, and mathematics and by using appropriate technologies (such as computers), while de-emphasizing ability tracking. The intervention was expected to enhance student academic outcomes in reading, writing, and mathematics achievement, and academic self-worth. Participants, both THEME students and a comparison group, were given pretests and posttests in language, reading, writing, and math. THEME students were grouped in two strands: bilingual and English only. In addition, survey data regarding the THEME students' academic self-concept and social identity were gathered during their sophomore year in high school.

Major findings: Findings after the first year of the project showed an academic advancement effect in reading, writing, and math. Based on the California Test of Basic Skills and Spanish Assessment of Basic Education, Project THEME students scored significantly higher than a comparative group of similar students. Qualitative (ethnographic and interview) data regarding students' perceptions of the program were highly positive. Moreover, results of the follow-up study of THEME students four years after the project indicated highly positive long-term effects. Specifically, comparative analyses in the areas of reading comprehension, vocabulary, language mechanics, and language expression in English significantly favored the THEME students. Similar results were found on Spanish language measures.

Major implication(s)/recommendation(s): The program was deemed successful and adopted by the school district for continuation and expansion.

Genesee, F. (1999). *Program alternatives for linguistically diverse students* (Educational Practice Rep. No. 1). Santa Cruz, CA: University of California, Center for Research on Education, Diversity & Excellence. Retrieved September 24, 2003, from http://repositories.cdlib.org/crede/edupractrpts/epr1/

Literature types: Program descriptions; case studies

Types of instructional program model: Sheltered instruction in English; other newcomer programs; transitional bilingual programs; developmental bilingual programs; foreign/second language immersion programs; two-way immersion programs.

School/student/staff characteristics: Various and diverse according to the program examined, but a focus on students with limited or no proficiency in English.

Summary: This report describes educational alternatives, specifically programs and approaches for educating students from diverse linguistic and cultural backgrounds. It is intended as a guide for decisionmakers in schools and school districts to help them identify the instructional approaches and programs that would best serve their students, meet their goals and needs, and match local resources and conditions.

This report describes sheltered instruction in English; newcomer programs; transitional bilingual programs; developmental bilingual programs; foreign/second language immersion programs; and two-way immersion programs.

Each program alternative is described within its theoretical rationale, salient pedagogical and program features, necessary resources, and necessary local conditions. A case study is presented to illustrate each alternative. A descriptive summary chart describes the following features of each program: language goals; cultural goals; academic goals; student characteristics; grades served; entry grades; length of student participation; participation of mainstream teachers; teacher qualifications; and instructional materials, tests, and visual aids.

There are no empirical or evaluative comparisons among the programs described here. An underlying assumption of this report is that no single approach or program model works best in every situation. Many different approaches can be successful when implemented well. Local conditions, choices, and innovation are critical for success.

There is no mention of how data were collected for the descriptions presented here. The report contains 47 references.

Major findings: Despite obvious differences there is considerable commonality among the program models and instructional approaches described here. All share the following characteristics:

- Extensive and ongoing parental involvement

- Ongoing, appropriate, state-of-the art professional development for teachers in specially designed programs and for mainstream teachers who work with English language learners

- Instructional personnel who can implement strategies that integrate language acquisition and academic achievement at the same time; promote proficiency in English for academic purposes, including literacy; and ensure that academic instruction through the second language is meaningful and comprehensible to second-language learners

- Instructional personnel who can implement assessment methods linked to instructional objectives and that inform instructional planning and delivery

- Developmentally appropriate curriculum and instructional material and aids

- High standards with respect to both language acquisition and academic achievement

- Strong and knowledgeable leadership among classroom, school, and district personnel

- Human resources to coordinate communication between parents and schools

Major implication(s)/recommendation(s): Choosing and implementing effective education for students with diverse linguistic and cultural backgrounds calls for an understanding of the available alternatives and a careful consideration of a district's goals, resources, and the needs and characteristics of its students.

Genesee, F. (2000). *Brain research: Implications for second language learning* [Occasional report]. Santa Cruz, CA: University of California, Center for Research on Education, Diversity & Excellence. Retrieved September 25, 2003, from http://repositories.cdlib.org/crede/occrpts/eric_00_12_brain/

Literature type: Professional judgment

Type of instructional program model: Unknown (Not specified)

School/student/staff characteristics: None mentioned

Summary: There has been a longstanding interest among second- and foreign-language educators in research on language and the brain. Language learning is a natural phenomenon that occurs even without intervention. By understanding how the brain learns naturally, language teachers may be better able to enhance their effectiveness in the classroom.

This brief (two-page) digest discusses brain research and its implications for second-language learning.

Major findings: The digest notes recent findings in brain research in regards to language acquisition and learning. Particular parts of the brain were designed for processing certain kinds of information from birth. The evidence suggests that the brain is much more malleable than previously thought. Not only developing but also aging brains are incredibly flexible.

Neural connections in the brain facilitate learning. Recent studies suggest that when learning occurs, neurochemical communication between neurons is facilitated and less input is required to activate established connections over time. In other words, learning by the brain is about making connections within the brain and between the brain and the outside world. But time is needed to establish new neural networks and connections between networks, which may help to explain why learning takes time.

The research also shows that areas of the brain important in specific domains of learning can change over the life span. Furthermore, brains are not all the same, which has implications for individual learning styles. Individual differences in learning style may not be a simple matter of personal preference but rather of individual differences in the hardwiring of the brain and, thus, beyond individual control. By implication, the author states, brain research confirms what is known from education research: Educators must make provisions for individual differences in learning styles.

Major implication(s)/recommendation(s): The author suggests that recent findings in brain research may have the following implications for language education:

- Teaching and teachers can make a difference in brain development, and teachers should not give up on older language learners.

- Effective teaching should include a focus on both parts and wholes because the brain naturally links local neural activity to circuits that are related to different experiential domains.

- Because higher order brain centers that process complex abstract information can activate and interact with lower order centers (and vice versa), teaching simple emotional expressions can take place in the context of talking about different emotions and what situations can elicit different emotions. This means that student vocabulary acquisition can be enhanced while it is embedded in real-world complex contexts that are familiar to the students.

- Students need time and experience to consolidate new skills and knowledge to become fluent in a second language.

Gerner de Garcia, B.A. (1995). ESL applications for Hispanic deaf students. *Bilingual Research Journal, 19*(3/4), 453–467. Retrieved September 25, 2003, from www.ncela.gwu.edu/miscpubs/nabe/brj/v19/19_34_gerner.pdf

Literature types: Program descriptions; professional judgment

Type of instructional program model: Other (A trilingual [English, Spanish, American Sign Language] pullout program using elements of whole language teaching)

School/student/staff characteristics: Students mentioned are Hispanic deaf children ranging in age from 3 to 22 attending a day school for the deaf. The school served approximately 150 deaf children. At the time of the study, the school had a Hispanic population of 45 to 50 percent. Most students were in self-contained classrooms taught by teachers of the deaf. Some students were mainstreamed for selected classes in a nearby elementary school.

Summary: This article is about deaf and hard-of-hearing children from Spanish-speaking families. Hispanics are the fastest growing population among deaf and hard-of-hearing school-age children.

The article focuses on an instructional approach used in a trilingual (English, Spanish, American Sign Language) pullout program with middle school Spanish-literate students and with elementary school students with limited literacy skills. The instructional approach described here is the author's own.

The author describes her teaching practice as "progressing toward and developing holistic practice." For her classes, she used thematic units to organize her teaching. For her middle school students and upper elementary students, she relied heavily on the use of children's literature, particularly picture books. She describes in detail two thematic units that she used: "rethinking Columbus" and "growing vegetable soup."

Major findings: The author found that teaching thematically in a 45-minute class period, even with students who were not with her all day, provided a continuity that proved effective. She also found that, "Whole language strategies and thematic teaching can be extremely lucrative for all ESL teachers, including teachers of the deaf and hard of hearing immigrant students who are learning ASL [American Sign Language] and English."

Major implication(s)/recommendation(s): To address the needs of deaf children from linguistically and culturally diverse backgrounds, schools and programs for the deaf should:

- Recognize and validate the languages of the students
- Retrain teachers and other professionals already working in the field
- Provide support through specialized programs for immigrant students to enable them to bridge the cultures and languages they live with while addressing the needs of deaf

children who are learning American Sign Language
- View deaf children as coming to school with "something" rather than view them as having "no language"
- Provide for naturalistic assessment of deaf children in and out of school
- Retain a diverse staff that includes hearing and deaf adults from the students' culture
- Provide school-based programs for deaf children that address their linguistic and cultural heritage

Gershberg, A.I. (2001). *New immigrants and the New School governance in New York: Defining the issues* (Working Paper No. 2002-02). New York, NY: New School University, Community Development Research Center. Retrieved September 25, 2003, from www.newschool.edu/milano/cdrc/pubs/wp/wp.2002.02.pdf

Literature type: Program descriptions

Type of instructional program model: General ESL and bilingual programs

School/student/staff characteristics: This study looks at limited English proficient new immigrants in New York City public schools. In 1998–1999, the predominant language of English language learners in the schools was Spanish (65.5 percent of ELL students), followed by Chinese, Russian, Haitian Creole, Bengali, Urdu, Arabic, Korean, Punjabi, and Polish.

Summary: This paper explores what New York City, the state of New York, and the federal government are doing to address the needs and issues of immigrant students, what reforms seem promising, and the potential gaps in service. It also provides a summary of programs and policies in place and uses qualitative interviews to discern promising directions for future reform and research efforts to improve educational outcomes for both immigrant and native students.

Data for the study reported here were collected from analyses of academic literature, popular literature and newspapers, publications by immigrant advocacy groups, and official documents from the New York City Board of Education and the New York State Department of Education. Additional information was gathered through interviews with district officials at the New York City Board of Education, school-level staff at four schools, and community-based organizations and immigrant advocacy groups. A total of 58 individuals were interviewed.

Major findings: While chiefly exploratory, the findings include the following:

- Despite all the attention being paid to immigrants and education, in policy circles the attention is mostly indirect. Federal policies that affect immigrants, such as bilingual education, are aimed at LEP students and are focused almost exclusively on teaching them English.

- The federal government's Emergency Immigrant Education Program provides largely discretionary grants to states and localities with large influxes of immigrant students, but the funding in 1999 totaled only $150 million.

- In the New York City public school system, two programs serve LEP students: bilingual education and freestanding ESL.

- New York state programs for LEP students relate only to English language instruction and instruction in a student's native language.

- Students are identified as being eligible for English language learning services through the Language Assessment Battery and the Home Language Identification Survey.

- Newcomer schools are one of the few policy responses in New York City that recognize the needs of immigrant students and attempt to provide services along as many dimensions as possible. These schools also provide training to new immigrant parents to equip them for participation in school leadership teams (site-based advisory councils) after their children move on to mainstream schools. These school leadership teams are required in every school in the state.

- The most important issue in school-parent relations is the translation of materials sent by the school into the appropriate language. Much material is sent home only in English.

- Anecdotal evidence suggests that, in general, immigrants are more likely than natives to send their children to the closest neighborhood school.

Major implication(s)/recommendation(s): Following are the most important concepts that emerged from the research:

- Because of dwindling resources, it will be important in both policy and political circles to clearly outline immigrant issues and delineate them as different from issues that affect all poor or disadvantaged student populations.

- Necessary funding and support need to be in place to achieve the state of New York's goals for English language learners to meet the academic standards imposed by the state.

- Both government and private advocacy organizations should sponsor relevant social science research and monitor closely the nature of immigrant parents' participation in school governance.

- The school system needs to increase its efforts to provide immigrant parents and students with the information they need to make informed school choices.

- More research needs to be done on the effectiveness of newcomer schools.

- Training of ESL and bilingual teachers must improve, and schools must consider training mainstream teachers in methods to help ESL students.

Gersten, R., & Baker, S. (1999, April). *Effective instruction for English-language learners: A multi-vocal approach toward research synthesis.* Paper presented at the annual meeting of the American Educational Research Association, Montreal, Quebec, Canada. (ERIC Document Reproduction Service No. ED430019)

Literature type: Synthesis of other studies

Type of instructional program model: Unknown (Not specified)

School/student/staff characteristics: English language learners in elementary and middle schools

Summary: The purpose of this synthesis was to examine the knowledge on the effectiveness of specific instructional practices for English language learners. The main question: What is really known about effective teaching practices for English language learners in the elementary and middle grades? The question was examined by conducting an exploratory meta-analysis on eight studies of instructional interventions and using qualitative synthesis to supplement this analysis.

Studies were included in the synthesis if they focused on K–8 English language learners and were conducted between 1985 and 1997. The first data source was the eight intervention studies, all of which used experimental or quasi-experimental designs that measured the effect instructional variables had on students' academic outcomes. The second data source consisted of studies of the learning environments of English language learners that focused on analyzing and describing instructional practices. These studies were divided into those that relied on low-inference instruments for documenting and analyzing classroom practices and those that relied strictly on qualitative interpretations. The third data source consisted of information gathered from five professional work groups, which differed from focus groups in that all 44 participants were professionals: teachers, staff development specialists, administrators, and researchers. The data were subjected to multivocal research synthesis.

The synthesis contains an explanation of multivocal research synthesis; details of some of the studies; suggestions from the professional work group on merging English language development with content-area learning; four figures and six tables supplementing the text; and 79 references.

Major findings: The following emerged from the synthesis:

- The knowledge of effective teaching practices for English language learners in the elementary and middle grades is limited. There are many theories but little empirical data.

- Within the eight empirical studies, no clear pattern emerged regarding effective instructional practices with English language learners.

- There is a limited understanding of the difficulty and complexity of this type of research.

- Distinguishing between language growth and academic growth is difficult.

- The English language development aspect of bilingual education and bilingual special education is a major problem, especially for special education students who may be excluded because they can't keep up the pace.

- A good ELD program should include the following:
    1. A focus on the development of fluency and proficiency in English
    2. A concern with more formal grammatical aspects of English
    3. An emphasis on learning new academic content

Major implication(s)/recommendation(s): The following emerged from the synthesis:

- The field of research must better define interventions and the critical context variables that give them shape and definition.

- Distinguishing between language growth and academic growth needs to be more clearly studied and accounted for.

- The U.S. Department of Education should be made aware of the lack of research and of the difficulties of doing research in this area.

Gibson, M.A., & Hurd, C.A. (2002). *Different paths taken: The divergent academic experiences of English language learners in high school* [Final report]. Santa Barbara, CA: University of California, Linguistic Minority Research Institute. Retrieved January 14, 2004, from http://lmri.ucsb.edu/resact/2/pdf_files/gibson_final.pdf

Literature type: Case studies

Type of instructional program model: English language development

School/student/staff characteristics: Three English language development classes were observed at a racially and ethnically mixed (60 percent white, 40 percent Mexican-descent) high school in an otherwise largely segregated school district in a mostly white middle- to upper-class professional town in Northern California. Students in the classes were all of Mexican descent with varying degrees of English proficiency.

The classes described in this report were constantly disrupted by some male students, answered by teacher threats, which resulted in a shift of attention from lessons to discipline. The classes were also characterized by an almost exclusive use of spoken Spanish by students, except when making jokes about the teacher or the lesson or when reading aloud. The girls typically remained quiet and unengaged. Only a small percentage of students remained attentive. Overall, the lessons moved slowly and little creative learning took place.

Summary: This report documents a study of some of the critical challenges facing Mexican-descent English language learners and how these challenges lead to the divergent academic paths during high school. The study used an ethnographic approach to more fully understand why Mexican-descent students from similar family and community backgrounds pursue different academic paths. The study had two main objectives: to highlight the political and emotional context of schooling for ELLs, including the barriers they face in learning English, paying special attention to variability by gender and generation; and to comprehensively explore ELLs' responses to schooling, that is, how they engage in school activities, both curricular and extracurricular, and the meanings and understanding that guide that engagement.

The study took place over one full academic year in three high school ELD classes: a combined beginner-intermediate class of 27 students and two advanced classes of 22 students each. All but one student were of Mexican descent.

Although the study focused on ELD classes, it was not concerned with the English language development pedagogy, curriculum, or curriculum application. (The analysis developed here may, nevertheless, be relevant to those interested in the field.) This report offers a student-centered ethnography of the ELD classroom, focusing on Mexican-descent students' interactions and behaviors, and their own accounts of their experiences inside and outside the class-

room. A primary focus of the study was the way in which students' connections to one another inform much of what they do, including how they act in class, what kinds of activities they get involved in, and what kinds of environments they feel comfortable in.

The analysis centers on three phenomena that appear to indicate student disengagement from learning: classroom "acting out" practices by some male students; invocations of the term "schoolboy" as a teasing measure against other boys engaged in what is actually being taught; and teasing that happens among English language learners—both boys and girls—in relation to their correctness in the use and pronunciation of spoken English.

The report contains excerpts from researchers' field notes on classroom behavior, along with analyses of the behavior.

Major findings: The findings center on the dynamics of these classrooms and why the students behaved as they did.

In cases of acting-out behavior, the situation tended to be one in which the teacher either tolerated the boys' behavior or responded to it by sending them to the office. Either way had significant drawbacks. In most cases, the girls blamed the teacher for the acting-out behavior that resulted in classroom disruptions, citing her lack of strictness. It was difficult to get the boys to reflect on acting-out behavior, although some of the responses tended to support peer pressure or peer acceptance.

The "schoolboy" phenomenon shares some important features with the acting-out practices. Boys are called "schoolboys" only by other boys when they appear to be engaged in the lessons. Within Mexican-descent populations, understandings of proper and educated personhood are variable and highly contested. Often these intraethnic differences are regionally determined; that is, struggles over social differences have a great deal to do with some of the more recent demographic and political changes that have taken place in the region.

Student commentaries demonstrated that speaking English, as well as learning English, is a very emotional dilemma. Students talked of being shamed by whites because of their lack of English proficiency; teased by Hispanics because of their high proficiency in English; and embarrassed by Hispanics who are ashamed of their own Spanish and speak only English.

Overall, the findings point to processes of differentiation (forms of inclusion/exclusion) among Mexican-descent students along lines of gender and perceived class and generational differences. The acting-out and teasing behaviors are meaningful social practices that have the potential to set effective limits on what appears acceptable while maintaining bonds of solidarity and sociality among classmates.

Major implication(s)/recommendation(s): The analysis in this report suggests that understanding the academic challenges facing Mexican-descent ELLs requires taking seri-

ously the way in which broader forces of gender, class, and racial discrimination and exploitation play out in the relationships and status among the students themselves. The analysis also suggests that to understand the behaviors of some Mexican immigrant students with regard to formal learning merits an appreciation of the various levels and forms of peer socialization at work in the school. Schools must recognize the mutually constituted forms of social difference that exist among their students and take active steps to mitigate the schooling practices that perpetuate those differences.

Greene, J.P. (1998). *A meta-analysis of the effectiveness of bilingual education*. Los Angeles, CA: University of Southern California, Tomas Rivera Policy Institute. Retrieved September 25, 2003, from James Crawford's Language Policy Web site and emporium: http://ourworld.compuserve.com/homepages/JWCRAWFORD/greene.htm

Literature type: Synthesis of other studies

Type of instructional model: Unknown (Not specified)

School/student/staff characteristics: LEP students

Summary: This paper reports on a review of the literature on the effectiveness of bilingual education. At the time this paper was written, bilingual education was a hotly contested political issue in California. Voters were asked to consider an initiative that would ban use of foreign languages in instruction of younger LEP children. Both initiative advocates and opponents claimed that research supported their case.

The author of this paper conducted a systematic statistical review—a meta-analysis—of the literature on the effectiveness of bilingual education. The meta-analysis included 11 studies drawn from a list of 75 studies compiled earlier by two critics of bilingual education. The author used the critics' criteria for acceptable studies: The studies had to compare students in a bilingual program to a control group of similar students for at least one year; differences between the treatment and control had to be random; results had to be based on standardized test scores; differences between the scores of the treatment and control groups had to be determined by applying appropriate statistical tests.

The author lists the 75 studies and categorizes them as follows: methodologically acceptable studies included in the meta-analysis; studies excluded because they are redundant; studies excluded because they are unavailable; studies excluded because they are not evaluations of bilingual programs; studies excluded because the effects are measured after an unreasonably short period; studies excluded because they inadequately control for differences between bilingual and English-only students.

Major findings: Children with limited proficiency who are taught using at least some of their native language perform significantly better on standardized tests than similar children who are taught only in English. In short, the research suggests that bilingual education helps children who are learning English. This conclusion is based on the standardized test score results from 2,719 students in 13 states; 1,562 of these students were enrolled in bilingual programs. The average student in these programs was tested in third grade after two years of bilingual instruction. The estimated benefit of using at least some native language in instruction on all scores measured in English is 0.18 of standard deviation on standardized tests.

Major implication(s)/recommendation(s) model: The author contends that, despite the small number of studies, the strength and consistency of the results, especially from the highest quality randomized experiments, reinforce the conclusion that bilingual programs are effective in increasing standardized test scores measured in English. However, the limited number of studies makes it difficult to address other issues, such as the ideal length of time students should be in bilingual programs, the ideal amount of native language that should be used in instruction, and the age groups in which these techniques are most appropriate. The author contends that to develop public policy that is most effective in addressing needs of LEP students, more randomized experiments are needed to determine how to best design effective bilingual programs.

Grey, M.A. (1992). Applying concepts of marginality to secondary ESL programs: Challenges for practitioners and researchers. In *Proceedings of the Third National Research Symposium on Limited English Proficient Student Issues: Focus on middle and high schools, vol. 2*. Washington, DC: U.S. Department of Education, Office of Bilingual Education and Minority Languages Affairs. Retrieved September 25, 2003, from www.ncela.gwu.edu/ncbepubs/symposia/third/grey.htm

Literature type: Professional judgment

Type of instructional program model: Unknown (Not specified)

School/student/staff characteristics: Secondary level ESL programs

Summary: This paper expands on earlier work done by the author (Grey, 1991) suggesting that secondary school ESL programs must be understood within the social, cultural, and economic contexts of the school, community, region, and nation. Understanding the context within which ESL programs work is crucial to determining whether these programs have become integral parts of school life or whether they are assigned a marginal status. The paper makes additional observations and examines seven influences that contribute to marginalized ESL programs. The purpose of the paper was to suggest a given set of circumstances, but not to necessarily claim the applicability of a general pattern. Influences on the marginalization of ESL programs in secondary schools include teachers' and administrators' lack of experience in ESL programs and with LEP students, an influx of LEP immigrants/refugees, and perception of LEP students as marginal people.

Major findings: Author suggests a common theme among the various influences that contribute to marginalized ESL programs: maximum uncertainty. An influx of cultural and language newcomers signals change. The dominant groups feel apprehension about the pace and depth of that change, which can create an environment of stress and fewer common references for "consolation."

Major implication(s)/recommendation(s): Author suggests further research throughout the country to determine effects on secondary ESL programs of conditions and other factors.

Hakuta, K. (1990). *Bilingualism and bilingual education: A research perspective* (Occasional Paper No. 1). Washington, DC: George Washington University, National Clearinghouse for Bilingual Education. Retrieved September 25, 2003, from www.ncela.gwu.edu/ncbepubs/focus/focus1.htm

Literature type: Professional judgment

Type of instructional program model: Bilingual programs in general

School/student/staff characteristics: No specific characteristics mentioned

Summary: This paper paints a broad picture of bilingualism and bilingual education in the United States. It begins with definitions of bilingualism and a discussion of the dichotomies created in the study of bilingualism. Various terms have arisen during the past 50 years: coordinate versus compound bilingualism; early versus late bilingualism; simultaneous versus successive bilingualism; additive versus subtractive bilingualism; and elite versus folk bilingualism. While such distinctions have served a purpose in drawing attention to various aspects of bilingualism, the author states, the most important lesson to be learned from the research is that some refer to characteristics of individuals and others to characteristics of social groups. The author asserts that no single definition of individual bilingualism is broad enough to cover all cases of individuals who are called bilingual; there is a range of possibilities. The same can be said of societal bilingualism.

In discussing bilingual education, the author contends that transitional bilingual education is explicitly nonbilingual because L1 is generally seen as instrumental only as an aid in the acquisition of English. In discussing second language learning, the author says that our present understanding of the process is far from complete. He continues with a brief discussion of trends in research in second language learning from empiricism to formal cognitivism to a greater sensitivity of cognitivism to the context in which learning occurs.

Major findings: In summarizing research in second language learning, the following conclusions are relevant to bilingual educators:

- The native language and the second language are complementary rather than mutually exclusive. Further, native language proficiency is a powerful predictor of the rapidity of second language development.

- The structural patterns of the native language have minimal influence on the patterns of second language acquisition, especially at the syntactic level.

- Language proficiency is not unitary but consists of a diverse collection of skills that are not necessarily correlated.

- The attainment of age-appropriate levels of performance in the second language can take four to seven years.

- Age may be a factor that constrains the acquisition of certain phonological and syntactic features of a second or foreign language but not its academic functions.

- Although affective factors are related to second language learning, those studies in a foreign language context may not be applicable to LEP individuals learning English as second language in the United States.

- Bilingualism is associated with greater cognitive flexibility and awareness of language.

- Skills and knowledge transfer globally rather than piece by piece.

- Expertise in translation exits in all bilingual children, demonstrating considerable ability to transfer regardless of content.

Major implication(s)/recommendation(s): The author suggests more work in the following areas:

- The discrepancy between psycholinguistics and sociolinguistics equity
- The value of language diversity as a natural resource
- The assessment of bilingual students
- The development of an international perspective

Harklau, L. (1994). Tracking and linguistic minority students: Consequences of ability grouping for second language learners. *Linguistics and Education, 6*(3), 217–244.

Literature type: Case studies

Type of instructional program model: Unknown (Not specified)

School/student/staff characteristics: Participants in the study reported here were four immigrant students (three from Taiwan, one from Hong Kong) from an urban high school in Northern California. The students were literate in Mandarin or Cantonese and planned to reside permanently in the United States. The school drew its student population from both affluent and industrial areas of the city. The student body of approximately 1,600 students averaged 50 percent African American, 30 percent Asian American, 20 percent white, and 2–3 percent Latino in 1987 through 1990, the period in which the study took place. Fewer than 150 students, mostly ethnic Chinese, were identified as second language speakers of English.

Summary: Tracking is a common practice in U.S. high schools. Students are sorted according to perceived academic ability and then instructed separately with different curricula. This article addresses linguistic features associated with the differential curricula of high school classrooms and the consequences for learners of English. It also explores processes by which language minority students are placed in tracked classrooms and the means by which some of them negotiate the system to change tracks after they are placed.

The reported study took the form of a school-based ethnography of the second language learning experiences of linguistic minority students. Specifically, four immigrant students (three from Taiwan, one from Hong Kong) from an urban high school in Northern California were the focal students. Data for the study were collected over the course of three and half school years (1987–1990). In total, the data included some 315 hours of observation, including 165 hours in 56 mainstream classrooms, 38 formal interviews with students and teachers, and frequent informal contact with students and school personnel during the course of the study. The final year of data collection served to supplement and formalize ongoing data collection with teachers, counselors, and other Chinese immigrant students. These data served as a means to triangulate with focal student data to ensure representativeness of case study experiences and bring to light other aspects of Chinese ethnic immigrant experiences at the school.

The article begins with an examination of the effects of tracked classes. It describes phenomena that parallel those described in previous accounts of tracked classrooms but frames and interprets these phenomena through the lens of second language learning opportunities. It next describes the means by which judgments of ability and placement in mainstream classes were negotiated and accomplished for the language minority students at the

high school. Finally, the article illustrates how these students, unlike their U.S.-born peers, were sometimes able to alter their track placements once in the mainstream and to position themselves in higher tracks.

Major findings: The study showed that instructional environments in mainstream classrooms are differentiated by the practice of tracking and emphasized the interconnection between differentiated curricula and differentiated opportunities to develop valued forms of school language proficiency and literate behaviors. Two main categories of language use in school contexts are differentiated: language used in instructional activities and language used in peer interactions at school. Tracking polarized instructional environments and created vastly different second language instructional environments for students in high and low tracks.

In exploring the negotiation process through which placements and judgments of ability are accomplished, the study showed that students were co-opted by the tracking system as they tried to work within it. They appeared to have little power to change the system as they saw it and were constrained to act within existing institutional structures. However, some immigrant students were able to change their position in the tracking system and move upward because of academic achievement and aspiration.

Major implication(s)/recommendation(s): Because the study focused primarily on student perception and experience, the author suggests that further research might serve to elaborate on the roles and perspectives of school personnel and student families. In particular, such work might address how family and community networks might help lower-achieving students navigate successfully through the U.S. school system. It also suggests the need for research on the dynamics and ethics of the school culture that make it possible to conceal the nature of the tracking system from students. Finally, it might be constructive to know how widespread tracking practices are.

Henderson, R.W., & Landesman, E.M. (1992). *Mathematics and middle school students of Mexican descent: The effects of thematically integrated instruction* (Research Rep. No. 5). Santa Cruz, CA: University of California, Center for Research on Education, Diversity & Excellence. Retrieved September 25, 2003, from http://repositories.cdlib.org/crede/ncrcdsllresearch/rr05

Literature type: Experimental studies; quasi-experimental studies

Types of instructional program model: Thematically organized instruction in mathematics with structured immersion and thematically organized instruction in mathematics with submersion with primary language support

School/student/staff characteristics: The subjects in the study reported here were seventh-grade students from a middle school serving a population of predominantly Mexican descent. Some 90 percent of the students in the school were Hispanic; 60 percent of those were identified as LEP speakers. The academic achievement of students in the school was the lowest of four middle schools in the district.

Summary: This paper reports on the first two years of a project that addressed the problem of underachievement and low participation in mathematics among students of Mexican descent. The project was part of a larger effort to enhance the educational experience of a population of at-risk middle school students. This paper reports on mathematics outcomes and associated patterns of attitudes and self-perceptions of academic motivation.

The specific purpose of the study was to examine the effects of thematically organized instruction in mathematics, to describe attitudes relevant to mathematics, and to test hypotheses regarding the relationship of motivational variables to mathematics outcomes. The study also examined some of the special difficulties, within a thematic approach, of providing comprehensive coverage of topics designated for the middle school mathematics curriculum.

Thematic instruction incorporates a concrete learning-by-doing approach and has the potential to facilitate cooperative and interactive learning opportunities. The central features of the collaborative approach reported here include "untracking," that is, assigning students to classes on a heterogeneous basis, developing a thematic approach to instructional organization, and emphasizing cooperative learning groups.

In the first year of the study, 102 subjects were randomly assigned either to the theme treatment or to traditionally organized classes that served as a comparison condition. Comparison students followed the school's traditional pattern. Theme students were grouped into two heterogeneous classes: one taught in English only; the other, bilingually. Theme students remained together for math, reading, language arts, and social studies or science and, along with their teachers, chose their themes.

A similar design was followed during the second year, except that assignment to treatment groups was not random. A total of 103 students were assigned to treatment conditions with a view toward equivalency in achievement levels between comparison and theme classes. Approximately half the students in each treatment condition received instruction in English while the rest received instruction in English and Spanish.

Researchers developed pretests and posttests to assess computational skills (40 items) and concepts and applications (45 items). The tests were designed to parallel the standardized achievement tests used by the school district. A Spanish version of both tests was created through back-translation performed by native Spanish speakers. Researchers constructed an attitudinal measure based on the Fourth National Assessment of Educational Progress. A part of the attitude scale employed items adapted from NAEP measures of student attitudes toward school subjects.

The data were collected over two years, pooled for overall analysis, and subjected to a multivariate analysis of variance, with treatment groups as the independent variable and the two mathematics posttests as dependent variables.

Major findings: As hypothesized, experimental and control students made equivalent gains in computational skills. Experimental students, who received thematic instruction, surpassed control students in achievement on mathematical concepts and applications. There were no treatment group differences in students' attitudes toward mathematics or their self-perceptions.

Major implication(s)/recommendation(s): The authors felt positive about the potential of thematic instruction as a means of involving minority students in meaningful learning experiences in mathematics. On the other hand, they were concerned whether students would have the opportunity to learn the full range of mathematics content defined by the curriculum. The researchers want to identify resource materials and develop testing frameworks for a variety of thematic units more responsive to diverse cultural backgrounds and community settings.

Hernandez, R.D. (1994). Reducing bias in the assessment of culturally and linguistically diverse populations. *Journal of Educational Issues of Language Minority Students, 14*, 269–300. Retrieved September 25, 2003, from www.ncela.gwu.edu/miscpubs/jeilms/vol14/hernand.htm

Literature type: Professional judgment

Type of instructional program model: Unknown (Not specified)

School/student/staff characteristics: None mentioned

Summary: Following is the author's own summary:

The assessment of culturally and linguistically diverse populations has been fraught with a myriad of problems. These problems range from lack of understanding by assessors of the cultural and linguistic characteristics that a given child brings to the assessment arena to knowingly conducting evaluation and diagnosis of children with limited English proficiency. Current assessment practices use diagnostic tests that are statistically unreliable and based on the psychological model that is divorced from the nature of what language is and how it actually functions for a particular child. As a result, injury to the child in the form of misdiagnosis occurs. Speech-language pathologists have a responsibility to ensure that this special population is evaluated in the most appropriate manner possible. Many studies have been conducted and procedures developed, but these do not matter unless changes are made to help the student in the assessment process in a positive manner. We, as a profession, need to examine what our biases are, be they conscious or unconscious attitudes we bring to the assessment arena. We have to move beyond the attitude of learned helplessness taught to us in graduate school and what has become comfortable in our daily routine and move toward attitudes that promote flexibility and creativity and place children's best interest at the crux of all evaluations. For this to occur, we must accept the idea that all students are unique and vary in terms of their environment and the knowledge that is acquired within that specific environment. Burnout is not the late hours put into the job but the feeling that we experience when we are prevented (externally or internally) from doing what is in the best interest of the children we serve.

Major findings: None included

Major implication(s)/recommendation(s): None included

Hewlett-Gómez, M.R., & Solís, A. (1995). Dual language instructional design for educating recent immigrant secondary students on the Texas-Mexico border. *Bilingual Research Journal, 19*(3/4), 429–452. Retrieved September 25, 2003, from www.ncela.gwu.edu/miscpubs/nabe/brj/v19/19_34_hewlett.pdf

Literature type: Program descriptions

Type of instructional program model: Dual language immersion

School/student/staff characteristics: The program described here was implemented in a small community in Texas 10 miles from the United States-Mexico border. In this community of 15,000 people, 10,350 students were enrolled, of whom 99 percent were Hispanic. Eighty-five percent of children entered school proficient in Spanish but limited in English; 45 percent were from migrant families; 13 percent of the LEP students were recent immigrants—that is, they had been in the United States for fewer than two years; 80 percent of recent immigrants were from Mexico, and the rest were from El Salvador and Guatemala.

Summary: This paper describes the Literacy Program for Recent Immigrant Students, a second language learning program for adolescents in Texas. The program was organized using the concept of teams of two middle school campuses, all serving grades 6, 7, and 8. Each campus housed approximately 1,000 students. Each campus team consisted of a certified bilingual/ESL teacher, a bilingual teaching assistant, and three content-area teachers. These teams used differentiated staffing composed of one unit with math, science, and social studies team members, and another unit with an ESL and reading team member and a Spanish reading and language arts team member. A team-teaching approach was used in ESL classes.

The program's five components were identification, assessment, and placement; curriculum, instruction, and materials; staff; staff development; and parental involvement.

The authors summarize the program's characteristics, generally unlike other ESL programs in Texas, as follows:

- Instruction that incorporated relevant theories of second language learning and literacy
- Instruction that incorporated state and federal laws and regulations relevant to bilingual education and ESL program requirements
- Instruction that addressed students with beginning levels of English oral literacy proficiency and two levels of native language proficiency

- ESL instruction that focused on oral language development skills needed for transition to literacy and language arts instruction

- Literacy and language arts instruction that addressed both Spanish and English skills and transitional instruction focusing on similarities and differences between languages

- Mathematics, science, and social studies instruction in both languages

- Instruction that infused students' cultural backgrounds and immigrant experiences into cultural activities throughout the curricula as a way to facilitate acculturation

- Instruction that relied significantly on state-adopted bilingual and ESL curricula and that encompassed recent and innovative language and literacy methodology

- Current supplementary materials and resources that supported the curricula

- Staff development that provided training in key instructional methodologies, enhanced staff skills in two languages, and deepened pedagogical issues such as literacy, second language acquisition, and integration of language and content

- Parent involvement and support services that assisted parents in understanding the school's role in educating their children and how they could help in this process

Major findings: The program was implemented for one year with financial support from the state. During the year of state support, the program was evaluated. Although the outcomes were not conclusive because of the program's short duration, they did provide some support for the program design's success. In brief, test assessment results showed some quantitative gains in Spanish and English achievement. Comment by teachers, students, and parents indicated that the program was well received by students, teachers, and administrators. Most important, the students felt they were learning, wanted to attend classes, and were liked by their peers.

Major implication(s)/recommendation(s): The authors conclude that the program faces three critical challenges: adequate funding; recruiting and retaining bilingual teachers; and meeting state high school graduation standards and requirements.

Hood, L. (2003). *Immigrant students, urban high schools: The challenge continues*. New York, NY: Carnegie Corporation of New York. Retrieved January 14, 2004, from www.carnegie.org/pdf/immigrantstudents.pdf

Literature types: Program descriptions; professional judgments

Types of instructional program model: ESL pullout; other (newcomer programs)

School/student/staff characteristics: Three samples are profiled in this report.

Sample 1 is a newcomer program for high school students at a community college in Long Island City, New York. All the students are immigrants. There are 450 students from 40 countries who speak 36 languages. There are 33 teachers. The school is organized into clusters. Each cluster has 75 students, four teachers, a teacher/counselor, and a full-time paraprofessional. All instruction is in English.

Sample 2 is a school reform model in use at a high school in Houston, Texas. The school experienced drastic demographic shifts in its student population during the 1990s. Affluent students gradually left the school and were replaced largely by poor immigrants. Most of the school's 2,077 students come from 70 countries and speak 42 languages. The school has been recently restructured. It operates 10 mostly self-contained communities, each with 173 to 224 students.

Sample 3 is an ESL program at a high school in Raleigh, North Carolina. The school is located in a blue-collar neighborhood. The school serves immigrant students from 30 countries. Approximately half the immigrants are Hispanic.

Summary: This paper broadly describes programs in high schools dealing with an increase of immigrant LEP students. They are International High School in Long Island City, New York; Lee High School in Houston, Texas; and Sanderson High School in Raleigh, North Carolina.

Sanderson and other North Carolina schools exemplify the multilayered challenges faced by traditional school systems trying to adapt to an influx of students from different cultures speaking different languages and with different levels of education. The International High School and Lee High School represent an attempt to institute innovative policies and practices, including school restructuring, in response to the special needs of immigrant youth.

Major findings: The three examples have the following in common:

- They have departed dramatically from the traditional model of the comprehensive high school.
- They have tried to create small-school settings.
- They work to strengthen their ESL programs.

- They foster one-on-one contact between adults and students.
- They encourage input from teachers. Teachers, in fact, are a key component in successful programs.

Major implication(s)/recommendation(s): The author states that substantive changes are needed in most high schools if immigrant students are to be well served. But the flow of newcomers to the United States is outpacing classroom reform. Meaningful reforms are difficult to enact because of a shortage of qualified ESL teachers, politics that are aligned with anti-immigrant sentiments, and a lack of resources.

Krashen, S.D. (1998). *A note on Greene's "A meta-analysis of the effectiveness of bilingual education."* Unpublished manuscript. University of Southern California, Los Angeles. Retrieved September 25, 2003, from James Crawford's Language Policy Web site & emporium: http://ourworld.compuserve.com/homepages/JWCRAWFORD/Krashen2.htm

Literature type: Professional judgment

Type of instructional program model: Unknown (Not specified)

School/student/staff characteristics: Not applicable

Summary: This short paper comments on Greene's (1998) meta-analysis. Here, Krashen states that Greene's analysis may have underestimated the effect of bilingual education. The average duration of the programs in Greene's study was only two years, not enough time for full impact of education in the primary language to be felt. Also, Greene did not attempt to account for the kind of bilingual education model used; some kinds of programs are more effective than others. In response to criticism that Greene's studies were "old," the author reports on a correlation he ran between the publication year of the study and the effect size reported. The correlation was close to zero for 10 of the studies that reported an effect size for English reading, meaning that earlier and later studies had similar effects.

Major findings: Krashen points out that Greene's work reanalyzed the results of Baker and de Kanter (1983). Greene, in his analysis—which may have underestimated the effect of bilingual education—calculated for each study the effect size for English, reading, math, and Spanish reading. He found that the average effect size was positive, which meant that, on the average, bilingual education had a positive effect.

Major implication(s)/recommendation(s): Greene's findings that bilingual education had a positive effect on student achievement may have implications for the English-only movement and the proposal, at the time this paper was written, to end bilingual education in California.

Langer, J. (1999). *Beating the odds: Teaching middle and high school students to read and write well.* (2nd ed. rev.). Albany, NY: University of Albany, National Research Center on English Learning and Achievement. Retrieved January 15, 2004, from http://cela.albany.edu/reports/eie2/index.html

Literature type: Case studies

Type of instructional program model: Unknown (Not specified)

School/student/staff characteristics: The study reported here took place in Texas, California, Florida, and New York and included 25 schools, 44 teachers, and 88 classes. Although the sample was diverse and included urban and suburban sites, schools with poor and diverse student bodies predominated. (A brief profile of each school is included in an appendix.)

Summary: The study reported here investigated the characteristics of instruction that accompany student achievement in reading, writing, and English. It focused on English language arts programs in schools that had been trying to increase student performance, comparing those whose students performed higher than demographically comparable schools with schools whose scores were more typical. The study took place over a five-year period. Each teacher and school was studied for two years. The project as a whole focused on both the professional and classroom activities that contributed to English instruction. This report focuses on analyses of classroom activities.

The study involved a nested multi-case design with each English program as a case, and the class—including the teachers and student informants—as cases within. None of the schools studied was dysfunctional, and none of the teachers was considered to be other than "good." Data consisted of field notes of all meetings, observed classes, and conversations; e-mail messages; artifacts from school and professional experiences; tape recordings and transcripts of interviews and observed class sessions; and in-process case reports developed by the field researchers. Data were analyzed by a system of constant comparisons, in which patterns were identified and tested both within and across cases.

Major findings: The following six features were shown to permeate the environments and provide distinctions between higher performing and more typically performing schools. While some of the features were present to varying degrees in the English programs in the more typical schools, they were all constantly present in the higher performing schools and formed a consistently supportive learning environment. In higher-performing schools:

- Instruction in the knowledge and conventions of English and high literacy took place as separated, simulated, and integrated experiences

- Test preparation was interpreted as encompassing the underlying skills and knowledge needed to do well in coursework and on tests and integrated into the ongoing class time as part of the ongoing English language arts curriculum

- Overt connections were constantly made among knowledge, skills, and ideas across lessons, classes, and grades, and across in-school and out-of-school application

- Students were overtly taught strategies for thinking about ideas and completing activities

- Even after achievement goals were met, teachers moved beyond those immediate goals toward students' deeper understandings and generation of ideas

- The content and skills of English were taught as a social activity, with depth and complexity of understanding and proficiency with conventions growing from collaborative discourse

Major implication(s)/recommendation(s): Because this was an observational study, it cannot prove causality. The author states that at least two types of follow-up studies are warranted. The first would focus on a more micro level on teacher and class differences to determine what differences can be tolerated and to what degree before achievement is compromised. The second would be an instructional intervention attempting to implement the features in lower-performing schools and studying whether these features will positively affect student performance and the kinds of professional and instructional development needed for this to occur.

Linquanti, R. (1999). *Fostering academic success for English language learners: What do we know?* San Francisco, CA: WestEd. Retrieved July 29, 2003, from www.wested.org/policy/pubs/fostering/

Literature types: Syntheses of other studies; program descriptions

Types of instructional program model: Early-exit transitional bilingual education; late-exit transitional bilingual education; developmental or maintenance bilingual education; bilingual immersion; integrated transitional bilingual education; dual-language or two-way immersion; English language development or English as a second language pullout; structured English immersion; submersion with primary language support; Canadian French immersion; indigenous language immersion

School/student/staff characteristics: Author defines the following instructional methods: native-language instruction; native-language support; English as a second language/English language development; and sheltered English instruction (in California often called "specially designed academic instruction in English"). The author defines the following types of students: English only; language minority; limited English proficient or English language learner; and fluent English proficient (initially fluent English proficient and redesignated fluent English proficient).

Summary: This publication synthesizes information from several sources to begin to answer questions concerning the types of language-minority students, instructional methods, and program models; the best instructional practices and how to use them; the most rigorous and reliable research about English language acquisition; and the role of students' native language in teaching reading, learning academic English, and succeeding academically. The publication is organized into seven sections: "Definitions and Terms"; "Inventory of Bilingual and Immersion Educational Models" (includes a table describing goals, target population, classroom population, and language used to teach literacy and subject matter for each of the 11 models); "Types of instructional program models" (includes a table describing definitions and characteristics, when appropriate, and elements of successful implementation for each of the 11 models); "Program Model Advantages and Concerns"; "English Language Acquisition and Academic Success: What Do We Know," which discusses three major studies: two National Research Council studies (Meyer & Fienburg, 1992; August & Hakuta, 1997) and Greene (1998); "Teaching Reading to English Language Learners"; and "Misconceptions That Cloud the Discussion."

Major findings: The following key findings come from the three major studies:

1. Timeframes for learning English vary widely, yet students with strong native-language proficiency are more likely to develop greater English proficiency.
2. Native language instruction bolsters English language learners' academic success.
3. Native-language use is one effective component among many that educators must be free to use to promote academic success for English language learners.

4. Schools need to assemble a set of program components that work for the children in their particular community, given its goals, demographics, and resources.

Major implication(s)/recommendation(s): Included are recommendations from the National Research Council's Committee on the Prevention of Reading Difficulties on teaching reading to English language learners. The committee urges initial literacy instruction in a child's native language whenever possible and suggests that literacy instruction should not be introduced in any language before some reasonable level of oral proficiency in that language has been attained.

Lucas, T. (1993b). What have we learned from research on successful secondary programs for LEP students? A synthesis of findings from three studies. In *Proceedings of the Third National Research Symposium on Limited English Proficient Student Issues: Focus on middle and high school issues, vol. 1*. Washington, DC: U.S. Department of Education, Office of Bilingual Education and Minority Languages Affairs. Retrieved September 25, 2003, from www.ncela.gwu.edu/ncbepubs/symposia/third/lucas.htm

Literature type: Synthesis of other studies

Type of instructional program model: Submersion with primary language support

School/student/staff characteristics: The first study examined six "effective" high schools in California and Arizona "working to promote academic success of Latino language-minority students." The second study examined in six unspecified states nine "exemplary programs" for language-minority students whose native languages varied. The third study examined efforts in 20 school districts in 16 unspecified states to build capacity for programs for language-minority students. In the third study, staff members were generally characterized as committed to and knowledgeable about education for language-minority students and were fluent in students' native languages. In the three studies, most programs were organized as special programs within traditional schools. No mention is made of numbers of students involved in the studies/programs.

Summary: The goal of this paper is to provide a framework for educators and others engaged in designing, restructuring, implementing, and studying secondary programs for language-minority (LM) students. The paper synthesizes findings from three studies that focused in whole or part on successful secondary programs for LM students. The studies were of six high schools in the Southwest that were effective with Latino LM students; a national study of exemplary special alternative instructional programs; and a national study of successful Title VII capacity building in 20 school districts. The paper provides an overview of factors that characterized the schools and programs and examines the role of context, school and program structures, curriculum, instruction, and staff.

Major findings: In these secondary school programs for language-minority students, contextual factors, curriculum, instruction, and staff characteristics influenced the success of the programs. Contextual factors and staff characteristics influenced all other variables and each other.

Major implication(s)/recommendation(s): Further research is warranted to fully understand how context influences school and program effectiveness and which particular features of curriculum, instruction, and staffing lead to greater success among schools and students. Further research is also needed to understand other variables, including family involvement, the involvement of the language-minority community and the broader community, student assessment, and the roles of paraprofessionals and counselors.

Lucas, T., Henze, R.C., & Donato, R. (1990). Promoting the success of Latino language-minority students: An exploratory study of six high schools. *Harvard Educational Review, 60*(3), 315–340.

Literature type: Case studies

Type of instructional program model: Unknown (Not specified)

School/student/staff characteristics: The population examined in the study reported here were Latino students in grades 9–12 organized into four groups: (1) high achievers; (2) average achievers; (3) students who had been doing poorly but had improved; and (4) students who had immigrated to the United States within two years of the study. All students were non-native speakers of English and were grouped for the study as either newcomers or non-newcomers.

Six high schools participated in the study. The schools were in Anaheim, Lakewood, San Francisco, San Jose, and National City, California, and Nogales, Arizona. Five of the six had student populations of between 1,700 and 2,200. All had minority white populations. In all but the smallest school, Latino students constituted the largest single group, more than one-third of the total student population.

The four schools with the larger proportions of nonwhite students also had large proportions of nonwhite staff. In none of the schools, however, was the ethnicity of the staff comparable to the student population; a much larger proportion of staff than students was white.

Summary: This article presents the findings of an exploratory study of five effective high schools in California and one in Arizona that provided an environment in which language-minority students and others could achieve academic success. The article presents the key features found to be integral to the schools' success.

By focusing on broad issues of schooling in secondary schools with large populations of LM students, the authors extend existing research on effective schooling, which, until the time of the study, had focused primarily on urban elementary schools in low-income neighborhoods. The authors also offer suggestions and a sense of possibility to educators seeking an effective response to the secondary education of LM students.

Schools for the study were selected first through a nomination process by experts in the field. Nominated schools were then asked to submit evidence of formal recognition from local, state, or federal agencies for their instructional programs for LM students. They were also asked to furnish quantitative evidence of their success such as attendance and dropout rates and standardized test scores.

Data for the study were collected from interviews with superintendents, district-level bilingual program directors, principals, assistant principals, school-level project and program directors, counselors, teachers, teacher aides, and students; student questionnaires; classroom observations; schoolwide observations; and various records and documents from each school. On average, 24 Latino LM students from each school were interviewed.

Major findings: From the study, eight features emerged that appear instrumental in promoting the success of LM students:

1. Value is placed on the students' languages and cultures.
2. High expectations of LM students are made concrete.
3. School leaders make the education of LM students a priority.
4. Staff development is explicitly designed to help teachers and other staff serve LM students more effectively.
5. A variety of courses and programs for LM students is offered.
6. A counseling program gives special attention to LM students.
7. Parents of LM students are encouraged to become involved in their children's education.
8. School staff members share a strong commitment to empower LM students through education.

Major implication(s)/recommendation(s): Because the study reported here was exploratory in nature, many more secondary schools with large numbers of LM students need to be visited for longer periods to determine whether the features that emerged apply to other similar schools. Also, the features themselves need to be examined in greater depth so that educators can understand them more fully and apply them in the appropriate contexts.

McCloskey, M.L. (1992). Developing integrated language learning: Teaching curricula with middle/high school ESOL programs. In *Proceedings of the Third National Research Symposium on Limited English Proficient Student Issues: Focus on middle and high school issues, vol. 1*. Washington, DC: U.S. Department of Education, Office of Bilingual Education and Minority Languages Affairs. Retrieved September 25, 2003, from www.ncela.gwu.edu/ncbepubs/symposia/third/mccloskey.htm

Literature type: Program descriptions

Type of instructional program model: Integrated TBE

School/student/staff characteristics: District leadership; development team composed of teachers; educational consultant; ESOL students who perform well academically

Summary: The goal of this paper is to offer a process for helping school districts develop curriculum that applies current research on the pedagogy and sociolinguistics of language learning and teaching; applies current understandings about what a curriculum should include and about the importance of involving participants at all levels in curriculum development; is implemented efficiently and is documented to effectively improve student learning; and uses appropriate evaluation procedures at several levels to ensure its effectiveness. The paper describes four key elements of four curriculum development projects: people involved in the initiation, development, and ongoing project implementation; process used for developing curriculum; assessment plan and process; and procedures for ongoing support. Relationships between these variables and program outcomes are explored. Various achievement levels among the different programs are described and possible relationships to the four key factors explored. Suggestions are made for future research.

Major findings: Not applicable

Major implication(s)/recommendation(s): Ideal outcomes include committed teachers who feel ownership of curriculum; ESOL students who read real books, gain cultural background knowledge through multicultural literature, write for real audiences, are involved with the community through projects they care about, perform well academically, and have parents who participate in the schools; students from grade-level classes can widen their cultural horizons through interactions with the program. A curriculum guide that is a clear and useful, yet a living, growing document is desirable.

Minicucci, C. (1996). *Learning science and English: How school reform advances scientific learning for limited English proficient middle school students* (Educational Practice Rep. No. 17). Washington, DC: National Center for Research on Cultural Diversity and Second Language Learning. Retrieved September 22, 2003, from www.ncela.gwu.edu/miscpubs/ncrcdsll/epr17.htm

Literature type: Case studies

Type of instructional program model: Submersion with primary language support

School/student/staff characteristics: LEP middle school students of mathematics and science at four schools.

School 1: Elementary school (K–8) in Cambridge, Massachusetts, with a total enrollment of 365; 25 percent LEP students; Haitian Creole main language of LEP students

School 2: Middle school (7–8) in Modesto, California, with a total enrollment of 860; 20 percent LEP students; Spanish and Southeast Asian languages main languages of LEP students

School 3: Middle school (6–8) in San Francisco, California, with a total enrollment of 650; 24 percent LEP students; Spanish, Cantonese, and other Chinese languages main languages of LEP students

School 4: Middle school (6–8) in El Paso, Texas, with a total enrollment of 1,000; 28 percent LEP students; Spanish main language of LEP students

Summary: This article presents findings from the School Reform and Student Diversity Study, a four-year project that analyzed schools offering exemplary science and mathematics programs to middle school students with limited proficiency in English. The four schools described in this article give students access to science and mathematics curricula by instructing them either in the students' primary language or in English using sheltered techniques.

Schools for the study were selected, first, through a nomination process. The study team screened 75 of the most promising sites through telephone interviews to identify schools that exhibited excellence in three areas: high-quality language arts, science, or mathematics programs for LEP students; significant school restructuring in governance, organization of teaching, and use of time; and implementation of a well-designed English language acquisition program. Further screening reduced the pool of schools for in-depth study to eight case study sites. Four sites offered exemplary mathematics and science programs; four offered language arts. The four with exemplary mathematics and science programs are the focus of this article.

Data on student outcomes comparable across the sites were not available because LEP students are not given the standardized tests (in English) that districts or states require of most students. Consequently, the study team could not provide evidence of significantly higher student achievement scores to demonstrate quantitatively that the case study sites were in fact exemplary. Nevertheless, the screenings led to the conclusion that the selected schools were highly innovative and provided outstanding learning opportunities for all students, including LEP students.

Major findings: Overall, the study showed that certain elements of school reform appear particularly valuable in overcoming barriers to teaching LEP students science and mathematics. These include:

- School-based decisionmaking over resources and time
- Creation of smaller school units for learning
- Innovative uses of time that protect and extend LEP students' time to learn
- Teacher collaboration that enables joint curriculum planning across grade levels, classes, and content areas

Although the four schools employ different methods to serve LEP students, they all share the following features in their efforts to upgrade science and mathematics curricula:

- They are engaged in innovative approaches to science and mathematics education that are aligned with and assisted by national efforts to upgrade curricula for all students
- They give LEP students access to these innovative science and mathematics programs
- Their language acquisition and development programs for LEP students support and are coordinated with the exemplary science and mathematics programs
- Their restructured school organization supports their innovative approaches to science and mathematics education

Major implication(s)/recommendation(s): The author believes that, with the help of federal and state governments, more needs to be done to make the learning opportunities observed at these four schools widely available to LEP students nationwide.

Montecel, M.R., & Cortez, J.D. (2002). Successful bilingual educational programs: Development and the dissemination of criteria to identify promising and exemplary practices in bilingual education at the national level. *Bilingual Research Journal, 26*(1). Retrieved January 15, 2004, from http://brj.asu.edu/content/vol26_no1/pdf/ar2.pdf

Literature type: Multivariate models

Types of instructional program model: Bilingual immersion; integrated transitional bilingual education; dual language immersion

School/student/staff characteristics: Eight elementary schools, two high schools, and one middle school participated in the study. Seven were urban schools, three rural, and one a reservation school. Schools were in Texas, Oregon, Illinois, Utah, Florida, Massachusetts, California, New York, and Washington, D.C. Student enrollment ranged from 219 to 1,848. The schools had similar profiles, including high poverty, high average attendance, high percentage of students participating in the bilingual education programs, low retention rate, low annual dropout rate, low percentage of migrant students, LEP student representation in gifted and talented programs, and low LEP student representation in special education programs. Ethnic representation of students was diverse: Hispanic students ranged from 40 percent to 98 percent of students enrolled; Asian, 2 percent to 41 percent; Russian, 12 percent to 32 percent; and Native American, 3 percent to 98 percent (specific tribes are not mentioned). All teachers in the schools received information about bilingual education. Bilingual teachers were fully credentialed. Staff members were selected based on their academic background, experience in bilingual education, language proficiency, enthusiasm, commitment, and openness to change and innovation.

Summary: This article reports on a study of promising and exemplary bilingual education programs in schools across the nation as determined by participating LEP students' academic achievement. The purpose of the study was to identify those characteristics that contribute to the high academic performance of students served by bilingual education programs. Schools were selected to reflect the diversity of U.S. schools and included elementary and secondary schools, different language groups, LEP concentrations, Title I targeted assistance and schoolwide programs, and Title VII grantees. The study had one primary research question: What contributed to the success of a bilingual education classroom as evidenced by LEP student academic achievement? Student outcome indicators included oral and language proficiency and content-area mastery in English and their native language. Assessment measures varied across the country. Quantitative data were gathered from a review of student and school outcomes; school demographics; surveys of principals and teachers; and structured formal classroom observations. Qualitative data included school profiles; structured interviews with principals; and focus group questions for teachers, parents, and students. All data were analyzed and synthesized. Results were triangulated and patterns and trends across programs were identified.

Major findings: The research revealed a number of indicators for success:

1. School shows strong and visible leadership.

2. Program leaders are well informed of the rationale for bilingual education and share an active commitment to bilingualism.

3. The school has published and disseminated statements of expectations to the school community that create a vision and set of goals that define the achievement levels of all students, including LEP students.

4. The school climate is safe and orderly.

5. Clearly articulated roles and responsibilities, dynamic two-way communication, and focused and sustained supports between central office and school-level staff provide strong leadership, credibility, and respect for the bilingual program.

6. The bilingual program is an integral part of the school's academic plan and is widely respected by the administration.

7. Fully credentialed bilingual and ESL teachers are continuously involved in professional development and continuing education.

8. Parents are strong advocates of the bilingual and ESL programs.

9. Staff members hold themselves accountable for the academic success of all students.

10. Teachers are of the highest caliber.

11. Community members know the rationale and critical components of the programs and are strong advocates of the programs.

12. Teachers expect all students to achieve at high standards.

13. The curriculum reflects and values the students' cultures.

Major implication(s)/recommendation(s): The reported indicators of success can now be used by practitioners and researchers to assess programs and recognize areas that are strong and those that may need improvement.

Montone, C.L., & Loeb, M.I. (2000). *Implementing two-way immersion programs in secondary schools* (Educational Practice Rep. No. 5). Santa Cruz, CA: University of California, Center for Research on Education, Diversity & Excellence. Retrieved September 26, 2003, from www.cal.org/crede/pubs/edpractice/EPR5.htm

Literature type: Program descriptions

Type of instructional program model: Dual language immersion

School/student/staff characteristics: All seven schools included in the study are in urban areas; all programs involved Spanish/English instruction. Language minority and language majority students were integrated for all or most of the day and received content and literacy instruction through both English and Spanish. Qualified staff needed to be bilingual.

Summary: This report discusses two-way immersion (TWI) programs in middle and high schools. While common in elementary schools, these types of programs have not entered many secondary schools. For this study, telephone interviews were conducted with project coordinators from seven schools that had secondary TWI programs. Their responses provide a preliminary sense of the key challenges confronting TWI programs operated above the elementary level, along with some experience-based options for meeting these challenges. Issues addressed include program planning; language distribution, curriculum, and materials; student participation and motivation; attrition and late entries; student scheduling; teams, clusters, and houses; staff; transportation; and parent involvement. A general overview of each program is included

Major findings: There is no one way to implement a secondary-level two-way immersion program. While most grow out of elementary programs, others do not. Some offer electives in Spanish; others do not. Some hire new teachers; others use existing bilingual staff.

Major implication(s)/recommendation(s): For those implementing a two-way immersion program, it is necessary to be patient; plan well in advance; hire good teachers; and obtain buy-in from the district, the school, the teachers, the students, and the parents.

Neumann, R.A. (1996). Reducing Hispanic dropout: A case of success. *Educational Policy, 10*(1), 22–45.

Literature type: Case studies

Type of instructional program model: Unknown (Not specified)

School/student/staff characteristics: The district reported on is 25 miles north of the United States-Mexico border in California's Imperial County, a large desert area. Mexican culture and identity dominate the area, but there are also strains of Southern California American culture. Educational programming in the district conforms, for the most part, to guidelines established by the California Department of Education. The district does have, however, a history of successful bilingual (Spanish/English) instruction.

Around the time of the study, faculty was 67 percent Latino; most—87 percent of elementary school teachers and 50 percent of secondary school teachers—were bilingual. Districtwide, 48 percent of teachers learned Spanish first; 69 percent of elementary school teachers regarded Spanish as their mother tongue. Most administrators were Latino; 66 percent were bilingual; and most attended public K–12 schools in the district. Additionally, all staff who dealt with parents spoke Spanish and English, and all communications to parents were in Spanish and English.

Summary: This article reports findings from an exploratory investigation of a comparatively low dropout rate in a predominantly Mexican American school district in Southern California.

Information regarding goals, characteristics, and philosophical and theoretical influences on the district's educational programs was obtained through interviews with the district's superintendent, central office staff, school principals, program directors, teachers, and school staff. Additionally, all 77 teachers at one of the district's high schools received a questionnaire on their perspectives on the district's dropout situation. Students' and former students' perspectives on the district's education programs, teachers' attitudes and behaviors, and the dropout situation were also surveyed. Information was also collected through observations in the schools and community, and through conversations with parents, residents, and other informants.

Major findings: The dropout phenomenon was influenced by a number of interrelated factors, both personal and systematic. Some of the factors that contributed to the district's ability to keep students in school were alternative education programs for at-risk students; counseling programs; a predominantly bilingual/bicultural staff, faculty, and administration; and professional development for teachers. The most important factor, however, appears to be the sociocultural contexts of community and schooling, which, in this case, contributed to a strong bond between students and school. The area's geographic isolation from urban

America and its dominant Mexican culture and identity helped produce a homogenizing effect on the area.

Major implication(s)/recommendation(s): The findings suggest that the sociocultural contexts of community and schooling have a substantial influence on the kinds of relationships Latino students establish with school.

Northwest Regional Educational Laboratory & National Clearinghouse for Comprehensive School Reform. (2003). *The catalog of school reform models* [Web site]. Portland, OR: Northwest Regional Educational Laboratory, & Washington, DC: National Clearinghouse for Comprehensive School Reform. Retrieved January 14, 2004, from www.nwrel.org/scpd/catalog/index.shtml

Literature type: Program descriptions

Type of instructional program model: Other

School/student/staff characteristics: The models profiled in this catalog are grouped into five categories that reflect five types of student populations: English language learners, special education, rural, urban, and high poverty.

Summary: This online document contains descriptions of 26 whole-school models and other reading/language arts models. The catalog is designed to help practitioners find an external model that meets the needs of their school's reform efforts. A review process for inclusion requires documentation of model effectiveness in improving student academic achievement. Each entry analyzes the model's general approach, results with students, implementation assistance, costs, and other components. A table summarizes each model and provides demographic data and contact information for at least four sample sites. Eight particular models are of interest in relation to ELLs:

Urban Living Centers was developed in Los Angeles primarily to support large urban schools serving high percentages of poor and ELL students. The model design includes structures for dividing large schools into more manageable units, the use of a schoolwide character curriculum, and service learning opportunities. The design focuses on connecting schools to social service agencies, improving crisis assistance and prevention, and involving parents. Teachers attend workshops on best instructional practices for ELL students. (PK–12)

Success for All is a reading program designed primarily for inner city schools serving large numbers of disadvantaged students. It has, however, been implemented in many rural schools as well. Success for All offers such features as multicultural materials, tutoring, family support teams, distance learning, joint service to multiple schools, Exito Para Todas (a Spanish adaptation of the program for use in bilingual programs), and a special component for learning-disabled students. (PK–8)

Success for All/Roots & Wings has been implemented in many schools serving each of the five populations. The program promotes family support teams and links with social service organizations to help disadvantaged students and families. It also provides distance learning and joint services to multiple schools to facilitate implementations in rural schools.

Expeditionary Learning Outward Bound provides key training materials in Spanish and a Spanish marketing/training video, promotes family involvement, integrates special education students in mainstream classrooms for most of the school day, supports an active Web site and e-mail network for distance learning, promotes communication and sharing of best practices among administrators and teachers. (K–12)

Exemplary Center for Reading Instruction has been implemented in rural, suburban, and Title I schools across the country. The program has proved effective for regular, special needs, bilingual, and special education students. (K–12)

The Direct Instruction Model was designed to provide a curriculum that would accelerate the performance of disadvantaged children lacking many fundamental skills. It features a student-grouping system that allows for the formation of small groups (six to eight students) for low-performing primary students. Direct Instruction materials have been used as the core special education curriculum in many schools. In full implementation, special education and regular students use the same materials, and special education students are generally included in regular classrooms. (K–8)

Different Ways of Knowing has been implemented in a number of urban and high-poverty schools and in schools with a significant number of ELL students. Its components include learning materials that give students opportunities to appreciate their own and others' cultures; after-school and summer-school programs; specific training for teachers about understanding the needs of ELL students, including specific materials that support them. (PreK–8)

The Accelerated Schools project was designed primarily to serve schools with high proportions of at-risk students. The model provides a process for addressing the unique needs of individual schools. Training includes strategies for instruction and curriculum development within the context of multicultural classrooms. The Accelerated Schools governance model joins special and regular education teachers together in teams, where they work toward the integration of special and regular education students. (K–8)

Major findings: Each model provides data to support student academic gains.

Major implication(s)/recommendation(s): These models are approved for federal Comprehensive School Reform (CSR) grants and provide resources to schools seeking to implement one of them.

Olsen, L., & Jaramillo, A. (2000). When time is on our side: Redesigning schools to meet the needs of immigrant students. In P. Gándara (Ed.), *The dimensions of time and the challenge of school reform* (pp. 225–250). Albany, NY: State University of New York Press.

Literature type: Program descriptions and case studies

Type of instructional program model: Bilingual immersion

School/student/staff characteristics: The focus of this article is a high school in a rural agricultural community in Central California. Nearly the entire student population was Latino language minority students. More than half were LEP immigrants, many the children of farm workers or farm workers themselves.

Summary: This article, a chapter from the book *The Dimensions of Time and the Challenge of School Reform*, describes the experiences of a demonstration project called California Tomorrow at Alisal High School in Salinas, California. California Tomorrow is a nonprofit organization that works to help schools adjust to the demographic changes of immigration. It partners with high schools to develop new models of immigrant-responsive secondary schools with the issue of time as central to the approach. This article illustrates the interrelationship of the principles of the new model and the central role that the rethinking and recreating of time in high schools plays. It also describes how the model was implemented in the subject high school, focusing on the way teachers used time.

The new model contained, instead of the traditional blocks of school time, the following features:

- Three class periods per day of 98 minutes each, including ESL classes, sheltered classes, and Spanish-content classes
- One-semester courses that run approximately 2.5 months
- Students enrolling in three subjects at a time, with an additional weekly tutorial in each course
- Teachers teaching approximately 60 to 90 students per day
- Tutorials built into the day
- Clubs and extracurricular activities built into the day instead of after school

The new model purports to give the following benefits:

- Teachers see fewer students per day and for longer periods of time
- Stronger academic focus
- Fewer subjects to concentrate on
- The possibilities of more interactive, intensive teaching and learning
- Academic support through built-in tutorials
- More time for students to participate in clubs and extracurricular activities
- Regular structured ways of mixing students across grade levels and language proficiencies
- Built in collaboration time for teachers

The model includes assessments through classroom observation by teachers in the school: teachers observed each other.

Major findings: No details of the new model's effect on academic achievement or improved language proficiency are discussed; the article is largely descriptive. The authors state that five years after the new model for time was implemented, fewer students are referred for discipline; LEP students are gaining English literacy proficiency at a faster rate than before; and more students are staying in school.

Major implication(s)/recommendation(s): Although many high schools are rethinking the use of time—and there are many creative approaches to creating time—time itself is not the answer to comprehensive and literacy development among LEP students. Many other elements are also involved.

Ortiz, J.A. (2001). English language learners developing academic language through sheltered instruction (Doctoral dissertation, University of Connecticut, 2000). *Dissertation Abstracts International, 61*(07), 2563.

Literature type: Correlational studies

Types of instructional program model: English language development/English as a second language; other (sheltered instruction)

School/student/staff characteristics: The study reported here took place in an urban high school in a large city in southern New England. A total of 975 students attended grades 9 through 12. Students with non-English home languages made up 27 percent of the total school population. A total of 118 students, 12 percent of the total school population, participated in bilingual or ESL classes. Participants for the study came from a pool of 118 students in 10th grade. The final sample consisted of eight selected ELLs from a science class. Criteria for selection included Hispanic origin, enrollment in a bilingual program, limited English proficiency, and low socioeconomic status. The teacher involved in the study had taught science for 15 years at the same school and was considered a teacher leader in the district. The teacher received a series of 10 half-hour sessions of training in sheltered instruction and second language learning in preparation for the study.

Summary: The purpose of the study reported in this doctoral dissertation was to examine the role of sheltered instruction in promoting English language learners' academic language in English and content learning. The author's intent was to explain behavior on the basis of the participants' ideational and cognitive categories. The study addressed four research questions: What are the characteristics of sheltered instruction as a medium to teaching content and language to ELLs? How can sheltered instruction help ELLs develop academic English? What is the range of teacher-student interactions when working with ELLs in a sheltered instruction science class? In which specific tasks of sheltered instruction scientific inquiry activity do ELLs produce the most academic language?

The site for the study was a chemistry laboratory classroom. The participants were divided into two groups of four and were seated on chairs around two tables. The teacher moved between the two groups as he conducted his lessons using the sheltered instruction techniques. Data were collected from five science lessons over a period of two weeks through classroom observation and the videotaping and transcribing of each sheltered instruction lesson. When each unit of study was completed, the author and two peer reviewers scored the videotaped lesson using the Sheltered Instruction Observation Protocol. Also, the Data Analysis Worksheet was used to analyze the discourse generated by the participants during the lessons. Agreement among raters for both protocols was computed using the Pearson correlation matrix.

Major findings: The study revealed the following:

1. The focus of sheltered instruction lesson planning should be based on specific linguistic and content-area standards.

2. The teacher's use of a wide variety of quality supplementary materials is one of the key components in helping ELLs to contextualize the cognitively demanding nature of the language of scientific content.

3. Once the content-related vocabulary and scientific concepts have been presented to ELLs in a comprehensible and meaningful way, they use and apply them often during their academic conversations.

4. The teacher's use of open-ended questions and a variety of questioning strategies promote the use of academic language and higher order thinking skills in ELLs.

5. The nature of the tasks performed in sheltered instruction inquiry-based science lessons elevate the use of cognitive or academic language in ELLs.

6. During sheltered instruction inquiry-based science lessons, the levels of interactions between teacher and students and among students reflect the nature of the scientific task represented in each lesson.

7. The frequency of the students' use of content-related vocabulary and content-related concepts increased as the sheltered instruction lesson progressed, as did their level of complexity.

Major implication(s)/recommendation(s): The author states that the results of the study support the effectiveness of sheltered instruction as a strategy for promoting the academic language proficiency of ELLs. However, to ensure that the results are not slanted, the study should be replicated. Additional research should also be conducted on the linguistic patterns between teachers and students and among the students in sheltered instruction lessons. Also important is the need for additional research in delving deeper into the relationship between the nature of academic tasks and the amount and quality of academic language in sheltered instruction lessons.

Park, C.C. (2002). Cross cultural differences in learning styles of secondary English learners. *Bilingual Research Journal, 26*(2), 213–229. Retrieved January 15, 2004, from http://brj.asu.edu/content/vol26_no2/pdf/ART13.PDF

Literature type: Multivariate models

Type of instructional program model: Unknown (Not specified)

School/student/staff characteristics: The sample for the study reported here included 857 cases collected from 20 high schools in California. Among the 20 schools, 14 were from a large urban school district and five satellite districts in Southern California. The other six were from two districts in Central California. All the schools had ESL classes.

The sample consisted of 183 Armenian, 126 Hmong, 90 Korean, 80 Vietnamese, and 378 Mexican ELLs in intermediate and advanced ESL classes. Of the respondents, 14.8 percent were born in the United States. Of those who were foreign-born, 31.5 percent had been in the United States fewer than three years at the time of the study.

Summary: This article reports on a study of the learning styles of Armenian, Hmong, Korean, Vietnamese, and Mexican ELLs. The sample contained 857 high school students from 20 schools in California. Reid's self-reporting questionnaire of perceptual learning styles was used to gather data. Multivariate analysis of variance, univariate *F* tests, and post hoc multiple comparisons of means tests were performed using the Scheffe procedure.

Major findings: Students in the study favored a variety of instructional strategies. They exhibited either major or minor preferences for all four basic perceptual learning styles but significant ethnic group differences in preferences for group and individual learning. All students exhibited either major or minor preferences for kinesthetic learning. Hmong, Mexican, and Vietnamese students preferred group learning while Armenian and Korean students did not. However, all five groups showed either major or minor preferences for visual learning. Middle and high achievers were more visual than low achievers. High and middle achievers preferred individual learning while low achievers did not. Newcomers exhibited much greater preference for individual learning than those who had been in the United States longer.

Major implication(s)/recommendation(s): Based on the findings of this study, teachers should try to use more visual materials to provide effective instruction for these ELLs. Cooperative learning activities in small groups appear to match the learning style preferences of Hmong, Mexican, and Vietnamese ELLs but would be a mismatch with Armenian and Korean students. Teachers need to plan instructional activities and develop curricular materials that will require whole-body involvement and provide experimental and interactive learning for these students so they can learn by doing.

Quinoñes Feliciano de Benitez, A.L. (2001). Training teachers of English language learners through instructional conversations: A metalogue (Doctoral dissertation, University of Connecticut, 2001). *Dissertation Abstracts International, 62*(03), 903.

Literature type: Program descriptions

Type of instructional program model: Other (instructional conversation, a dialogical instructional method used with ELLs in the classroom)

School/student/staff characteristics: The study reported here took place in a middle school in an inner-city neighborhood in Connecticut. The school had an enrollment of 890 students in grades 5–8. Of those enrolled, 62 percent were Hispanic, 31 percent African American, 5 percent white, and 2 percent Asian American. Participants in the study were selected from a pool of 83 full-time teachers at the school. A sample of nine teachers, all state certified, was selected according to program assignment and grade level. Five teachers ran bilingual classrooms; four had English-only classrooms; four taught fifth grade; three taught sixth grade; three taught all subjects; two taught seventh- and eighth-grade science and math. In all the teachers' classroom, student enrollment of ELLs exceeded 50 percent.

Summary: The purpose of the study reported in this doctoral dissertation was to examine the instructional conversation (IC) as a professional development and instructional tool. The researcher's intent was to explain behavior on the basis of the participants' ideational and cognitive categories in an attempt to make sense of interpretive phenomena in terms of meanings people bring to them. The study focused on four research questions: What are the characteristics of the IC as a professional development tool for middle school teachers of ELLs? What are the characteristics of the IC as a pedagogical and instructional tool for middle school ELLs? What guidelines for professional development and instruction can be profiled using the IC? What theoretical model emerges that represents the findings of the study? To answer the four research questions, the study used the constructs of didactic interaction and intersubjectivity to examine the IC as a highly interactive professional development and instructional tool. The nine subject teachers were trained in the IC strategy for teaching. Their performance was defined as their ability to identify the elements of the IC and to implement it in their classroom. Data for the study were collected using ethnographic techniques such as document analysis, participant observation, semi-structured interviews, focus groups, and ranking and pile sorting. The data were analyzed and discussed in terms of the elements of the IC as a training and teaching tool. The IC Rating Scale was used to determine the elements of the IC present in the planning and delivery of each training session and subsequent classroom lessons.

Major findings: The study revealed the following:

1. Instructional conversation (IC) seems to provide a methodology for professional development that connects theory with practice.

2. In conducting ICs for teacher training, scaffolding needs to be provided to enhance participation in the conversation.

3. ICs can be the professional development tool for training teachers to use IC in the classroom, provided that demonstration by peers is promoted.

4. ICs can be used as a learning strategy in professional development efforts, provided teachers share their expertise.

5. ICs can be a medium for reflection about current practices and how to improve those practices.

6. ICs can enhance teacher learning, promoting ownership in professional development design and content.

7. The interaction evident in ICs as used for professional development can alleviate the isolation that teachers encounter when working alone in a classroom.

8. ICs seem to be useful in assessing concerns about the implementation of new strategies.

9. ICs can be a tool for assessing the needs of inner-city teachers to improve current pedagogical practices.

10. Teachers with vast experience in the classroom and motivation for change may demon strate strong pedagogical maneuvering.

Major implication(s)/recommendation(s): The results of the study seem to support the use of instructional conversations (ICs) as a means for professional development for teachers of English language learners in the middle school. Apparently, ICs can be instrumental in learning new concepts and can support reflective practice. The author suggests more research to further the confidence in the model for staff development. In future research, it would be beneficial to compare approaches to professional development with and without IC.

Reed, B., & Railsback, J. (2003). *Strategies and resources for mainstream teachers of English language learners*. Portland, OR: Northwest Regional Educational Laboratory. Retrieved September 28, 2003, from www.nwrel.org/request/2003may/

Literature types: Program descriptions and case studies

Types of instructional program model: Four broad categories are discussed in this report: instructional methods using the native language; instructional methods using the native language as support; instructional methods using English as a second language; and content-based instruction/sheltered instructional method.

School/student/staff characteristics: Three schools (two secondary) and one district are profiled as examples to show how schools are meeting the challenge of No Child Left Behind. (No data on the success of these efforts are included.)

Secondary school 1: Burley Senior High School is in a depressed farming town in Idaho. The area has both a long-standing Hispanic population and a small group of more recent migrants, mostly from southern Mexico and El Salvador. Many of the students come from Spanish-speaking homes, have received limited formal schooling in their native country, and have parents with limited literacy skills, even in Spanish. At the time of the study, more than 1,000 students in the district were designated as limited English proficient, with nearly two-thirds of these also designated as migrant.

Secondary school 2: Ontario High School is located on the Idaho/Oregon border. With a population base of about 11,000, Ontario is the largest city in an agriculturally based county. The high school has a growing number of students in the English language learners program, 25 percent of the school's student body at the time of the study. Almost all ELL students are native Spanish speakers. Although some students have been in the school district for many years, most are recent newcomers to the United States.

Summary: This booklet focuses on practical research-based principles and instructional strategies that mainstream teachers can use to meet the needs of the diverse population of English language learners. It provides a brief overview of the major legislative changes in the No Child Left Behind Act, an outline of instructional methods and program models, a description of important theories of second language acquisition that have direct implications for mainstream classroom instruction, and general principles for teaching ELL students. It includes profiles of three schools (two secondary) and one district in the Northwest that are answering the challenge of serving culturally and linguistically diverse students in the mainstream classroom. It also provides a list of resources and references of organizations, Web sites, research studies, and instructional materials.

Major findings: The report revealed the following:
Secondary school 1: Among the strategies used in this school are the following: creating hands-on lessons as much as possible and building in a language component in biology and English classes; going over any specialized language in detail before starting a lesson; daily vocabulary study in English classes; extensive use of visual aids in biology and English classes; using alternative assessments, including portfolios, open-book tests, and presentations; peer tutoring pairing students who speak the same (non-English) language and are only slightly apart in their ability level; employing a full-time bilingual aide; and whenever possible, individualized instruction.

Secondary school 2: This school uses a comprehensive approach to ELL services that includes the following: a free ongoing Spanish-language course for all teachers; a full-time ESL teacher; core-content classes taught in Spanish; a bilingual secretary; training for all faculty members in instructional strategies to assist ELL students; inservice training programs on cultural awareness; sheltered English instruction; content classes in English with sheltered instructional strategies; alternative assessments; and a strong emphasis on vocabulary building. Initial data show that this comprehensive approach is working. ELL students improved an average of seven RIT points in both reading and math from before the program was implemented to one year into the program.

Major implication(s)/recommendation(s): This report presents 10 things mainstream teachers can do to improve instruction for ELL students:

1. Enunciate clearly but not too loudly; add gestures; point directly to objects or draw pictures when appropriate.
2. Write legibly in print.
3. Develop and maintain routines; use clear and consistent signals for classroom instructions.
4. Repeat information and review frequently; check often for understanding.
5. Avoid idioms and slang.
6. Present new information in the context of known information.
7. Announce the lesson's objectives and activities; list instructions step by step.
8. Present information in a variety of ways.
9. Provide frequent summations of important points of a lesson, emphasizing key vocabulary items.
10. Recognize student success overtly and frequently within the context of student's culture.

Region VII Comprehensive Center & Northrop Grumman Information Technology. (n.d.). *A framework for rural schools: Starting out with your ELL program*. Norman, OK: University of Oklahoma, Region VII Comprehensive Center, & Herndon, VA: Northrop Grumman Information Technology. Retrieved January 16, 2004, from www.helpforschools.com/ELLKBase/practitionerstips/Framework_for_rural_schools.shtml

Literature type: Program descriptions

Type of instructional program model: Unknown (Not specified)

School/student/staff characteristics: This article focuses on rural school districts.

Summary: This online article presents a framework for creating an ELL program in rural school districts. The framework was compiled through interviews with program administrators who have started ELL programs in rural school districts in Nebraska. The topics of the framework are grouped into two general areas: school and district, and home. The framework is not meant to be an all-inclusive list but rather one that offers suggestions to school administrators.

Major findings: According to the framework, the first essential steps for rural schools and districts in establishing an ELL program are:

- Setting a direction, which includes recognizing the challenge, understanding the legal requirements, and development support
- Marshaling resources: resources include funding, staffing, scheduling, focus of instruction, and curriculum materials
- Assessing students, which includes a formal language assessment
- Establishing an environment for students that provides academic and social opportunities

The framework offers the following practical tips for connecting with the home of English language learners:

- Acknowledge the existence of language and cultural barriers
- Send materials home in the family's native language and in English
- Have translators present at parent-teacher conferences
- Gain an understanding of the community needs the newcomer families may have
- Promote parental involvement
- Promote cultural awareness among staff members

Major implication(s)/recommendation(s): None specified

Reyhmer, J., & Davison, D.M. (1992). Improving mathematics and science instruction for LEP middle and high school students through language activities. In *Proceedings of the Third National Research Symposium on Limited English Proficient Student Issues: Focus on middle and high school issues, vol. 2*. Washington, DC: U.S. Department of Education, Office of Bilingual Education and Minority Languages Affairs. Retrieved September 28, 2003, from www.ncela.gwu.edu/ncbepubs/symposia/third/reyhner.htm

Literature type: Synthesis of other studies

Type of instructional program model: Indigenous language immersion

School/student/staff characteristics: Low-achieving LEP Native American students from both public and reservation middle and high schools. Several of the studies mentioned here focused on specific tribes: Navajo, Crow, Ute, and Eskimo.

Summary: This paper presents an overview of a series of studies of ways to improve education of ethnic minority LEP students in general and the education of LEP Native American students in mathematics and science in particular. The authors were guided by three research questions: What does past research tell us about what works in Native American education? What type of mathematics and science curriculum and instruction work best with LEP Native American students? Will a focus on writing and other language activities in content-area classrooms, such as math and science, improve student performance in those subjects?

Major findings: The authors found, both in the literature and in their own research, that when teachers of math and science respect and are knowledgeable about their students' native culture and emphasize writing and other language activities, Native American students perform better and have a better understanding of math and science.

Major implication(s)/recommendation(s): To improve the education of LEP students in math and science, the authors recommend the following: teachers must relate their instruction to the out-of-school life of their students; the implementation of ethno-mathematics and ethno-science can help teachers relate those subjects to their students' lives; teachers must use teaching methods that contextualize the subject matter they teach; teachers need to be concerned about affective factors in their classrooms; and teachers of math and science need to provide writing and other language development activities for their LEP students.

Robles-Rivas, E. (2001). An examination of standards for effective pedagogy in a high school bilingual setting (Doctoral dissertation, University of Connecticut, 2001). *Dissertation Abstracts International, 62*(03), 885.

Literature type: Case studies

Type of instructional program model: English language development/English as a second language pullout

School/student/staff characteristics: The study reported here took place at an urban New England high school. The minority student population was 62 percent. A language other than English was the home language of 25 percent of students. Thirteen percent of students were enrolled in a bilingual or ESL program. Participants were selected from a pool of 60 Hispanic ninth- and 10th-grade ELLs. The final sample consisted of 21 students of varied national backgrounds: one from Mexico, two from Ecuador, four from Dominican Republic, and 14 from Puerto Rico. Participants in the school's bilingual program ranged from 10 months to two years. The three content-area teachers (science, math, and ESL) involved were experienced in their areas and had ELLs in their classroom, but had not made any specific instructional modifications.

Summary: The purpose of this doctoral dissertation study was to conduct a detailed qualitative inquiry of the enactment of five standards for effective pedagogy and to determine how they enhance the teaching of the English language and demanding content to high school ELLs. The five standards—developed by the Center for Research on Education, Diversity and Excellence—are joint productive activity; language development; contextualization; challenging activity; and instructional conversation. The specific research questions for this study were: What is the sociocultural context of the classrooms with high school ELLs? How do teachers conceptualize the five standards in the training process? How do teachers implement the five standards in their classrooms? How do teachers and students perceive the lessons presented using the five standards? What theoretical model emerges that represents the findings of this study? To answer the research questions, data were collected from interviews with teachers and students, peer reviews of videotapes and audiotapes of lessons, document analysis and transcriptions of lessons, and classroom observations. Science, math, and ESL classrooms were the study sites. The data were analyzed inductively and discussed in terms of the elements of the Standards Performance Assessment Continuum, a five-point rubric that grants quantitative measures on classroom performance quality by five standards for effective pedagogy. Transcribed and coded information for interviews and observations were summarized; similar conceptualizations and perceptions were clustered; and similar themes were noted.

Major findings: The study revealed the following:

1. The standards for effective pedagogy seem to be significant instructional tools to improve educational practices for high school ELLS.

2. Standards-based instruction appears to provide positive and effective interaction among students and between students and teacher in the classrooms.

3. Content-area standards integrated with the standards for effective pedagogy appear to create an instructional environment in which academic language and content are taught simultaneously.

4. The standards seem to help to present content vocabulary necessary for ELLs to understand the lessons in a meaningful way.

5. The use of a variety of supplemental materials appears to help ELLs understand key components necessary to understand the concepts presented.

6. The data obtained seem to support the sociocultural theoretical framework of the study.

7. The classroom dynamic seems to promote interaction and discourse among students in a nonthreatening environment that enhances language and academic learning.

8. The standards appear to promote student-centered activities that offer a greater potential for students' output in a nonthreatening environment.

9. The standards promote the use of modeling and conversation that serves as a scaffold to enhance learning academic concepts.

Major implication(s)/recommendation(s): Author states that the findings of the study support and are consistent with the theoretical framework of a social constructivist learning theory, standards-based instruction, and second-language learning. Author suggests further research, such as a longitudinal replication of the study and studies with ELLs with different language backgrounds.

Rosebery, A.S., Warren, B., & Conant, F.R. (1992). *Appropriating scientific discourse: Findings from language minority classrooms* (Research Rep. No. 3). Santa Cruz, CA: University of California, National Center for Research on Cultural Diversity and Second Language Learning. Retrieved September 28, 2003, from www.ncela.gwu.edu/miscpubs/ncrcdsll/rr3/

Literature type: Case studies

Types of instructional program model: Submersion with primary language support; collaborative inquiry approach

School/student/staff characteristics: The first classroom involved in this study was in an urban K–8 school with 390 students. One-third of the students were in the bilingual program that housed the city's Haitian Creole bilingual program and a mainstream program. Participants were 20 students in the combined seventh-eighth grade. The students took their core academic subjects in Haitian Creole from their classroom teacher and instruction in English as a second language from an ESL teacher. Academically, the students ranged from a few who functioned approximately two years below grade level to those who could not read or write in either Haitian Creole or English. During the year, science was taught in Haitian Creole by the classroom teacher for 45 minutes three times a week. The classroom teacher was a native speaker of Haitian Creole and fluent in English. She had taught in the bilingual program for several years. Before the study, she had only occasionally taught science and had no formal training in science.

The second classroom was in a large urban high school. The school served 2,700 students and was composed of several "houses." At the time of the study, the bilingual program occupied its own house and served approximately 250 students of diverse ethnic and language backgrounds. The bilingual program offered a basic skills program for those students whose low academic and literacy skills prevented them from participating in the regular bilingual program. From this program came 22 participants for the study. Some of them were not able to read or write in either their native language or English, and most had no previous exposure to science. They were from a variety of linguistic and cultural backgrounds. Six language groups were represented: Haitian Creole, Spanish, Portuguese, Amharic, Tigrinya, and Cape Verdean Creole. Four teachers worked together in the Basic Skills program: two math teachers, one ESL teacher, and one social studies teacher. One of the math teachers was a native speaker of Haitian Creole, was fluent in English, had a working knowledge of Spanish, and had occasionally taught science in the past. The other teacher was a native speaker of English, had a good working knowledge of Haitian Creole and Spanish, and had never taught science before. Neither had any formal science training.

Summary: This paper reports a study of the effects of a collaborative inquiry approach to science on language minority students' learning. This approach (called Cheche Konnen, which means "search for knowledge" in Haitian Creole) emphasizes involving the students,

most of whom had never studied science before and some of whom had very little schooling of any kind, in doing science as practicing scientists do. The study addressed the question: To what extent do students appropriate scientific ways of knowing and reasoning as a result of their participation in collaborative scientific inquiry? For the study, students in both classes planned and carried out investigations into local aquatic ecosystems throughout the school year. As background to their investigations, the students studied aspects of the chemistry, biology, and ecology of local water sources. The work in the classrooms was collaborative on many levels: among students; between teachers and students; and among researchers, teachers, and students. To explore the main research question, researchers analyzed protocols from interviews conducted with the students in September 1988 and June 1989 for changes in what they knew and in how they used their knowledge to reason scientifically. The analysis was concerned with students' use of hypotheses, explanations, and experiments to organize their reasoning. To assess changes in students' scientific literacy, the students were interviewed individually in September and June on two think-aloud problems in which they were asked to reason aloud about how they would investigate and try to explain two ill-defined but realistic problems. The interviews were conducted in Haitian Creole by a fluent speaker. The problems used in the September and June versions of the interview were identical.

Major findings: The findings indicate that at the beginning of the school year the students' reasoning was non analytic and bound to personal experience. By contrast, at the end of the school year they reasoned in terms of a larger explanatory system, used hypotheses to organize and give direction to their reasoning, and demonstrated an awareness of the function of experimentation in producing evidence to evaluate hypotheses. The results suggest that the students knew more in June than in September and that they were better able to organize their reasoning around hypotheses and experiments and that their reasoning had changed. But, according to researchers, it is not easy to tell from such results in what ways specifically it had changed or why. Taken together, the results suggest that the students did more than acquire factual knowledge; they began to be enculturated into a new discourse community in which conjecture and experimentation are characteristic inquiry modes. In the September interviews, much of the students' discourse was enacted through the omniscient third person, with occasional uses of the first person to tell stories from personal experience. In the June interviews, in contrast, the first person dominates, but it is an "I" distinctly different from the "I" occasionally heard in the September interviews. In June, the "I" functioned authoritatively, that is, as the voice of an active problem solver.

Major implication(s)/recommendation(s): The researchers continued their studies along the same lines, but no results are mentioned in this paper. One of the major keys to this research effort is the participation of teachers. The researchers had organized a seminar on scientific sense-making in which such issues as how students and teachers can build a culture of authentic scientific practice in language minority classrooms was addressed. In the seminar, the teachers did science, explored what science is and how scientific knowledge is constructed, and analyzed and redefined their own classroom practice in relation to their work in the seminar.

Ruiz, R. (1992). Critical research issues in bilingual secondary education. In *Proceedings of the Third National Research Symposium on Limited English Proficient Student Issues: Focus on middle and high school issues, vol. 2*. Washington, DC: U.S. Department of Education, Office of Bilingual Education and Minority Languages Affairs. Retrieved September 28, 2003, from www.ncela.gwu.edu/ncbepubs/symposia/third/ruiz.htm

Literature type: Professional judgment

Type of instructional program model: Bilingual immersion

School/student/staff characteristics: Not applicable

Summary: This paper discusses bilingual education, describing it as a special curriculum, and holds that bilingual education can be a dimension of curriculum in general. The paper touches on four general topics and their roles in bilingual education research: school restructuring; systemic school reform; detracking; and home-school isomorphism, the author's term for suggesting that minority students do not achieve in school in large part because the structural and normative patterns of the home and the school differ radically from each other.

Major findings: Not applicable

Major implication(s)/recommendation(s): The paper concludes that while much is known about second language acquisition and bilingual education, there is still much research to done, that research should focus on the conceptual issues of instructional practices, programmatic arrangements, and school organization.

Ruiz-de-Velasco, J., & Fix, M. (with Clewell, B.C.). (2000). *Overlooked and underserved: Immigrant students in U.S. secondary schools*. Washington, DC: Urban Institute. Retrieved September 28, 2003, from www.urban.org/pdfs/overlooked.pdf

Literature type: Case studies

Type of instructional program model: Unknown (Not specified) This report focuses on no instructional model, but it does mention ESL/bilingual programs in a general way.

School/student/staff characteristics: This report focuses on two subpopulations of immigrant children that pose special challenges to secondary schools but have received little attention. One subpopulation is immigrant teens who arrive in the U.S. school system with significant gaps in their schooling. Many of these children are not fully literate in their native language, much less in English. The second subpopulation is students from language minority homes who have been in U.S. schools longer but have yet to master basic language and literacy skills. While these students may be orally proficient in English, their reading and writing skills lag behind those of their student counterparts. They are referred to here as "long-term LEPs." The program mentioned here involved three major research/demonstration projects in five school districts. The projects were administered in Hayward, Salinas, Long Beach, and Paramount, California, and in Baltimore and Prince George's counties, Maryland. Some of the schools were in communities where immigrants first settled on arriving in this country. Others were in areas of secondary migration, where immigrant families tend to move after their economic situations improve. Still others were in communities where foreign immigration is a relatively new phenomenon. One district was in an agricultural region and included students from seasonal migrant families.

Summary: This report examines the challenges of educating immigrant children in secondary schools. It assesses the Program in Immigrant Education (PRIME) at PRIME demonstration schools. Specifically, the report focuses on four institutional challenges that the PRIME demonstration schools faced in strengthening education programs for immigrant children: the limited capacity of school staff to instruct these learners; ways in which secondary schools are organized; systems of accountability that have historically omitted LEP/immigrant students; and wide knowledge gaps about how to simultaneously build both language and subject-matter learning among LEP/immigrant students. Researchers conducted both quantitative analyses of aggregate databases and a qualitative analysis of the policy and practice issues facing the PRIME demonstration projects. Researchers visited 10 project high schools and middle schools in five school districts and interviewed more than 60 teachers, school administrators, and project leaders about immigrant education and school reform at their sites. Researchers also observed teachers and students in their classrooms and conducted focus groups with parents and student teachers at selected sites. Although they examined data on student achievement at some sites, their assessment

does not have the type of comparison data necessary to draw rigorous empirically based conclusions about project impacts. The primary emphasis was on the challenges the projects faced. The report provides only a general description of the reforms the projects introduced. The report's point is that immigrant students tend to be invisible and omitted from accountability systems, even in schools engaged in systemwide reform.

Major findings: While the available data did not allow a rigorous empirical evaluation, evidence did emerge of the projects' success. Among the reforms that had been institutionalized at one or more schools or districts as of January 1, 1999, were the following:

- New curricula for underschooled youth and sheltered instruction for all newcomer LEPs
- Inclusion of language development staff in schoolwide planning
- Expanded professional development for content-area teachers on educating LEP/immigrant students
- New practices in data collection and use at the school level for program improvement
- Broader adoption of block scheduling, including training for teachers in how to use longer time blocks effectively
- Extended day programming for underschooled LEP students

Major implication(s)/recommendation(s): Further quantitative assessment should be built into the projects from the start. The projects may hold some lessons for the reauthorization of the Elementary and Secondary Education Act, the federal government's principal funding vehicle for elementary and secondary education. The program's experiences would appear to support proposals to:

- Provide a greater share of funding to secondary schools undergoing schoolwide reform
- Target funds to schools with high concentrations of poor students
- Increase schools' accountability by requiring annual tests of LEP students' progress in learning English and by including LEP students in new state accountability systems
- Increase incentives for offering extended day and year services to LEP/immigrant students
- Expand funding for school districts that have rapidly growing immigrant populations but little experience serving LEP students

Rumbaut, R.G. (1995). The new Californians: Comparative research findings on the educational progress of immigrant children. In R.G. Rumbaut & W.A. Cornelius (Eds.), *California's immigrant children: Theory, research and implications for educational policy* (pp. 17–69). La Jolla, CA: University of California-San Diego, Center for U.S. Mexican Studies.

Literature type: Case studies

Type of instructional program model: Unknown (Not specified)

School/student/staff characteristics: This article broadly discusses recently arrived immigrant and refugee groups of widely different sociocultural and linguistic origins and socioeconomic and educational backgrounds in California public schools.

Summary: The aim of the article, a chapter in the book *California Immigrant Children: Theory, Research, and Implications for Educational Policy*, is to provide a point of departure for the book and to review research findings about immigrant students in California public schools. It is organized in five parts. First, it presents 1990 census data on the size, national origins, and sociodemographic characteristics of the foreign-born population to document the diversity and its concentration at the time in California. This is followed by a profile of LEP and FEP language minority students enrolled in K–12 public schools in California. Next, it reports results from two comparative research studies of the educational performance of children of immigrants in San Diego schools (including dropout rates, GPAs, achievement test scores, and educational aspirations), focusing on the largest groups: Mexicans, Filipinos, Vietnamese, Laotians, Cambodians, and groups of East Asian origin. Finally, the article discusses the findings of four case studies of the adaptation of immigrant high school students in different parts of California, focusing on Southeast Asians, Punjabi Sikhs from India, Mexicans, and Central Americans.

This article contains a great deal of information, mostly demographic, descriptive, and quantitative.

Major findings: Specific findings from the six studies mentioned in this article were many and varied widely among the groups studied. Overall, the finding suggest that despite their relatively modest social class backgrounds, a climate of pervasive prejudice, and initial obstacles in adapting to new school environments in California, most of the children studied were making a rapid and positive adjustment. In some instances they were even outperforming native-born majority-group high school students in such basic indicators as grades and graduation rates. For instance, one case study reported that Vietnamese and Chinese students showed the highest levels of educational attainment among Indochinese immigrant students. Their GPAs were well above those for native students in the district, and their math achievement scores placed them in the top quartile of the nation. In another case study involving Punjabi Sikh immigrant students, it was found that 85–90 percent of the Punjabis

graduated from high school, compared to 70–75 percent of the native white students. Punjabi students who had received all their education in the United States were as likely as their white classmates to be placed in college-prep courses. During high school, Punjabi boys surpass the GPAs of majority peers, and they were more likely to take advanced math and science classes.

Major implication(s)/recommendation(s): For new immigrants in California, the findings point to a positive association between school performance and a resilient affirmation of collective ethnic identity.

Salazar, J. (1998). A longitudinal model for interpreting thirty years of bilingual education research. *Bilingual Research Journal, 22*(1). Retrieved January 12, 2004, from http://brj.asu.edu/v221/pdf/ar2.pdf

Literature type: Synthesis of other studies

Type of instructional program model: Dual language (late-exit and early-exit)

School/student/staff characteristics: Not applicable

Summary: The purpose of this article is to report the results of the reanalysis of two well-known bilingual education studies with the goal of assisting educators to interpret Title VII program outcomes. First, the article presents the results of a power analysis of Greene's (1998) meta-analysis of the effectiveness of bilingual education. Second, the article presents the outcomes of a reanalysis of Thomas and Collier's (1997) 15-year longitudinal study of the variety of education services provided for language-minority students in U.S. public schools and the resulting long-term academic achievement of these students. (At the time this article was published, Thomas and Collier had not released their complete longitudinal outcomes.) This article also includes 10 main criteria identified by the research community for conducting a methodologically adequate bilingual education study. Further, the article presents an evaluative framework based on the Thomas and Collier model to explain differences between primary language programs and English-only programs in reading English and to explain the outcome implications found in early-exit and late-exit programs.

Major findings: The power analysis of Greene's (1998) study revealed that most bilingual education reading studies in the previous 30 years had been so statistically weak that the results had generally been uninterpretable. Specifically, the analysis revealed an exorbitant rate of Type II errors in the research. Following the re-analysis of Thomas and Collier's (1997) study, the author argues that the model advanced in this study best explains bilingual education research and also serves as a heuristic framework for measuring and improving the effectiveness of Title VII programs.

Major implication(s)/recommendation(s): Based on Greene's (1998) meta-analysis; Thomas and Collier's (1997) study; studies by Crawford (1999), Krashen (1999), and Rossell and Baker (1996); and the author's research, the following list of criteria for bilingual education studies emerged:

1. Compare students in a bilingual program to a control group of similar students.
2. Differences between the treatment and control groups must be controlled statistically or randomly assigned to treatment and control groups.
3. Results must be based on standardized tests scores in English.
4. Differences between the scores of treatment and control groups must be determined.
5. Only studies that measure the effects of bilingual programs after at least one academic year should be included in any review of literature.

6. Exclude studies of Canadian immersion programs because they do not compare the acquisition of English by French Canadians with the acquisition of English by English language learners.
7. Exact length of treatment in the primary language program must be documented and reported.
8. Effect size differences between the bilingual education and English-only programs should be calculated and reported.
9. The only good bilingual education study is a longitudinal study.
10. The only good longitudinal study is one that follows a cohort's long-term academic gains beyond the elementary school grades and into the middle and high school grades.

Short, D.J. (1998). *Secondary newcomer programs: Helping recent immigrants prepare for school success* [ERIC digest]. Washington, DC: ERIC Clearinghouse on Languages and Linguistics. Retrieved September 28, 2003, from www.ericfacility.net/databases/ERIC_Digests/ed419385.html

Literature type: Program descriptions

Type of instructional program model: Other (secondary newcomer programs)

School/student/staff characteristics: The newcomer programs in the study reported here were located in 18 states, mostly in New York, California, and New Jersey; more than 75 percent were in urban settings; the rest were in suburban and rural areas. More than 50 percent of the programs operated at the high school level; 12 were not located in a regular school; three were in full-length high schools; two were located at district intake centers. Participants in secondary newcomer programs were immigrant students with low-level English or native language skills and, in many cases, had limited formal education in their native countries. They ranged in age from 10 to 22 years and came from many language backgrounds, including Spanish (the majority), Mandarin, Tagalog, Russian, Haitian Creole, Polish, Punjabi, Vietnamese, and Hindi. The number of students served by the newcomer programs ranged from 14 at one site in Connecticut to more than 740 at a high school in New York City. The programs usually employed experienced staff trained in second language acquisition theory, ESL, sheltered instruction methods, and cross-cultural communication. Usually, at least one staff member in a program was bilingual.

Summary: This digest reports on data collected through a study of secondary newcomer programs. It introduces the common factors and range of practices found in secondary newcomer programs in the United States. Secondary newcomer programs generally serve immigrant students through a program of intensive language development and academic and cultural orientation for a limited period of time before placing them in regular school language support and academic programs. Newcomer programs ease the transition process in several ways. At some sites newcomer courses are part of a continuum of services in the language support program; some sites have students sit in on regular courses before moving on; and many sites provide orientation to regular school programs, take students on school tours, and have students meet with guidance counselors.

Major findings: Program designs differed according to educational goals, site options, staff availability, and resource allocation. Most programs were designed as a separate program within a regular secondary school, and most served students for the full school day. Most educated students for one year and allowed new students to enroll mid-year or mid-session. The programs offered a range of instructional programs that reflected the goal of developing both language and academic skills so that students could enter the regular ESL or bilingual program. A total of 98 percent of the programs provided a course in ESL; 80 percent offered sheltered content instruction; 73 percent offered content instruction in

at least one of the student's native languages; 40 percent had courses in native language literacy; and more than 50 percent offered both sheltered instruction and native-language content instruction. An important characteristic of newcomer programs was the attention given to familiarizing students with their new environment: the school, community, and country. Some 80 percent of the programs provided courses in cultural orientation to the United States; 43 percent offered classes to orient the students' parents; and 63 percent offered adult ESL classes.

Major implication(s)/recommendation(s): Case studies of selected sites will take place to further an understanding of how these programs serve recent immigrants.

Slavin, R.E., & Calderón, M. (Eds.). (2001). *Effective programs for Latino students*. Mahwah, NJ: Lawrence Erlbaum.

Literature type: Program descriptions; case studies

Type of instructional program model: Various

School/student/staff characteristics: Various, but mostly ELL Latino students, some of whom may be at risk of academic failure or of dropping out

Summary: The book presents the current state of the art with respect to programs for Latino students. It contains profiles of successful programs and research reviews. It is intended for educators, policymakers, and researchers who want to use research to inform the decisions they make about how to help Latino students succeed in school and beyond.

Each of the 10 articles/chapters in the book is written by a different author or team of authors. They present a variety of program descriptions, successful interventions, research methods, and solutions. Following are the article/chapter titles:
"Effective Programs for Latino Students in Elementary and Middle Schools" (Fashola, Slavin, Calderón, & Durán); "Effective Dropout Prevention and College Attendance Programs for Latino Students" (Fashola & Slavin); "Effective Elementary, Middle, and High School Programs for Latino Youth" (Lockwood); "A Two-Way Bilingual Program: Promise, Practice, and Precautions" (Calderón & Carreón); "Improving Literacy Achievement for English Learners" (Sanders); "Effects of Bilingual and English-as-a-Second-Language Adaptations of Success for All on the Reading Achievement of Students Acquiring English" (Slavin & Madden); "Ethnographic Studies of Éxito Para Todos" (Prado-Olmos & Marquez); "Curricula and Methodologies Used to Teach Spanish-Speaking Limited English Proficient Students" (Calderón); "The Factors That Place Latino Children and Youth at Risk of Educational Failure" (Garcia); and "An Overview of the Educational Models Used to Explain the Academic Achievement of Latino Students: Implications for Research and Policies Into the New Millennium" (Montero-Sieburth & Batt).

Major findings: Various

Major implication(s)/recommendation(s): Various

Slavin, R.E., & Cheung, A. (2003). *Effective reading programs for English language learners: A best evidence synthesis.* (Rep. No. 66). Baltimore, MD: Johns Hopkins University, Center for Research on the Education of Students Placed At Risk. Retrieved January 14, 2004, from www.csos.jhu.edu/crespar/techReports/Report66.pdf

Literature type: Synthesis of other studies

Types of instructional program model: Structured immersion; dual language immersion

School/student/staff characteristics: English language learners of various cultural and language backgrounds in both the elementary and secondary grades but focusing mostly on the elementary grades

Summary: This report reviews experimental studies of reading programs for English language learners, focusing both on comparisons of bilingual and English-only programs and on specific replicable models that have been evaluated with ELLs. The purpose of the review was to examine the evidence on reading programs for ELLs to discover how much of a scientific basis there is for competing claims about effects of various programs. The authors' intentions were to inform practitioners and policymakers about the tools at hand to help ELLs learn to read, and to inform researchers about the current state of scientific investigation. For the review, the authors used a technique called "best-evidence synthesis," which employs a systematic literature search, quantification of outcomes as effect sizes, and extensive discussion of individual studies that meet inclusion standards. The review discusses a total of 42 qualifying studies, computing effect sizes and describing the context, design, and findings of each study. The 42 studies are divided into three broad categories: language of instruction programs; beginning reading programs; and upper elementary and secondary reading programs. The characteristics and findings are also summarized in tables.

Only four studies are of secondary level programs: Covey (1973); Schon, Hopkins, & Vojir (1984); Schon, Hopkins, & Vojir (1985); and Shames (1998). The first three involved the use of Spanish newspapers, magazines, and other materials in remedial reading classes. No significant differences were found at the high school level. (Another study of seventh- and eighth-graders found significant English reading gains for the seventh-grade control groups.) Of the secondary studies, only the Shames study found significant positive effects. It compared four treatments (community language learning model; comprehension processing; a combination community-comprehension approach; and traditional control group) in grades 9–12. Students in the first three treatment groups, low-achieving speakers of Haitian Creole and Spanish, realized accelerated reading achievement more than members of the control group receiving traditional instruction.

Major findings: The review concludes that, even though the number of high-quality studies is small, the evidence favors bilingual approaches, especially paired bilingual strategies that teach reading in the native language and English at the same time at different times of the day, or that use a very fast transition: one year in native language before beginning transition. Whether taught in their native language or English, English language learners have been found to benefit from instruction in programs using systematic phonics, one-to-one or small-group tutoring, cooperative learning, and extensive reading. The evidence also shows that direct teaching of English vocabulary can help the reading performance of ELLs. A few studies found that encouraging children to read a wide range of grade-appropriate books helps to build their reading skills. Finally, in addition to the language of instruction, quality of instruction has been shown to be an equally important aspect of effective programs.

Major implication(s)/recommendation(s): From the evidence it is clear that effective reading models can be applied in English, in the learners' native language, or in both languages. However, the authors conclude there is much more research to be done. Large-scale randomized longitudinal evaluations of well-justified approaches are needed to more confidently recommend effective strategies for English language learners of all ages and backgrounds. Research into varying program components and research combining quantitative and qualitative methods is needed to more fully understand how various interventions affect the development of reading skills among ELLs.

Spanos, G. (1992). ESL math and science for high school students: Two case studies. In *Proceedings of the Third National Research Symposium on Limited English Proficient Student Issues: Focus on middle and high school issues, vol. 1*. Washington, DC: U.S. Department of Education, Office of Bilingual Education and Minority Languages Affairs. Retrieved September 29, 2003, from www.ncela.gwu.edu/ncbepubs/symposia/third/spanos.htm

Literature type: Case studies

Types of instructional program model: Structured immersion; math and science

School/student/staff characteristics: High school of 1,460 students, of whom 254 (17 percent) received special services through the English as a Second or Other Language/ High Intensity Language Training program. The majority of these students were of Hispanic origin (67 percent), with Vietnamese students the next largest group (12 percent). Classes in the district followed a curriculum as suggested by Cognitive Academic Language Learning approach.

Summary: This paper documents the experiences of the author in implementing a content-ESL program for high school math and science. Data were collected through use of a word-problem procedure for math and a scientific-method procedure for science. These procedures invite the use of learning strategies and enabled instructors to collect data on linguistic, academic, and strategic aspects of content-ESL. The following questions were investigated: What are the linguistic demands of mathematical and scientific content? How is student acquisition of this content assessed? How can teachers provide context for students to utilize learning strategies in acquiring this content? How is the role of learning-strategy instruction in this acquisition process measured?

Major findings: The results of the word-problem procedure sessions in the math class revealed students' limitations in language usage, mathematical skill, and abilities to engage in purposeful classroom behavior. There were, however, indications that students could overcome those limitations. Science students were more cooperative, responsible, confident, and diligent than the math students. They worked faster and were more accurate in both their English and their explanations of scientific principles.

Major implication(s)/recommendation(s): Educators should develop well-articulated programs for language-minority students. Mainstream math and science teachers should be involved at all stages of development. Program development should address language acquisition at all stages of the learning process. Language teachers should be trained to integrate language and other content-area instruction.

Stanford Working Group. (1993). *Federal education programs for limited-English proficient students: A blueprint for the second generation*. Stanford, CA: Author. Retrieved October 14, 2003, from www.ncela.gwu.edu/miscpubs/blueprint.htm

Literature type: Professional judgment

Type of instructional program model: Unknown (Not specified)

School/student/staff characteristics: LEP students

Summary: This report is a set of comprehensive recommendations for three major pieces of federal legislation that address key aspects in the education of LEP students: efforts to develop national, state, and local education standards and to assess these standards; programs to supplement instruction for underachieving students in schools with relatively high-poverty enrollments; and programs to increase national, state, and local capacity in addressing the unique situation of LEP and language minority students, including the full potential of these students.

Major findings: None

Major implication(s)/recommendation(s): This report contains three sets of recommendations.

The first set of recommendations addresses how the federal government should actively encourage state education agencies to play new leadership roles in school reform:

- Develop high content and performance standards for LEP students that are the same as those established for all other students, with full inclusion in the development process of persons knowledgeable about the education of LEP students.
- Develop opportunity-to-learn standards adapted to the unique situation of LEP students.
- Develop assessment of student performance and opportunities to learn that are appropriate for LEP students.
- Develop a system of school and local education agency accountability for LEP students that combines assessment of student outcomes and opportunities to learn.
- Make special efforts to ensure an adequate supply of teachers well prepared to educate LEP students.

The second set of recommendations concerns Chapter 1 students:

- Require a state education plan that would include provisions to ensure that LEP students have access to the same challenging curriculum and instruction as other students.

- Increase access to Chapter 1 programs by targeting funds to high-poverty schools or districts and by requiring that all eligible LEP students be equitably selected for Chapter 1 services.

- Reduce the school poverty threshold for schoolwide projects.

- Ensure that instruction and materials are adapted to the unique needs of LEP students.

- Set aside significant resources for staff development efforts to support the reforms and meet the needs of LEP students.

- Promote and focus school improvement efforts through school and local educational agency plans that are developed through a broad participatory process that includes those with knowledge and experience in the education of LEP students.

- Develop linguistically accessible activities to inform and involve parents of LEP students in the education of their children.

- Develop assessment, school improvement, and accountability provisions that are consistent with the overall state standards and that contain a graduated series of state and local responses to failing schools, ranging from technical assistance to direct intervention and even school closure.

The third set of recommendations concerns Title VII:

- Redefine the role of the U.S. Department of Education's Office of Bilingual Education and Minority Languages Affairs to ensure full inclusion of language minority students in national reform efforts; develop technical expertise on the appropriate assessment of content mastery in LEP students; direct a national research agenda of bilingual development; and coordinate all federal language education programs.

- Enhance and improve the state's role in planning, coordination, program improvement, evaluation, dissemination of effective practice, and data collection.

- Reformulate the types of grants awarded to schools and school districts so as to encourage innovation and limit fragmentation of services.

- Give priority to program applications that promote full bilingual development, demonstrate consistency with state plans, and provide innovative programs for underserved students.

- Develop a comprehensive system of project self-study, evaluation, and research for purposes of program improvement and dissemination.

- Bolster efforts to address the continuing shortage and often poor preparation of educational personnel who serve LEP students.

- Create a new part of the legislation to support language conservation and restoration efforts in schools and school districts serving Native American students.

- Enhance Title VII's "lighthouse" role in language policy, particularly in promoting the conservation and development of language resources.

Thomas, W.P., & Collier, V.P. (2002). *A national study of school effectiveness for language minority students' long-term academic achievement, Final report: Project I.I.* Santa Cruz, CA: University of California, Center for Research on Education, Diversity & Excellence. Retrieved September 29, 2003, from www.crede.ucsc.edu/research/llaa/1.1_final.html

Literature type: Multivariate models

Types of instructional program model: Other (eight major different program types)

School/student/staff characteristics: Broad range of U.S. public schools and staff. Total number of student records collected was 210,054. More than 80 primary languages were represented, including languages spoken by newly-arrived immigrants; French spoken by cultural and linguistic groups; Spanish represented 75 percent of the LM school-age population in the study.

Summary: This report describes a longitudinal study (1996–2001) of the variety of education services provided for language-minority students in U.S. public schools and the resulting long-term academic achievement of these students. The study included qualitative and quantitative research findings from five urban and rural sites in the Northeast, Northwest, South Central, and Southeast United States. The study was designed to answer urgent policy questions because the demographic group is projected to be 40 percent of the school-age population by 2030, and most U.S. schools are undereducating this group. Overall, the research provided whole school-district views of policy decisionmaking that was data-driven regarding designing, implementing, evaluating, and reforming the education of LM students.

Major K–12 findings: English language learners immersed in the English mainstream because their parents refused bilingual/ESL services showed large decreases in reading and math achievement by grade 5 when compared to students who received such services. The number of years of primary-language schooling, either in home or host country, had more influence than socioeconomic status when the number of years of schooling was four or more.

Major secondary-level findings: More than 100,000 students in central, large urban area, grades 9–11 math mean NCE scores on Stanford 9 were 47 (native English speakers in mainstream), 46 (transitional bilingual education), 45 (ESL monolingual, no English support), and 35 (ELL parents who refused ELL programs). Reading (in English) mean NCE scores on Stanford 9 were 47 (native English speakers in mainstream), 46 (transitional bilingual education), 40 (ESL monolingual, no English support), 24 (ELL parents who refused ELL programs). A different, small sample (just under 2,000 grade 11 students in mid-size urban site) was less positive: NCE mean English scores: reading: 62 (native

English), 38 (former ELLs); social studies: 65 (native English), 44 (former ELLs); and writing: 66 (native English), 48 (former ELLs).

Major implication(s)/recommendation(s): Students with no proficiency in English should not be placed in short-term programs of only one to three years. Short-term, remedial, and ineffective programs cannot close the large achievement gap and should be avoided. An enrichment bilingual/ESL program must meet students' development needs: linguistic, academic, cognitive, emotional, social, and physical. ELLs schooled all in English outperform those schooled bilingually when tested in English. During high school the bilingually schooled students outperform the monolingually schooled students. Effective ELL programs must be sustained five–six years to affect the achievement gap.

Tuan, M. (1995). Korean and Russian students in a Los Angeles high school: Exploring the alternative strategies of two high-achieving groups. In R.G. Rumbaut & W.A. Cornelius (Eds.), *California's immigrant children: Theory, research, and implications for educational policy* (pp. 107–130). La Jolla, CA: University of California-San Diego, Center for U.S.-Mexican Studies.

Literature type: Case studies

Type of instructional program model: Unknown (Not specified)

School/student/staff characteristics: Approximately 200 ESL and regular school population Korean students and 200 ESL Russian Jewish students in a large public high school are the focus of this article. The high school, at the time of the study, had an overall student population of more than 1,800, of which 70 percent was classified ethnic minority. The overall population was approximately 34 percent Latino, 20 percent white, 18 percent African American, and 20 percent Asian. Nearly one-third of the students were enrolled in ESL classes.

Summary: In this article, a chapter in the book C*alifornia Immigrant Children: Theory, Research, and Implications for Educational Policy*, the author examines the experiences of Korean and Russian Jewish students attending a Los Angeles public high school. These students were chosen because both groups mutually diverged from the assimilationist trajectory: they associated with co-ethnics; rarely participated in school functions or extracurricular activities; and were seen by many faculty as maintaining clannish rather than assimilationist attitudes. Nevertheless, school authorities considered both the Koreans and Russians to be college-bound high achievers.

Theories postulated by John Ogbu on school success of minority groups form the point of departure for this study. Ogbu argued that school success depends primarily on historic factors that determine what type of minority (autonomous, voluntary, caste-like) a newcomer is, that how a group becomes labeled has largely to do with the original conditions and terms under which the group entered the host society. In this article, the author argues that neither the existing assimilation framework nor Ogbu's typology can capture the full range of experiences and responses that newcomer students may develop, and that both miss a large part of the immigrant adaptation picture. The author also argues that, rather than passively conforming to the given structure and expectations of schools, growing numbers of newcomers are employing distinct adaptation strategies unique to their goals and circumstance.

Data for the study reported here, gathered during one year, consisted of observations of various English and ESL classes; informal interviews with teachers and staff; formal interviews of 16 Korean and 14 Russian students in grades 10–12 (topics included their experi-

ence in adapting to a U.S. school, relations with other students, and educational aspirations); and more than 20 formal interviews with teachers, administrators, ESL staff, counselors, and community workers.

Major findings:

- Both the Korean and Russian students were highly motivated to attend college and saw education as the key to their success in the United States.

- Both groups of students felt that U.S. schools were easier than the schools in their native countries. Many of the Russians expressed frustration over the easy curriculum while the Koreans expressed their appreciation for a less stressful academic environment.

- The Koreans were more likely than the Russians to see their way through high school, receive diplomas, and enroll in college; the Russians were more likely to bypass high school in their rush to enter college.

- Because the Russians came from the then–Soviet Union and were accorded refugee status, they were more skeptical of authority and impatient to improve themselves. The Koreans were more accepting of their circumstances.

- Because of their color, Koreans faced more racial prejudice than the white Russians. Race, in fact, is a major predictor of how immigrants groups and individuals adapt to a host country.

Major implication(s)/recommendation(s): The author suggests that policymakers pay close attention to the dynamics of racial exclusion when viewing the experiences of newcomers. Also, to better understand immigrant students, school authorities should keep in mind that different groups use different strategies to achieve their goals.

Valdez, G., Svedkauskaite, A., & McNabb, M. (2002). *Critical Issue: Mastering the mosaic-framing impact factors to aid limited-English-proficient students in mathematics and science* [Web page]. Naperville, IL: North Central Regional Educational Laboratory. Retrieved January 16, 2004, from www.ncrel.org/sdrs/areas/issues/content/cntareas/math/ma700.htm

Literature type: Professional judgment

Types of instructional program model: ESL pullout; bilingual immersion; dual language immersion; structured immersion; submersion with primary language support; other

School/student/staff characteristics: LEP students studying mathematics and science

Summary: This online article looks at instructional models for serving LEP students, focusing on mathematics and science instruction. Its purpose is to help educators narrow in on effective approaches.

The article presents what the author calls a "mosaic," that is, a pattern of influences. It begins with an overview of ways to teach LEP students. It then looks at instructional models, the mosaic's background, discussing ESL programs, bilingual programs, and other programs. Next it focuses on mathematics and science languages, assuming the common belief that mathematics and science are languages of their own.

To further develop the mosaic, the article discusses the family and cultural factors that affect the mosaic's design. It then examines the underlying, cohesive strength of school factors that support it. Finally, it suggests an emerging pattern of influences to help LEP students become successful learners of mathematics and science. This pattern ultimately relies on efficient assessments.

The article also contains online sources for illustrative cases and resources, along with an extensive list of references.

Major findings: Following are the factors that affect the design of the mosaic, or patterns of influence, on LEP students learning mathematics and science:

- How children learn language at home
- The learner's family culture
- The learner's academic exposure to his or her native language
- Teacher quality
- Curriculum
- Instructional methods
- Use of educational technology
- Fair and accurate assessments

Major implication(s)/recommendation(s): Following are "action options" recommended by the author:

- Be aware of and commit to having high standards for all students, including LEP students.
- Be aware of state and federal legislation designed to increase the educational achievement of LEP students, to improve teaching, and to expand parental participation.
- Understand that educational reform is a complex and time-consuming process.
- Understand and accept the premise that mathematics and science are necessary for all students.
- Help students, parents, and community members become aware of what teachers are teaching and the approaches they use.
- Link instruction in mathematics and science to LEP students' previous learning and experiences.
- Use practices such as authentic and engaged instruction whenever possible.
- Help LEP students become engaged, and help them understand that in the final analysis they are responsible for their own learning.
- Help LEP students take advantage of every learning opportunity and participate to the best of their abilities.
- Help LEP students develop the language and cognitive skills needed to seek information and solve problems.
- Help LEP students work with others using their culture, experiences, and values to enhance the learning of all.

Walqui, A. (2000a). *Access and engagement: Program design and instructional approaches for immigrant students in secondary school.* Washington, DC: ERIC Clearinghouse on Languages and Linguistics. (ERIC Document Reproduction Service No. ED438727)

Literature type: Program descriptions

Types of instructional program model: ELD; ESL pullout; submersion with primary language support; bilingual immersion

School/student/staff characteristics: Six immigrant high school students from various linguistic and cultural backgrounds with different personal and academic needs are profiled. All are English language learners with different degrees of proficiency. The students are from El Salvador, Brazil, Haiti, Russia, Mexico, and Vietnam.

Summary: This book discusses the needs of immigrant students in secondary schools in the United States and some of the issues involved in their education. The book relies on two sources of information: a review of literature, which included research on and written descriptions of programs, and data collected especially for this study from visits to selected exemplary programs.

Chapter 1 presents profiles of six immigrant high school students.

Chapter 2 addresses some common misconceptions about adolescents' second language acquisition and academic skills and what current research reveals about these problems. Some of those misconceptions are:

- Learning English as quickly as possible is the first priority for immigrant students.
- If students can converse in English, they can succeed in mainstream courses taught in English.
- Native languages are a crutch that impedes students' progress in English.
- All adolescent immigrants will progress at the same rate in learning English.
- Immigrant students' academic progress depends solely on individual motivations.

Chapter 3 focuses on school structures that make it difficult for immigrant students to succeed, including:

- Fragmented schools days and instructional programs in which English as a second language and content area teachers work in separate departments and rarely interact
- The complex system of courses and of graduation and college entrance requirements
- The practice of placing students in classes chiefly according to age and tracking students learning English into courses that may not grant the credits they need
- Inadequate methods of documenting student achievement

Chapter 4 focuses on characteristics of effective teaching and learning for the adolescent English language learners. The study identified the following key features:

- A high value is placed on the students' languages and cultures
- High expectations of language-minority students
- The education of language-minority students as a priority
- Staff development designed to help teachers and other staff members serve language-minority students more effectively
- A variety of courses and programs for language-minority students
- A counseling program geared toward language-minority students
- Encouragement of parents' involvement
- A strong commitment by school staff to empower language-minority students through education

Major findings: Chapter 5 presents profiles of four exemplary programs, and herein rests the heart of the book. The profiles include underlying philosophies, staff profiles, program content, school and community characteristics, materials available from the program, and contact information. Following are some of the key features of each program:

The Sioux City (Iowa) Community Schools Reception Center

- Staff respect for immigrant students and belief in their ability to succeed educationally
- A clear sense that the culture and language of the students is valued
- A flexible approach to ESL courses
- After-school programs
- Support for families as well as students
- A collaborative approach among staff

Calexico (California) High School

- Bilingual personnel, including noninstructional staff
- Course offerings in Spanish
- A belief in bilingualism as an asset for the future
- Educational materials in Spanish
- Strong home-school communication, which includes bilingual parent meetings
- High expectations of students, along with mechanisms in place to meet those expectations

International High School, Long Island City, New York

- Theme-based curricula
- Work internships
- Interdisciplinary units instead of the traditional departmental approach to education
- A strong collaborative approach among teachers
- Small student population

Harden Middle School, Salinas, California

- A strong belief in professional learning communities
- A strong commitment to staff development

Major implication(s)/recommendation(s): Chapter 6 offers recommendations for improving educational access and engagement of immigrant students. First are 10 priorities to consider when designing instruction for immigrant students:

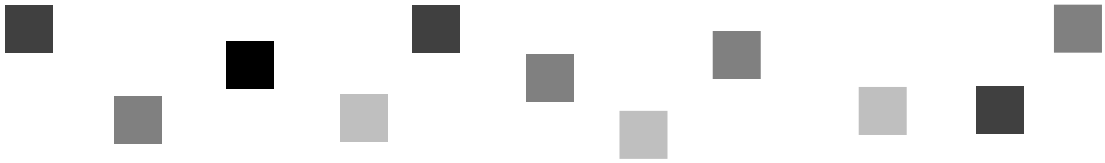
1. The culture of the classroom fosters the development of a community of learners, and all students are part of that community.
2. Good language teaching involves conceptual and academic development.
3. Students' background is used as a point of departure and an anchor in the exploration of new ideas.
4. Teaching and learning focus on substantive ideas that are organized cyclically.
5. New ideas and tasks are contextualized.
6. Academic strategies, sociocultural expectations, and academic norms are taught explicitly.
7. Tasks are relevant, meaningful, engaging, and varied.
8. Complex and flexible forms of collaboration maximize learners' opportunities to interact while making sense of language and content.
9. Students are given multiple opportunities to extend their understandings and apply their knowledge.
10. Authentic assessment is an integral part of teaching and learning.

The author makes the following recommendations for program development:

- Time must be used in new and better ways for English language learners. For instance, schools could be open longer in the mornings and afternoons, and accelerated academic programs could be offered in summers.
- Create opportunities for adult immigrants to teach courses for immigrant students in their native languages.
- Stop worrying about the potentially diverse nature of multilingualism in the United States. Bilingualism needs to be promoted for all Americans, not only immigrants.
- Stop worrying that temporary separate educational arrangements for certain students represent segregation.

The author makes the following recommendations for research:

- Research is needed in areas to better inform the implementation of effective programs for English language learners at the secondary level.
- More study is needed in professional development for teachers.
- In the areas of school and classroom effectiveness for second language learners, research could investigate variability in definitions of effectiveness and how definitions interact with local school and student characteristics.
- The involvement in secondary schools of the families of English language learners is an area of special need of research and development.



Appendix B

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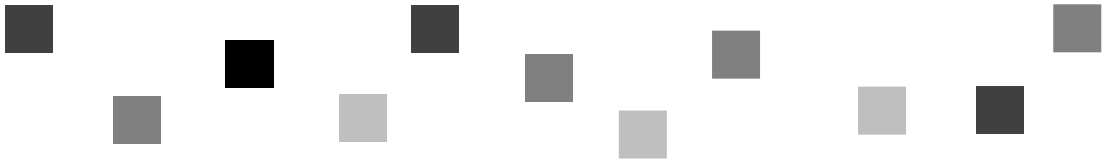
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Appendix C

Glossary of Terms*

*Majority of glossary terms are from Costantino, (1999) (used with permission). Other sources for glossary terms are indicated in the individual entries; see the bibliography for full source citations. Readers may wish to consult the online glossary maintained by the Center for Research on Education, Diversity & Excellence (CREDE) at www.crede.ucsc.edu/tools/glossary.html for more definitions and terms.

Academic language proficiency: Ability in language skills needed for mastering academic material; pertains to both written and oral language (Center for Research on Education, Diversity & Excellence [CREDE], 2002).

Academic outcomes: Achievement in areas such as reading, mathematics, and science. Reading outcomes may include measures of phonemic awareness, phonics, reading fluency, vocabulary, and reading comprehension. Math outcomes may include measures of content knowledge (number sense, properties, and operations; measurement; geometry and spatial sense; data analysis, statistics, and probability; and algebra functions) as well as an understanding of mathematical concepts, procedures, and problem solving. Similarly, science outcomes may include measures of content knowledge (earth, physical, and life sciences) and an understanding of concepts, scientific investigation, and practical reasoning (What Works Clearinghouse Web site, www.w-w-c.org/topic7.html).

Additive bilingualism: Developing a learner's proficiency in a second language with no pressure to replace or reduce the importance of the first language.

Adequate Yearly Progress (AYP): As defined within the No Child Left Behind Act, states define academic standards and assessments to ensure that all districts and schools make progress each school year. For a school to meet AYP, each subgroup of students (LEP students specified as a subgroup) must meet or exceed the state's measurable objectives. Districts must annually review indicators to determine whether schools have met AYP. The results of AYPs are to be available to the public (Wong, Nicotera, & Manning, 2002).

Affective filter: A filter governing how much input is received by the mechanism that processes language. The lower the filter, the more open a student will be to acquiring new language (Dulay & Burt, 1977).

Age of arrival: Age when a language-minority student is first enrolled into a formal educational program in the United States.

Alphabetic principle: Idea that written spellings systematically represent spoken words.

Basic interpersonal communication skills: Language proficiency aspects strongly associated with basic fluency in face-to-face interaction.

Beaders: Second-language learners who learn words incrementally and embrace a gradual process of language learning. These learners do not produce language until they understand the meaning of individual words. Initially, they will identify objects and learn nouns before learning verbs. For these learners, complete comprehension of a word is attained before it becomes part of their vocabulary (Ventriglia, 1982).

BICS: See "Basic interpersonal communication skills."

Bilingual education: A term that is broadly inclusive of any educational program in which two languages are used for instruction.

CALP: See "Cognitive academic language proficiency."

Cognitive academic language proficiency: Aspects of language strongly associated with literacy and academic achievement.

Comprehensible input: The amount of new language, either written or heard, that a learner is exposed to and understands.

Concurrent translation: A method of bilingual instruction in which students are provided with a sentence-by-sentence translation of lessons from English into the students' native language.

Content-based ESL: A form of ESL that provides students with instruction that is structured around academic content rather than general English-language skills.

Creative construction: The ability of children to extract the grammar of a language from a string of unfamiliar words and produce structures that they have not been taught.

Crisscrossers: Second-language learners who are spontaneous, adaptable, and creative. They have a positive attitude toward both the first and second languages, and are comfortable navigating back and forth between the two. These learners embrace a bicultural identity (Ventriglia, 1982).

Crisscrossing: The motivational style of second-language learners who identify with both the first and second cultures (Ventriglia, 1982).

Critical period: A theory of first-language acquisition according to which the human brain, during a period extending from birth to the onset of puberty, shows the plasticity that allows the child to acquire his or her first language.

Crossing over: The motivational style of second-language learners who identify with the second culture (Ventriglia, 1982).

Crossovers: Flexible and independent second-language learners who are willing to take chances. These learners view second language identification as a positive way to adapt to the school setting. They may temporarily move closer to their English-speaking peers, embracing this new identity (Ventriglia, 1982).

Crystallizers: Cautious second-language learners who display a passive attitude toward second-language learning. They are listeners, and long periods of silence are not unusual

for them. These learners will verbalize only when they have perfected their comprehension. They initially reject the second language and do not interact socially with English speakers or identify with them (Ventriglia, 1982).

Crystallizing: The motivational style of second-language learners who maintain their identity with their first-language culture (Ventriglia, 1982).

Decoding: The aspect of the reading process that involves "sounding out" a printed sequence of letters based on knowledge of letter-sound correspondences.

Developmental bilingual education (DBE): See "late-exit bilingual education" (alternately termed maintenance bilingual education).

Early-exit bilingual education: A program model in which, initially, half the day's instruction is provided through English and half through the students' native language. This is followed by a gradual transition to all-English instruction that is completed in approximately two to three years. This program model is alternately termed transitional bilingual education.

ELL: See "English language learner."

English as a second language (ESL): A method for teaching English to speakers of other languages in which English is the medium of instruction. ESL students receive specified periods of instruction aimed at the development of English language skills, with a primary focus on grammar, vocabulary, and communication rather than on academic content areas. Academic content is addressed through mainstream instruction, generally in which no special English language assistance is provided (August & Hakuta, 1997).

English language learner (ELL): Student with a primary language other than English who has a limited range of speaking, reading, writing, and listening skills in English (What Works Clearinghouse, www.w-w-c.org/topic7.html).

English language skills: These skills include speaking and listening fluency, in addition to the academic outcomes of reading and writing (What Works Clearinghouse, www.w-w-c.org/topic7.html). See also "literacy."

ESL: See "English as a second language."

ESL pullout: A program model in which English language learners attend mainstream classes, but are "pulled out" for ESL sessions designed to enhance English acquisition. Traditionally, these sessions have focused on grammar, vocabulary, and communication rather than academic content areas.

Field sensitivity/field independence: A learning style typology that categorizes learners as field-sensitive or field-independent, depending on how their perceptions are affected by the surrounding environment. Field-sensitive learners enjoy working with others to achieve a common goal, and most often look to the teacher for guidance and demonstration. Field-independent learners enjoy working independently, like to compete, and ask for teacher assistance only in relation to the current task (Scarcella, 1990).

First language: Language a normal child acquires in the first few years of life. Alternately termed native language.

Global/analytic: Learning style typology that categorizes students according to which brain hemisphere is most used in language learning. Global thinking takes place in the right hemisphere; global learners initially prefer an overall picture. Analytic thinking takes place in the left hemisphere; analytic learners are fact-oriented and learn tasks in a step-by-step fashion (Scarcella, 1990).

Home language: See "first language."

IL: See "interlanguage."

Immersion bilingual education: A program model in which academic instruction is provided through both the first and second languages for grades K–12. Originally developed for language-majority students in Canada, it is used as one model for two-way bilingual education in the United States.

Immigrant child: An individual who is age 3–21; was not born in any U.S. state; and has not been attending one or more schools in any one or more states for more than three full years (Kindler, 2002).

Instrumental orientation: Pragmatic reasons for learning a second language, such as obtaining employment.

Integrative orientation: Reasons for learning a second language that reflect an interest in forming a closer liaison with the target-language community.

Interlanguage: Developing, or transitional, second-language proficiency of a second-language learner.

L1: See "first language."

L2: See "second language."

Language-minority students: Children in grades K–12 from homes where a language other than English is spoken. This group includes those who are officially classi-

fied as limited English proficient as well as those who have developed some proficiency in English but are less than fully fluent (Lucas, 1993b).

Late-exit bilingual education: (Alternately termed maintenance bilingual education or developmental bilingual education [DBE]). Program model in which half the day's instruction is provided through the students' first language and half through a second language. The goal of this program model is bilingualism. Ideally, the program type is for grades K–12, but it has rarely been implemented beyond elementary-school level in the United States.

Learning styles: Thinking and/or interacting patterns that affect a student's perceptions, memory, and reasoning.

LEP: See "limited English proficient students."

Limited English proficient students: Language-minority students who have difficulties speaking, comprehending, reading, or writing English to the degree that it affects school performance.

Literacy: As generally used, the ability to find meaning in written symbols. Some definitions include oral literacy (using and comprehending language appropriately in speaking and listening). Visual literacy is the ability to interpret visual images (Jalongo, 1992). See also "English language skills."

Maintenance bilingual education: Programs aiming to develop academic proficiency in English and the native language. Most students are English language learners and from the same language background. Students receive significant amounts of instruction in their native language (August & Hakuta, 1997). See also "late-exit bilingual education."

Metacognition: Thoughts about thinking (cognition); for example, thinking about how to understand a passage.

Metalinguistic: Thoughts about language.

Miscue analysis: Detailed recording of student errors or inaccurate attempts during reading.

Morphology: Study of structure and form of words in language or a language, including inflection, derivation, and formation of compounds.

Motivation: Degree to which an individual strives to do something because he or she desires to and because of the pleasure and fulfillment derived.

Native language: See "first language."

NCE: See "normal curve equivalent."

Newcomer program: A program that places recent immigrant students with limited English proficiency and often low or limited educational experience in their native countries into a special academic environment separated from native English-speaking students for a limited period of time (usually six months to two years). Program may exist off-site at a feeder location or within an LEP student's school. (Source: Center for Applied Linguistics; see www.cal.org/crede/newcomer.htm)

No Child Left Behind Act (NCLB): Federal act (Public Law 107-110) effective January 2002 reauthorizing the Elementary and Secondary Education Act of 1965 (ESEA), which provides supplemental resources to districts and schools serving large numbers of low-income students to ensure that all students have the opportunity to obtain a high-quality education. NCLB focuses on increased accountability at the state, district, and school levels for academic results, expands options for school choice, and emphasizes instructional strategies drawn from scientifically based research.

Normal curve equivalent: Unit of measurement used on norm-referenced standardized tests.

Oral literacy: See "literacy."

Orientations: Reasons for learning a second language that may be classified as integrative (see "integrative orientation") or instrumental (see "instrumental orientation").

Orthography: Method of representing spoken language by letters and diacritics (i.e., spelling).

Performance-based assessment: Assessment requiring a student to construct an extended response, create a product, or perform a demonstration.

Phonemes: Speech phonological units that make a difference to meaning. Thus, the spoken word rope is composed of three phonemes: /r/, /o/, and /p/. It differs by only one phoneme from each of the spoken words *soap*, *rode*, and *rip*.

Phonemic awareness: Insight that every spoken word can be conceived as a sequence of phonemes. This awareness is key to understanding the logic of the alphabetic principle.

Phonics: Instructional practices that emphasize how spellings are related to speech sounds in systematic ways.

Phonological awareness: More inclusive term than phonemic awareness, this refers to the general ability to attend to the sounds of language, as distinct from meaning. Phonemic awareness generally develops through other, less subtle levels of phonological awareness.

Phonology: The study of speech structure in language (or a particular language) that includes both the patterns of basic speech units (phonemes) and the tacit rules of pronunciation.

Primary language: Language an individual is most fluent in; usually, though not always, an individual's first language.

Second language: Language acquired or learned simultaneously with, or after, an individual acquires a first language.

Second-language acquisition: Subconscious process similar to, if not identical to, the process by which children develop language ability in their first language.

Second-language learning: Conscious process by which knowledge of a second language is developed. Knowledge includes knowing the rules of the language, being aware of them, and being able to talk about them.

Sensory modality strength: Learning-style typology that categorizes learners by the sensory input they utilize most for information. Learners are categorized as *visual learners*, meaning they remember best by seeing or reading; *auditory learners*, meaning they remember best by hearing; or *tactile-kinesthetic learners*, meaning they remember best by writing or using their hands in a manipulative way (Scarcella, 1990).

Sheltered instruction: Subject-matter instruction provided to English language learners in English, modified so that it is accessible to them at their English proficiency levels. This instructional modification includes teachers using, for example, simplified speech, repetition, visual aids, or contextual clues.

Structured immersion: Program model aimed at English language learners in which all students are usually (not always) from different language backgrounds. Instruction is provided in English, with an attempt made to adjust the level of English so that subject matter is comprehensible. Typically, there is no native-language support.

Submersion: English-only instruction in which students with limited English proficiency are placed in mainstream classes with English-speaking students; no language assistance programs are provided.

Subtractive bilingualism: Replacement of a learner's first-language skills by second-language skills.

Syllable: Unit of spoken language. In English, a syllable can consist of a vowel sound alone or a vowel sound with one or more consonant sounds preceding and following.

Target language: Language that a learner is trying to acquire or learn.

TL: See "target language."

Tracking: Students are sorted according to perceived academic ability and instructed separately with different curricula. Tracking is a common practice in U.S. secondary schools and appropriate tracking for language minority students is an area of concern (Harklau, 1994).

Transitional bilingual education: See "early-exit bilingual education."

Two-way developmental bilingual education: Program model in which language-majority and language-minority students are schooled together in the same bilingual class. Model goal is for both student groups to develop proficiency in both languages. Like late-exit bilingual education, this model usually involves students for several more years than the early-exit model.

Visual literacy: See "literacy."

Whole language: A philosophy of language instruction emphasizing integration of all language skills (reading, writing, speaking, and listening); reading for meaning; and contextualized language learning and use. Some whole-language instructors avoid reading and writing instruction that is based on phonics; some whole-language teachers may give phonics lessons to individual students as needed (Center for Research on Education, Diversity & Excellence [CREDE], 2002).