

Bilingual Education in the United States
Where Research Stands

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Introduction

With the recent influx of immigrants, the American public school system has had challenges providing bilingual education to these populations. According to the National U.S. Department of Education (2011), about 11.2 million students are bilingual in the U.S. School districts lack the financial and staff resources to provide bilingual services. Most schools do not have effective programs or have no programs, at all, in place to address the needs of bilingual students, especially Pre-K to third grade. This is a concern to policy makers and educators, as studies show that young children whose native language is not English are behind their native English-speaking counterparts in reading scores, as well as other negative outcomes that contribute to the academic gap between minority and native-English students (Bialystok, 2008, Flynn & Hill, 2005, Lui et al., 1999; Reed, 1996). Additionally, many immigrant and minority populations including several Native American tribes are concerned about the loss of native languages in response to assimilation to mainstream American culture. Much research and advocacy has been mobilized to preserve native languages (see McCarty et al. 2006; Pease-Alvarez 1993; Wong Fillmore 1991; Crawford 1995; Withers 2010). An effective, statewide policy on bilingualism may help address this increasing dilemma, lessen the academic gap and achieve the goal of retaining native language skills. There is, however, a push for English-only instruction in all classrooms that threatens to terminate educational programs, such as bilingual education, for immigrants.

This paper will synthesize the outcomes of several research studies examining the effectiveness of bilingual education programs, in particular transitional bilingual education (TBE), two-way bilingual immersion (TWBI), and submersion (structured English immersion) in

the United States. The purpose is to determine what the existing pool of research has to say on the effectiveness of bilingual education programs. The paper will also discuss the push for English-only instruction to establish what existing literature indicates is the best approach to serve the needs of bilingual students in schools, whether that is a specific bilingual education model or English-only instruction. Drawing upon the findings of the synthesis, recommendations to better serve this population of students will be provided for all states to consider.

Historical Context of Bilingual Programs

First, a distinction must be made between bilingual students and English as a Second Language (ESL) students. All bilingual and ESL students are considered English Language Learners (ELL) because their native language is not English. As all new students of non-Anglo immigrant backgrounds are assessed prior to school enrollment, those that do not meet English literacy standards set by the state are labeled as ELL. There on, depending on the model school districts have in place, ELL students can be funneled into ESL classes or bilingual education programs. ESL classes are instructed mainly in English only. Students in these classes are provided limited assistance in their native languages and may be integrated into mainstream classrooms or pulled out completely (Spann & Gold, n.d.).

On the other hand, ELL students in bilingual programs all have the same native language, and classes are taught in both the native language and English. School districts are required to offer bilingual education programs when more than 20 students per classroom share the same native language. It may be easier to think of these two models as opposite ends of a spectrum. Bilingual education programs utilize the native language for both English acquisition and academic learning in all subjects, while ESL programs tend to focus more on English acquisition rather than the native language (Spann & Gold, n.d.). However, as Osorio-O'Dea (2001) points

out, these different models are hard to differentiate in practice. In the United States, most school districts have ESL programs as opposed to bilingual education programs due to the lack of funding and qualified bilingual instructors. For the purpose of this paper, I will not be focusing on the ESL model.

Table 1 illustrates the different bilingual education models, or programs, offered by school districts in the U.S. As the most recent influxes of immigrants originate from Spanish-speaking countries, the majority of bilingual education programs in the United States are taught in Spanish as the native language, and English. However, there has been a rise in other languages as well, such as Korean, Cantonese, French, Navajo and Japanese (Garcia & Baker, 2007). The most common program is transitional bilingual education (TBE), which focuses on instruction in the students' native tongue; however, instruction gradually progresses in English as students become more comfortable with English. When students are assessed as proficient, or nearly proficient, they can exit the program and integrate with mainstream students. The main goal of the model is to "mainstream students to all dominant-language classrooms...and in the end, proficiency in the dominant language is...important" (Akkari, 1998, pg. 109). TBE programs act as a connector for students by aiding them in their transition from their native language to English. Supporters of this model view primary language as a "problem to overcome"; thus it is only used until students gain sufficient English literacy before transiting them to mainstream English-only classrooms (Garcia & Baker, 2007). Federal regulations require a maximum of 3 years as the target time frame for students to receive native language support. Studies, on the other hand, have found that a more practical time period is around 5 to 7 years (Roberts, 1995; see Collier, 1989; Krashen et al., 1982). Once students exit the program, they are not provided with native language support at school. TBE programs tend to result in subtractive bilingualism

where ELL students may lose knowledge of their native language. This happens in part due to the aim of the model – English language development (Garcia and Baker, 2007).

The second most implemented model is two-way bilingual immersion (TWBI), also known as dual-language immersion, provides academic instruction through English and a second language, most often the native language of all enrolled ELL students. The target group of TWBI is not only ELL students but also English-speaking students. English speakers and bilingual speakers are integrated into one classroom. Instruction in TWBI programs can be taught in two ways: the 50/50 or 90/10 approach. In the 50/50 approach, instruction in all classes is taught in the native language for 50 percent of the instructional day and in English the other half of the day. The other method comprises of the use of the native language for instruction 90 percent of the instructional day and English 10 percent for the rest of the day. The goals of this program are for students to become proficient in both the native language and English, content area achievement at or above grade level and multicultural competencies. TWBI programs lead to additive bilingualism as the aim of the model is towards bilingualism, bi-literacy and academic literacy in two languages for their target population (Garcia & Baker, 2007).

An additional advantage of this model is that non-ELL students have the opportunity to learn a second language by interacting with ELL students in the same classroom. Both groups can learn new languages and increase positive relationships. Christian (1996) found that Anglo and Hispanic learners in TWBI classes benefit greatly in these types of programs, as they are not only learners but also have a teaching role. TWBI programs in the U.S. gained positive attention and funding beginning in the mid 1990's. Prior to this, the Department of Education's Title VIII program funded only TBE and ESL programs. The Bilingual Education Act, or Title VII, was reauthorized in 1994 and new guidelines specified that up to 25 percent of grant money could be

used for substitute forms of bilingual education; thus the number of TWBI programs increased (Garcia & Baker, 2007). Today, the total number of TWBI programs in the nation is 384 (CAL, 2012). Other bilingual education models are offered and implemented in the U.S., however, for the purpose of this paper, they will not be discussed.

Submersion, also known as structured English immersion in some school districts, is an approach preferred by advocates of the English-only movement. This model places ELL students in regular English classrooms with English-speaking children given no additional help or instruction in their native language. This method is also known as the “sink or swim” approach as non-English speaking students are immediately integrated with mainstream students. The proposed goal is for ELL students to learn English and “assimilate to North American society as fast as possible (Roberts, 1995, pg. 372).

Secondly, a historical overview of the growing population of bilingual students is necessary to understand how some schools are unable to secure resources to address the needs of this population. Bilingual education programs were created nationwide at the federal level in response to the growing number of Spanish-speaking youth and other minority groups in the United States during the sixties. Federal funding was given to local school districts as an act of encouragement to integrate native-language instruction through the Bilingual Education Act of 1967, which later become known as Title VII of the Elementary and Secondary Education Act of 1965 (Ovando, 2003).

The bill was introduced by Senator Ralph Yarborough (TX-D), and was the first “official federal recognition of the needs of students with limited English speaking ability.” The intention of the bill was to “meet the special educational needs of children of limited English-speaking ability by funding local experiments in bilingual schooling...where non-English speakers are

taught in their own languages... until fluent in English” (Davies, 2002, pg. 1407). Enforcement of this legislation was weak, resulting in many state and federal court cases citing a denial of equal education of immigrant children.

An example of a Supreme Court case is *Lau v. Nichols* (1974), where Lau argued that the school district did not provide adequate bilingual instruction in Mandarin. As a result of the court case, school districts in California must make an effort to provide instructional programming to students with an inability to speak and understand English. The results of other similar federal court cases include: Districts are required to provide “appropriate language assistance” services to develop proficiency in English, programs must meet the linguistic, cultural and academic needs of bilingual students while not “segregating them from English-speaking peers”, bilingual-bicultural instructional approaches should be used, to “ensure that students do not fall behind academically while English skills are being developed and districts must pursue and implement a program based on an educational theory recognized as sound or legitimate” (Boals, 2001).

No Child Left Behind further required that public schools be legally obligated to provide services to bilingual students as all students, whether native-English speaking or dual-language, need to meet state and national achievement standards (Chen, 2009). Currently, there are four states required to provide bilingual instruction – New York, Texas, Illinois and New Jersey; while it is voluntary for other states to provide services to ELL students (Faltis, 2011).

Bilingual education program funding comes from a variety of sources including federal and state agencies related to education, human services and labor; however, the funding stream for bilingual programs fluctuates with the state of the economy (Reed, 1996). As a consequence, programs across the nation have seen a decrease in quality and outcomes.

Table 1

Types of Bilingual Education Programs in the United States

	Transitional Bilingual Education	Two-Way Bilingual Immersion	Submersion/Structured English Immersion
Goals	Transition to all-English instruction, understanding of and integration into mainstream American culture	Bilingualism, maintenance/integration into mainstream American culture and appreciation of other culture	Academic English proficiency, integration into mainstream American culture
Grades Served	Primary and elementary grades	K-8, preferably K-12	All grades (during transition to English)
Entry Grades	K, 1, 2	K, 1	Any grade
Length of Student Participation	2-4 years	Usually 6 years, preferably 12 years	Varied: 1-3 years or as needed
Instructional Materials, Texts and Visual Aids	In minority language and English, English materials adapted to students' proficiency levels	In minority language and English, as required by curriculum of study	In English with adaptations; visuals; culturally appropriate
Student Characteristics	Limited or no English, All students have the same minority language	Native English speakers and students with limited or no English	Limited or no English; some programs mix native and non-native English speakers

Adapted from Boyson et al., 1999

When bilingual programs were first introduced, the annual budget allocated, on a federal level, was \$5 million dollars in 1967. Funding increased to \$7.5 million in 1969 and \$35 million in 1974 (Davies, 2002). In President Obama's fiscal year 2013 budget, he allotted \$732 million for English learner education (U.S. Department of Education, 2012). At the state level, the average cost of bilingual programs ranges from half a million to one billion dollars per year depending on each state's budget allocation. For example, in Nevada, the cost is \$722 million per year while in Texas, bilingual programs costs \$1.2 billion per year (Faltis, 2011; Vogel, 2010).

Due to the different means by which states finance bilingual education programs, it is a challenge to estimate total state spending on a state level. One reason for this is that states do not separate funds used for bilingual education and ESL programs. The expenditures labeled "bilingual education" in state databases are the total of all expenditures for ELL students. Despite this, studies have attempted to estimate the costs of bilingual programs. In terms of cost per pupil, TBE programs are the most expensive models relative to other alternative programs. For instance, Carpenter- Huffman and Samulon (1983) reported a range of \$200 to \$700 more per pupil, while Prince and Hubert (1994) stated \$690 more per pupil (Rossell, 2009). While dual language programs, such as TWBI, are the second most costly model. Costs are associated with this model are quality of teaching staff, additional native language resources and supplies, professional development of teachers and the time associated with curriculum development (Garcia & Baker, 2007). The least costly approach is the English-only, or mainstreaming, model as there would be no need for bilingual instructors and other additional fees and services for implementation. The fact that not all states and school districts have the financial resources to provide top-quality bilingual instruction, or hire qualified instructors, must be taken into account. This difference in financial resources impacts the quality of the programs, which in turn

compromises the outcomes – lower academic performance and lower test scores of bilingual students.

Reactions of U.S. School Districts

The number of bilingual children is growing at a faster rate than English-speaking children due to a more diverse nation. Enrollment rates of bilingual children in early education programs (head start, etc.) and the education system in general are higher than native English-speaking children. There is an increasing need for bilingual education in American public schools (Flynn & Hill, 2005; Garcia, Jensen, & Seribner, 2019). States that have not attracted immigrants before are now seeing an influx of minority groups in their region, some school districts are not fully equipped to handle, or meet, the growing needs of bilingual students. In some school districts, bilingual students make up more than half of the student body. In order to meet the needs of these students, school districts are implementing various approaches to address them, such as ESL programs, dual language schools, immersion classes (French, German, etc.), and the like. Flynn and Hill (2005) break down the change in percentage of Pre-K to 5th grade bilingual students in seven mid-west states that have historically drawn few immigrants. With the average increase of about a 90 percent increase in bilingual students in a ten-year period between 1990 and 2000, many of the schools and teachers are unprepared to handle the needs of bilingual students.

Bilingual education programs are imperative; a review of recent research studies has linked ELL students not provided bilingual education with lower academic scores and other negative outcomes, such as lower personal income (see Bialystok, 2008; Lui et al., 1999, Slavin et al., 2010; Reed, 1996). According to a report by Education Week (2011), a nationwide study found that only 12 percent of ELL students scored “at or above proficient” in mathematics in the

4th grade on the 2009 National Assessment of Educational Progress while 42 percent of native-English speaking students scored at or above the standards. This gap was even wider in 8th grade math - only 5 percent of bilingual students were proficient or above compared to their counterparts who scored 35 percent. As for reading scores, only 3 percent of dual language learners met standards in 8th grade reading compared to 34 percent of non-dual language learners. Without these programs in place to intervene, native-English speaking students will continue to outperform ELL students.

Dewaele et al. (2003) examined studies done by Baker (2000, 2001), Cummins (2000) and Skutnabb-Kangas (2000) that analyzed the correlation between proficiency in one's mother tongue and overall personal and educational development. They found that bilingualism has positive effects on children's linguistic and educational development, critical thinking and linguistic proficiency. Additionally, the level of development of the mother tongue can help children develop literacy in English. In short, both languages nurture each other when the educational environments permit children access to both languages. Mother tongue promotion in school helps develop not only the native language but also children's literacy in the majority language. ELL students enrolled in bilingual education programs perform better in school when classes are taught in the native language so they can develop literacy in that language first before moving on to English. Spending instructional time through a minority language in the school does not hurt children's academic development in English. Well-implemented programs can promote literacy and subject matter knowledge in a minority language without any negative effects on children's development in the majority language (see Byram & Leman, 1990; Leman, 1993; Lebrun & Baetens Beardsmore, 1993; Baetens Beardsmore, 1993).

The National Clearinghouse for Bilingual Education reports that 43 states have some type of regulation for the provision of English language instruction for English language learners. These regulations could comprise of mandates for local educational agencies to provide native language-based bilingual education, or that local agencies offer some modified instruction for ELL students. There are currently 200 bilingual education programs in 25 states. Of these 200 programs, most are TBE models. A total of 400 programs in 30 states are modeled after the TWBI program, while three states have mandated English-only, or submersion, models (Osorio-O'Dea, 2001).

One of the many challenges school districts face is the lack of qualified bilingual instructors. According to surveys, fewer than 13 percent of bilingual teachers have sufficient training in areas, such as content comprehension, language integration with content instruction, respect and incorporate first languages, cultural awareness, intersection of culture and language with classroom participation, etc. Not only are teachers feeling the burden to educate bilingual students, school administrators are also overwhelmed with the lower academic performances of bilingual students on standardized tests. In order to lessen this burden, the Mid-Continent Research for Education and Learning (McREL) developed strategies and best approaches to guide teachers, school administrators and parents, in these states. Some of the suggestions include: Make all staff aware of the legal requirements for serving bilingual students, allocation of resources is key to providing adequate instruction, integrate bilingual programs, make connections between students' experiences and the content they are expected to learn, help students transfer existing native language skills to English language acquisition, use bilingual staff to the extent possible and offer ESL classes for parents (Flynn & Hill, 2005). The strategies that McREL offer are great stepping-stones for new educators and administrators to use as

references. Nevertheless, most of the recommendations are very broad and may not be practical because some may not be applicable to all school districts due to the fact that no two bilingual students, or no two school districts, are the same. Schools will need to tailor each tactic to match their own needs and resources.

The English-Only Movement

The English-only movement gained momentum in 1981 when Californian Senator Hayakawa introduced an amendment (the English Language amendment) to the U.S. constitution that would make English the nation's official language. Two years later, he created U.S. English, an organization aiming to stop what it termed "the mindless drift toward a bilingual society" (Tollefson & Tsui, 2004, pg. 85). Between 1981 and 1995, numerous official English bills were introduced in Congress; however, none has been approved as of today. Some supporters of the English-only movement, and advocates not part of the movement, call for an abolition of all bilingual education programs for ELL students. Bilingual students and English-speaking students should be merged in all classrooms with no instruction in any non-English language. One of the main arguments they stress is the fact that many immigrants in the past have "acquired English successfully without any special help" and do not feel that today's immigrant children should be treated any differently (Krashen, 1999, para. 1).

Public attitudes regarding bilingualism in the U.S. were documented by Marshall in 1986 (Dewaele et al., 2003). Bilingual education was perceived as a threat to national identity due to massive immigration from mainly Spanish-speaking countries. Efforts to curtail and eventually dismantle bilingual education come from both governmental and nongovernmental advocates. California, Florida, Colorado and Arizona have passed legislation to make English their official state language (Hornberger, 1990). California then went on to pass Proposition 227, in 1998, to

eliminate most of the bilingual education programs in the state's public schools. As for Arizona, it is without a doubt the "most restrictive anti-bilingual education policy to date" (Tollefson & Tsui, 2004, pg. 73). After the passing of Proposition 203 in 2000, public school districts in the state were required to terminate non-English languages from ELL students while simultaneously mandated to provide foreign language instruction as part of the core K-12 curriculum (Rossell, 2009). Many research studies have been conducted to determine the impact these Propositions have made in terms of test scores of ELL students before and after the change in legislation. Similar to the findings of studies done on bilingual education, the results on Arizona and California are conflicting, as well (see Rolstad, 2010; Ryan, 2002; Garcia & Curry-Rodriguez, 2010; Butler et al., 2010).

Method

Qualitative Meta-Analysis

The purpose of this paper is to conduct a qualitative meta-analysis, also known as meta-synthesis, of the literature on bilingual education programs in the United States. The synthesis aims to determine what the existing pool of research has to say on the effectiveness of bilingual education programs. A meta-analysis is a method used to combine the findings of research studies examining the same issue. Although most meta-analyses are quantitative in nature, there are instances of qualitative meta-analyses, also known as meta-syntheses (Park & Gretzel, 2007). Additionally, rather than focusing on aggregating data into one single unit, the purpose of a meta-synthesis is to find, interpret and transform data based on common patterns, or themes, across related studies to reach, or generate, a new conclusion and interpretation (Zimmer, 2004).

Data Collection

Articles were located and selected through various online databases, such as ERIC, JSTOR, Wiley Online Library, EBSCO Host, Taylor & François Journals and SAGE Premiere, as well as a general Google Scholar search using specific search terms. The search terms used to identify articles included “bilingual education”, “effectiveness of bilingual education”, “transitional bilingual education”, “two-way bilingual immersion”, “English-only instruction” and “bilingual education in the United States.” Research publications prior to 1980 were excluded, as well as studies that did not involve the United States, unless they were comparative studies. The criteria required for included studies are 1) Study should have a comparison of either TBE, TWBI and Submersion bilingual models, 2) Study should assess the effectiveness of any one (or all) of these models and 3) Study should focus on programs in the United States.

The articles came from a variety of different disciplines and fields of study ranging from education to economics. Articles used in this paper are categorized into three categories: meta-analyses or syntheses, longitudinal evaluations and quasi-experiments. Through this procedure the sample included a total of 17 studies. Table 2 details the articles used in this paper. The analysis will draw on prior research including key studies, such as Baker and de Kanter (1981), Baker and Rossell (1996) and Ramirez (2006). Each of these scholars looked at the effectiveness of bilingual education programs in the U.S., and offered different views on the issue. Some of the studies included in this study utilized quantitative tools, such as ANOVA tests, to measure variables examined in their own studies to generate outcomes. Others employed the use of language and math assessment tools including Peabody Picture Vocabulary Test and Woodcock Language Proficiency Battery-Revised, as well as student records to compare pre- and post-scores of participating students to reach their conclusions.

There are other variables that affect the outcome of bilingual education programs not directly addressed in depth in this paper. These factors include instructor quality, parental involvement, program funding, English assessment tools, instructional setting and scope of curriculum, costs of implementation, students' attitudes, classroom and school environment, socioeconomic status of families, age of children, length of time in the U.S., as well as other variables. Due to the inability to access valid data or identify existing research studies on these factors, they will not be explored; but should still be taken into consideration. Although the Ramirez and Shapiro (2006), Thomas and Collier (1997), Baker and de Kanter (1981) and Gerstein (1985) studies did look at a variety of these variables, such as child-level data, home background (family SES, parental educational attainment, etc.), and teacher and classroom qualities, they were the only studies that did so out of the sample.

Data Analysis

Coding of research articles was done by looking for specific word phrases. In the finding and conclusion sections of selected studies, the author's interpretation, or indication, of preference towards one type of bilingual education model were extracted. Phrases that signified a preference towards bilingual education over English-only instruction or one specific bilingual education model over another included: "more effective", "better", "improved English proficiency", "improved academic performance", "favored", "increased" and "more appropriate." A synthesize of these findings will allow a clearer picture of what the existing literature has to say about the effectiveness of bilingual education programs.

Study Limitations

The issue of statistical significance is of concern in this synthesis. Instead of focusing solely on effect sizes and p-scores like a quantitative meta-analysis would, this paper looks at

specific phrases and wording of articles included in the sample. Therefore, an acknowledgement must be made to the fact that not all findings may be statistically significant, or have low significance, and valid. Findings both significant and insignificant were taken into account. The number of original controlled experiments on the effectiveness of bilingual education programs is limited to a couple longitudinal studies, while the rest of the existing literature are reviews, meta-analyses and reports on the subject; thus not all studies provided information on p-scores and significance.

Additionally, the universe of studies on bilingual education is vast. A generic Google Scholar search using any of the search terms results in more than 400,000 articles, which demonstrates the scope and range of research done on the topic. The exclusion of a sizable amount of literature on the subject may result in a preference for one bilingual education model over others skewing conclusions in this paper; although, the selection criteria used to identify studies were not as restrictive and stringent as other meta-analyses. Studies did not have to meet a long list of qualifications to be included. Nevertheless, having regulations in place could perhaps introduce bias in the selection process. What is deemed methodological appropriate, or acceptable, differs across research studies.

Characteristics beyond specific bilingual education programs, such as home language climate, proximity of native language to English, regional and school differences, population size of ethnic group and social class of parents heavily influences a child's chances of access and enrollment, as well as experiences, in bilingual education programs. Chances are interventions and experiments many of the included studies have conducted may not reflect the true realities of what happens in classrooms (Thomas & Collier, 1997). Solely relying on descriptions authors provide in their studies is not representative of how children are actually impacted by a given

program or how their situations might be different had they not participated in that program (Slavin & Cheung, 2005). The use of students in comparison groups may not be similar, or appropriate, if these external factors and characteristics are not controlled for. The included studies examined different groups of students in terms of ethnic, SES, regional and other backgrounds. As a consequence, there is a possibility that research findings that found differences in test scores or academic performance between treatment and control groups may be invalid. Success of, or preference for, a specific bilingual education model in improving academic outcomes of ELL students may be wrongly attributed in this study.

Limitations of Existing Research Studies and Meta-Analyses

One challenge that heavily influences studies on effectiveness of bilingual education programs is the issue of measurement, and its implications need to be addressed. The inconsistencies in measurement of English proficiency within each of the research studies included in this analysis are a threat to validity. States are not required to utilize a uniform assessment tool to identify English proficiency levels of ELL students, and therefore, have the discretion and flexibility to select whichever tool(s) deemed appropriate by the Department of Education. Additionally, assessment tools have been found to inaccurately measure students' English proficiency levels (Gandara & Merino, 1993). Data across states are inconsistent and/or unavailable for certain assessment tools. This concern raises questions regarding the accountability of school districts in reporting progress of students. This issue of inconsistent measurement has also been noted in other topics related to education, such as high school dropout rates, academic achievement outcomes, etc.

Table 2

Summary of Included Studies

Author	Date	Grade	Design	Sample Size	Reported Results
Baker and de Kanter	1981	K-9	Meta-analysis	28 studies	No evidence to show that TBE programs are effective, however, immersion programs showed promising results.
Willing	1985	_____	Meta-analysis	23 studies	Favored bilingual education programs over English-Only instruction
Gersten	1985	K-4	Longitudinal Evaluation	104 participants	Favored immersion over English-Only
Gerstein and Woodward	1995	4-7	Longitudinal Evaluation	228 participants	Favored immersion over TBE and English-Only
Rossell and Baker	1996	K-5	Comprehensive Review	72 studies	Immersion more effective in improving English scores over English-Only
Thomas and Collier	1997	K-12	Longitudinal Controlled Study	700,000 student records	TWBI more effective than TBE and English-Only
Greene	1998	K-6	Meta-analysis	11 studies	Students in bilingual education performed significantly better than students in English-Only instruction
Soifer	2000	2-8	Comprehensive Review	8 official reports	Participation in bilingual education did not increase English proficiency
Senesac	2002	3-8	Longitudinal Study	_____	Bilingual education is better than English-Only
Theobald	2003	9-12	Comparative Study	394 school districts	Enrollment in bilingual education programs did not help increase English proficiency
Lopez and Tashakkori	2004	K-1	Longitudinal Study	66 students	TWBI programs did not improve test scores but did improve academic performance and oral language development of enrolled students

Table 2

Summary of Included Studies (Continued)

Author	Date	Grade	Design	Sample Size	Reported Results
MacSwan and Pray	2005	K-3	Controlled Experiment	89 students	Enrollment in bilingual education programs had no negative effect on English proficiency
Slavin and Cheung	2005	K-6	Synthesis	17 studies	Favored bilingual education over English-Only instruction
Rolstad et al.	2005	K-8	Meta-analysis	17 studies	Favored bilingual education programs over English-Only
Ramirez and Shapiro	2006	K-5	Controlled Experiment	165 participants	No difference between models
Tong et al.	2008	K-2	Quasi-experiment	534 participants	Participation in TBE and SEI showed a significant increase in English proficiency over a period of two years
Slavin et al.	2010	K-4	Longitudinal, Randomized Evaluation	————	TBE participants scored lower on test scores than other bilingual education programs

———— No information provided

The matter of classification of types of bilingual education models may also be of concern. Characteristics of the programs, such as instructional programming, overlap and thus it is hard to distinguish some of the models from one another. For instance, submersion and structured English immersion, as well as TWBI and developmental TBE programs, are very similar in their goals and approach to instruction. These models may be defined differently from study to study, and some studies do not specify which type of bilingual education model they are analyzing, which affects the findings of this paper.

Study Findings

The body of literature on bilingual education and its effectiveness is not consistent because researchers and educators are not in agreement on the benefits of bilingual programs and the methodologies employed to determine causation. Although many scholars have attempted to control for methodological errors, debate still encircles the issue of proper control and comparison groups. For instance, a study done by Gandara and Merino (1993) compared the effectiveness of a range of bilingual education programs – TBE and TWBI, among other less implemented models, in California from 1989 to 1991. Data were collected from district and school policies, program implementation, student academic achievement and language proficiency scores and classroom processes.

They came to the realization that test scores and other factors used to assess effectiveness are not reliable and thus cannot come to a conclusion as to which programs were more appropriate for ELL students.

Nonetheless, one of the most recognized studies on bilingual education is the longitudinal study done by Ramirez & Shapiro (2006) as commissioned by the US Department of Education. The study, which began in 1986, compared two bilingual education programs – English

immersion and early/late-exit transitional bilingual education, on effectiveness through the evaluation of instructional program. They collected data from 70 classrooms from seven districts serving Spanish-speaking ELL students. Four of the school districts employed an immersion and early-exit TBE program. The last remaining districts had a late-exit transitional bilingual education model. Classrooms were audio-taped during observations and coded to evaluate programs. Ramirez and Shapiro found that there were no differences in instructional programming; however, students in TBE programs, with more Spanish instruction, were able to converse in English with peers and teachers more often than students in immersion programs. ELL students in all models were found to improve math, English language and reading scores more rapidly than students in mainstream classes.

A meta-analysis done by Willig (1985) comparing results of selected studies, including Dulay and Burt (1978) and Baker and de Kanter (1981) on the efficacy of bilingual education against traditional review of the same literature. Willig controlled for methodological inadequacies by recoding variables from the original, selected studies and correcting for bias in effect sizes. Using the same criteria Baker and de Kanter employed to select their study sample, Willig applied an additional regulation – studies had to focus on K-12 students in U.S. schools. As a consequence, the 28 studies in Baker and de Kanter’s sample were reduced to 23 in Willig’s study. The results of the selected studies reinforced the benefits of bilingual education as it “improved and did not impede achievement in schools” (pg. 271). Willig’s findings were much more supportive of bilingual education than Baker and de Kanter’s, and concluded that bilingual education programs produced “positive effects”, however, these differences were small to moderate “favoring bilingual education for tests of reading, language skills, mathematics, and total achievement” when administered in English and for “reading, language, mathematics,

writing, social studies, listening comprehension, and attitudes toward school or self' when tests were administered in students' native languages (pg 277; 297).

Rolstad et al. (2005) conducted a meta-analysis using 17 prior research studies on bilingual program effectiveness. Studies include Baker and de Kanter (1981), Rossell and Baker (1996), Krashen (1996), Green (1998), and many more. The authors recoded variables and recalculated effect size from the prior studies. Their findings are similar to Willig's and MacSwan and Pray's in that bilingual education is "consistently superior to all-English approaches", as well as beneficial to increasing academic achievement. The authors found that TWBI programs were the best models.

In their study comparing English acquisition of students enrolled in bilingual education, primarily TBE, and students in all-English programs, MacSwan & Pray (2005) sought to answer two questions: the length of time needed for students in bilingual programs to become proficient in English and whether younger children become proficient faster than older children. It is important to note that ELL students in all-English classrooms were waived out of bilingual education programs by their parents. Data were collected in an urban elementary school district in Arizona. The district assessed language proficiency in their bilingual programs utilizing the Bilingual Syntax Measure (BSM) upon enrollment and every two years after enrollment. The sample comprised of 89 bilingual students whose native language is Spanish. To determine how long it took bilingual students to acquire proficient English, they used scores, ranging from 1 (No English) to 6 (Proficient English) from BSM assessments, meanwhile to determine if age mattered, MacSwan and Pray conducted a one-way ANOVA to gauge the link between the grade when the first BSM was given and the rate of English acquisition. They concluded that students in bilingual programs learned English quickly. After only 5 years more than 92 percent of the

students attained native-level proficiency in English, suggesting that participation in bilingual programs do not have a negative impact on the acquisition of English. As for the age question, the authors found that older children do not learn English at a slower rate than younger children as previously assumed.

Senesac's (2002) findings from her longitudinal study on the effectiveness of bilingual programs at the Inter-American Magnet School in Chicago support the proposed advantages stated from the studies above. Senesac stated that children enrolled in bilingual education programs performed higher in English reading and writing, math, science and social studies tests compared to students in English-only classrooms. Data from classroom observations, staff questionnaires, interviews, student focus groups and test scores on the Illinois Standards Achievement Test (ISAT) were collected for a period of 10 years and analyzed.

Research demonstrates that bilingual education programs may be more appropriate for ELL students in improving English skills. Slavin and Cheung (2005) conducted a synthesis of existing research on bilingual education programs. The authors only accepted studies that met the following criteria: a comparison of children taught reading in bilingual classes to those taught in English immersion classes, either a random assignment to conditions, or pretesting or other matching criteria to establish the degree of comparability of bilingual and immersion groups before treatments began, ELL students in only elementary or secondary schools in English-speaking countries, the dependent variables are quantitative measures of English-reading performance (standardized tests and reading inventories) and treatment lasted at least one academic year. Their sample size comprised of 17 studies. Most of the research they examined favored bilingual education programs over English-only instruction. In determining which type of bilingual education program is more suitable for ELL students, studies prefer TWBI to TBE

programs for ELL students. In their five year study of reading and language outcomes of ELL students enrolled in TBE and another bilingual education program, structured English immersion (SEI) programs, Slavin et al. (2010) found that ELL students in the TBE program scored lower on English reading and writing tests than ELL students in other bilingual education programs up until fourth grade. After TBE students transitioned to English, however, their reading test scores become comparable to ELL students in other bilingual programs.

Consensus from the body of literature that approves of bilingual education appears to lean more towards the two-way immersion model in terms of effectiveness (Thomas & Collier, 1997). Garcia & Baker (2007) found that all students enrolled in TWBI – both ELL and non-ELL students, outperformed non-TWBI participating peers in their first, and second, language in 5th grade (see Lindholm, 1988a, 1988b, 1991, 1996; Lindholm and Aclan, 1991, 1993; Lindholm and Fairchild, 1988; Freeman, 1996, 1998; Mahrer and Christian, 1993). Cummings (1979) argued that it takes at least 5 years for ELL students to develop conversational fluency and catch up with native speakers' norms; thus TBE programs, with a limit of 3 years, would not allow enough time for students to gain the English skills needed to participate and achieve as equals in the academic mainstream. A study done by Thomas & Collier (1997, 2004), also a federally funded study, looked at 700,000 student records from 1982-1996 of ELL students in five large urban and rural school districts enrolled in TWBI and TBE programs to evaluate student performance. Students in both programs performed on an equal level; however, by 11th grade, students in TWBI programs outperformed those in TBE programs and ELL students in mainstream classrooms. Most children enrolled in TBE programs are not on par, in terms of English fluency with English-speaking student by the time they complete the program. The

authors stressed that TWBI programs are the only programs for ELL students that “fully closes the [achievement] gap (2004, pg. 1).

Howard and Christian (2004) studied the Key School in Virginia that implemented TWBI programs, and found that both native Spanish (and native English speakers) were progressing well and comparable to native speakers in regular mainstream classrooms (pg. 21). Lopez and Tashakkori (2004) compared Scholastic Reading Inventory scores of at-risk Kindergarten students in a TWBI program with a comparison group of students in a mainstream classroom in a public elementary school in the South. The results indicated that there were no differences found between the two groups by the end of first grade. Nevertheless, students enrolled in the bilingual education program did improve their oral language development and academic performance after the first year. The authors proposed that TWBI programs should “devote more time to sight word recognition and vocabulary development” (pg. 334).

There are few studies directed at the effectiveness of immersion programs in the United States. Gersten (1985) conducted a longitudinal study examining an immersion program in the U.S from 1980 to 1982. A quasi-experimental design was employed to compare groups of low-income Asian students in primary school, and measured academic through assessment tests. Gersten found that the immersion program was effective in improving English scores for enrolled students in comparison to non-enrolled ELL students. Another longitudinal study by Gersten and Woodward (1995) evaluated two bilingual education programs – TBE and immersion, in 10 schools based on a measurement of achievement as assessed by the Iowa Tests of Basic Skills in grades 4 through 7. There were a total of 111 students in the immersion sample and 117 in the TBE sample. Their findings indicated a preference towards the immersion model.

Students enrolled in the immersion program performed better in all areas assessed compared to students in TBE programs. This difference, though, dissipated after the fourth grade.

On the other hand, critics are wary of the proposed benefits bilingual programs claim to bestow on ELL students, and argue that costs is one of the biggest factors when deciding whether or not to implement a bilingual program. Research studies focusing on the cons of these programs has debunked the cost-effectiveness of these programs, and concludes that they do not yield an impressive high-rate of return after reading test scores of bilingual students did not show improvement (Faltis, 2011). This illustration that students enrolled in bilingual programs exit and graduate without becoming proficient in English adds fuel to the English-only movement. Baker and de Kanter (1981) reviewed 28 studies, published between 1968 and 1980, supporting TBE programs and refuted the positive effects of the programs. They compared TBE programs to submersion, ESL and structured immersion. The strict set of criteria the authors employed to select ‘methodologically sound’ studies include true experiments (random assignment of treatment and comparison groups), inclusion of other variables including age, SES and ethnicity, and the use of appropriate statistical tests used to demonstrate program effects. The outcome of Baker and de Kanter’s findings was mixed. The conclusions of their selected studies were inconsistent; therefore, they reasoned that not enough evidence was present to showcase the effectiveness of TBE programs. Schools should decide which model to implement accordingly to local factors, such as student population, etc. Nevertheless, the authors took a more favorable stance towards structured immersion than the other programs they analyzed.

Rossell and Baker (1996) analyzed earlier studies, such as Baker and de Kanter (1981, 1983a, 1983b), along with 70 other “methodologically acceptable studies” on the topic of bilingual education to determine its effectiveness (pg. 19). Their sample selection criteria were

vastly similar to the list used by Baker and de Kanter (1981). Studies were required to be true experiments with random assignment of treatment and comparison groups and included comparison groups of ELL students of the same ethnicity groups and similar language backgrounds. The primary bilingual education program they examined was structured immersion. Similar to Baker and de Kanter's findings, Rossell and Baker's results indicated the lack of uniformity amongst studies to support the claim that bilingual education is the best approach to improving English language achievement of non-English speaking students. Still, the authors made positive remarks about the promise of structured immersion programs. In a comparison of a standardized achievement test of language and reading, students enrolled in bilingual education, specifically TBE, performed lower than non-English speaking students in mainstream classrooms. The same trend can be seen in math scores, as well. Other studies (see Engle, 1975; Holland, 1986; and Rotberg, 1982) share similar results.

Examining official reports that recipients of Title VII bilingual education programs filed with the U.S. Department of Education, Sofier (2000) hoped to answer three questions: 1) Did grant recipients meet state performance-based objectives, 2) Were those objectives useful and relevant and 3) Did program activities help English Learners? Grant recipients are required to submit report cards to the Department of Education to ensure all regulations are followed. He concluded that some programs "did not improve English proficiency for more than half of their students" and almost all programs failed to "meet major program objectives, submitted immeasurable objectives, or contained no out-come based objectives" (pg. 8).

Many individuals are quick to use this division in opinion surrounding the issue of bilingual education and its effectiveness to dismiss the credibility and cease the use of bilingual programs in school districts; however, Willig points out a rather fascinating declaration – "the

overwhelming message derived from these data suggests that most research conclusions regarding the effectiveness of bilingual education reflect weaknesses of the research itself rather than effects of the actual programs” (pg. 297). Cziko (1992) examined several key bilingual education evaluations conducted on the effectiveness of bilingual programs. The major studies that Cziko looked at included Baker and de Kanter (1981, 1983) and Willig (1985). Evaluations conducted by the American Institutes for Research in 1978, the U.S. General Accounting Office in 1987, and Aguirre International in 1990 were also analyzed. Instead of looking for common threads tying these studies together, or even a synthesis of the literature, the author focused on the diversity of the methodology employed, analysis and interpretation of findings. Cziko agreed that these research studies “cannot answer the question of whether bilingual education necessarily or even probably works” (pg. 10).

From the synthesis of the selected studies in this paper, the majority of the literature favors the utilization of bilingual education programs versus English-only instruction, or mainstream classrooms. Of the 17 studies included, 13 favored bilingual education over mainstream English-Only instruction. In terms of which bilingual education model is more effective at improving English proficiency amongst ELL students, the analysis points to immersion/submersion and two-way bilingual immersion programs over TBE models. Of the 13 research studies selected that favored bilingual education programs over English-Only instruction, 5 studies found that ELL students in TWBI programs acquired English more rapidly than ELL students in other programs. A total of 6 research articles found immersion (submersion) programs to be more effective than English-only and TBE. As for TBE programs, 1 study supported the model over English-Only and immersion programs. Table 3 summarizes the outcome of the synthesis.

Recommendations

Based on the literature on bilingual education, there are many issues both with measurement and evaluation of bilingual education programs and consensus regarding the effectiveness of bilingual education programs. One recommendation would be a creation of a uniform assessment tool to measure English proficiency for all school districts to utilize across states. The problem may not reside in the quality, or effectiveness, of bilingual education programs but in the assessment of effectiveness; thus the use of a valid and standard assessment tool would result in easier data collection and analysis of test scores. In addition, statistics should be separated for each type of bilingual education program instead of clustering all ELL students into one category as this makes it difficult to assess progress of students in each type of bilingual education programs. Lam (1992) studied the quality of evaluation studies that have been done on the effects of bilingual education. His results showed that most studies were “methodologically acceptable” but offered recommendations for improvement, such as the development of sound and practical guidelines and materials (which results in proper technical assistance), competent program evaluators, informed local administration, and appropriate state and federal policies.

Additionally, Hugo Beardsmore (as cited in DeWaele et al., 2003) spent many years trying to determine the effects of bilingual education and the optimal conditions for its implementation.

Table 3
Outcome of Synthesis

Author	Preferred Model	Measurement Tool(s)	Statistical Significance (p-value)
Baker and de Kanter	Immersion	Effect Size; Test of Heterogeneity	Not Significant
Gersten	Immersion	Comprehensive Test of Basic Skills; Language Assessment Scale	p < .05
Willing	Bilingual education ¹	Hedge's Correction Factor; Coding; ANOVA	p > .878
Gerstein and Woodward	Immersion	Iowa Tests of Basic Skills; Questionnaires	p < .001
Rossell and Baker	Immersion	Effect Size; Test of Heterogeneity	————
Thomas and Collier	TWBI	Effect Size; Test of Heterogeneity	————
Greene	Bilingual education*	Effect Size; Test of Heterogeneity	p < .01
Soifer	Participation in bilingual education did not increase English proficiency	Test of Heterogeneity; Normal Curve Equivalents	————
Senesac	TWBI	Observations; Questionnaire; Interviews; School Report Card Tool	————
Lopez and Tashakkori	TWBI ²	Scholastic Reading Inventory	Not Significant

¹ Found no differences between different models. Favored bilingual education overall.

² Students showed an increase in academic performance and oral language development, not improved test scores, though.

Table 3
Outcome of Synthesis (Continued)

Author	Preferred Model	Measurement Tool	Statistical Significance (p-value)
MacSwan and Pray	Enrollment in bilingual education programs had no negative effect on English proficiency	ANOVA	p < .001
Slavin and Cheung	TWBI	Effect Size; Test of Heterogeneity	p < .05
Rolstad et al.	TWBI	Effect Size; Test of Heterogeneity; Coding	_____
Ramirez	No difference in models	Texas Assessment Academic Skills; Developmental Reading Assessment; Curriculum-based Measurement	Not Significant
Tong et al.	TBE and Immersion ³	Peabody Picture Vocabulary Test, Woodcock Language Proficiency Battery-Revised	p < .05
Slavin et al.	Immersion*	Peabody Picture Vocabulary Test; Test de Vocabulario en Imagenese Peabody; Woodcock Language Proficiency Batter Letter-World Identification and World Attack Scales	p < .001
Theobald	Bilingual education enrollment did not help increase English proficiency	Academic Excellence Indicator System; Effect Size	Not Significant

_____ No information provided

* The classification of the bilingual education program used in this study cannot be determined, thus it was reclassified.

³ Students enrolled in both programs showed a significant increase in English proficiency over a period of two years.

There are many variables that should be taken into account when evaluating the effectiveness of a bilingual education program: Linguistic knowledge child bring to school, relative status of two languages involved, socioeconomic background of parents, nature of bilingual program applied, sequencing of instruction, makeup of group undergoing bilingual instruction, expectations and attitudes of teachers, extent of parental involvement and understanding of bilingual process, attitudes and motivation of learners and pressures of outside environment (DeWaele et al., 2003).

The body of literature is unclear about the proposed benefits of TBE programs; yet most states endorse the continuation of providing bilingual education, therefore a statewide transition to dual language programs, such as TWBI, and complete elimination of TBE programs would be an alternative. For instance, the consensus regarding the effectiveness of TWBI programs and student academic achievement is not as polarized as TBE, or immersion, programs. However, to ensure maximum quality of dual language programs, states should re-evaluate their current system and modify it accordingly to ensure top-quality, effective and responsive programs. Although TWBI programs are the second most costly bilingual education model, they have been shown to be cost effective, and yield considerable high rates of return, in the following aspects: enrolled ELL students are less likely to be placed in special education programs as opposed to ELL students who enroll in English-only programs, students are less likely to drop out of high school and dual-language instruction helps to “nurture and support the continual development of valuable bilingual/bicultural skills that are needed in our global economy” (Cerdeña & Hernandez, 2006). In addition to well-implemented TWBI programs, states should consider assessing and enrolling ELL students at an earlier. Instead of screening and providing bilingual education programs to children in K-12th grade, school districts may extend these services to children in

Pre-K. Bilingual education in preschool has been found to be beneficial to children, families and communities (Garcia & Baker, 2007).

Allowing parents of ELL students to decide which program best fit their child's needs in all school districts is a recommendation. One down side to this possibility is that some parents may not fully understand the different programs available for their children nor the processes and regulations their children must follow (Rossell, 2009). Immigrant parents may not have the social capital and language skills needed to understand the American school system; thus it is unlikely they will fully grasp the complexities of bilingual education programs. Schools would need to develop workshops to increase parents' knowledge of the public school system and bilingual education programs, as well as improve parental involvement in students' education. Also, one particular group's voice on the issue has largely been ignored – that of ELL students themselves. Little research has paid attention to their views on bilingual education and if they feel these programs are empowering or limiting, or whether they want the option of bilingual education programs at all (Akkari, 1998).

Regardless of the type of bilingual program, a bilingual education program should parallel with the Teachers of English to Speakers of Other Language (TESOL) standards and must address all federal and state accountability requirements for ELL's English language development and academic achievement in English. The last point gets to the fact that all programs must be aligned with all state content-area and English language proficiency standards. Additionally, the program should be well defined in terms of its goals, purpose and the target population it wishes to serve (Garcia & Baker, 2007).

Discussion

The Policy Problems

This paper attempts to synthesis the findings of the literature to gauge the sentiments towards certain types of bilingual education programs and their effectiveness in hopes of determining the best method to closing the academic gap and preserving native languages in the U.S. Research on bilingual education in the United States paints a semi-blurry picture to say the very least. Consensus amongst researchers, educators and policy makers regarding the usefulness of bilingual education programs is nonexistent, and the body of literature is contradictory and conflicting. Most of the selected studies are supportive of bilingual education programs to help ELL students acquire English literacy; yet is it not possible to firmly conclude which approach is the answer based on the results of this study.

Improvement in math and reading scores of ELL students in bilingual education mentioned in the analysis is questionable and lack consistent statistical data and evidence. Some of the selected studies found an increase in test scores and academic performance while others found no improvement. For instance, the findings from Willig (1985), Rolstad et al. (2005) and Senesac (2002) stated some improvement in test scores of students in bilingual education programs; while Slavin et al. (2010), Rossell and Ross (1986) and Baker and de Kanter (1981) found enrollment in bilingual education to have little to no impact on test scores and academic performance. There is no substantial indication that enrollment in bilingual education negatively, or positively, impacts math and reading performances of ELL students. More thorough investigation on how participation in bilingual education programs influence test scores and academic achievement of ELL students, as well as the short and long-term effects of bilingual education on other student outcomes, would help provide policy makers with improved tools to address the disparities in academic achievement between minority and native-English students.

Nonetheless, amongst the selected studies in favor of bilingual education, a portion prefers TWBI and immersion/submersion models to TBE. The increasing popularity of dual-language programs, mainly TWBI, may help resolve the issue of native language retainment and preservation. Immigrant and minority-based organizations and associations that advocate the preservation of specific native languages can utilize dual-language programs as part of their strategy to help minority youth retain their culture and heritage. Dual-language programs help establish levels of cultural, and linguistic, equality leading to a greater respect for diversity (Garcia & Baker 2007). TWBI programs also ensure that all students develop oral and written expertise in both native and English languages; however, the key to success is implementation of the program. According to Akkari (1998), there are various factors that influence the possibility of implementing this type of program. Such factors include: Size of the minority group in a particular school or region, the local availability of financial resources and the “prestige of the foreign language” (pg. 111). Various schools in California have experimented with this type of program and have encountered positive feedback and support of researchers in the state. TWBI programs are on the rise in other states, as well.

Still, advocates of English-only instruction are gaining support and attention through the efforts of the English-Only movement and other anti-immigrant policies. In addition, the push for more submersion and immersion models in school districts leaves the future of bilingual education in American public school systems unknown. There awaits many actions that must be taken to solidify the argument for a much-needed bilingual education system that is proven to be effective (both in the short and long-run), cost-efficient and overall worthwhile of the government’s resources.

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