# Two-Way Immersion Bilingual Programs in Texas 

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#### Abstract

This article summarizes the results from the first statewide study of two-way immersion (TWI) programs for English language learners. The survey was conducted electronically with 304 Texas bilingual/English as a Second Language directors in districts that serve English language learners. Data are reported for the following research question: What information can be identified about TWI programs in Texas, specifically: (a) number of districts reporting TWI programs, (b) program types, (c) grade levels served, (d) number of classrooms at each grade level, (e) languages of instruction, (f) distribution of native Spanish and native English speakers, (g) TWI program by regional educational service center, and (h) years of implementation? This article concludes with implications for further research related to TWI programs in Texas and the United States.


## Introduction

The English language learner (ELL) population in Texas has experienced an $84 \%$ growth since 1989 (National Clearinghouse for English Language Acquisition [NCELA], 2002) and was at 542,312 in 2002 (Texas Education Agency, 2003). This dramatic increase places Texas second only to California in the number of school-age ELLs $(1,512,655)$ (NCELA). Demographers predict that in 2030, Hispanic (or Latino) students, mostly of Mexican origin, will constitute a majority of the California and Texas public schools (Suárez-Orozco, 1998). The majority of Texas's ELL population is considered economically
disadvantaged (Public Education Information Management System, 2002), and more than $97 \%$ speak Spanish as their first language (L1) (NCELA).

The Texas Education Code (2002) mandates that every student who has a home language other than English and who is identified as limited English proficient be provided an opportunity to participate in a bilingual or English as a Second Language (ESL) program. Four bilingual education program models are offered at the elementary level in Texas: ESL, English immersion, transitional bilingual, and two-way or dual-language bilingual education. The Texas Education Code mandates that all school districts with at least 20 $E L L s^{1}$ in the same grade level in any language classification must offer bilingual education; it also mandates that all limited ELLs for whom a district is not required to offer a bilingual education program shall be provided an ESL program, regardless of the students' grade levels and home language, and regardless of the number of such students.

## Literature Review

## English as a Second Language Program Models

ESL program models are generally classified as: (a) pull-out ESL at the elementary level, (b) class period at the middle or secondary school level, (c) sheltered English or content-based programs at the secondary school level, (d) structured English immersion at elementary or secondary levels, and (e) high-intensity language training programs used at the secondary level (Lara-Alecio, Irby, \& Meyer, 2001).

## Pull-Out English as a Second Language Programs

Students in pull-out ESL programs receive specialized instruction in a separate classroom during the day. Because these students are taken from their mainstream classroom for this special instruction, they often lose valuable access to the mainstream curriculum due to having been pulled out part of the day. In this program model, students have little or no access to L1 support because most teachers of ESL are not bilingual and are generally not required by law to be. The primary focus of ESL pull-out programs is on grammar, vocabulary, reading, speaking, and writing in English. This model is often perceived as remedial, is the most often implemented, and, yet, is the least effective model (Thomas \& Collier, 1997). Pull-out ESL programs are the most expensive to operate since ESL teachers must be hired to attend to all the students who are pulled out of their mainstream classrooms for the specialized instruction in English. Perhaps a less expensive model of the pull-out ESL program would be a mainstream ESL program in which regular classroom teachers are certified in ESL so that a pull-out ESL teacher is not required;
rather, the child receives ESL education in the mainstream classroom by a certified teacher.

## English-Immersion Programs

English-immersion programs, often called structured English immersion (SEI), typically include all subjects taught in English with few clarifications from the L1. SEI is a less successful model for ELLs' long-term academic achievement than those with more significant L1 support (Ramírez, Pasta, Ramey, \& Yuen, 1991; Thomas \& Collier, 1996). Students with different L1s (or those from low-incidence language groups), for whom L1 instruction is not feasible, often are placed in English-immersion classes. For students within the SEI self-contained classroom, all instruction for all subjects is received within that classroom. If students are participating in departmentalized instruction, SEI can occur with each departmentalized course and from differing teachers. (Ovando, Collier, \& Combs, 2002). As ELLs struggle to learn the English language, they also must learn the academic content in the second language (L2); therefore, achievement gains in the content areas may fall behind.

## Bilingual Program Models

Educators cannot agree on a single definition or model for bilingual education. Definitions and delivery models are so broad that they tell little about the teaching and learning processes that occur in the classroom or about their variety and patterns of occurrence (Escamilla, 1989). The main goal of bilingual programs is the acquisition of English skills by languageminority children so they can succeed in mainstream, English-only classrooms (Ramírez, 1992). A variety of bilingual program models make use of students' L1 while developing English (Moran, 1993).

## Transitional Bilingual Programs

Transitional bilingual programs have been described as those in which the students' L1 and English are used in some combination for instruction and where the L1 serves as a temporary bridge to instruction in English (Baca \& Cervantes, 1989; Birman \& Ginsburg, 1983; Bruce, Lara-Alecio, Paker, Hasbrouck, Weaver, \& Irby, 1997; Peregoy \& Boyle, 1983; Trueba, 1979). Initially, instruction is provided in the L1 for all subject areas with a small portion of the instructional time devoted to ESL instruction. Students are gradually transitioned to all-English classes and eventually are exited out of bilingual programs, whether it be in an early- or late-exit transitional bilingual program (Brisk, 1999). An early-exit program provides some initial instruction in the L1, primarily for the introduction of reading, but L1 instruction is phased out rapidly (Rennie, 1993), usually by second grade. A late-exit program serves ELLs in kindergarten through sixth grade, and students receive $40 \%$ of their instructional time in the L1 (Ramírez, 1992).

Early-exit transitional programs represent a deficit model in that students are exited before they have fully developed cognitive academic-language proficiency (Collier, 1992). Researchers have found that students in early-exit transitional programs tend to be more academically successful than those in ESL pull-out models, but less academically successful than those participating in late-exit transitional programs and in two-way bilingual programs (Ramírez, Pasta, Ramey, \& Yuen, 1991; Thomas \& Collier, 1997; Thomas \& Collier, 2002).

## Two-Way Immersion Bilingual Programs

According to Alanís (2000), the majority of Texas students are served in transitional bilingual programs (49\%) or ESL programs (38\%). Transitional bilingual and ESL programs are often viewed as subtractive and/or deficit models of teaching ELLs (Hernández-Chavez, 1984; Lambert, 1987; Ovando, Collier, \& Combs, 2002). In such models, students subjugate their L1 to the majority language and tend to decline in L1 proficiency. Student proficiency in English and rapid mainstreaming into grade-level classes are the goals of transitional programs; therefore, these programs may be viewed as remedial models in which students are viewed as lacking English skills and are in need of quick remediation in English. Conversely, two-way immersion (TWI) programs are often described as language additive or language maintenance programs in which students acquire an L2 while maintaining their L1 (Cloud, Genesee, \& Hamayan, 2000).

TWI programs strive to develop bilingualism and biliteracy skills in all students, language minority and language majority alike (Christian \& Whitcher, 1995; Valdés, 1997), and foster language equity (Torres-Guzman, 2002). Research studies of TWI programs have indicated that academic achievement is very high for both language-minority and language-majority children participating in TWI programs, compared with students receiving English-only instruction (Cummins \& Swain, 1986; Lindholm \& Aclan, 1991; Thomas \& Collier, 1996, 2001).

TWI, sometimes referred to as two-way developmental or dual-language immersion, is considered to be an inclusive model because it does not segregate ELLs from the mainstream. Rather, it includes mainstream English speakers within the same classroom as ELLs. Within TWI program design, there are critical linguistic, sociocultural, and pedagogical principles based on important theoretical foundations. The major theoretical principles are: (a) Cognitive academic-language learning requires 5-7 years (Collier, 1992; Cummins, 1991); (b) Students can transfer knowledge and skills from one language to another (Cummins, 1981, 1991); and (c) Continued development in two languages enhances learners' educational and cognitive development (Collier, 1992; Cummins, 1992). Christian (1994) stressed that the goal of two-way programs is to balance the development of language, academic, and social development and not to choose or sacrifice one language at the expense of the other.

According to Thomas and Collier (1997), there are six critical factors of successful TWI programs:

1. Students participate for at least 6 years;
2. There is a balanced ratio of speakers of each language;
3. A separation of languages exists for instructional purposes (the two languages do not integrate during instructional time);
4. Emphasis is on the minority language in the early grades;
5. Core academics are emphasized as well as instructional excellence; and
6. Parents have a positive relationship with the program.

Lindholm-Leary (2001) added three others to the list of critical success factors for TWI programs: (a) effective leadership and support by administrators and instructors; (b) a positive school environment composed of an additive bilingual environment; and (c) high-quality instructional personnel and staff training.

TWI programs vary in the amount of instructional time spent in the L1 and L2. The typical rule of thumb in TWI programs is that the instructional language is segregated; that is, the teacher presents the content only in Spanish or only in English-the two languages are rarely used within the same lesson. The most common TWI models are what are known as $50-50$ or $90-10$ (Christian, 1996). In 50-50 models, the instructional day is equally divided between English and Spanish; in 90-10 models, $90 \%$ of the instructional day is in Spanish (or other minority language) during the early years of the program with graduated time to $80-20,70-30$, until the ratio reaches $50-50$. Theoretically, in TWI programs, students reach $50-50$ instructional time and continue through 12th grade with this model; however, in reality, TWI programs vary in how long programs continue through the grade levels (only a few programs continue to 12 th grade; most phase out in elementary, intermediate, or middle school).

Programs also vary in the percentages of majority and minority speakers and languages of instruction; however, nearly all of the TWI programs in Texas are Spanish-English. Within TWI programs, the native English speakers experience an initial emphasis on the minority language (Spanish), and the native Spanish speakers experience a maintenance model in which their L1 literacy is developed. TWI programs allow native English speakers to develop proficiency in an L2 without sacrificing development of academic-language proficiency in their L1 (Genesee, 1987; Swain \& Lapkin, 1982). In their recent national study, Thomas and Collier (2001) found that:

Enrichment 90-10 and 50-50 one-way and two-way developmental bilingual education (DBE) programs (or dual language, bilingual immersion) are the only programs we have found to date that assist students to fully reach the 50th percentile in both L1 and L2 in all
subjects and to maintain that level of high achievement, or reach even higher levels through the end of schooling. The fewest dropouts come from these programs. (Major Policy Implications section, para. 2)
Specifically, 90-10 models have been shown to be the most successful programs for ELLs (Thomas \& Collier, 2001). In 90-10 models, $90 \%$ of the instructional day is in Spanish (or other minority language) during the early years of the program. Optimal two-way bilingual programs show promising results for both ELLs and native English speakers in terms of both Spanish and English linguistic and academic development, positive intergroup relationships, and parent-school partnerships.

## Identification of Two-Way Immersion Programs

Before beginning the present study, we investigated TWI programs in Texas and nationwide. According to the Center for Applied Linguistics (CAL), the first TWI program in the United States began in 1963; over the next 20 years, fewer than 10 two-way programs were implemented (Howard \& Sugarman, 2001). However, the last two decades have seen a dramatic increase in the number of programs in the United States. In 1995, Christian and Whitcher (1995) identified 182 schools nationwide with two-way programs, and the Directory of Two-Way Immersion Programs in the United States (CAL, 2004) reported 289 two-way programs in 23 states and the District of Columbia. This directory also reported an expansion within existing programs adding new grade levels each year, and 40 programs extended into the middle or secondary grades. Since 2000, there have been 40 new programs identified by CAL.

To learn about programs in Texas, we sought information from the Texas Education Agency. The agency collects basic school descriptive data about Texas districts and ELL programs through a software program called Public Education Information Management System. According to the Texas Education Agency (n.d.):

In compliance with the Texas Education Code, the Public Education Information Management System (PEIMS) contains only the data necessary for the legislature and the TEA to perform their legally authorized functions in overseeing public education. It does not contain any information relating to instructional method, except as required by federal law.
Therefore, Texas does not collect specific information about bilingual program type. However, nationally, CAL has been collecting data and monitoring the growth of two-way programs in the United States since 1991. In 2000, CAL's Directory of Two-Way Immersion Programs in the United States identified 39 two-way schools in 17 districts in Texas, and in 2004, there were 45 schools implementing this type of program in 22 districts. In 2000, the members of the Texas Two-way Consortium Steering Committee (a group of
interested academics and practitioners whose mission was to work toward building a consortium to maintain and research bilingual education in Texas) were aware of other TWI programs in Texas; therefore, the committee commissioned an expansive statewide study, supported by the Texas A\&M University Bilingual Education Program.

Several national longitudinal studies have attempted to determine the effectiveness of the various bilingual program models focusing on academic and linguistic achievement (Christian, Montone, Lindholm, \& Carranza, 1997; Thomas \& Collier, 1996, 2001). To date, no comprehensive evaluation of the effectiveness of Texas's TWI programs had been conducted, in part, due to the lack of a clear identification of these programs.

In the 2000-2001 school year, the Texas Two-way Consortium (TTC), a group of Texas educators, administrators, and concerned citizens, began collecting two-way program data by paper survey distributed at state and regional bilingual education conferences. The TTC was able to identify 63 two-way programs in 32 school districts in Texas.

Reported from the current 2002 study are the baseline data that lay the groundwork for more comprehensive evaluations of two-way (dual-language) programs in Texas to be conducted in 2004. The TTC and the Texas A\&M University Bilingual Program sponsored an online survey to identify all the TWI programs in Texas in the 2001-2002 school year (this survey can be found at http://texastwoway.org). The primary purpose of our larger study was to identify and describe the TWI programs in Texas. The study collected statewide data on (a) the number of TWI programs in Texas, (b) languages used, (c) model, (d) grade levels, (e) number of classes involved, (f) content, (g) duration, (h) location, (i) student demographics, and (j) contact information for these two-way programs. The secondary purpose was to create an online network directory of the TWI programs by Texas Education Service Center Regions to facilitate communication and collaboration among existing TWI programs and those in the planning phases. Specifically, this research report answered the following research question: What information can be identified about TWI programs in Texas, specifically (a) number of districts reporting TWI programs, (b) program types, (c) grade levels served, (d) number of classrooms at each grade level, (e) languages of instruction, (f) distribution of native Spanish and native English speakers, (g) TWI program by regional educational service center, and (h) years of implementation?

## Methodology

## Participants

Participants in our study were 304 bilingual directors in the state of Texas representing 304 school districts. We identified them from the Web site for the Texas Center for Bilingual/ESL Education (http://www.tcbee.org) and from school district Web sites.

## Instrument

After an extensive literature review related to TWI programs, the research team, consisting of bilingual educators and university faculty and researchers, developed a questionnaire. The questionnaire consisted of 15 items and was pilot tested with 10 bilingual administrators, five teachers, and three Title III coordinators in both a paper and an online format. The survey, in both formats, was deemed to have internal consistency $(\alpha=.90)$ and face validity. The survey can be viewed at http://www.texastwoway.org/pdf/2002.pdf

## Procedure

First, we needed to develop a comprehensive e-mail list of bilingual directors since one did not exist. A list of the known bilingual directors was acquired from the Texas Center for Bilingual/ESL Education Web site. The 20 Texas Region Center Bilingual Directors and regional Texas bilingual professional organizations were contacted to assist in acquiring these e-mail addresses. We made some progress from initial contacts, but we acquired the bulk of the e-mail addresses by looking at the Web pages for each school district and, as a last resort, calling the school districts for assistance. From this nearly month long project, we developed an e-mail list comprised of 304 bilingual directors. We sent an e-mail letter in February 2002 inviting voluntary participation in the study. During February through April 2002, we received 274 online responses, representing a $90.1 \%$ response rate.

## Results

The results of our study indicate a significant increase of $461 \%$ in TWI programs in Texas over the CAL 2000 data of 39 TWI programs ${ }^{2}$ and an increase of $263 \%$ over the original paper survey from the TTC in 2000-2001. The results are reported by (a) number of districts reporting TWI programs, (b) program types, (c) grade levels served, (d) number of classrooms at each grade level, (e) language of instruction, (f) distribution of native Spanish and native English speakers, (g) TWI program by regional educational service center, and (h) years of implementation.

## Number of Districts Reporting Two-Way Immersion Programs

Figure 1 depicts the reported TWI programs in Texas compared with other bilingual and ESL program types. Sixty-one of 552 districts in Texas that house bilingual or ESL programs reported having TWI programs. In 61 school districts in Texas (of 274 districts reporting), 166 two-way programs were identified. As noted in Figure 1, approximately 10\% of the districts with bilingual or ESL programs in Texas are implementing at least one TWI program within their district.
Other
Bilingual/ESL
Programs
$90 \%$

Figure 1. Comparison of districts with two-way immersion programs in contrast to other bilingual or English as a Second Langauge programs in Texas.

## Two-Way Immersion Programs by Program Type

According to $90.1 \%$ of the respondents, $53 \%$ of TWI programs are 50-50 models and $47 \%$ are 90-10 models. According to CAL (2004), nationally, the most frequently reported type of TWI is also the $50-50$ model. The 2000 TTC data revealed that of the 63 identified TWI programs, $63.4 \%$ were the $50-50$ model.

## Programs by Grade Level and Classes

The data as reported in Figure 2 indicate that the majority of programs for TWI programs in Texas are situated at the early elementary levels. Nationally, TWI programs are frequently implemented in prekindergarten through third grade; CAL's 2000 directory showed 39\% of TWI programs are situated at the early elementary grades and $40 \%$ continue to the upper elementary grades. CAL reported that only $5 \%$ of the known TWI programs extended through middle school or high school. In 2002, there were 10 TWI programs situated at the middle and high school grades in Texas, and at least 28 other programs were in upper elementary grades and in the planning stages for middle school. TTC 2002 data indicated no significant changes in reported grade-level implementation over the TTC 2001 data, yet it is expected that the number of middle school and high school programs will increase over time as programs expand. The TTC 2002 data revealed that only $2.2 \%$ of the TWI classes were at the middle school level or beyond, although the research indicates earlyexit TWI programs are not as effective as TWI programs that extend to upper elementary or beyond into middle school or high school (Thomas \& Collier, 2001). Again, the TTC 2002 data is consistent with the national trends as reported by CAL for all grade levels. The Texas data reflect that $58 \%$ of the classes are in grades $\mathrm{PK}-2$, which is higher than the national percentage; however, this percentage also implies that many of the Texas programs are new programs that are adding grades each year, so the intention is to have later exit programs. A total of 938 TWI classrooms were reported in the 166 TWI programs for an average of 5.660 TWI classrooms per program. Texas limits class size to 22 students per class in $\mathrm{K}-4$, so we extrapolated that the total number of students served in the reported TWI programs in Texas is approximately 19,698.

## Number of Classes per Grade Level



Figure 2. Implementation of two-way immersion by grade level. Programs by Language of Instruction

All TWI programs in Texas reported that their TWI programs used Spanish and English as the languages of instruction. Two programs reported using a third language as a foreign language for enrichment (French or American Sign Language). According to the CAL national data, Spanish and English are the predominant languages of instruction in TWI programs in the United States (CAL, 2004).

## Language Distribution of Native Spanish and Native English Speakers

Forty-seven percent of the TWI programs reported a language distribution of $75 \%$ native Spanish speakers to $25 \%$ native English speakers. The optimal instructional environment in TWI programs is an equal division of native English and Spanish speakers. Nearly half of the programs reported being near balanced between native Spanish and English speakers ( $27 \%$ were 50-50 and $20 \%$ were $60-40$ ). Only $6 \%$ of the programs were weighted in favor of native English speakers. Figure 3 depicts the programs by language distribution.


Figure 3. Language distribution in TWI programs by native Spanish speakers and native English speakers.

## Programs by Regional Education Service Center

The state of Texas is divided into 20 regional education service centers that function as assistance centers for the Texas Education Agency. Figure 4 depicts the number and percentage of the TWI programs in Texas by education service center. The data indicate that TWI programs appear in 14 of the 20 centers. Region 1 reported the most TWI programs, with $26.5 \%$ of the programs. Region 1 is situated in the Texas Lower Rio Grande Valley and has a large percentage of Spanish-speaking students.


Figure 4. Percentage of two-way programs by regional Texas education service centers.

Notably, two other areas, Region 4 (Houston area) and Region 19 (El Paso area) also had a large percentage of the total TWI programs, with $23.8 \%$ and $24.3 \%$, respectively. These three region areas contain $74.6 \%$ of the total reported TWI programs in Texas. It should be noted that these regions also have high percentages of Hispanic and ELL student populations and are situated in south Texas or border Mexico.

## Programs by Year of Implementation

According to the 2002 TTC data, $54 \%$ of the programs reported being within the planning year to 3 years of implementation. Forty-six percent
reported being within 4 to 6 years of implementation. This indicates that over half of the TWI programs in Texas are relatively new programs. Seventy-nine percent of the TWI programs that were in the planning year in 2001-2002 reported forecasting a $50-50$ model, and $30.6 \%$ reported planning to implement a $90-10$ model. Thirty-eight percent of TWI programs in Year 1 of implementation reported having $90-10$ models, and $61.8 \%$ reported implementing a 50-50 model.

## Implications and Conclusion

Our study provides the first comprehensive collection of data on TWI programs in the state of Texas. The Texas survey reveals that the number of Texas TWI programs is underreported at the national level and implies that local and state efforts are needed across the nation to better identify TWI programs. Further, Internet and e-mail efforts were more effective at identifying programs than the previous paper-based survey. As noted, this survey represents the baseline data for further evaluation of TWI programs at the state level. The TTC plans to update and collect longitudinal data annually on all the known TWI programs in Texas. It is clear that a large percentage (74.6\%) of Texas's TWI programs are situated in heavily Hispanic areas, and this trend warrants examination. Furthermore, a large number of the TWI programs in Texas are relatively new programs (over half are less than 3 years old), which indicates that comprehensive efforts should concentrate on supporting these new programs. The survey data also indicates that on average, each TWI school has approximately six classes per school, implying that many of the programs are strands within a school.

We believe that our study holds promise for future research that will help decision makers improve education for language-minority students. Rigorous scientific research is mandated under the No Child Left Behind Act (2002). However, before scholars and practitioners can conduct such research and can determine what is the most effective practice for ELLs, they must know where existing programs of practice exist and what type of programs are servicing the ELL population. This is the TTC's contribution to No Child Left Behind: to better identify and provide a database of TWI programs so that other researchers who are interested in contributing to the scientifically based research in determining best program practices for ELLs will have a basis upon which to begin. Until now, no such database existed.

The Texas Two-Way Directory is available at http://texastwoway.org and has had over 300,000 visitors from Texas, the nation, and every continent since inception 2 years ago. This volume demonstrates the great interest in TWI programs. Our data indicate that Texas houses the largest number of TWI programs in the country as compared to the CAL 2004 data. ${ }^{3}$ It is our hope that the Texas Two-Way Directory online will serve as a vehicle for other
states to collect similar data and provide much-needed peer support for the numerous new TWIs and for similar programs under development in Texas and elsewhere in the United States.

## References

Alanís, I. (2000). A Texas two-way bilingual program: Its effects on linguistic and academic achievement, Bilingual Research Journal, 24(3), 225-248.
Baca, L. M., \& Cervantes, M.T. (1989). Background and rationale for bilingual special education. In L. M. Baca \& H. T. Cervantes (Eds.), The bilingual special education interface (2nd ed., pp. 1-21). Columbus, OH: Merril.
Baker, C. 1996). Foundations of bilingual education and bilingualism (2nd ed.) Clevedon, England: Multilingual Matters.
Birman, B. F., \& Ginsburg, A. L. (1983). Introduction: Addressing the needs of language-minority children. In K. A. Baker \& A. A. Decanter (Eds.), Bilingual education: A reappraisal of federal policy (pp. 9-21). Lexington, MA: Lexington Books.
Brisk, M. E. (1999). Quality bilingual education: Defining success (LAB Working Paper No. 1). Providence, RI: Northeast and Islands Regional Educational Laboratory, Brown University. (ERIC Document Reproduction Service No. ED 445549)

Bruce, K., Lara-Alecio, R., Parker, R., Hasbrouck, J.E. Weaver, L., \& Irby, B. (1997). Inside transitional bilingual classrooms: Accurately describing the language learning process. Bilingual Research Journal, 21(2\&3), 123-145.

Center for Applied Linguistics. (2004). Directory of two-way bilingual immersion programs in the U.S. Retrieved February 15, 2004, from http://www.cal.org/twi/directory
Christian, D. (1994). Two-way bilingual education: Students learning through two languages (Education Practice Report, 12). Washington, DC: Center for Applied Linguistics.

Christian, D. (1996). Two-way immersion education: Students learning through two languages. Modern Language Journal, 80(1), 66-76.
Christian, D., Montone, C., Lindholm, K., \& Carranza, I. (1997). Profiles in two-way immersion education. McHenry, IL: Delta Systems.

Christian, D., \& Whitcher, A. (1995). Directory of two-way bilingual programs in the United States. Santa Cruz, CA: National Center for Research on Cultural Diversity and Second Language Learning.

Cloud, N., Genesee, F., \& Hamayan, E. (2000). Dual language instruction: A handbook for enriched education. Boston: Heinle \& Heinle.
Collier, V. P. (1992). A synthesis of studies examining long-term language minority student data on academic achievement. Bilingual Research Journal, 16, 187-222.
Cummins, J. (1981). The role of primary language development in promoting educational success for language minority students: A theoretical framework. Los Angeles: California State University, Evaluation, Dissemination and Assessment Center.
Cummins, J. (1991). Interdependence of first- and second-language proficiency in bilingual children. In E. Bialystok (Ed.), Language processing in bilingual children (pp. 70-89). Cambridge, England: Cambridge University Press.
Cummins, J. (1992). Empowerment through biliteracy. In J. V. Tinajero \& A. F. Ada (Eds.), The power of two languages: Literacy and biliteracy for Spanish-speaking students (pp. 9-25). New York: Macmillan/McGraw-Hill.
Cummins, J., \& Swain, M. (1986). Bilingualism in education. New York: Longman.

Escamilla, K. (1989). A Brief History of Bilingual Education in Spanish. Charleston, WV: Clearinghouse on Rural Education and Small Schools. (ERIC Document Reproduction Service No. ED 308 055)
Genesee, F. (1987). Learning through two languages: Students of immersion and bilingual education. Cambridge, MA: Newbury House.
Hernández-Chavez, E. (1984). The inadequacy of English immersion education as an educational approach for language minority students in the United States. In California Department of Education (Ed.), Studies on immersion education (pp. 144-180). Sacramento, CA: Bilingual Bicultural Education Division, California Department of Education.

Howard, E., \& Sugarman, J. (2001). Two-way immersion programs: Features and statistics. Retrieved March 1, 2004, from http://www.cal.org/resources/ digest/0101twi.html
Lambert, W. E. (1987). The effects of bilingual and bicultural experiences on children's attitudes and social perspectives. In P. Homel, M. Palij, \& D. Aaronson (Eds.), Childhood bilingualism: Aspects of linguistic, cognitive, and social development. Hillsdale, NJ: Erlbaum.
Lara-Alecio, R., Irby, B. J. , \& Meyer, D. (2001). Bilingual and English as a second language programs. In G. Schroth \& M. Littleton (Eds.), The administration \& supervision of special programs in education (pp. 77-96). Iowa: Kendall/Hunt.

Lindholm, K. J. (1987). Directory of bilingual immersion programs (Educational Report No. 8). Los Angeles: Center for Language Education and Research, University of California, Los Angeles.
Lindholm, K. J., \& Aclan, Z. (1991). Bilingual proficiency as a bridge to academic achievement: Results from bilingual/immersion programs. Journal of Education, 173, 99-113.
Lindholm-Leary, K. (2001). Dual language education. Clevedon, England: Multilingual Matters.
Moran, C. (1993). Content area instruction for students acquiring English: Focus on Social Studies. In J. Tinajero \& R. DeVillar (Eds.), The Power of Two Languages. New York: MacMillan/McGraw-Hill.
National Clearinghouse for English Language Acquisition. (2002). Rate in LEP growth. Retrieved March 2, 2004, from http://www.ncela.gwu.edu/ ncbepubs/reports/state-data/2000/texasr.pdf
No Child Left Behind Act, Pub. L. No. 107-110, 115 Stat. 1425 (2002).
Ovando, C. J., Collier, V. P., \& Combs, M. C. (2002) Bilingual and ESL classrooms: Teaching in multicultural contexts (3rd ed.). Boston: McGraw Hill.
Peregoy, S., \& Boyle, O. (1993). Reading, writing, and learning in ESL: A resource book for $K-8$ teachers. New York: Longman.
Public Education Information Management System. (2002). Public Education Information Management System. Retrieved February 19, 2004, from http://www.tea.state.tx.us/peims/
Ramírez, J. D. (1992). Executive summary. Bilingual Research Journal, 16(1\&2), 1-62.
Ramírez, J., Pasta, D., Ramey, D., \& Yuen, S. (1991). Final report: Longitudinal study of structured English immersion strategy, early-exit and late-exit bilingual education programs for language minority children. (Vol. 1). Prepared for U.S. Department of Education (Contract No. 300-87-0156). San Mateo, CA: Aguirre International.
Rennie, J. (1993). ESL and bilingual program models. Washington, DC: Clearinghouse on Language and Linguistics. (ERIC Document Reproduction Service No.ED 362072)
Suárez-Orozco, M. (1998). Crossings: Mexican immigration in interdisciplinary perspectives. Cambridge, MA: Harvard University, David Rockefeller Center for Latin American Studies.
Swain, M., \& Lapkin, S. (1982). Evaluating bilingual education. Clevedon, England: Multilingual Matters.

Texas Education Agency. (2003). Pocket edition. Retrieved February 19, 2004, from http://www.tea.state.tx.us/perfreport/pocked/2002/ pocked0102.pdf
Texas Education Agency. (n.d.). PEIMS, Public education information management system. Retrieved February 15, 2004, from http:// www.tea.state.tx.us/peims/about.html
Texas Education Code, § 29.051-29.064, Chapter 89, Subchapter BB, § 89.1205 (2002).

Thomas, W. P., \& Collier, V. P. (1996, December). Two languages are better than one. Educational Leadership, 55(4), 23-26.
Thomas, W.P., \& Collier, V. (1997). School effectivenessfor language minority students. Washington, DC: National Clearinghouse for Bilingual Education.

Thomas, W. P., \& Collier, V. (2001). A national study of school effectiveness for language minority students' long term academic achievement. Retrieved February 19, 2004, from http://www.crede.ucsc.edu/research/ llaa/1.1es.html

Thomas, W., \& Collier, V. (2002). A national study of school effectiveness for language minority students' long-term academic achievement. Santa Cruz, CA: Center for Research on Education, Diversity \& Excellence.
Torres-Guzman, M. (2002). Dual language programs: Key features and results. Washington, DC: National Clearinghouse for Bilingual Education.
Trueba, H. (1979). Bilingual education models: Types and designs. In H. Trueba \& C. Barnett-Mizrahi (Eds.). Bilingual multicultural education and the profession: From theory to practice (pp. 54-73). Rowley, MA: Newbury House.
Valdés, G. (1997). Dual-language immersion programs: A cautionary note concerning the education of language-minority students. Harvard Educational Review, 67(3), 391-429.

## Endnotes

${ }^{1}$ The Texas Education Code (2002) lists ELL students as limited English proficient.
${ }^{2}$ Even at the time of this publication, CAL is reporting only 45 TWI programs.
${ }^{3}$ It must be noted that the CAL data for Texas appeared to be inaccurate; therefore, there may be more TWI programs in each state than are reported on the CAL Web site.

## Appendix

## Texas Two-Way Survey

Instructions: Please fill out this form and proceed to the next screen.

## Section 1 of 3

Campus Registration Information
First Name
Last Name
Position
Principal
Program Coordinator
Bilingual Director
Teacher
Other
Phone
Email
Fax
District

Select Region
Region 1
Region 2
Region 3
Region 4
Region 5
Region 6
Region 7
Region 8
Region 9
Region 10
Region 11
Region 12
Region 13
Region 14
Region 15

## Appendix (cont.)

Region 16
Region 17
Region 18
Region 19
Region 20
Campus
Address
City
State
Zip
Section 2 of 3
Please select the program model(s) that best describes your campus programs that serve

- English Language learners
- Early Exit Transitional Bilingual Program
- Late Exit Transitional Bilingual Program
- ESL (English as a Second Language) Pull-out
- Content-Area ESL
- Structured Immersion
- Submersion

Please provide a brief description of your program.
Are you planning on implementing a two-way dual immersion program?

Yes
No
If yes, what type of assistance do you need?

- Funding
- Assessment
- Program Implementation
- Training / Development
- None
- Other


## Appendix (cont.)

Program Information
Are you currently implementing a Dual Language Program?
Yes
No
Would you like to receive The Two-Way Dual Language Quarterly Newsletter?

Yes
No
Instructions: Please select the model and other information that most accurately describe your Grade Level program. You will have an opportunity to enter more than one grade after this screen.

Section 2 of 3

- Two-Way Program Information
- Grade level(s) of the program?
- Pre-K
- Kindergarten
-1st Grade
- 2nd Grade
-3rd Grade
-4th Grade
- 5th Grade
- 6th Grade
-7th-12th
What Type of Program is currently implemented?
-90-10 Model
-80-20 Model
- 70-30 Model
- 50-50 Model

How many years of implementation have you had at this level?

- Planning Year
- Year 1
- Year 2


## Appendix (cont.)

- Year 3
- Year 4
- Year 5
- Year 5 Plus

How many classes are at this level?

- 1
- 2
$\cdot 3$
- 4
- 5
-6
Section 3 of 3
Two-Way Program Information
You have completed information for one grade. If you wish to enter another grade for your school, please "click" the button below labeled "Next Grade." If you are finished entering data for all grade levels at this particular campus, press the "Finished" button.

