Benefits of Dual Immersion Programs

Paula Valencia

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Dr. Chad Treado

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In the United States, the population of individuals speaking a language other than English has been steadily increasing, reflecting the linguistic diversity shaping the education field in the country. Nearly 68 million people spoke a language other than English at home (U.S. Census Bureau, 2022). In 2019, 62% of U.S. homes spoke Spanish, making the largest minority group compared to Chinese, Tagalog, Vietnamese, and Arabic (U.S. Census Bureau, 2022). This linguistic diversity impacted educational attainment. About 33% of the Spanish-speaking population did not graduate from school, while Tagalog and Chinese speakers with bachelor's degrees were not statistically different from each other, ranking at around 50% (U.S. Census Bureau, 2022). To target this critical need for increasing the number of bilingual students to achieve a higher level of education, it is necessary to expand educational programs aiming to provide resources and support for academic success.

One effective educational program that has shown potential in supporting bilingual students is the implementation of dual immersion programs (DL), or Two-Way Dual Language (TWD). Such programs have been showing positive outcomes. For instance, Li et al. (2016) mentioned,

Alongside the findings that dual language immersion programs are associated with higher student outcomes, it is the research from cognitive psychology that finds that bilingualism is associated with cognitive advantages, such as improved working memory, superior executive control, and better selective attention. (p. 32)

Therefore, the purpose of this research is to explore the academic benefits offered by DL programs. To understand these benefits, it is important to take a deep look at the following

areas including the origin and implementation of the program, teachers' and students'

perspectives, the impact of motivation, connection with the different subjects, and its impact

on the different cultures.

Origin and Implementation

As the number of dual language immersion programs grows, educators and

policymakers are looking for fidelity to ensure these programs contribute positively to student

achievement and close achievement gaps, which are two of the biggest goals of DL programs.

As mentioned by Murphy (2016) during her research,

> DL students learn how to work collaboratively at cognitively demanding tasks in two
>
> different languages, and, in doing so, they not only help each other to improve their
>
> command of both but also learn valuable teamwork skills and augment their learning
>
> efficacy. (p. 52)

 Hence, the need to enhance student achievement for both English learners and native English

speakers has fueled the interest in adopting these programs. To better understand these

programs, it is important to take a look back at the Bilingual Education Act (BEA) introduced

in 1967 to support the rights of minority language speakers by providing funds for them to

learn in their native language as they transitioned to English in the classroom. Years later,

Polanco and Luft (2018) mentioned, "It was not until 1994 when the Federal government

shifted funding for Dual Language programs through a grant program under the

reauthorization of the Elementary and Secondary Education Act" (p. 425). Consequently,

these historical developments underscore the importance of the fidelity of the programs and

the evolving commitment to supporting DL education and its potential benefits.

Polanco and Luft (2018) continued, stating that in 2015, President Obama's Every Student Succeeds Act aimed to provide high-quality education to bilingual students without specific guidance on bilingual instruction implementation. As a result, various programs offer bilingual education to maintain students' native language while they learn English, aligning with the goal of federal education policy. Therefore, to comply with this policy, programs must focus on two important aspects, Li et al. (2016) stated, "Two important aspects of fidelity of implementation of education programs are *adherence* and *quality of delivery"* (p. 33).

Regarding adherence, the programs should comply with consistency with program goals, such as maintaining the integrity of the DL approach, and curriculum implementation in which teachers follow the given curriculum while considering that it could be adapted to better meet their students' needs.

On the other hand, quality of delivery was described as the various ways the program used to deliver the content, using the techniques, processes, and methods prescribed. Therefore, programs should consider consistency in the use of sheltered instruction practices across practice language. This approach proved that well-trained teachers can achieve their goals more effectively, benefiting all students. Li et al. (2016) said, "We found strong implementation of teacher practices consistent with sheltered instruction and strong adherence by teacher to partner language use as prescribed by the district's guidelines" (p. 31). Once these two aspects have been addressed, other people in the field like Murphy (2016) recommended, the next steps to develop a DL program: choosing a target language and program type, equipping the classroom, class organization, orientation for parents and staff, teacher selection and programming, and promoting academic achievement.

The first step to choosing a target language and program type is to study the community's demographics and needs to consider the target language (TL) and type of the program. "The models for allocation that currently predominate in U.S schools are the 90/10 model, in which English is spoken 10% of the time and the TL 90% of the time, and the 50/50 model, which strives for balance in the use of English and the TL" (Murphy, 2016, p. 47). Next, the classroom should be well equipped, including technology and instructional support materials that are age- appropriate and in both languages. The class organization should follow two primary models: homogenous for literacy and mixed subject groups. Then, parents and staff should be aware of the benefits and the structure of the DL program as they are stakeholders, and their opinions matter. Regarding teacher selection, there should be at least two teachers per grade level: one certified in bilingual education and one in English as a Second Language (ESL). Finally, and most importantly, DL programs should offer a variety of teaching styles and activities to promote academic and personal growth. For instance, offering cohesive and creative courses, and accommodating learning styles, cultures, and socioeconomic backgrounds. Consequently, the success of DL programs hinges on maintaining fidelity through adherence to program goals, and high-quality delivery of instruction. Studies showed that DL programs can foster significant academic growth for all students involved by choosing and following the right steps. Next, the crucial role of teachers and students in the success of DL programs will be explored.

Teachers' and Students' Perspectives

The subsequent study aims to investigate a critical function of DL programs by examining the experiences that immersion teachers have when trying to strike a balance between integrating language and subject in their lessons. Cammarata and Tedick (2012) not

only stated the benefits of immersion programs but also provided pivotal data as they

addressed teachers lived experiences with content and language integration. This raises the

question stated by Cammarata and Tedick (2012), "What is immersion teachers' experience of

attempting to balance content and language in instruction?" (p. 251). To answer these

questions, the authors interviewed three immersion teachers who had participated in a year-

long professional development program. The qualitative data analysis identifies essential

aspects of the teachers' experiences with content and language integration. Although the

research remains incomplete, Cammarata and Tedick (2012) attempt to bridge the gap by

interviewing immersion teachers to understand their personal experiences and perspectives.

This leads to the results of several key issues: a struggle involving professional

identity, understanding the relationship between language and content, and the need for

professional development to effectively integrate the content in the target language.

Furthermore, the authors emphasize the benefits of immersion programs, such as high levels

of functional proficiency in the immersion language and improved cognitive flexibility. As

stated by the authors,

> English-speaking immersion students of various academic abilities, regardless of ethic
>
> or socioeconomic backgrounds, are capable of achieving high levels of functional
>
> proficiency in the immersion language while at the same time achieving academically
>
> as well as or better than nonimmersion peers on standardized tests administered in
>
> English. (p. 252-253)

Other people in the field have suggested that besides the standardized test, subject evaluations

from teachers should be considered when assessing the academic and social functioning of

students in two-way immersion programs. For instance, Marian et al. (2013) state, "To that

end, researchers can administer more ecologically called experimental test along with subjective measures of academic and social functioning like peer, teacher, and parent evaluations of the students" (p. 181). Therefore, the findings of Marian et al. and Cammarata and Tedick not only provide insight into the teachers' perspective but also highlight the importance of evaluating two-way immersion programs using a multifaceted approach that goes beyond standardized test scores. Incorporating teacher input and subjective assessments can offer a more meaningful and comprehensive evaluation of these programs.

This brings the focus to students' perspective, highlighting how the discussed benefits contribute to their overall development, academic growth, and the pride and enthusiasm they experience in DL programs. Throughout the study, Carranza emphasizes the importance of acquiring a new language by developing an eight-week unit around the value of bilingualism. This unit provided a data collection method including participant observation, a survey from parents and students, and interviews with students and teachers. Carranza (2018) states, "I provided examples of how being bilingual could them learn to read and write in other languages, I provided them with examples of how knowing more than one language can help them in pursuing higher education" (p. 4). Besides developing critical thinking and metacognitive skills, Carranza created an energetic and collaborative learning environment for the process of learning a new language. These approaches are essential not only because they bring pride and enthusiasm but also because they incentivize students to learn more about their heritage, build a stronger community, and equip students with skills that will serve them for the rest of their lives.

Additionally, DL programs not only enhance the student's personal development but also enhance their academic goals by demonstrating higher achievement in reading, math, and

overall literacy skills. Morales (2024) discusses the positive impacts of DL programs on students' performance. Although, Morales examined the impact of dual language education using large samples of students subjects to enrollment lotteries. The research presents evidence of the benefits of DL programs on the academic achievement of elementary school students in reading and math. One example from the article emphasizes the impact on academic performance. "For example, students who won a dual lottery scored on average 0.12 SDs high in reading. Likewise, students with access to DLI education scored on average 0.14 SDs higher in math" (Morales, 2024, p. 6). Morales used an empirical strategy that leverages enrollment lotteries from oversubscribed DL programs to estimate the causal impact of access to bilingual education on students' reading and math scores. Consequently, participation in dual language programs not only enhances bilingual pruriency but also contributes to higher academic achievement in key subjects. As highlighted by Morales, the impact of DL programs extends beyond academic achievements to fostering connections with different key subjects. As the demands for these programs continue to grow, it is crucial to understand their impact on academic achievement, particularly in the early elementary grades.

In addition to the impact on academic performance, other people in the field make connections between the language and the cognitive gains in the students. Trebits et al. (2021) mentioned, a positive impact on the development of phonological awareness, and working memory by the end of 4th grade, compared to the regular monolingual school setting. Trebits et al. (2021) showed,

> Thus, at the first time of measurement, participants' working memory scores were
> similar in both school programs, but it developed significantly more strongly in the
> bilingual group resulting in significant differences between both groups by the end of

grade 4. (p.8)

In summary, these findings indicate that bilingual immersion education can promote the development of working memory as well as overall development, academic growth, and pride and enthusiasm.

Addendum

Impact of Motivation

Building on these insights into teachers' and students' experiences in DL programs, it is important to further explore the role of motivation, which plays a pivotal role in shaping both instructional approaches and student outcomes. The case, "Parent Motivation Regarding Dual Language Immersion Programs" by Bryan W. Taylor (2016), investigated and analyzed motivation factors that led parents to enroll their children in DLP. After 91 families were surveyed 59% reported the   top five reasons as:

(1) being able to speak, read, and/or write in multiple languages; (2) being more successful in a global economy; (3) being more comfortable relating to other people and other cultures; (4) having a stronger identity as a bilingual/bicultural individual; and (5) being more successful in school. (p. 4)

This data was collected from reflective blog entries, focus groups, and interviews with participants who served as teaching assistants in dual-language classrooms. The participants were Spanish L2 learners with varying levels of language proficiency. The findings varied from linguistic self-confidence, metacognition reflection on language learning, missed opportunities for Spanish use, and motivation and attitudes. Therefore, it is essential to consider the motivations of all the stakeholders participating in the DL programs. As Taylor's case study

shows, parental motivation plays a key role in shaping their decision to enroll children in such

programs, driven by the desire for bilingualism, cultural competence, and academic success.

Furthermore, these motivations align with the broader benefits of dual immersion programs,

which not only enhance linguistic abilities but also contribute to cognitive advantages.

From the teachers' perspective, the study from Sawyer and Almaguer (year)"'Teaching

students like me': Bilingual Authorization Candidates, Motivations, and California's Bilingual

Education Renaissance" focused on bilingual education, particularly in the aspect of the

experiences of bilingual educators and the motivations behind their decisions to pursue this

career path. Data gathered through comprehensive surveys and autobiographical writing pieces,

allow not only for in-depth qualitative insights, but also to probe into the participants'

biographical and academic backgrounds, motivations for becoming bilingual educators, and

experiences as bilingual individuals.

As Sawyer and Almaguer (2022) said, "On the other hand, Latinx bilingual educators in

these studies overwhelmingly describe a personal identification and empathy with the

experiences of emergent bilinguals and a desire to advocate for and serve those like themselves"

(p 311). In this way, the motivations of bilingual educators are deeply intertwined with their

personal identification and empathy for emergent bilinguals, making their roles not only

professionally significant but also personally fulfilling. As California's bilingual education

renaissance continues to evolve, it will be crucial to honor these motivations and lived

experiences while ensuring that historical and cultural-linguistic contexts inform the

development of future bilingual educators.

Just as parents' and teachers' motivations are essential in supporting the success of the

immersion program, students' motivation is equally critical in driving their language acquisition,

academic achievement, and engagement with the curriculum. Knell and Chi (2012) explored the impact of nonlinguistic factors such as motivation, language attitudes, and willingness to communicate (WTC) among upper primary students and the results exhibited higher levels of WTC and positive attitudes toward the new language. Knell and Chi (2012) stated, "Results indicate that immersion students used in this study had significantly higher levels of willingness to communicate and perceived competence and exhibited less language anxiety than their non-immersion peers". (p. 66) As a result, student motivation in immersion programs fosters a positive attitude toward learning the target language enhancing their willingness to communicate and reducing language anxiety. This motivation not only supports language acquisition but also strengthens students' sense of belonging and confidence, creating a dynamic learning environment where they feel empowered to learn a new language.

Therefore, motivation is a driving for all stakeholders to shape the overall effectiveness and outcomes of dual immersion programs. Fostering this motivation promotes language proficiency and academic success. Consequently, understanding and nurturing the diverse motivations of parents, teachers, and students in dual language immersion programs is essential to shaping the overall effectiveness and outcomes of these programs. Fostering this alignment o motivation promotes sustained engagement, cultural growth, and long-term academic success.

Connections with Different Subjects

The following study by Nascimento provides data on the higher achievement of the Dual Language programs in the area of language arts literacy. By studying both the Transitional, Early Exit Bilingual Program and the Dual Language: Two-Way Immersion Bilingual Program, Nascimento attempts to determine which programs yield the most academic benefits, demonstrating linguistic development in both the native and second

language. To determine the student's proficiency in language arts literacy, the study collected

data from criterion-based measures from kindergarten to third grade, on word decoding, and

reading comprehension. As noted by Nascimento (2016), "In all of the measures used to

determine the students' abilities in word coding the students enrolled in the Dual Language:

Two-Way Immersion Bilingual program revealed higher achievement scores than students

enrolled in the Early Exit, Transitional Bilingual program" (p. 11). Therefore, to understand

the results, the article emphasizes how each of these two programs works. For instance,

Nascimento (2016) explains how the primary objective of the Transitional, Early Exit

Bilingual program is to teach the student English only, and the Dual Language: Two-Way

Immersion Bilingual program aims to make students bilingual by using their native language.

Although there have been substantial resources on the positive impact of DL programs,

Marian et al. (2013) state that some people may argue against bilingual education, citing that it

can be detrimental to academic success. Fortunately, this study shows the opposite, providing a

strong background with reviews suggesting that bilingual education programs, including

transitional bilingual education, led to better performance. This information comes from cross-

sectional data from all 2009 3rd, 4th, and 5th grades, as well as instructional programs

considering the language of instruction, socioeconomic status, and teacher qualifications. The

study uses standardized test scores from two different assessments. As stated by the author,

> The State Measure of Annual Growth in English and the State Standards
>
> Achievement Test both consist of several measures of reading comprehension (e.g.,
>
> short passages followed by multiple-choice questions) and math knowledge (e.g.,
>
> single-sentence, multiple-choice word problems, and simple arithmetic) and tap into
>
> the same academic abilities. The State Measure of Annual Growth in English test

was designed for English language learners and therefore includes more simple

language than that of the State Standards Achievement Test but addresses the same

content. (p.171 -172)

This quote explains that the two standardized tests, the State Measure of Annual Growth in

English and the State Standards Achievement Test, both assess reading comprehension and

math knowledge, but the State Measure of Annual Growth in English uses simpler language

since it is designed for English language learners. Consequently, the results provide relevant

evidence applicable to the ongoing expansion of DL programs across states with diverse

student populations.

Impact on the Different Cultures

As dual immersion programs increase, so does the variety in the different languages.

As this demand increases, so does the demand for understanding how different target

languages in DL programs can impact student learning and outcomes. This article by Padilla

et al. (2013) states, "The number of Chinese language programs in the United States, from

elementary through adult programs, tripled from 1995 to 2005 and continues to expand" (p.

662). Hence, as this demand increases, so does the need for understanding how different

target languages in DL programs can impact student learning and outcomes. As Mandarin is

making its way into the two-way DL programs, it is important to consider the linguistic

complexity, such as the complexity of the non-phonetic symbols, to understand the benefits

and challenges of this target language. As stated in the article, students were assessed on their

Mandarin oral and listening, reading, writing, California Standard Test, and Mandarin

STAMP 4Se test. The results provided a key point: the performance between heritage and

non-heritage students. Although heritage students initially outperformed non-heritage, the

advantage in language acquisition diminished over time. For example, Padilla et al. (2013)

mentioned, that in the early grades, heritage Mandarin speakers performed moderately better

than non-heritage speakers during the MAP test, while on the 5th grade STAMP 4Se Test,

there was no statistically significant difference between heritage and non-heritage speakers'

score in listening, speaking, reading, and writing.

These outcomes align with the importance of a well-designed immersion program to

bridge the initial gap between heritage and non-heritage language learners. By providing

consistent exposure to the target language, such programs can lead to comparable proficiency

levels across both groups. Johnson (2024) takes the research more in-depth and focuses on one

particular culture to promote bilingualism and biliteracy. As Johnson (2024) noted, the

purpose of "This paper is to report academic achievement and growth in grades 2 through 8

for Hispanic participants and nonparticipants of a Spanish-English dual language program" (p.

1). Not only does Johnson concentrate on a large sample of Hispanic students, but she also

compares the math and reading growth rates of all the participants.

As per Johnson's finding, under the Spanish-English Dual Language Instruction,

which was established in 2011-12, over 85% of Spanish-speakers English Learners enrolled

and decided to stay, emphasizing the program's long-term commitment. Regarding growth

rates, Johnson's results differed from other studies, bringing this study to the main takeaway.

The study emphasizes the importance of addressing both academic year and summer learning

to related students' achievement in DL programs. For instance, a result from Johnson (2024)

"reported significant summer reading loss for every ELs another EL subgroups" (p. 207).

Although there is a greater summer learning loss, Johnson (2024) emphasizes providing

literacy and content instruction in both English and Spanish to promote bilingualism,

biliteracy, grade- level academic achievement, and sociocultural skills.

Other studies such as the one by Trebits et al. (2021) look at the socio-economic (SES) impact on bilingual education and the cognitive development of children. The methodology used in this study was based on a combination of standardized tests, cognitive assessments, and a crucial part of the parental SES questionnaires to explore the relationship between bilingual immersion education, SES, and cognitive development for one school year. The findings highlight the importance of providing bilingual education opportunities, especially for children from disadvantaged socioeconomic backgrounds, to promote their cognitive and linguistic development. Trebits et al (2021) states,

> Considering that low socioeconomic status is associated with detrimental effects on the development of language and cognition (Hackman and Farah 2009), it is important to establish that bilingual education may have far-reaching benefits independent of and despite the potential drawbacks of low family socioeconomic background. (p. 11)

As a result, it is important to note that the cognitive and linguistic benefits of bilingual immersion education were observed regardless of the student's socioeconomic background. These results allowed the researchers to conclude about the mitigating role of bilingual education for students from low-SES backgrounds.

Conclusion

This literature review discussed the benefits of dual immersion (DL) programs in the United States, which aim to provide resources and support for the academic success of bilingual students. The research explores the origin and implementation of DL programs, the perspectives of teachers and students, the connections with different subjects, and the impact

on different cultures. The findings suggest that well-designed DL programs can lead to higher

education achievement, improved cognitive abilities, and increased bilingual proficiency

among students.

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Dissertations & Theses.

Reflection

I am confident that I made the right decision in choosing this topic. The amount of data I collected from various articles reassures me that I am on the right track and that there is still much more for me to achieve. This research has boosted my confidence to speak more about my career in an immersion school. It has also encouraged me to at least start a discussion on how to incorporate this program in our county, considering we only have one immersion school in our school district and our diverse population is rapidly growing.

Initially, I was hesitant because of the amount I had to write, but the structure of the assignment made it easier for me to complete. The feedback I received from my peers provided valuable information. They both mentioned my citations, which I struggled with, as well as how to make my sentences flow more smoothly. While I may not be an expert on APA citations, I now know more, such as the requirement for quotes longer than 40 words to be presented in a block and the use of "et al." Overall, this was a great learning experience, and the time I spent on it was well worth the knowledge I gained.

Revisiting this literature review to include motivation felt essential. A recent meeting with parents in the immersion program highlighted how motivation comes from all of us students, parents, and teachers to ensure the program's success. This collective support reinforces the value of motivation in my work and in creating a positive learning environment.