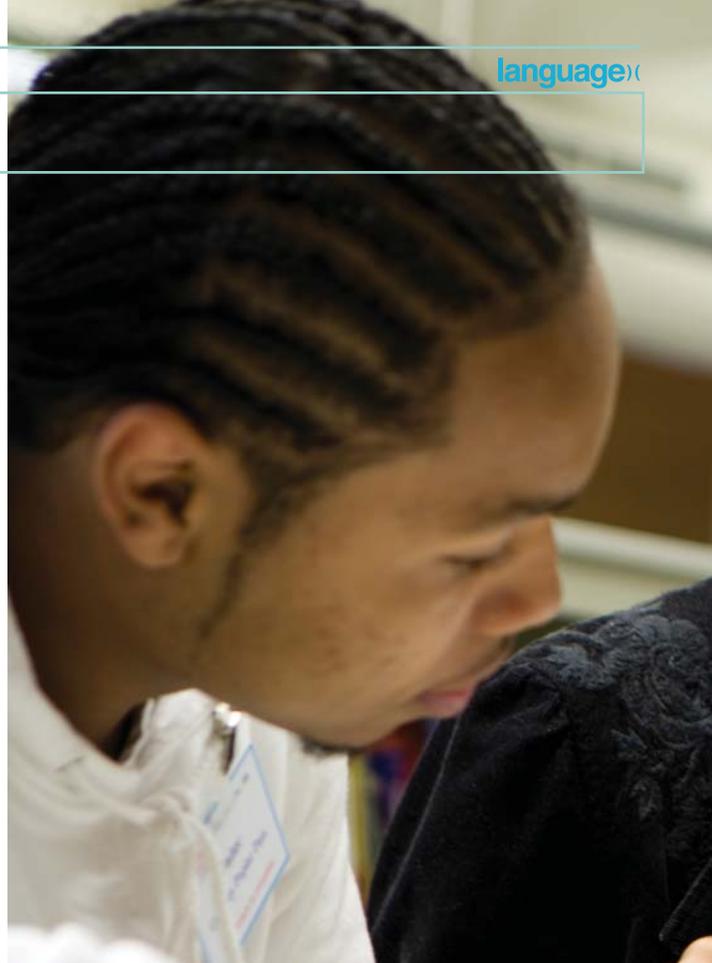


# Student Achievement in California Two-Way Immersion Programs



*Steve Charbonneau, Delia Gomez, Danielle Waite, and Kay Vang study how California Two-Way Immersion (TWI) programs impact student achievement*

**Two-Way Immersion (TWI) schools serve students in a** comprehensive program, meeting all state and federal obligations, and use two languages to do so (Center for Applied Linguistics, 2008). By definition, a TWI program utilizes two languages to educate two distinct groups of students. In these types of programs, students who are native English speakers are paired with students from another language background (English Learners). With few exceptions, all students in a TWI program are together for core academic instruction during the school day. Thus, TWI programs provide both groups of students with core academic instruction in both languages (Center for Applied Linguistics, 2008).

Two basic TWI program models are the 90:10 and 50:50 models. Here, the numbers refer to percentages meant to represent instructional time during the course of a school day. The first number refers to the amount of time the teacher spends each day teaching in the target or non-English language during the first year of a TWI program (Kindergarten). The second number refers to the amount of time the teacher teaches in English. Eventually, a 90:10 model sees the amount of the target language decreasing annually, until there is a 50:50 balance between English and the target language by about the fourth grade (Lindholm-Leary, 2007).

A 50:50 TWI program is one where the teacher uses both English and the target language fifty percent of the time starting at the Kindergarten level and continuing throughout the length of the program. Both 90:10 and 50:50 TWI programs utilize the same approach for students who reach the secondary level. At this level, most TWI programs provide at least one core class taught in the target language and one advanced foreign language course in the target language for

students starting at the junior high school level. This configuration is often maintained throughout high school (Gomez, Freeman, and Freeman, 2005).

In 1998, Proposition 227 was placed on the California State ballot by way of petition (State of California Primary Election Guide, 1998). Known as the English Language in Public Schools Initiative, it passed with 61.0 percent of the vote that year and greatly restricted bilingual education in the State of California. As a result of that initiative, TWI programs must require parents of English Learners (ELs) to sign yearly waivers of consent if their children are to remain in the program. Moreover, the initiative also requires ELs under ten years old to be placed in a regular mainstream setting for 30 calendar days prior to placement in a TWI program. According to the legislation, students who are native English speakers are not seen at risk of losing the English language. Therefore, TWI schools are not obligated to extend the same 30 day placement for them (Center for Applied Linguistics, 2008).

Still, TWI programs would find it challenging to legally operate under proposition 227 if not for one paramount characteristic of the TWI model. In fact, TWI programs do not replace English with another language, but rather provide students an opportunity to acquire a second language. TWI programs are, therefore, enrichment programs in that the students they serve acquire a second language while maintaining their first language (Lindholm-Leary, 2007). As will be seen, the results of this study may help to alleviate the concerns of those who supported proposition 227 by demonstrating that students in dual language programs can perform as well or better than their peers in regular mainstream programs.



## Review of Literature

### TWI Programs

TWI programs have been an interest in the U.S. and Canada for a number of years. The U.S. primarily focuses on Spanish-English programs, whereas Canada's focus is on French-English programs. However, the number of languages that are offered through TWI programs has expanded across the U.S. in the last few years. Spanish, Cantonese, Korean, French, Portuguese, Haitian-Creole, Tagalog, Arabic and Japanese programs are listed among districts that have TWI programs, and there is interest in developing Hmong and Vietnamese programs as well (Gomez, et. al., 2005). Recently in the U.S., there has been "...the recognition by policymakers and educators that the US has a critical need for residents who are proficient in more than one language" (Howard & Christian, 2002, p. 1), which helps to support the argument for offering TWI in public schools. TWI in all its different forms provides benefits to both the EL students and English native speakers alike (Cummins, 1992, Howard & Christian, 2002). The goals of TWI are: all students will develop high levels of proficiency in their first language, all students will develop high levels of proficiency in a second language, academic performance for both groups of students will be at or above grade level, and all students will demonstrate positive cross-cultural attitudes and behaviors (Howard & Christian, 2002).

To successfully implement a TWI program, school personnel needs to determine which model (90:10 or 50:50) they wish to adopt and then they need to determine how implementation will occur. Certainly, there are a number of ways that both models can be implemented successfully. However, there are a number of universally accepted factors seen as crucial for developing a successful TWI program. They are: high quality staff and professional development, curriculum and

instruction, classroom environment, leadership and support, and parent and community support (Lindholm-Leary, Hardman & Meyer, 2007). Whichever version is chosen, TWI success is generally determined by how much commitment to the program exists (Howard & Christian, 2002). Many TWI programs around the country have experienced both success and popularity in recent years.

"One reason that dual language programs have become popular is that they attract Anglo parents who want their children to become bilingual — taking away the one advantage that Els have traditionally had — the distinction of achieving a high level of bilingualism" (Gomez, et. al., 2005, p. 149-150). However, there are documented benefits to all children, both native English speaking and EL students. Both Spanish and English speakers in one study of sixth graders showed a 92-93 percent proficiency in their second language (Lindholm-Leary, et. al., 2007). "In addition, native English speakers in these programs, despite learning through two languages, excel in their native English, scoring higher than peers studying only in English." (Gomez, et. al., 2005, pg 146).

### TWI Studies

There have been a number of studies regarding TWI programs over the last 40 years. All the studies reviewed illustrate that there are multiple advantages for the students in TWI programs. As stated above, there are even advantages for the English native speakers, as they become bilingual and biliterate in a second language. Studies have shown that both populations benefit from the two language immersion over traditional English instruction (Cummins, 1992, Howard & Christian, 2002, Collier & Thomas, 2004). Lindholm-Leary & Borsato (2005) summarized from their research that potentially at-risk Hispanics appeared to be more successful than the average Hispanic students when those at-risk Hispanics were in TWI programs.

## Methods

### Research Question

Do students taught in the three different instructional settings; 90:10 TWI, 50:50 TWI, and English mainstream programs experience different rates of academic achievement?

### Sample

This study examined student achievement in three different instructional settings; 90:10 TWI setting, 50:50 TWI setting, and regular mainstream setting, as measured by the CST. The California Department of Education (CDE) provides Academic Performance Index (API) reports as part of its Accountability Progress Reporting system. The API of each particular school takes many factors into account, but it is an overall academic score taken from compiled student results of the CST. It ranges from a low of 200 to a high of 1000. The API performance target for all schools is 800. A school's growth is measured by how well it is moving toward or past that goal (California Department of Education, 2008). The API is comprised of content areas having different relative emphases as determined by the statewide test weights and by the number of students taking each type of test to measure the academic performance and growth of schools (California Department of Education, 2008). As of January 2008, more than 200 TWI programs were offered in California public schools (California Department

of Education, 2008). However, only about 30 percent of those programs had API scores associated with them.

The 2007-08 API scores obtained from the CDE website for the selected schools were analyzed. In total, 60 elementary schools were included in this study with twenty programs representing each of the three instructional settings (90:10 TWI, 50:50 TWI, and the English mainstream). The forty TWI schools included in the sample utilized one of the following target languages in their programs; Spanish, Korean, French, Mandarin, and Cantonese. The twenty contrasting regular mainstream programs included in the study were selected because they possessed similar demographics to their TWI counterparts. In addition, these English mainstream programs were schools in the same district as twenty of the TWI schools. Schools in the sample were selected from throughout California, and a few of the TWI schools were charter schools. While some schools were in smaller districts such as Patterson Joint Unified School District, other schools were part of much larger districts such as Los Angeles Unified School District. Sixteen out of twenty 90:10, and fifteen out of the twenty 50:50 TWI schools represented school-wide TWI programs. The nine schools included in the study that were not school-wide TWI programs had approximately 75 percent of their students engaged in dual language education. Had these programs not been included, the sample size would have been dramatically reduced.



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## Results

A one-way ANOVA was conducted to determine whether students taught in the three different instructional settings (90:10, 50:50, English mainstream program) experienced different rates of academic achievement. The results indicated that there was no statistical significance in student achievement, implicating a weak relationship. Students in two-way immersion programs did not experience higher rates of academic achievement compared to students in the regular mainstream program and vice versa. Schools implementing the 50:50 TWI model had an API mean score of 753.4, and 90:10 TWI schools had an API mean score of 761.7. Schools implementing the TWI model did not have mean API scores that were significantly better than regular mainstream schools ( $M=753.7$ ). Surprisingly, the standard deviation for all three instructional settings were the same ( $sd=15.2$ ). See Table 1 for information.

## Conclusion and Discussion

The main goal of this study was to examine the academic achievement of students taught in three different instructional settings: 90:10 TWI, 50:50 TWI, and English mainstream programs. More specifically, this study analyzed whether students enrolled in these programs experienced different rates of achievement as measured by the schools' API index. In examining the three aforementioned instructional settings, this study did not seek to analyze the performance of individual students, but rather a school's entire student population. Therefore, utilizing API scores of schools representing the different instructional settings made sense, as API scores summarize a school's performance on the Standardized Testing and Reporting (STAR) Program for the CDE (California Department of Education, 2008).

There are a few reasons the results of this study may not have shown statistical significance among the three instructional settings.

### API Scores

Program	N	M	sd	F	p
50:50 Dual Language	20	753.4	15.2	.10	.91
90:10 Dual Language	20	761.7	15.2		
English Mainstream	20	753.7	15.2		

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The API score is derived from an assessment that is a snapshot of a school on a given day. The results of the test are strongly impacted by what kind of day each student is having. Also, the API scores for this study were only analyzed for one year; a longitudinal study would perhaps provide a more in-depth analysis. The scores from previous years were not taken into account. Schools may have made significant growth in previous years and may have made no or minimal growth for the year used for this study. The sample size may have also been a contributing factor. These considerations aside, the results of the study did cause a great deal of reflection for the research team.

Two of the researchers involved in this study are TWI practitioners. While all involved were prepared to allow the data to speak for itself, the entire research team had hoped the data would show that students in TWI programs outperform their peers in regular mainstream programs. Instead and as established, the results of the study indicated that there was no statistical significance in student achievement among students taught in the three different instructional settings. While this was not the outcome anticipated by the research team, the team realized that it may have missed the "big picture" after several debriefing sessions. After all, at minimum the data indicates that instruction in the target language does not deter students in TWI programs from learning California State Content Standards. And while no difference has been shown in the results of

API's for the three different instructional settings, there is one obvious advantage to dual language instruction. Students are not only learning English-based grade-level standards, they also have the added benefits of learning a second language. Both ELs and native English speakers have the opportunity to become bilingual and biliterate. Therefore, in addition to offering students a strong education in English as in English mainstream programs, TWI programs give students an edge that will help them throughout their educational and working careers, giving them more opportunities in an ever more global economy.

Beyond this, there are other benefits to consider. For one, students in TWI programs may develop skills beyond those tested on the CSTs. For example, TWI programs are programs with students representing at least two different cultural groups. Students of different languages and cultural backgrounds learn to work and problem solve together. Thus, cultural appreciation and awareness among all participants are likely to occur. Many programs also provide multicultural assemblies, author lectures, and field trips to enhance the cultural and linguistic diversity within the school. Although there is a need for further studies on the effectiveness of TWI programs, this study provides strong support for dual language proponents or practitioners who are looking to start a new program. A well implemented dual language program will provide students the skills and knowledge they need to thrive in school and in society. **X**

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