Current Research Findings on Two-Way Bilingual Immersion Education

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Two-Way Bilingual Immersion (TWBI) programs have expanded from just one program in 1962 to possibly as many as 2000 or more programs in public schools across the country. Why have they become so popular? Because research shows they are effective for all students. TWBI programs provide all students with the opportunity to develop the bi/multi-lingual, cognitive-academic, and socio-cultural competencies that will enable them to thrive in the 21st century. This article briefly summarizes the most current research findings in TWBI programs.

WHAT IS Two-Way Bilingual Immersion Education?

In Two-Way Bilingual Immersion (TWBI) programs, instruction occurs through two languages, where the target, or non-English, language is used for a significant portion (at least 50%) of the students' instructional day. Instruction is provided in English and a target (non-English) language beginning in kindergarten and continuing until the end of elementary school and, in some cases, follows a pathway into

> **Definition** TWBI programs
> - Instruction through 2 languages; partner language used for a significant portion (50%-90%) of day
> - During instruction - only one language is used
> - Approximately equal numbers of native speakers of each language
> - Students integrated for all/most instruction

middle and high school. These programs aim for bilingual and biliteracy proficiencies for all students, in addition to high levels of academic achievement and socio-cultural competencies. The two major models of TWBI are:

- **90/10** – the target language is used for 90% of the instructional day in grades K-1, after which more English is added at each grade level until grades 4-5, when the proportion is about 50/50;
- **50/50** – each language (English and target language) is used for approximately 50% of the instructional day in each grade of elementary school.

WHAT is the Research Evidence for Two-Way Bilingual Immersion Education?

This brief summary includes a compilation of 30-40 years of research findings on student outcomes in two-way bilingual immersion/dual language programs, both English learners (EL) and native English speakers (NES), from over 200 public schools across the country. It is important to point out that newer research, some of which includes larger-scale and random assignment, is consistent with the well-documented older research showing that *elementary and secondary TWBI students achieve at levels that are comparable to or higher than those of their peers in English mainstream programs*[1].

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[1] Collier & Thomas, 2017; Genesee, Lindholm-Leary, Saunders & Christian, 2006; Genesee & Lindholm-Leary, 2013; Howard, Lindholm-Leary, Rogers, et al., 2018; Lindholm-Leary, 2016a,b; 2018, 2019; Lindholm-Leary & Borsato, 2006; Lindholm-Leary & Genesee, 2010; Lindholm-Leary & Howard, 2008; National Academies of Sciences, Engineering, & Medicine, 2017; Steele et al., 2017; Steele et al., 2018; Thompson, 2015; Umansky & Reardon, 2014; Valentino & Reardon, 2015; Watzinger-Tharp et al., 2016; Watzinger-Tharp et al., 2018.

1. Language Proficiency and Bilingualism

TWBI students' language proficiency in English and the target language have been studied in all four domains – reading, writing, listening, and/or speaking, though most of the research focuses on the English language proficiency of EL students.

> According to research in foreign language and on ELs, it takes students 5-7 years to acquire full academic proficiency in a second language.

English Proficiency – Over three decades of research indicates that EL students in TWBI programs become orally proficient in English and achieve at or above grade level norms in English reading and writing by Grades 5-7, if not sooner. Despite less instruction in English, most ELs in TWBI programs acquire English proficiency skills as well and as quickly as their EL peers in mainstream programs, though there may be an initial lag of 3-5 years. NES students in TWBI acquire the same or higher levels of English competence as their peers in mainstream programs.[2]

Target Language and Bilingual Proficiency – This topic has received little research attention. The available evidence shows that TWBI students attain relatively high levels of proficiency in 90/10 programs, though (former) EL students demonstrate higher writing and overall proficiency skills than NES students. Studies of 50/50 programs indicate that students from different target language programs (e.g., Spanish, French, Mandarin) attain Intermediate levels of proficiency on foreign language tests[3]. Secondary students report that their target language skills are highly functional and that they have the necessary skills to participate in a variety of classroom and social exchanges, though some studies also show that TWBI students, particularly NES, in 50/50 programs may struggle with fluency in the target language[4].

A significant body of research demonstrates that ELs who receive literacy instruction through their primary language develop higher levels of English proficiency than ELs in mainstream English programs[5]. Similarly, new research shows that current and former EL and IFEP (Initially Fluent English Proficient) students demonstrate both English and Spanish academic language skills contribute to English literacy[6].

2. Academic Achievement:

Considerable research has examined the reading, math, and other achievement of TWBI students. This research base has consistently demonstrated over three decades that students in TWBI programs achieve at or above the performance of their peers who are not in TWBI programs, after a possible 3-5 year lag[7].

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[2] For reviews, see Collier & Thomas, 2017; Genesee & Lindholm-Leary, 2013; Howard et al., 2018; Lindholm-Leary, 2018, 2019; Lindholm-Leary & Borsato, 2006; Lindholm-Leary & Genesee, 2010; Lindholm-Leary & Howard, 2008; National Academies, 2017; Umansky & Reardon, 2014.

[3] Padilla, Fan, Xu, & Silva, 2013; Watzinger-Tharp, Rubio & Tharp, 2018.

[4] Potowski, 2007.

[5] For reviews, see Howard et al., 2018; Lindholm-Leary, 2018, 2019; Lindholm-Leary & Genesee, 2010; Lindholm-Leary & Howard, 2008; National Academies, 2017.

[6] Galloway, Uccelli, Aguilar & Barr, 2020; Lindholm-Leary, 2018, 2019; Lindholm-Leary & Hernandez, 2019; National Academies, 2017.

[7] For reviews, see Collier & Thomas, 2017; Genesee & Lindholm-Leary, 2013; Genesee et al., 2006; Lindholm-Leary, 2001, 2014, 2016a; Lindholm-Leary & Block, 2010; Lindholm-Leary & Genesee, 2010; Lindholm-Leary & Howard, 2008; Steele et al., 2016; Steele et al., 2018; Watzinger-Tharp et al., 2016; Watzinger-Tharp et al., 2018.

While most of this research looks at reading achievement, a few studies have examined math, science, and/or social studies achievement; the same results hold whether one examines outcomes in reading or other content areas. In math, some studies show that TWBI students make greater gains than non-TWBI students and that TWBI students who are taught math through the target language still score at the same level as their non-TWBI peers on math assessments in English[8]. While reading achievement in the target language is rarely included in research, it is an important predictor of English reading achievement[9]. In addition, studies of cognitive functioning also show that TWBI children score higher than their peers in mainstream programs[10]. Further, large-scale studies (district- or state-wide) and randomized studies are consistent with smaller-scale studies in showing that TWBI students achieve at levels that are similar to or higher than their peers in English mainstream[11]. Finally, research indicates that TWBI students of different backgrounds (economic, ethnic, language, special education, parent education, attend segregated schools) score at similar or higher levels compared to their diverse peers [12]. Thus, there is no research to justify excluding certain groups of students from participating in a TWBI program.

Research at the secondary level shows that compared to their peers in English mainstream programs, TWBI middle and high school students are: 1) as or more likely to be enrolled in higher level math courses; 2) as or more likely to pass the high school exit exam; 3) less likely to drop out of school; and 4) more likely to close the achievement gap with NES peers at least by the end of high school[13].

3. Social-Emotional and Cultural Competencies:

Research indicates that TWBI students are more likely to be bilingual and to communicate with their family than non-TWBI students and they demonstrate positive attitudes: toward others who are culturally and linguistically different from them; toward bilingualism; toward the TWBI program. They also perceive cognitive, social and cultural advantages of bilingualism[14].

4. Program Model Comparisons: 90:10 vs. 50:50

Several studies have compared the outcomes of students in 90/10 and 50/50 TWBI programs[15]. Overall, in both program models, results show that TWBI students become bilingual, biliterate, achieve at or above grade level, and develop positive attitudes. Major comparative findings are:
- In English language development, there is no long-term program effect; both NES and EL students in both 50/50 and 90/10 programs demonstrated high levels of <u>English </u>proficiency.

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[8] Watzinger-Tharp, Swenson, & Mayne, 2016.
[9] Lindholm-Leary, 2019; National Academies, 2017.
[10] Esposito & Baker-Ward, 2013;
[11] Steele et al., 2016; Steele et al., 2018; Watzinger-Tharp, Rubio & Tharp, 2018; Watzinger-Tharp et al., 2016.
[12] For reviews, see Esposito & Baker-Ward, 2013; Genesee et al., 2006; Genesee & Lindholm-Leary, 2013; Lindholm-Leary, 2001, 2014, 2016a, b, 2018, 2019; Lindholm-Leary & Block, 2010; Lindholm-Leary & Borsato, 2005; Lindholm-Leary & Ferrante, 2005; Lindholm-Leary & Genesee, 2010; Lindholm-Leary & Hernández, 2011, 2018; National Academies, 2017; Paradis, Genesee, Crago, & Leonard, 2010; Steele et al., 2018.
[13] Lindholm-Leary & Genesee, 2010, Lindholm-Leary, 2016a; Lindholm-Leary & Hernández, 2011.
[14] Block, 2014; Lindholm-Leary, 2016b.
[15] Collier & Thomas, 2017; Lindholm-Leary (2001, 2016a,b, 2018, 2019); Lindholm-Leary & Hernandez, 2011, 2018.

- While the paths to English proficiency and English reading and math achievement vary by program model, there are some short-term advantages for 50/50 programs (consistent with the 3-5 years lag mentioned previously), but these differences disappear by the upper elementary grades and performance remains comparable through the secondary grades.
- In Spanish, by the end of elementary school and into middle school, there is clearly an advantage for 90/10 programs, with greater Spanish oral language and literacy attainment by both NES and previously EL students in these programs.
- With respect to bilingual proficiency, students in 90/10 programs develop higher levels of bilingual proficiency than students in 50/50 programs.

> - More English in the instructional day does NOT lead to higher proficiency in English.
> - More target language in the instructional day (90:10 vs. 50:50) leads to higher levels of target language and bilingual proficiency.

6. Program or Instructional Factors [16]

- Programs that are well implemented demonstrate more positive student outcomes, especially in the long term.
- There is evidence of transfer of content knowledge from one language to another.
- Promoting high proficiency and/or academic achievement necessitates:
  - systematic instruction of enriched cognitive-academic language
  - counterbalancing form-focused and content-based instruction[17]
  - providing both structured and unstructured opportunities for oral production;
  - establishing and enforcing strong language policy in the classroom encouraging use of instructional language and discouraging use of non-instructional language;
  - grouping strategies that encourage student interactions and group work.

> Program QUALITY Matters
> - Well implemented programs show more positive student outcomes
> - EL students who participate for 4-7 years close achievement gap
> - Students who receive strong academic language and support achieve at higher levels
> - ELs receiving schooling in L1 K-5 show more schooling success

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[16] Genesee et al., 2006; Howard et al., 2018; Li, Steele, Slater, & Miller, 2016; National Academies, 2017.

[17] Tedick & Lyster, 2019.

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