

Promoting Student Success
Bilingual Education Best Practices and Research Flaws

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Abstract

This paper first determines the benefits which bilingual education offers and then compares transitional, dual-language, and heritage language maintenance programs. After exploring the outcomes, contexts, and practical implications of the various bilingual programs, this paper explores the oversight in most bilingual studies, which assess students' syntax and semantics while neglecting their understanding of pragmatics and discourse structures (Maxwell-Reid, 2011). Incorporating information from recent studies which question traditional understandings of bilingualism and argue that biliteracy requires more than grammatical and vocabulary instruction, this paper proposes modifications in current research strategies and suggests best practices for transitional, dual-language, and heritage maintenance programs.

Promoting Student Success

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Introduction

Since the mid-twentieth century, the United States public school canvas has been crisscrossed with competing theories of bilingual education. The debate, highly colored by emotions, fears, and the desire for student success, is heavily punctuated with black-and-white statistics. However, these statistics, though numerous, do not lie solely on one side of the debate. Instead, both proponents and critics of bilingual education reference compelling evidence to support their stances. In one aspect, however, both parties unite, agreeing that the issue of bilingual education is not one of efficiency or economy, but ultimately a question of what is best for the students. When experts evaluate this issue in the light of student wellbeing, the cold facts and numerical statistics fade against a backdrop of what is right and wrong for students of every race and color. This paper will first establish the advantages of bilingual education for the United States English Language Learner (ELL) population and then explore three bilingual education models that have replaced mainstream immersion, noting significant oversights in current research and concluding with a proposal of effective research models and best practices for various student populations and outcomes.

Arguments for and Against Bilingual Education

Proponents of bilingual education argue that bilingual education is ethical because it equips all students with a marketable, versatile career skill, promotes cultural literacy

and cooperation, and increases mental flexibility and psychological health (Christoffels et al., 2015; Kim, Hutchison, and Winsler, 2015; McCarty, 2012).

Career Opportunities

As educators and parents look toward a bleak job market, bilingual education offers the assurance that students will be able to find lucrative employment. In areas of the United States where the ELL population is high, graduates who are equipped with multiple languages will be most capable of getting jobs and most successful in their careers. According to Musser-Granski and Carrillo (1997), the rising immigration rate in the United States has produced a rising need for bilingual professionals in the job market. They explain that, because bilingual professionals are scarce, many businesses and corporations are hiring bilingual employees as paraprofessionals. Though these bilingual job candidates have less career-specific skills than other applicants, employers continue to hire bilingual paraprofessionals because their language skills are so vital to successful business. Kim et al. (2015) write, “The United States is concerned with its standing in the global market, but remains less concerned with providing children with the foreign language tools necessary to be competitive in the market” (p. 248). Thus, if the United States hopes to keep its economic standing in the global market, it must offer students the opportunity to gain bilingualism.

In addition, bilingual speakers have more opportunities for career advancement than their monolingual coworkers. Musser-Granski and Carrillo (1997) note that some companies offer time off and tuition reimbursement for bilingual employees enrolled in field-related school programs. Other employers cooperate with educational institutions to

offer bilingual employees education courses which provide them with the equivalent of professional degrees in their fields. Through these programs, even bilingual employees with no former specializations can acquire marketable skills. These opportunities render bilingual citizens one of the most diversely marketable groups of people in the United States. Because of this, many teachers hope that bilingual education will help schools promote students' future wellbeing and guard against financial adversity.

Though the United States workplace provides employment to bilingual citizens, many people object to bilingual education in schools because it detracts from education in other subjects. According to Rycha-Yagambrun (2012), bilingual education programs harm ELL students because bilingual classes force students to concentrate more on language skills than on other curriculum areas (i.e. science and math). If ELL students are already unlikely to become proficient in English and are then further handicapped by bilingual programs which place less emphasis on non-language curricula than English immersion programs do, ELL students risk graduating high school without proficiency in any area of study. Therefore, though some educators see bilingual education as the surest way to promote the success of ELL students, other educators note the risk bilingual programs take by producing students who lack a thorough understanding of all core subject areas and who are ill-equipped to function proficiently in any professional field.

Psychosocial Benefits

Proponents of bilingual education suggest that bilingualism increases cognitive flexibility and attention, and offer these psychological advantages as another justification for the sacrifices bilingual programs require. Christoffels et al. (2015) demonstrate how

bilingual students perform cognitive tasks faster than their monolingual peers. In addition, bilingual students tend to have longer attention spans, more readily transition from one cognitive task to another, and have a greater ability to distinguish important sensory information from peripheral stimulants. With prolonged attention spans and increased mental agility, many bilingual individuals perform more efficiently in the classroom and workplace.

Cultural Literacy

Teachers who support bilingual education believe that bilingual education is ethically right because it promotes cultural literacy, allowing both native and non-native English speakers to interact and share ideas in ways that promote the good of society (Carstens, 2015). As ELLs have increased in United States public schools, many teachers have joined initiatives to promote cultural literacy. However, these efforts have proved largely ineffective because they reinforce cultural stereotypes rather than actually giving cultural minorities a voice. Bilingual education remedies this failure. Originally, bilingual education failed to promote respect and collaboration among culturally-diverse students, instead only further fracturing student relations, promoting the idea that minority cultures were undeveloped and static. As teachers noted the ways such initiatives were injuring students' cultural identities, research shifted to concentrate on providing ELL students with the best and quickest assimilation into the United States classroom. However, Carstens notes that this initiative failed as well, because it essentially ignored minority cultures, seeking to over-write ELL students' native cultures with the thought and tradition of the United States. As some students assimilated quickly, teachers began to

celebrate their victories, blind to the many other minority speakers who silently fell behind in the wake of Americanization, unable to adjust as quickly as curriculum demanded.

This second pendulum swing, almost as ineffective as the first in promoting cultural respect and understanding of diversity is now being replaced with a third educational model. Recent research recommends cultural education which delivers content instruction in two languages, thereby giving minority students a voice to express their own culture without bias or cultural prejudices (Feinberg, 2002). This new model uses bilingual instruction to teach every subject--from language arts to math and science, and places special emphasis on integrating cultural material from both languages into each subject. Carstens (2015) notes that cultural instruction and linguistic instruction are closely tied, because culture is communicated through language. Thus, as students assimilate knowledge in one area, they will excel further in the other. As students learn more of the language, they will have access to a deeper understanding of culture, and as they learn more about other cultures, they will be able to make connections to vocabulary in their secondary language. As students learn to speak multiple languages, they will be able to communicate and collaborate with more diverse populations and experience wider ranges of cultural perspectives, becoming better-rounded individuals who promote the well-being of their peers and society.

Though much research points to the cultural enrichment which bilingual education provides, some experts disagree, arguing that bilingual education produces students who will have less to offer both their native culture and their secondary culture.

According to Krashen (1996), many people fear that students gain bilingual education “at the expense of gaining a sound education” (p. 43). These opponents view bilingual education as the schools’ failure to perform their ethical duty, because every minute students invest in learning a language is one less minute they can invest in developing whatever areas of expertise they hope to use in collaboration with other individuals to improve society. In addition, these experts fear that bilingual education, by attempting too much, will prevent both native English speakers and ELL students from developing the English language proficiency necessary to succeed in their future workplaces. Because the public-school system was founded to equip students to succeed in their adult life, many teachers fear that bilingual education will prevent schools from fulfilling their primary duty.

In addition, because bilingual education emphasizes student differences and provides accommodation for these differences, some educators argue that bilingual programs will only reinforce racial stereotypes and prevent cooperation and assimilation between multiple cultures. Wood (2008) argues that bilingual education, rather than promoting assimilation, further segregates students, defining learning content based on cultural differences and ethnic physical features. In a public school system which seeks to prepare every student to succeed and collaborate to improve the country, such segregated programs would not only be ineffective, but unethical.

However, bilingual educators argue that Wood’s fears are only relevant in the pull-out ELL intervention model. In the pull-out system, non-native English speakers spend some of their instruction time in an English-only classroom and another portion of

their day in ELL-only classrooms where they are instructed in their native languages (McCarty, 2012). Such a system could not fail to promote racial segregation and stunted assimilation. While pull-out programs are one form of bilingual education, they are no longer the predominant model. Instead, pull-out programs have been replaced by much more effective and inclusive models in which all students—both ELL and native English speakers—receive instruction in both English and a second language (Carstens, 2015). Bilingual educators argue that these new bilingual programs are the most ethical systems because they compel both English and non-English speakers to practice language acquisition, thereby strengthening community and promoting cooperation and assimilation between the two cultures.

Three Bilingual Approaches

Once we have established the efficacy of bilingualism in offering economic, academic, and social advantages for students, we must examine bilingual programs which are designed to deliver additive, rather than subtractive, linguistic instruction. While bilingual education is not possible or necessary in all United States public schools, most states require bilingual programs in schools with a high percentage of ELL students (Wood, 2008). Many schools still address this requirement by offering sheltered English instruction through pullout English classes which attempt to replace ELLs L1 with their L2—a subtractive approach. However, newer models of bilingual education offer more long-term advantages for ELLs and promise more successful cultural assimilation and English acquisition through additive programs which seek to provide students with L2 fluency in addition to L1 proficiency. The remainder of this paper will explore three

bilingual instructional models—transitional bilingual instruction, dual-language instruction, and heritage language maintenance instruction, detailing the goals, contexts, and outcomes of each program and suggesting practices for success with each of these models.

Transitional Bilingual Education

In the transitional bilingual education model, ELL students are taught all core subjects primarily in their home language, with roughly 20-30% of instruction in the L2, initially (Duran, Roseth, & Hoffman, 2010). Transitional programs are built on the theory that “students who are taught initially in their L1 and then transition to English ultimately read as well or better in English than students taught only in English” (Hofstetter, 2004, p. 357). Many educators fear that new ELLs “are not developmentally ready to benefit from having most or all of their content instruction in English” (Murphy, 2014, p. 183). Accordingly, Krashen (1996) advocates instruction that uses students’ primary language so that they can acquire content knowledge while simultaneously learning English. Transitional programs place an emphasis on language and literacy instruction, and as students progress through the program, teachers gradually start to use the L2 for more instruction, until it becomes the primary means of communication for the classroom (Duran et al., 2010).

Just as bilingual education may be broken into numerous categories, so transitional instruction programs fall into several categories. While some programs teach core academic content in ELLs’ L1, others achieve L1 instruction through pull-out classes in language acquisition and literacy skills, while teaching core subjects in English

(Hofstetter, 2004). Additionally, though many ELLs remain in transitional programs for only months, other programs deliver a more gradual transition process, over the course of several years. Hofstetter details one such long-term transition program, which, in kindergarten and first grade, offers 70% L1 instruction and 30% L2 instruction. Each year, English instruction increases, until fourth and fifth grade, when students are learning 85% of the content in English. However, whether the programs last only a matter of months or up to several years, after temporary placement in transitional programs, ELLs usually transfer to mainstream English classrooms.

Goals of transitional education. Hofstetter (2004) outlines three primary achievement goals for ELLs in transitional education programs—academic, linguistic, and psychosocial. Transitional programs facilitate these goals by providing content instruction for ELLs in their L1, offering sheltered instruction in L2 acquisition strategies, and quickly processing ELLs into the mainstream classroom where they can interact with both L1- and L2-dominant peers

Transitional instruction and academic development. Bilingual education is critical for most ELLs' academic success, for until students can understand what they are being taught, they are unable to assimilate any content instruction. Many critics of bilingual education argue that, for ELLs, academic success is possible without bilingual education. To this, Krashen (1996) replies, "Success without bilingual education is possible, of course. Success without comprehensible input is not possible, however" (p. 21). Krashen argues that for ELLs to succeed academically they must have some form of

comprehensible input, and bilingual programs—often transitional bilingual programs—are the best way to facilitate this input.

In addition, research suggests that enhanced literacy skills in students' L1 often facilitate greater achievement in non-linguistic subjects, even if these subjects are not taught in the students' L1, because literacy and comprehension skills from the L1 transfer to the L2 (Krashen, 1996). Murphy (2014) states, "home-language skills are associated with academic content learning, such that students with strong home-language skills show higher academic achievement related to students with weaker skills" (p. 183). Thus, transitional programs, which equip students with both L1 and L2 literacy skills as well as content knowledge, provide a valuable method for maintaining student academic progress while ELLs transition from L1 to English-dominant classrooms.

Transitional instruction and linguistic development. Most transitional programs seek to enhance students' L2 acquisition, with little emphasis on L1 maintenance, using the L1 to teach literacy concepts which transfer to the L2. Though some critics of transitional instruction argue that such programs are detrimental to ELLs' English acquisition, Crawford (2008) notes that "[k]nowledge and skills acquired in the native language, literacy in particular, are 'transferable' to a second language. They do not need to be relearned in English" (p. 52). Murphy (2014) echoes this point, stating, "Research has also shown that home-language skills predict second-language learning...students who have well-developed literacy skills in their home language acquire the second language more successfully than those students with weaker literacy skills in the home language" (p. 183). In addition, Duran et al. (2010) offer data from "An experimental

study comparing English-only and Transitional Bilingual Education on Spanish-speaking preschoolers' early development." They state, "For the [transitional bilingual education (TBE)] classroom, results showed significantly higher growth on both Spanish oral vocabulary and letter-word identification measures. There were no significant differences between classrooms on these same measures in English" (p. 215). Duran et al. also predict that these increased Spanish literacy scores transfer to better English literacy since "Higher Spanish vocabulary scores have been found to predict enhanced word reading and comprehension of English" (p. 215).

Transitional instruction and psychosocial development. Murphy (2014) notes that "Unlike the [dual-language] approach, the [transitional bilingual education] model serves only ELLs and does not include native English speakers, so interaction between ELLs and native English speakers is limited" (p. 183). Thus, ELLs' conversational skills may not develop as quickly as their ELL peers in mainstream immersion classrooms. However, Crawford (2008) suggests that transitional programs make up for this deficiency by enhancing students' understanding of academic language. He writes, "Bilingual education programs that emphasize a gradual transition to English, using native-language instruction in declining amounts over time provide continuity in children's cognitive growth and lay a basis for academic success in the second language" (pp. 52-53). Thus, while many ELLs in mainstream English classrooms develop conversational English through the immersion process, transitional programs provide long-term benefits by developing fluency in the academic language required for content instruction.

Comparing the results of transitional and mainstream instruction in

California. In a 2003 study by Hofstetter (2004), two groups of ELL students were compared after completing K-third grade in either a transitional classroom or a mainstream classroom with sheltered English tutoring. ELLs in the transitional classroom received on average 40% of their instruction in English, compared to 90% for mainstream students. In their fourth-grade year, a total of 441 students—82% from transitional classrooms and 18% from mainstream classrooms—were assessed using two standardized tests.

On the first assessment, the *California English Language Development Test*, which scored students on English language proficiency, 63% of students from transitional classrooms scored “early advanced or above” on the listening and speaking portion of the test, 13.5% on the reading portion, and 15.5% on the writing portion. In contrast, 57% of the students from mainstream classrooms scored “early advanced or above” for listening and speaking, 5.5% for reading, and 28.5% for writing. In total, 47.5% of the students from transitional classrooms achieved advanced scores in at least one area, while 39.5% of the ELLs from mainstream classrooms did the same (Hofstetter, 2004). Reference Table 1.

Though the results of the *California English Language Development Test* indicate advantages for students in transitional classrooms, when the same students were tested on the *Stanford Achievement Test* (9th ed.) (SAT-9), the results showed only minimal differences between the two student groups.

Table 1
Percentage of Students Scoring at an Advanced Level on the California English Language Development Test

	ELLs from transitional classrooms	ELLs from mainstream classrooms
Listening & speaking portion		
<i>Students scoring at a level of early advanced and above.</i>	63%	57%
Reading portion		
<i>Students scoring at a level of early advanced and above.</i>	13.5%	5.5%
Writing portion		
<i>Students scoring at a level of early advanced and above.</i>	15.5%	28.5%
Total		
<i>Students scoring at a level of early advanced and above in at least 1 section</i>	47.5%	39.5%

Note. Adapted from “Effects of a Transitional Bilingual Education Program: Findings, Issues, and Next Steps,” by C. H. Hofstetter, 2004, *Bilingual Research Journal*, 28(3), p. 368. Copyright 2004 by Taylor & Francis. Used by permission.

On the SAT-9, ELL students were assessed in English on their understanding of reading, mathematics, and language arts. Both student groups performed better on this test than on the language proficiency tests, probably because it required more content

knowledge and less language arts understanding, but neither group significantly outperformed the other (Hofstetter, 2004). On the SAT-9, 24% of ELLs from transitional classrooms scored at or above the 50% national percentile in reading, 49% in mathematics, and 36% in language arts. In comparison, 20% of ELLs from mainstream classrooms scored at or above the 50% national percentile in reading, 40% in mathematics, and 40% in language arts. Reference Table 2.

Hofstetter (2004) noted that both ELL groups scored much better in mathematics than in either reading or language arts and suggested that this is because the mathematics section required less English proficiency than the other two portions. Though these results varied from one section of the assessment to another, the average achievements of the two groups was largely comparable and did not indicate strong advantages for either of the instructional models.

However, Hofstetter (2004) cited other studies from 1997, 1985, 1998, 2001, and 2002, in which students from transitional programs achieved significantly higher scores on standardized assessments than their ELL peers in mainstream immersion classrooms. This research indicates measurable improvements in the achievement gap between ELLs and English-dominant speakers in transitional programs, in comparison with ELLs who had no bilingual education.

Duration of transitional programs. Hofstetter (2004) suggested that the inconsistent results of transitional programs may have been largely due to the length of time ELLs spent in transitional programs. Transitional programs only prove effective when they offer students long-term transitional care. Comparing the results of various

Table 2
Percentage of Students Scoring at or Above Stanford Achievement Test (9th ed.) National Percentile Ranks (NPRs)

	ELLs from transitional classrooms	ELLs from mainstream classrooms
Reading portion		
<i>75th NPR</i>	8%	8%
<i>50th NPR</i>	24%	20%
<i>25th NPR</i>	56%	68%
Mathematics portion		
<i>75th NPR</i>	25%	32%
<i>50th NPR</i>	49%	40%
<i>25th NPR</i>	81%	84%
Language arts portion		
<i>75th NPR</i>	12%	8%
<i>50th NPR</i>	36%	40%
<i>25th NPR</i>	48%	88%

Note. Adapted from “Effects of a Transitional Bilingual Education Program: Findings, Issues, and Next Steps,” by C. H. Hofstetter, 2004, *Bilingual Research Journal*, 28(3), p. 368. Copyright 2004 by Taylor & Francis. Used by permission.

long and short-term programs, Hofstetter stated, “ELLs in a transitional bilingual education program need several years (at least 4 full years) to reach the English-language attainment levels of their peers in English-immersion classes” (p. 374). Though long-term transitional programs do promote student achievement for ELLs, “previous research

suggests that it takes 4-6 years for ELLs to achieve success in English-language acquisition generally and within core content areas” (p. 363). Further research suggests that it takes between five and seven years to develop the L2 proficiency necessary for academic instruction fully in the L2 (McMahon & Murray, 2000). Thus, when students have access to a consistent transitional program for several years—when families can establish stable, stationary home environments, and when schools can offer an extended transitional program—transitional bilingual education offers a viable, and often gentler, method of introducing ELL students to the mainstream English-dominant classroom.

McCarty (2012) suggested one disadvantage to transitional programs, noting that these programs often provide a weak form of bilingual education because, though they start with bilingual instruction and substantial L1 instruction, their goal is assimilating language minorities into the mainstream classroom where, without further L1 maintenance, they risk losing native language fluency. Thus, though transitional programs succeed in quickly transitioning students to the mainstream classroom, they do not consistently produce students with functional bilingualism. Instead, they simply replace L1 fluency with L2 fluency.

Dual-Language Bilingual Education

United States dual-language (DL) bilingual programs, modeled after the Canadian French-English instructional model developed in 1965, attempt to produce functionally bilingual students through two-way L1/L2 instruction (Kim et al., 2015). In contrast to transition classrooms, DL classrooms use both the L1 and the L2 equally to deliver both literacy and content instruction. While some programs are set up so that each subject is

taught 50% in the L1 and 50% in the L2, other programs are organized so that half the subjects are taught in the L1 and the other half in the L2 (Murphy, 2014). DL programs take advantage of high ELL populations to create classrooms with 50/50 mix of ELL and English-dominant students. In 2013, schools in 28 states had developed DL programs for students in elementary to high school (Kim et al., 2015).

Psychosocial benefits of the dual-language model. Because dual language programs maintain heritage languages while adding in L2 fluency, emphasizing the value of students' L1 as well as their L2, they promote cultural identity and respect within the classroom. Murphy (2014) states, "Dual-language instruction also works to alleviate the isolation of ELLs from their English-speaking peers by providing ELLs with skills for peer-to-peer conversations on a daily basis in an environment that values both languages and cultures" (p. 191).

Comparing the results of English- and Spanish-dominant students in the dual-language classroom. In an experimental study conducted in 2005, a dual-language Spanish-English program compared the standardized reading and math test results of third- and fifth-grade English and Spanish students whose program was designed so that half of the subjects were taught in English and the other half in Spanish (Murphy, 2014). On the third-grade reading test, 88% of the Spanish-dominant students met state standards, compared to 91% of English-dominant students. In math, 86% of the third-grade Spanish-dominant students achieved state standards, while 95% of the English-dominant students did so. Thus, in the first three years of the DL programs, English-dominant students still outperformed their Spanish-dominant peers on tests administered

in English. However, by fifth grade, there were no discrepancies between Spanish- and English-dominant achievement scores in reading, and 90% of both groups met state standards for math, though the math content was taught entirely in English. Murphy notes, “by fifth grade, DL [dual-language] students have already developed high levels of bilingualism...In general the results suggest that dual-language programs are similarly effective across academic subjects” (p. 184). Thus, though English-dominant students initially outperform their ELL classmates, long-term placement in a DL program eliminates this achievement gap.

Comparing the results of dual-language instruction and mainstream models.

Similarly, Kim et al. (2015) report a comparison of students in DL and English immersion preschools which demonstrated no significant discrepancies between the two groups, except in Spanish vocabulary, where the DL group showed significant gains. Kim et al. write, “young language minority students in [DL] programs can reach native-like proficiency in English, while improving in their home language as well, demonstrating that one can create an additive bilingual education environment for language-minority children” (p. 242).

Though DL students in the preschool study by Kim et al. (2015) showed little difference from their English immersion peers, students in long term programs showed significant gains after several years in DL programs. In a study of fifth-grade ELLs, DL students “equaled or exceeded both English-speaking and Spanish-speaking participants in the English-only program on the standardized Texas Assessment of Academic Skills” (p. 242). Another study compares language proficiency for students with up to eight years

of instruction in either ELL pull-out, transitional, heritage maintenance, or DL programs. Students in pull-out programs demonstrated the lowest English fluency while students in DL programs achieved the highest English proficiency (Kim et al., 2015).

Murphy (2014) reports a study which compared test results of students in dual-language programs with the achievements of their peers in monolingual programs. Both English-dominant and Spanish-dominant students gained or maintained functional levels of Spanish proficiency through the dual-language program, and Murphy states, “In math achievement, results showed that across all grades the Spanish-speaking students in the program scored as well or better than the Spanish-speaking [monolingual] control group” (p. 184). However, “In reading, the English-speaking students in the program scored significantly lower than the English-speaking control group in grades four and five, and as well or better than the Spanish-speaking control group in all grades” (p. 184). Thus, Murphy suggests that while dual-language instruction produces significant benefits for ELLs in United States schools, DL programs detract from the achievement of English-dominant students. However, this hypothesis conflicts with findings from a 2007 comparison study of 385 preschoolers in DL programs, in which English-dominant students performed similarly to mainstream students on both linguistic and content knowledge tests (Barnett, Yarosz, Thomas, Jung, & Blanco, 2007).

Similarly, a study by Marian, Shook, and Schroeder (2013) demonstrates that both Spanish- and English-dominant students in DL programs outperformed students in the control group mainstream classroom. In this study, long-term placement in the DL program correlated with significant achievement improvements for both minority- and

majority-language students in both language and content areas. While the differences were negligible between DL and transitional student achievement scores for third-grade students, by fourth and fifth grade, both ELLs and English-dominant students in the DL classroom were outperforming their peers in mainstream and transitional classrooms on both reading and math assessments given in English.

These studies and their conflicting results offer ambiguous conclusions for DL programs. However, the most common variable in these studies seems to be the percentage of time and the subjects taught in each language. While most DL models produce considerable advantages for ELLs and no noticeable disadvantages for English-dominant students, those DL classrooms which produce undesirable results are probably employing ineffective DL models. This area begs further study, for little research has addressed best practices for DL classrooms, and many DL models spend disproportionate instructional times in the L1 and L2.

Comparing the results of transitional and dual-language instruction. Murphy (2014) reports a comparison study of transitional and DL instruction, based on the theory that home language instruction supports academic achievement. To reveal best practices, Murphy compared the standardized test results of two focus groups composed of first- and second-grade ELLs from Spanish-dominant homes. A total of 94 students in six classes participated in the study. The students were administered a Spanish literacy assessment which tested “alphabet/sight words, reading, writing, listening, and verbal expression” (p. 187). Data comparison for the first-grade student groups revealed no significant difference between test results for DL or transitional students in any of the

five literacy skill areas. For the second-grade students, results were similar, with little discrepancy between DL and transitional student groups in four of the five literacy skills. However, for the Verbal Expression strand, where, after listening to a teacher read a book aloud, students discussed character and plot elements, students in the DL group showed more improvement than their transitional peers between pretest and posttest. Murphy wrote the following:

Although...both models have promise for enhancing students' overall literacy development...the DL approach—which treats education in and through the home language as more than a mere transitional strategy—had the added benefit [of] boosting the students' home-language verbal expression skills. (p. 191)

Murphy (2014) emphasized the necessity of long-term home language instruction, noting that the DL group in this study did not outperform the transitional group until second grade. In contrast to transitional programs, DL instruction's long-term approach provides added benefits for ELLs by strengthening their home-language literacy skills, which then transfer to increased achievement in other content areas.

Discussion. Though DL instruction offers a stronger form of bilingual education than transitional instruction through its additive approach, it is not practical for all school environments because the student demographic must be roughly 50/50 L1-L2 for DL instruction to be practicable. When the ELL population is not this high, transitional bilingual instruction offers a good alternative model, for it still advances ELL students well beyond their ELL peers in mainstream classrooms (Marian et al., 2013). However,

heritage language maintenance programs offer another additive bilingual instructional alternative.

Heritage Language Maintenance Programs

Heritage Language (HL) Maintenance Programs seek to maintain students' L1 proficiency as ELLs undertake L2 acquisition in an L2-dominant culture. Like dual-language instruction, HL maintenance is a strong form of bilingual education because it produces students with bilingual and biliteracy skills (McCarty, 2012). HL programs are designed to maintain literacy in both students' L1 and L2 in order to encourage literacy skills, foster cognitive flexibility, cultivate healthy psychosocial identity, and equip students with bilingual career skills.

HL programs differ from DL programs in the amount of time they dedicate to L1 instruction and study. While the DL approach teaches academic content and literacy skills in both the majority and minority language equally, HL programs may spend anywhere from 50% of instructional time to only a few hours each week studying the L1 (McMahon & Murray, 2000). This L1 instruction time may focus solely on literacy skills (e.g. writing, reading, public speech, research) or it may, like dual-language instruction, simply come in the form of core content taught in the ELLs' L1. HL instruction also differs from transitional instruction and mainstream instruction with sheltered English because, while the latter two approaches seek to produce English-fluent students without maintaining L1 fluency, HL instruction, like the DL model, pursues bilingualism (McCarty, 2012).

Tong, Lara-Alecio, Irby, Mathes, and Kwok (2008) detailed a study demonstrating the advantages which bilingual programs provide in developing oral English fluency among ELLs. In addition to encouraging oral fluency in students' L2, HL programs address an even greater need by maintaining literacy in the ELLs' L1 while simultaneously developing new literacy in the L2. Many ELLs in immersion classrooms or in transitional programs lose L1 fluency as they gain English proficiency, but because L2 acquisition is a long process, many ELLs risk losing proficiency in their L1 before they have developed adequate academic proficiency in English (Bylund & Diaz, 2012). Thus, many ELLs, caught in this limbo, end up academically illiterate in both their L1 and L2.

Menken and Kleyn (2010) underscored this issue with findings from an interview study of ELLs in New York public schools. Students in their study, though exhibiting conversational English proficiency in social settings, tested three years below their grade level in English and three and a half years below their grade level in Spanish. In their study, all of the students were "characterized by limited literacy skills in both English and their native language, in spite of their oral bilingualism" (p. 410). Menken and Kleyn argue that, to eliminate this illiteracy, ELLs must receive literacy instruction in their native language as well as their L2. HL programs seek to provide this instruction and prevent L1 attrition by cultivating continued literary skills and reviewing pre-established linguistic understanding in the L1. According to Tong et al. (2008), HL bilingual programs can significantly reduce the achievement gap between ELLs and native-English speakers. HL proponents argue that, as students gain continued literacy skills in their L1,

these skills will transfer to their L2, much like in the transitional and dual-language models.

Cultural, cognitive, and career enhancement for HL Students. HL proponents, more than focusing on the relatively short-term benefits related to academic success in grade school, aim at producing bilingual adults because bilingualism offers so many career and cognitive advantages. McMahon & Murray (2000) write, “overall research on bilingualism indicates that additive bilingualism, where the second language adds but does not replace the first, produces more positive cognitive and educational outcomes than subtractive bilingualism, where the second language replaces the first” (p. 42). These terms *additive* and *subtractive* are highly colored and biased, and approaches termed “subtractive” could much more appropriately be called *substitutive*, since they do not remove language skills, but simply replace L1 language skills with L2 language skills. However, regardless of the terminology, research indicates that students with continued fluency in both their L1 and L2 experience more success both in the classroom and in their careers (McMahon & Murray, 2000). Through HL maintenance and L2 instruction, HL educators seek to provide students with the skills to exercise greater cognitive function and achieve more in school and the workplace.

HL education also places a heavy focus on students’ native culture, aiming to influence social and cultural patterns and preserve cultural heritage through young bilinguals. Such programs foster cultural identity and respect while preserving communication ties between immigrants and their families (McCarty, 2012). McMahon

and Murray (2000) reference a report on bilingualism in the Federated States of Micronesia (FSM) which states,

Students perform poorly in FSM educational institutions because they are forced to totally abandon their indigenous languages and made to acquire their education in what is essentially a second language...indigenous languages must be given equal time in instruction...The exclusion of indigenous language from the curriculum is culturally and educationally discontinuous; it is socially disrespectful. (p. 40)

The HL approach asserts that a holistic education program will neither deny nor ignore the presence of a culture or society which represents a noticeable portion of its student population. To do so would disregard a wellspring of relevant information—not just linguistic, but historical, geographical, literary, political, and cultural.

L1 attrition in preadolescent immigrants. As might be expected, L1 attrition is directly related to decreased L1 exposure (Bylund & Diaz, 2012). Additionally, language retention is positively tied to age, and children risk losing significant portions of the first language—in some cases losing all conversational ability—if deprived of regular exposure before the onset of puberty. Thus, to preserve L1 proficiency, HL programs generally focus on elementary and high school immigrants, stressing L1 exposure at the lower grades.

Bylund and Diaz (2012) note that many ELLs may be conversationally fluent without being academically literate. While most ELLs have regular exposure to conversational L1 in their homes, they rarely have as ready access to print materials and

academic content in their L1. As a result, many ELLs will not have functional fluency in their L1 when they seek to use it academically or professionally. Bylund and Diaz contrasted test results of monolingual Spanish and English students with test results of L1 Spanish and L2 English students attending a DL Spanish-English program. The Spanish-speaking bilingual population in this study received some training in their L1, but because their instruction was divided between the L1 and L2, they were unable to develop the more complex command of the language which their monolingual peers achieved. Bylund and Diaz argue that results such as these urge formal HL instruction immediately on entrance into L2 culture and for the duration of schooling if students are to maintain the L1 proficiency necessary for academic or professional work.

Bylund and Diaz (2012) demonstrate this phenomenon with a comparison study which contrasted test results of two student groups. Both groups were composed of Spanish-dominant 12th-grade students in Swedish schools. However, all students in Group A were enrolled in HL maintenance classes while students in Group B had attended HL classes throughout high school, but were not enrolled their final year due to scheduling conflicts. Students from both groups were administered a grammaticality judgement test and vocabulary test which required them to supply words for specific contexts. Though both groups had been through multiple years of HL instruction, Group A performed significantly better than Group B on both the grammatical and the vocabulary tests. Bylund and Diaz summarized, “the group with current HL class attendance outperformed the group with discontinued HL class attendance on both L1 proficiency measures...length of HL class attendance did not play a role for test

performance” (p. 602). Reference Figure 1. As demonstrated, continued language exposure, not duration of exposure, seems to be the greatest determining factor in L1 proficiency. Thus, effective HL programs will continue to cultivate L1 literacy throughout language learners’ education.

Discussion. These findings suggest that successful HL programs accept ELLs soon after immigration, maintain consistent and repetitive L1 instruction throughout primary school—and optimally through high school—and exercise students, not only in conversational L1 skills, but in more complex academic skills like writing, research in the L1, proper grammar, and advanced vocabulary. In contrast to DL programs, which can only produce these effects in an environment where the student demographic is roughly 50/50 L1-L2, HL programs are practical when these percentages are more uneven. In addition, by providing more advanced language instruction than DL programs and exploring L1 culture more, HL programs cultivate stronger connections to native culture than DL or transitional programs. Thus, the HL model is beneficial to ELL communities which hope to develop bilinguals rather than simply easing the assimilation process into L2 culture, and such programs prepare students for success in bilingual career fields.

Issues with Current Studies

While most research indicates the cognitive, psychosocial, academic, career, and literacy advantages of bilingual programs, these studies are primarily based on Krashen’s (1996) classic theory that literacy skills transfer between languages. While Krashen’s theory has been supported by countless studies of ELL success in bilingual programs, these studies rest on a narrow understanding of literacy which ignores an integral part of

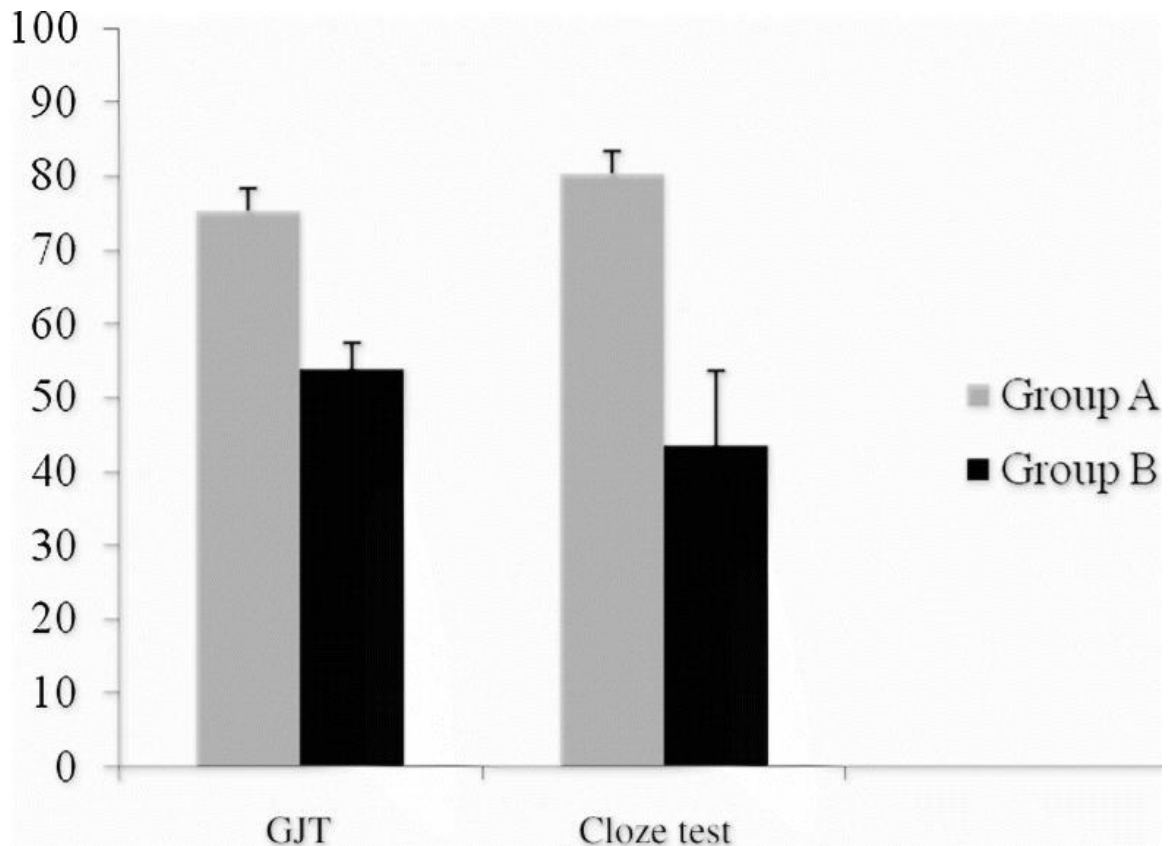


Figure 1. Means for the two groups' performance on the L1 proficiency tests, expressed as percentages of the maximum score on each test (Group A = Heritage language class-attending group; Group B = non-attending group; bars represent standard errors). Adapted from "The Effects of Heritage Language Instruction on First Language Proficiency: A Psycholinguistic Perspective," by E. Bylund, and M. Diaz, 2012, *International Journal of Bilingual Education and Bilingualism*, 15(5), p. 601. Copyright 2012 by Taylor & Francis. Reprinted with permission.

reading—understanding discourse structures. Current research is just beginning to explore the complex ways that cultural discourse may play into biliteracy and the ways that English cognitive structures may influence how students process and produce literature for other cultures (Maxwell-Reid, 2011). This view of language as situated within a cultural context is widely associated with the work of Benjamin Whorf, as cited by Maxwell-Reid, who first popularized the theory that language structures may

influence thought. However, his theory was not widely researched until recently when studies began to “focus, not on cognition, but on the relationship between language in use and the cultural context of that use” (Maxwell-Reid, p. 419). According to Risager (2006), language “is always a bearer of culture” (p. 134). This cultural influence of language on cognitive processes is now so well demonstrated that many worry that the spread of English may result in the extinction of other cultural cognitive patterns and discourse structures (Maxwell-Reid, 2011).

Differences Between Spanish and English Literary Structures

A comparison of Spanish and English discourse structures provides ample examples of the contrasting cultural cognitive meaning-making strategies. Just as these languages express meaning differently through their contrasting analytic and agglutinative semantic structures, so they communicate concepts through different logical and argumentative structures. “Users of Spanish and English are aware of discourse differences between the two languages, with Spanish text described as more complex, more elaborate, and less linear or explicit” (Maxwell-Reid, 2011, p. 420). Maxwell-Reid measured features such as sentence and clause length, subordination, logical digressions and linear reasoning, and thematic development. They write, “Spanish discourse has repeatedly been found to use longer sentences and more subordination, be more digressive and use less metatext to orient readers” (p. 420). In addition, Spanish exposition does not rely on the same organizational norms as English logic and proposition, and in argumentation, Spanish is especially likely to depart from English discourse structures and organizational standards.

In a 2010 study, Maxwell-Reid (2011) compared writing samples from Spanish-dominant students studying in traditional Spanish-only classrooms and bilingual English classrooms. The two student groups wrote argumentative essays in Spanish (their dominant language) in response to two writing prompts. Analyzing “systemic functional linguistics, including analysis of clause complexes, interpersonal and textual theme, and text structure” (p. 679), Maxwell-Reid found significant variations between ELL and monolingual Spanish student discourse structures, with ELL students exhibiting more English pragmatic and cognitive patterns in their Spanish writing, particularly in their textual organization and clause structures. While comparing Spanish and English discourse structures sufficiently illustrates the differences in cognitive strategies, these differences are likely to be even greater in languages with less linguistic coordination to English, like those from Asiatic or Arabic language families.

Redefining Bilingual Literacy Studies

In the context of diverse cultural discourse structures, Krashen’s argument for transferred literacy skills does not provide an adequate answer for bilingual advantages. While most studies of bilingual programs do evidence achievement gains for students, the studies typically assess lexical acquisition and grammatical accuracy, with little reference to comprehension or discourse. A review of the studies examined throughout this paper indicates this.

In the comparison study by Duran et al. (2010), Spanish-speaking preschoolers in transitional and immersion classrooms were assessed on “receptive and expressive vocabulary, letter-word identification, [and] alliteration and rhyming in English and

Spanish” (p. 210). The students were repeatedly assessed over a year-long period, and students in the transitional classroom exhibited noticeable gains in all areas. However, while these students excelled in functional literacy, there was no assessment of their cognitive, pragmatic literacy.

Tong et al. (2008) conducted a similar study, demonstrating the effects of transitional programs on academic oral English development. Their findings similarly indicated that transitional instruction accelerates lexical acquisition and syntactical understanding. However, like Duran et al. (2010), they also failed to examine student comprehension.

In Hofstetter’s 2004 study of transitional education, students were administered three standardized tests: the California English Language Development Test (CELDT), the SAT-9, and the Spanish Assessment of Basic Education (SABE/2). These tests measured listening, speaking, reading, writing, mathematics, and academic language acquisition. However, they relied on vocabulary assessments, straightforward grammatical understanding, and basic comprehension, with no instrument to measure higher level cognitive skills and pragmatic abilities. Thus, while Hofstetter demonstrated the efficacy of bilingual education in expanding students’ lexical and grammatical abilities, her work did not account for the role that discourse structures play in cultural biliteracy.

In Murphy’s 2014 comparison study of DL and transitional programs, students were tested on comprehension as well as lexical abilities. However, Murphy’s entire assessment was based on student interaction with storybooks, and these stories were

written for students on a first- and second-grade reading level. Thus, these assessments did not account for most differences in discourse structures, which primarily evidence themselves in argumentative writing and in more advanced writing samples than those produced by or for students in the primary grades.

Kim et al. (2015) cited studies from five DL programs. In these studies, assessments centered on vocabulary and syntactical abilities, both receptive and productive, and several contained comprehension assessments as well. However, these studies also focused on students in the primary grades and did not engage students in the higher-level cognitive processes which might indicate fluency in diverse cultural discourse structures.

The DL assessment by Marian et al. (2013) analyzed student achievement on two tests which measured students on “reading comprehension (e.g., short passages followed by multiple-choice questions) and math knowledge” (p. 171). However, one of these tests, because it was designed for ELLs, intentionally included simple language with high-frequency words and simple sentence structures. Thus, by eliminating complex discourse structures, these assessments failed to gauge pragmatic fluency.

Barnett et al. (2007) conducted a study of preschoolers, which indicated increased vocabulary for students in DL programs, and while this study reported student achievement on three assessments, each test centered on vocabulary skills, either receptive or productive. As a result, this study offered no indication that pragmatic function transfers along with lexical ability.

Bylund and Diaz's 2012 study claimed to assess ELLs' "grammatical intuition, [as well as] grammatical, lexical, contextual, and pragmatic knowledge" (p. 599). However, while they claimed to conduct a pragmatic assessment, their assessment materials indicate otherwise. The study implemented two tests: 1) the Grammaticality Judgement Test, requiring students to identify grammatical errors within 44 sample sentences, and 2) the Cloze test, a 300-word writing sample with every seventh word removed, which requires students to fill the blanks with words from their own vocabulary. These tests, like the others, assessed students on lexical and syntactical fluency, with little regard to pragmatic structures or patterns of cognitive discourse.

In Kim and Pyun's study of ELLs in HL programs (2014), student writing samples were assessed for "vocabulary, grammatical accuracy, content, organization, and fluency" (p. 300). In this study, content was analyzed for "relevancy of the topic, that is, whether ideas are clearly communicated and supported by details" (pp. 300-301). Kim and Pyun also assessed organizational features such as "sequencing and cohesion of the text including logical or natural progression of ideas and the effective use of cohesive devices" (pp. 300-301). Though this assessment graded students on higher-level abilities and discourse structures evidenced through content and organization, and while the student group in this study was composed of high school, college, and career ELLs, this analysis failed to address pragmatic differences between students' L1 and L2 because it judged both L1 and L2 writing samples according to English discourse standards. Thus, while this study initially appears to provide a more thorough analysis of literacy transfer from L1 to L2, it failed to do so because it assessed both English and non-English writing

samples with a rubric for English discourse structures. Neglecting the existence of variations in cultural cognitive patterns, Kim and Pyun's study, like earlier analyses, fails to offer insight into effective methods for promoting pragmatic biliteracy.

These studies generously demonstrate that grammatical and syntactical skill transfer from one language to another and that L1 idiolect may predict L2 idiolect, but they fail to indicate that social pragmatics transfer in the same way. Future studies of bilingual education must focus on bilingual discourse structures and pragmatic trends.

Teaching Cultural Reading Practices

In a world where patterns of logic, argument, and even humor differ from culture to culture, cognitive structures must be taught directly; they must not be assumed to transfer along with lexical acquisition and grammatical understanding. As Maxwell-Reid (2011) argues, cultural and pragmatic bilingualism could be encouraged through analyzing and creating both L1 and L2 texts for linguistic and content classes. "Students could consider published texts in terms of purpose, structure of texts, and related options for the writer to help them realize that language use involves choices and that different choices achieve different effects" (p. 432). Maxwell-Reid also proposes that teachers in bilingual classrooms should encourage their students to manipulate their writing, changing content and organizational patterns for different purposes and cultural contexts. Such activities, though not new to language instruction, when used to develop student understanding of pragmatics and discourse structures, will help students to recognize the place of various structures in their L1 and L2. Maxwell-Reid writes, "Equipped with this

greater awareness, students could then decide which discourse norms to put into writing and thus learn to manage their own language in a global context.” (p. 432)

In the bilingual classroom, language instruction should not be limited to vocabulary and grammar studies, but should include opportunities for students to interact with literature in a manner which exhibits the discourse structures of students’ primary and secondary languages. Otherwise, bilingual programs in United States school system will produce students who are biliterate according to political standards, but functionally illiterate, incapable of engaging with diverse cultural discourses and unable to communicate within socially diverse cognitive patterns.

Conclusions

In a culture with a growing immigrant population and burgeoning ELL student demographics, bilingual education is critical for students’ academic success and promises advantages for the United States workplace and for its national place in the global marketplace. However, because United States schools exhibit vastly different student demographics, no single bilingual program can meet every student’s needs. Instead, three bilingual models offer viable options for promoting ELL assimilation and satisfying political standards for equal opportunity.

In schools with fluid student populations, where many students are only temporarily enrolled, where the ELL population is low, or where the ELL population represents a wide variety of L1s, transitional bilingual programs offer the best alternative because they do not entail the long-term care of DL or HL programs and do not require as large of an ELL population. However, because transitional programs offer subtractive

rather than additive instruction, HL and DL programs offer more effective approaches to bilingual education when the ELL population is high and when students can commit to long-term enrollment.

DL programs are most effective when ELL populations are roughly equal to the English-dominant population. In such settings, schools may establish 50/50 classrooms where both student groups learn in the L1 and the L2 equally. Such programs encourage bilingualism and biliteracy for all students and foster a spirit of mutual respect for the languages and cultures of native and non-native English speakers. However, if DL educators wish to develop truly bilingual students, they must instruct in L1 and L2 discourse structures and pragmatics as well as grammar and vocabulary.

When the ELL student population is small but stable and able to commit to long-term enrollment, HL programs are effective. Though HL maintenance programs do not benefit English-dominant students, as DL programs do, they provide an effective model for maintaining bilingualism and biliteracy for ELLs when the student demographic is not balanced enough to create a 50/50 DL classroom. Because HL programs work well for small groups of ELL students, such programs should be developed in areas with diverse or small ELL populations. However, like DL programs, HL programs must provide instruction in cultural pragmatics and discourse structures—not just syntax and semantics—if they are to develop truly bilingual students.

Though each of these methods improves on the traditional immersive education model, providing students with added language acquisition support, little research has explored the effect of these programs on ELLs' fluency in cultural discourse and

pragmatics. Future research should analyze the effects of current methods on cultural biliteracy and explore effective methods for promoting biliteracy in diverse cognitive patterns.

In addition, though much research has been dedicated to analyzing different bilingual education models, little research has explored the effects of teacher education on bilingual student success. Further areas of research would include studies of the best educational models for equipping bilingual teachers.

Finally, little research has explored best practices for time allotments in DL programs. While many programs split instruction 50/50, others instruct 30/70 or 90/10. Other programs consistently teach each subject in the same languages each year, while still others shuffle which subjects are taught in the L1 and L2 from year to year. Inquiry into effective DL program design would be advisable.

As United States schools welcome students from diverse linguistic and cultural backgrounds, they must provide each student with an equal opportunity to succeed in the classroom. As schools perfect their bilingual programs, focusing on bilingualism as well as assimilation and looking deeper than oral literacy to cognitive literacy, they will equip students for success both in the classroom and in their careers.

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