



## Language Choice in Intervention With Bilingual Children

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**P**ractitioners involved in the development of educational programs and clinical services for child learners of English as a second language (ESL) are challenged when they make decisions about which language(s) to use in intervention. Questions that often arise in the decision-making process with bilingual learners include: Would intervention in the first language (L1) delay acquisition of a second language (L2)? Should intervention be conducted in English only? Would bilingual intervention “tax” the limited language-learning resources of children with language disorders? Answers to these questions vary with the language attitudes of the respondents, their belief systems, their own experience as foreign-language learners, and their assumptions about the processes of first (L1) and second-language (L2) acquisition, among other factors.

Variations in views about the language-learning processes of bilingual learners have important clinical implications. For example, if L1 and L2 are believed to develop as autonomous or unrelated language systems, clinicians may opt for implementing intervention in English, the majority language in the United States, and avoid use of the child’s first or home language. Alternatively, if development of L1 and L2 are seen as interrelated language-learning processes, clinicians may use intervention in one language to mediate simultaneous or sequential learning of the other (i.e., a bilingual approach).

This article examines assumptions underlying the selection of a language for intervention with bilingual children with language disorders. These children form a heterogeneous linguistic group. Broadly, bilingualism could be defined as knowledge of two languages. However, there is limited research regarding what levels of

proficiency in each language should characterize the language behavior of bilingual children. Some children are exposed to a language other than English at home and have limited experience or exposure to the second language. Others may be exposed to L1 and L2 at home and use the two languages without clear preference. Valdés and Figueroa (1994) defined bilingualism as knowledge of “more than one” language. In their framework, bilingualism is described as a continuum of proficiencies. If English (E) and Spanish (S) are the target languages of a bilingual individual, one may find bilingual children who are fluent in Spanish but have limited proficiency in English (Se) and children who are fluent in English but have limited proficiency in Spanish (Es). In between these two extremes, there is great individual variation in the performance of children in each language. Even bilingual individuals who appear fluent in the two languages (e.g., ES) tend to show differences in performance across language tasks, contexts, and conditions (Valdés & Figueroa, 1994). For example, they may be proficient in one language for one task (e.g., reading) but not for another (e.g., listening comprehension).

Although clinicians are frequently asked to provide language intervention to bilingual children, there is a paucity of research regarding the best way to teach them. For the sake of simplicity, one may view the use of one or two languages in intervention along a continuum. On one end of the continuum, clinicians may apply an “English only” approach, using English as the only linguistic means of intervention and instructing the parent to use only English in the home in place of the child’s first or native language (Karniol, 1992). This position is consistent with what has been called “subtractive bilingualism.” The educational aim is not to maintain the minority language but to promote the acquisition of the majority language only. Within this focus, bilingualism is gradually replaced by monolingualism in the majority language.

On the other end of the continuum, clinicians may apply a variety of “bilingual approaches.” For example, in bilingual programs in Canada, parents may be encouraged to continue to mediate L1 skills at home while the child is receiving intervention and instruction in the second language (e.g., Bruck, 1982). In other bilingual programs, intervention would be conducted in the native language while the child is acquiring English as a second language in school (Kayser, 1995). Concurrent translation approaches (i.e., sentences in one language are repeated in the other) are also representative of a bilingual approach in intervention. Although

there is great individual variation across programs and clinicians, these approaches promote both L1 and L2 development. Learning two languages is viewed as an enrichment to a child's development.

For the sake of simplicity, the rationales for the use of a bilingual approach in intervention are presented, followed by a summary of the arguments against the English-only approach. The goal is not to revive recent debates in the bilingual education arena (for examples of such debates, see Porter, 1990, and Krashen, 1996) but to describe the assumptions underlying these approaches. Studies focused on the role of input in the early bilingual development of typical children are used to further illuminate the complexities involved in measuring input and output in bilinguals. Then, methodological issues related to assessing language transfer during the school years are assessed using studies that compare the efficacy of various monolingual and bilingual education methods. Finally, available studies that focus on these questions with regard to bilingual children with language disorders are examined.

The review of this research will be used to provide converging evidence that (a) bilingual input does not retard language development in general, (b) learning in one language involves interrelated processes in the other for both typical and atypical learners, and (c) transfer of skills to a second language by children with limited English proficiency can be facilitated by mediation in the native language. Based on this evidence, it is concluded that intervention of language-minority children should be provided in the language(s) spoken in the home while the child is in the process of learning English as a second language at school.

### **Arguments for a Bilingual Approach in Language Intervention**

One of the most logical reasons for the use of a bilingual approach in intervention is that children benefit from input that is comprehensible (Krashen, 1994). Children learn a first or a second language by understanding messages that are comprehensible. If a second language is not understood, input in that language would not allow the learner to attend to specific linguistic features.

Further, a bilingual approach in intervention can facilitate *both* L1 and L2 development (rather than skills in only one language) because the processes of learning a first and second language are interrelated or interdependent (Cummins, 1980). The underlying cognitive processes responsible for language

processing and language acquisition (e.g., verbal working memory, perception, attention, problem solving, affective processing) are believed to be similar across typologically different languages, in monolinguals, bilinguals, and second language learners. In addition, the two languages interact dynamically within a single representational system. There is a growing body of research with bilinguals showing that words in L1 and L2 are interconnected via lexical-level links and conceptual links (for a review, see Poulisse, 1997). Current language processing models emphasize patterns of generalization from L1 to L2 and transfer of aspects of language whenever the languages share target features.

Based on these ideas, children who acquire a certain level of proficiency in L1 should achieve comparable levels of proficiency in L2. Correlations between L1 and L2 conversational skills or between L1 and L2 academic language would suggest the operation of unitary underlying learning processes applied to both languages. Children who attain high levels of first-language competence will be able to show comparable achievements in their acquisition of L2. Cummins' (1980) hypothesis would predict that conversational skills in L1 would correlate with conversational skills in L2, but not with academic language skills in L2. As will be discussed later, one of the challenges in testing this hypothesis is to determine cross-lingual measures that reflect these two levels of proficiency. Studies that focus on tasks based on cross-lingual similar items would show transfer from L1 to L2 and support Cummins' predictions. Studies that focus on aspects that are language-specific may not find transfer across the two languages.

Third, children who learn L2 through L1 may develop self-confidence and motivation, which in turn would facilitate L2 development. For L2 input to be comprehended, there has to be a "low affective filter" (Krashen, 1994). Children who are encouraged to use L1 may experience higher self-confidence and motivation than children who are not. Learner factors such as anxiety level, motivation to learn, or self-confidence may affect comprehension and development of L2.

Fourth, a language intervention approach that supports the language needs of children and their families (as opposed to "sink or swim" situations where treatment is conducted in a foreign language) may facilitate teachability. Parents who have limited English proficiency will be more capable of supporting their children's language development in their home language than in their second language. Wong Fillmore (1991b) indicated that L2

learning can be facilitated when children have access to a social, linguistic, and cognitive support system.

Fifth, a bilingual approach can facilitate the preservation of the child's home language. Language is a vehicle for the transmission of culture, values, and beliefs by immigrant (and non-immigrant) families. Children who experience negative attitudes regarding their home language may refuse to use it and eventually lose L1 proficiency. Wong Fillmore (1991a, 1991c) reported that the loss of the child's home language, in particular when that is the only language spoken by the parents, may have serious consequences for the child's development. Wong Fillmore found that a majority of children who received English-only instruction at the expense of the home language were likely to experience language loss. The parents of these children reported a breakdown of parental authority and a lack of their children's respect for them which in many cases had tragic consequences.

Thus, there are many strong reasons supporting bilingual instruction for children with language impairments. In contrast, the English-only approach in language intervention is based on several untenable arguments. For example, it is believed that learning two languages (L1, L2) may take longer, may require more effort than learning only one (L2), and may limit the child's acquisition of L2. These beliefs are based on the assumption that L1 and L2 are learned as two separate or isolated sets of competencies, which contrasts with the current view that the two languages share common underlying cognitive processes, a single representational system, and the potential for L1/L2 interactions for specific linguistic features. As will be seen later, studies showing evidence of transfer of skills from one language to the other do not support this notion.

The assumption that bilingualism slows down the child's acquisition of a language is based on comparisons with monolinguals (for a review of this research, see Gutierrez-Clellen, 1996; Pearson, Fernández, & Oller, 1993). Reports of depressed test scores for bilingual children (compared to monolingual children) and differences in their use of spontaneous language are often interpreted in support of the view that children who are bilingual do not achieve expected language skills. In these studies, the language skills of bilingual children are assessed separately for each language. L1 is compared to monolingual speakers of that language and L2 is compared to the English norms of monolingual children. Grosjean (1989) described this view as a "monolingual

view" of bilingualism wherein the language performance of a bilingual speaker is judged as that of two monolingual persons. For example, Teuber & Furlong (1985) found that bilingual children obtained scores that were almost two standard deviations below the normative mean of monolingual children on both the Expressive One-Word Picture Vocabulary Test (Gardner, 1979, 1983) and Peabody Picture Vocabulary Test-Revised (Dunn & Dunn, 1981). Thus, low test scores for bilingual children are typically attributed to their bilingualism and used to suggest English-only instruction. As will be discussed later, the recent literature shows that it is not appropriate to use a monolingual standard for assessing the language(s) of bilingual children and that monolingual standards underestimate the language skills of these children.

In addition to depressed test scores, the spontaneous language performance of bilingual children is also believed to exhibit "limitations" such as the alternation of the two languages within or between sentences (i.e., code-switching). Codeswitching is viewed as problematic because the language skills of bilinguals are compared to the language performance of monolinguals (who are not expected to exhibit codeswitching behavior). Language mixing is assumed to be symptomatic of limited language development (i.e., a "borrowed" word is used in place of a word the child presumably does not know). Within this perspective, codeswitching and language mixing occur because the child lacks words in a targeted language and there is no "overlap" or positive transfer between the two languages. Language mixing was also presumed to increase stuttering (Lebrun & Paradis, 1984). An English-only or monolingual approach in intervention would prevent language interference from one language to the other. Many language teachers advise parents who want to raise their children bilingually to "keep their two languages separate" (i.e., one parent, one language) and not to mix the two languages when communicating with their child in order to prevent language mixing or codeswitching behavior (for a review, see Romaine, 1995).

Proponents of an English-only approach in intervention claim that there is a direct relationship between the amount of English input and achievement outcomes in American schools (Porter, 1990; Rosenshine & Berliner, 1978). This position is known as the "time-on-task" hypothesis. Depending on the clinicians' assumptions about the nature of the language-learning process, parents are often told to restrict input in the native language to avoid interfering with the acquisition of the majority

language, typically the language selected for intervention. This hypothesis predicts that children will exhibit greater English language gains in intervention if more time is devoted to English (rather than to intervention in the native language). This position is also based on the assumption that ESL learners will not learn to use English if the targeted language is not “needed” for communication purposes (i.e., when the child interacts with speakers of other languages). The following section will suggest that when bilingual children are assessed appropriately, there is no evidence that bilingualism impairs the child’s rate or quality of development in the target languages.

### **Bilingualism and Outcomes During the Early Stages of Language Development**

One of the main challenges in assessing the effectiveness of English-only or bilingual approaches in language instruction is to identify clearly defined methods for measuring the quality and quantity of bilingual input. Home surveys and parent reports may be useful in obtaining information about input in each language and to later establish relationships between input and language outcomes. However, although lexical learning in bilingual infants was found to relate to the quantity of input in a targeted language (Pearson, Fernández, Lewedeg, & Oller, 1997), the magnitude of this “critical threshold” or minimum input is still unknown. There is evidence that the quantity of input in each language may not directly relate to the particular pattern or rate of cross-language grammatical development in children learning two languages (Paradis & Genesee, 1996). Children who appear to be exposed *equally* to two languages may not exhibit balanced output (Pearson & Fernández, 1994). “Balanced” bilinguals may represent only a small proportion of bilingual children learning two languages as a “first” language. Pearson and Fernández found that only 4 children out of a sample of 20 infants and toddlers demonstrated an equal number of words in each language. Interestingly, these children were *not* exposed to balanced input.

The issue of assessing output in bilingual children is even more complicated. For example, if the vocabularies of the two languages are assessed separately and each language is compared to available monolingual norms for that language, bilingual children may show a slower rate of growth. This occurs because of the significant individual variability in second language acquisition across children. Thus, the most appropriate way to assess the

bilingual competencies of bilingual speakers is to consider their performance in the two languages, rather than in each language in isolation. In effect, children may initially learn certain words in one language and not in the other. Using this procedure, there were no differences in the lexical development of young bilingual and monolingual children (Pearson et al., 1993). Pearson and her colleagues showed that children’s early bilingual development was best measured by determining the child’s total conceptual vocabulary for both L1 and L2 combined. The total conceptual vocabulary would include all the words in one language and the words in the other that represented concepts not present in the former language. When the child’s bilingual competence was assessed “bilingually,” the vocabulary scores of the bilingual children were found to be similar to those of monolinguals. For vocabulary comprehension, bilingual children’s scores in each language were found to be comparable to the scores of monolingual children. Similar results were found for vocabulary production.

The results of this research showed that bilingual input did not delay children’s lexical development. These trends have been observed for the syntactic acquisition of young bilingual children as well, even though each of the languages of bilingual children were compared to the patterns of development of monolinguals. A cross-language comparison of children ages 2 to 3 years who were learning English and French simultaneously indicated developmental patterns within the range of variation of monolingual children in each language for finite verbs, negative utterances, and pronominal subject use (Paradis & Genesee, 1996). The crosslinguistic comparisons did not yield significant differences in developmental rates of syntactic development across bilingual and monolingual children. However, further research is needed to evaluate these trends in older children who are expected to use complex syntactic forms.

The research discussed thus far has shown that when the two languages are assessed appropriately by including unique aspects of both languages, bilingual children progress at the same rates as monolingual children. To determine whether similar conclusions can be reached regarding the quality of the two languages, it is important to also examine codeswitching appropriately. Instances of codeswitching behavior should not be interpreted as lack of language skill. Children who are bilingual may codeswitch within and between utterances depending on multiple factors (e.g., pragmatic, sociolinguistic, priming effects, etc.) and not necessarily because of relative lack of proficiency across

the two languages or because of parental use of codeswitching.

There is no consensus in the field of multilingual research regarding the nature of codeswitching in child learners and how it relates to language input. Studies in which children were exposed to the “one parent, one language” strategy indicate great individual differences in children’s codeswitching performance (Lanza, 1997). Some children may codeswitch even though they are not exposed to much codeswitching at home (Genesee, Nicoladis, & Paradis, 1995), whereas other children who are exposed to code-switching may exhibit little codeswitching in their spontaneous language. Research indicates that bilingual children at about 2 years of age have the ability to separate their languages and codeswitch to address different interlocutors and according to different situations (Nicoladis & Genesee, 1996). Thus, there is no empirical support for keeping the two languages separate to facilitate language differentiation. Furthermore, Lebrun and Paradis (1984) showed that there is no correlation between bilingualism and stuttering based on early studies of the incidence of stuttering in monolingual and bilingual populations.

Because codeswitching is characteristic of the linguistic behavior of bilinguals (children or adults), it may indeed be a measure of bilingual proficiency and not a problem of “interference” from L1 or a case of incomplete language development (Poullisse, 1997). Research in the area of codeswitching suggests great variability in the use of codeswitching across speech communities. For example, Puerto Rican communities in the New York area continue to codeswitch in adulthood (Eastman, 1992). In these communities, codeswitching is expected in child and adult communication and is not viewed as a deviation from the “norm.” Rather, codeswitching in language intervention may be useful to mediate bilingual development.

Current research suggests that children can learn two languages in an additive fashion. There is no evidence that use of L1 constrains learning of L2. Children who are exposed to bilingual input were found to use translation equivalents. Children used “cross-language” translation equivalents even at very early stages of vocabulary development, in vocabularies of 2–12 words, (Pearson, Fernández, & Oller, 1995). Children do not appear to have a harder time learning words in L2 when the same meanings are learned first in L1.

Regardless of type or amount of bilingual input, there is great variability in children’s bilingual development during the early stages. Typical children exposed to two languages

simultaneously tend to demonstrate sequential language growth (i.e., L1 followed by L2) and still achieve rates of lexical development similar to monolinguals (Pearson & Fernández, 1994). If the processes of second language acquisition described in the literature apply to the bilingual learning of atypical learners, one would predict that an L1-first or L1–L2 approach in intervention would result in comparable achievements across the two languages. The next section will show that learning two languages involves common language-learning mechanisms as well as interactive processes of transfer for shared linguistic features.

### **Bilingualism and Outcomes During the School Years**

Studies examining the language performance and achievements of bilinguals during the school years focus on the issue of transfer between the two languages using school-language or academic tasks. In these studies, evidence of positive correlations between L1 and L2 achievements would suggest that learning in L1 does not negatively affect L2 development. However, one of the main problems in determining the effectiveness of bilingual intervention approaches for facilitating transfer is the appropriate identification of equivalent cross-language domains, contexts, and activities. Crosslinguistic research on language transfer shows that bilingual speakers may use their L1 knowledge when learning L2 and that transfer is facilitated when learners can identify cross-language similarities for specific domains. For example, a study reported in Hancin-Bhatt and Nagy (1994) indicated that Spanish speakers, but not Korean speakers, were more accurate at an English morpheme completion task when real words rather than nonwords were used. Presumably because Korean differs from English more than Spanish does, the difference between completing real words versus nonwords was smaller for Korean speakers. The Spanish speakers appeared to have used their L1 knowledge to complete the L2 task. These findings suggest that speakers rely on cross-linguistic similarities between L1 and L2 in the performance of new language tasks.

The question of whether L1 learning can facilitate L2 acquisition was directly addressed using an invented language as L2. In a study with Spanish- and Navajo-speaking children learning English as L2, children were taught novel vocabulary words as learning tasks (Kiernan & Swisher, 1990). Children were taught invented English words under a bilingual

(i.e., stimuli presentation and training in L1 followed by L2) and monolingual condition (i.e., stimuli presentation and training in L2 only). Results supported the hypothesis of facilitated L2 word learning under a bilingual condition compared to the L2-only approach. Children reached criterion in fewer trials in the bilingual training condition regardless of their L1 background (i.e., Spanish, Navajo) or L2 proficiency. These results corroborated earlier findings by García (1983) that demonstrated

how knowledge of Spanish (L1) prepositions facilitated learning of “on” and “behind” in English (L2).

Most studies with school-age children focus on the effectiveness of bilingual approaches on the language and academic development of typical learners. Research with atypical language learners is more limited. Table 1 presents an overview of bilingual studies comparing bilingual and L2-only approaches with typical learners. These studies generally

**TABLE 1. Selected bilingual studies of language transfer and the efficacy of bilingual approaches.**

Study	L1/L2	Outcome Measure	Age or Grade	N	Nature of Findings
Gonzalez (1986)	Spanish/English	Reading comprehension, ratings of oral skills	6th grade	72	Significant positive correlations between L1 and L2
Davidson, Kline, & Snow (1986)	French/English	Word definitions	grades 2 to 5	71	Significant positive correlations between L1 and L2
Cummins, Swain, Nakajima, Hadscombe, Green, & Tran (1984)	Vietnamese/English	Antonyms	9 to 17 years	45	Significant positive correlations between L1 and L2
Geva & Ryan (1987)	English/Hebrew	Sentence completion, reading comprehension, memory	grades 5 to 7	73	Significant positive correlations between L1 sentence completion and L2 reading; L1 and L2 correlated on memory
Rosier & Farella (1976)	Navajo/English	Reading Achievement	grades 4 and 5	Unknown (9 schools)	Greater gains for bilingual than L2-only programs
Vorih & Rosier (1978)	Navajo/English	Reading Achievement	grades 4 and 5	Unknown (9 schools)	Greater gains for bilingual than L2-only programs
Legarreta (1979)	Spanish/English	Oral language comprehension	5 years	52	Greater gains for bilingual than L2-only programs
Sandoval-Martínez (1982)	Spanish/English	Language production, concept development	4 years	554	Greater gains for bilingual than L2-only instruction only for Spanish-preferring children
Carlisle (1986)	Spanish/English	Rhetorical effectiveness, syntax, productivity of written language	grades 4 and 6	62	Greater gains for bilingual than L2-only submersion programs
Kiernan & Swisher (1990)	Spanish/English Navajo/English	Novel English word learning	4;11–6;3 years	7	Fewer trials under bilingual than monolingual condition regardless of L2 proficiency or L1 background
García (1983)	Spanish/English	Prepositions “on” and “behind”	4;3–4;8 years	4	Fewer trials under bilingual vs. L2-only conditions
Bruck (1982)	English/French/French/English	Language production and comprehension	K to grade 1	27 in each group	No difference between instruction in L1 and L2.

found positive correlations between L1 and L2 as well as greater gains in bilingual versus L2-only approaches for children with limited L2 proficiency.

For example, Gonzalez (1986) reported significant correlations across L1 and L2 development measures in Mexican immigrant and Mexican American sixth grade students. Students with high levels of Spanish reading proficiency tended to develop high levels of English reading skills. These relationships were stronger than the relationships between English oral proficiency and English reading skills. Children who obtained high ratings of Spanish oral communication also tended to earn high scores on their English oral skills. These findings suggest that L1 learning can transfer to L2 in at least some domains.

Similar results have been found across other languages. Davidson, Kline, and Snow (1986) reported significant positive correlations in the ability to provide definitions in L1 and L2 by school age French- and English-speaking children. Children who were able to perform these linguistic tasks in French were likely to demonstrate similar skills in English, their second language. A study conducted by Cummins et al. (1984) found that the performance of Vietnamese refugee children on Vietnamese antonyms together with age as a factor predicted 61% of the variance in English antonyms. Geva and Ryan (1987) found similar relationships between the ability to complete English clauses such as “she cooked the potatoes and meat for him because...” and the reading ability of Anglophone Canadian children in Hebrew as a second language. Interestingly, they also found a correlation between memory measures in L1 and L2 that was maintained after grade and nonverbal intelligence were partialled out. These findings suggest the presence of interrelated linguistic processes across L1 and L2 as well as the existence of common cognitive mechanisms underlying L1 and L2 learning.

The effectiveness of bilingual training on children’s academic achievement has been assessed in numerous studies conducted in the United States, Canada, and Europe (for a comprehensive review, see Cummins, 1991; for annotated bibliographies on the polemics over bilingual education, see Cummins, 1993). In general, these studies suggest greater gains in a bilingual versus L2-only condition for children with limited L2 proficiency. Early studies with fourth and fifth grade Navajo children reported significantly higher English reading achievement test scores in children who received bilingual instruction than in a comparison group in monolingual English classrooms within the

same reservation (Rosier & Farella, 1976; Vorih & Rosier, 1978). Legarreta (1979) compared the language gains of Spanish-speaking kindergarten children placed in programs that incorporated L1 as the language of instruction and programs that used only L2. Results indicated that children who received bilingual training (bilingual with concurrent translation or bilingual with alternate immersion) demonstrated greater gains in English oral comprehension measures than children in English-only placements.

Sandoval-Martínez (1982) examined the language performance of Spanish-speaking children receiving bilingual and English-only instruction in Head Start programs. Children’s performance was further evaluated across language groups on the pretest (i.e., Spanish-preferring, English-preferring). The Spanish-preferring children in bilingual programs achieved greater gains than comparison children in English-only placements in language production and concept development. The English-preferring children were found to achieve similar gains across instructional approaches.

Carlisle (1986) suggested that a bilingual approach may facilitate greater levels of L2 written language development than does use of L2 as the only language of instruction. Fourth and sixth grade Spanish-speaking children who received instruction in a bilingual program achieved higher rhetorical effectiveness, syntactic maturity, and productivity in their written English than a control group in a submersion program where English was the only language of instruction. Most recently, Ramírez, Pasta, Yuen, Billings, & Ramey (1991) compared the effectiveness of an early-exit bilingual approach and a structured English immersion approach with Spanish-speaking children. Results indicated greater English reading achievement in the children from the early-exit bilingual approach group than in the children from the English immersion program. These findings suggest that L2-only approaches may result in smaller gains than bilingual instructional approaches.

A review of studies of bilingual, L1-only, and traditional L2 as a second language instruction with Anglophone students in Canada learning French as a second language found similar outcomes (Genesee, 1991; Swain & Lapkin, 1991). In the bilingual program, students received instruction only in L2 from kindergarten to first or second grade. They were then gradually instructed in L1 so that by sixth grade both languages were equally used for instruction. Students were compared to students receiving instruction in the home language (i.e., L1-only) and students receiving

traditional ESL instruction. Results indicated that the students in the bilingual program lagged behind L1-only comparison groups on L1 measures when instruction was provided only in L2 (i.e., up to third grade). As both languages began to be incorporated, the students in the bilingual program outperformed the comparison group on L1 measures. Their academic achievement became comparable to students receiving instruction in L1 and their French proficiency surpassed that of comparison groups in other L2 instructional programs.

Rossell and Baker (1996) emphasized the lack of conclusive evidence regarding the superiority of a bilingual approach over English-only instruction based on their evaluation of 72 bilingual studies (for a critique of their review, see Krashen, 1996). Their evaluation yielded no evidence supporting the superiority of an English-only approach either. Their findings revealed great variability in the implementation of a target program across studies as well as variability due to uncontrolled mediating variables regarding the amount of engaged “time-on-task,” quality of instruction, and other methodological issues in many studies (e.g., limited sample size, lack of a control group, and lack of randomization in the assignment of students to programs). Nevertheless, their analyses led them to conclude that a bilingual approach “can produce better learning at the early stages of learning a second language” (Rossell & Baker, 1996, p. 39) than an English-only approach. Even the harshest critics have acknowledged the positive effects of bilingual approaches on the academic performance of children with limited English proficiency. The Panel to Review Evaluation Studies of Bilingual Education appointed by the National Research Council noted that “when several studies carried out under different conditions yield convergent results, confidence in the conclusions increases, even if the individual studies are flawed” (National Research Council, 1992, p. 49).

In summary, a preponderance of evidence indicates that learning L1 and L2 in children without language-learning disabilities does not hinder language development. The positive correlations between L1 and L2 achievements suggest the interaction of interrelated linguistic processes for shared linguistic features and a common core of cognitive processes. The finding of greater L2 gains in a bilingual versus L2-only condition for children with limited L2 proficiency indicates that a bilingual approach in intervention may facilitate language development in children with special needs. The next section illustrates these outcomes in children with language disorders.

## **Outcomes of Bilingual Approaches With Atypical Child Learners: Canadian Studies**

Although the literature examining the effects of bilingual approaches with typical child learners is extensive, there is limited research on the effectiveness of these approaches with clinical populations. An early study (Bruck, 1982, 1984), attempted to address this issue by comparing the language skills of English-speaking children with language impairments learning French as L2 in an additive bilingual program (maintenance and development of L1 at home; French immersion at school) versus a regular program (maintenance and development of L1 at home; L1 instruction and French as a second language at school) in Quebec, Canada. In the French immersion program, children first received all instruction in their L2 (i.e., reading, mathematics, language arts during kindergarten and first grade) before they were gradually taught in L1 (from grade 2 on). Comparisons of their linguistic progress from kindergarten to first grade were cross-validated with two control groups with normal language (i.e., normal language English-speaking in French immersion, normal language English-speaking in English classes). Statistical analyses revealed no significant differences in the language achievement of the children across the two language approaches (i.e., L1 at home, French immersion vs. L1 at home, English at school, and French as a second language). Bruck concluded that children with language impairments (LI children) can benefit from intervention in L2 and a focus on maintenance of the home language.

The results of this study suggest no differences favoring use of L1 or L2 in intervention. However, it is critical to emphasize the differences between the French immersion approach and the English-only approach favored by American clinicians in many settings. The reported success of a French immersion approach with Canadian Anglophone children is based on several social and psychoeducational conditions. First, the program is described as promoting additive bilingualism. The child’s home language is honored, encouraged, and maintained to promote bilingualism. Both English and French are valued because they are the two official languages in the country. Furthermore, children and families are not required to attend French immersion programs. Children can transfer in and out of these programs to continue their education in English regular classes. In contrast, the English-only approach in the United States focuses on the acquisition of English rather than on the



acquisition of two languages. Bilingual education programs are not designed to promote maintenance of the home language. Learning English is mandatory and not an educational program option. Proponents of an English-only approach discourage use of L1 by the family because the goal is to assimilate the child to the majority culture as quickly as possible. The emphasis on monolingualism (as opposed to developing bilingualism) and suppression of the home language (which promotes subtractive bilingualism and ultimately language loss) may result in poorer language and academic outcomes (see Bruck, 1985 for a discussion of affective, motivational, and attitudinal variables).

### **Outcomes of Bilingual Approaches With Atypical Child Learners: American Studies**

Perozzi (1985) compared the vocabulary learning of 6 children with language delays from Spanish- and English-speaking backgrounds using a within-subject design across two learning conditions. For the individual children, the learning tasks involved unfamiliar vocabulary items presented in Spanish and English. Under condition A, children were taught receptive vocabulary in L1 followed by L2; for condition B, training was conducted in reverse order (i.e., L2 was followed by L1). Results indicated that children achieved L2 criterion in fewer trials when L1 was introduced first (i.e., condition A) than under condition B. In addition, when L1 was taught before L2, children learned both L1 and L2 faster than when words were learned initially in L2. The facilitating effect of using L1 to mediate L2 vocabulary learning was found for both language background groups.

A study of vocabulary learning under bilingual (English-Icelandic) and English-only treatment conditions with an Icelandic child with language impairment suggested that processing structurally different languages in intervention does *not* slow down language development (Thordardottir, Ellis Weismer, & Smith, 1996). Targeted English vocabulary stimuli included both school and home words to account for differences in language use across settings (i.e., the child's language at home was Icelandic; the language at school was English). In the bilingual treatment condition, targeted words were presented in both languages using a translation approach within semi-structured play activities. In the English-only condition, Icelandic utterances were ignored and target words were presented only in English. Results indicated an advantage for

the bilingual condition on the child's performance on home words and equivalent achievement across treatment conditions for school words.

There is evidence that bilingual facilitating effects may be found for the training of prepositions and pronouns as well (Perozzi & Chavez Sanchez, 1992). First grade children with language delays were compared under two training conditions (i.e., Spanish followed by English; English-only) focused on teaching unfamiliar prepositions and pronouns in English. Targeted stimuli were identified upon assessment of Spanish and English prepositions and pronouns. Children who were taught the English prepositions and pronouns in the bilingual condition learned twice as rapidly as children who were taught in English only. Results appeared to corroborate the facilitating effects of the native language in intervention with children with language disorders. Yet one of the main problems with this research is the lack of appropriate assessment measures for the initial identification of bilingual children with language disorders. It is possible that some of the participating children were typical learners who exhibited limited test performance due to the use of invalid assessment measures at the time of the study.

### **Clinical Implications**

The literature in bilingual education of the last two decades suggests that children who are learning two languages may benefit from a bilingual approach in intervention. None of the studies designed to prove the contrary have been able to show that an English-only approach is superior. The research clearly shows that mediation in the native language does not slow development or learning of a second language. There is no evidence that a bilingual approach in intervention would "confuse" or tax the learning abilities of children with disabilities. There is great variability in second-language acquisition and the language-learning processes involved are not well understood.

The research presented in this paper has several implications for clinicians working with bilingual children. First, it suggests that children's language performance and achievement can be maximized when the language of instruction matches the child's language(s), and when L1 is used as an organizational language framework to facilitate second-language learning. If it is assumed that language learning relies on shared cognitive processes, one would expect that interventions that facilitate general language-learning mechanisms (e.g., attention, perception, comparison) should facilitate both

L1 and L2 learning. Children may indeed benefit from language uses in interventions that acknowledge the language usage of the family and the bilingual development of the child. Although there is a need for further research on the processes of developing bilingual competence and the role of input with atypical learners, all the studies reviewed so far converge in at least one point. The language acquisition process may be quite robust in normal children exposed to different linguistic environments (insofar as L2 is appropriately mediated), but children with language disorders require optimal and comprehensible input (Richards, 1994). Interventions conducted with incomprehensible input may not facilitate language development in L1 or L2. Limiting input by forcing a family to “choose” the language of intervention (typically the majority language) does not appear to be an optimal choice for children who are exposed to a bilingual learning environment outside monolingual clinical or school settings.

Children with language disorders who are learning a second language constitute a heterogeneous language group concerning the types of language deficits involved (e.g., phonologic, lexical, morphosyntactic, pragmatic), the severity of the disorder (mild to severe), the modality of the disorder (receptive, expressive, both), the structural distance of the language(s) learned as L1 and L2 (e.g., Spanish/English vs. Cantonese/English), the language experiences of the child in each language (formal or informal manner of acquisition, time of first exposure to L2), the type and availability of input in each language, and the influence of affective factors related to second-language learning. These variables are expected to interact in predicting rate of learning and ultimate attainment in each language.

The extent to which L1 and L2 are typologically similar for specific language aspects is a critical variable for predicting transfer of L1 skills to L2. Interventions in one language are not expected to result in direct and observable gains in the other language for all features and across all language areas. One may expect significant transfer for features in L1 that are also represented in L2. For example, for children who speak Spanish as L1, Spanish phonemes and processes that are represented in English may be good candidates for intervention in L1 (e.g., liquids, gliding processes, weak syllable deletions). In contrast, Spanish does not require attention to clusters compared to English. Thus, practicing the Spanish clusters may not be helpful in teaching /st, sk/ clusters. These English-specific targets will need to be taught in L2.

Children are likely to notice L2 features that are frequent and perceptually salient. A focus on common phonological features across Spanish as L1 and English (e.g., syllableness, final /s/), may facilitate the perception of morphological features that require attention to unstressed syllables of short duration, such as articles and plural -s (both represented in each language). Grammatical forms that do not overlap across the two languages (e.g., Spanish and English verb inflections) will need to be explicitly taught in the corresponding languages once children are capable of representing a variety of meaning relationships in the language.

Children are also likely to notice L2 features if they are meaningful and have communicative significance. L1 should be used to provide conceptual mediation as needed while children learn L2 words. This approach may promote semantic development in both languages. This does not mean that clinicians should wait to get a sizable vocabulary in L1 before introducing those words in L2. Likewise, concurrent translation approaches (i.e., sentences in one language are repeated in the other) within bilingual instructional programs do not appear to be as effective in facilitating language learning as the strategic use of the two languages to facilitate language comprehension (Jacobson, 1990).

## Conclusions

Historically, the use of L1 has been viewed as a deficit or a disadvantage, not as a strength that can be used to facilitate language learning because bilingualism was blamed for the less successful academic performance of poor immigrant children. The available literature suggests that intervention approaches may be most successful when they are designed to extend, rather than limit, the child's linguistic resources. This paper discussed several assumptions underlying the choice of language in intervention. Understanding the complexities of the processes involved in bilingual learning should help the clinician make clinical decisions that will address the needs of bilingual children and their families.

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