Multiple literacies: Linking the research on bilingualism and biliteracies to the practical

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The present article addresses the fundamental developmental differences between monolingualism and bilingualism, as outlined in the literature. It takes into account research using qualitative and quantitative methodologies and reviews the advantages and possible disadvantages of bilingualism in preschool children. It then moves on to biliteracies in early childhood education. The questions addressed are: Will the early learning of a second language delay a child's language development? What effect does bilingualism have on the development of phonemic awareness, and does that have an impact on reading development? Do bilingual children have an advantage over monolingual children? What happens when a child with language impairment is called upon to develop two languages? What are some challenges regarding the acquisition of biliteracies? The present article concludes with recommendations for physicians who counsel bilingual families regarding early childhood literacy promotion and development.

Key Words: *Bilingual advantage; Bilingualism; Biliteracies; Family literacies; Multiple literacies*

Studies conducted on the differences in the language abilities of bilingual and monolingual children are numerous. The present article examines these studies with the aim of developing an understanding of the processes involved to offer practical advice in reference to bilingualism and biliteracies. As educational language researchers and teacher educators, we need to look at developmental and learning processes, as well as the accompanying research on bilingualism and biliteracies (1,2). There is a need for us to incorporate this knowledge into the everyday lives of bilingual children and the parents with whom we are in contact.

We are often faced with difficulties that arise in children for whom the bilingual experience has not been successful, both in terms of language acquisition and biliteracy. The present article outlines the pitfalls that need to be avoided in certain children if they are to be successful at language learning and in acquiring different and differing literacies.

Les alphabétisations multiples : Relier la recherche sur le bilinguisme et les bialphabétisations aux aspects pratiques

Le présent article porte sur les différences fondamentales du développement entre l'unilinguisme et le bilinguisme, telles qu'elles sont soulignées dans les publications. Il tient compte des recherches faisant appel à des méthodologies qualitative et quantitative et analyse les avantages et les inconvénients potentiels du bilinguisme chez les enfants d'âge préscolaire. Il traite ensuite de la bialphabétisation dans l'éducation des tout-petits. Les questions abordées sont : L'apprentissage précoce d'une deuxième langue retarde-t-il le développement langagier de l'enfant? Quel est l'effet du bilinguisme sur le développement de l'éveil phonémique, et cet effet a-t-il des répercussions sur le développement de la lecture? Les enfants bilingues sont-ils avantagés par rapport aux enfants unilingues? Que se passe-t-il lorsqu'un enfant qui a des troubles du langage est appelé à développer deux langues? Quels sont quelques-uns des défis reliés à l'acquisition de la bialphabétisation? Le présent article conclut par des recommandations à l'intention des médecins qui conseillent les familles bilingues au sujet de la promotion et du développement de l'alphabétisation des tout-petits.

Will the early learning of a second language delay a child's language development?

Research has shown that bilingual children do, indeed, lag behind their monolingual peers in acquiring language, and that bilingual children display language patterns similar to monolingual language-impaired children. In particular, research (3) that compared monolingual children with language impairment and typical second-language learners demonstrated that these two groups made similar kinds of errors in their expressive language and grammatical morphology. Over time, bilingual children learn the differing rules governing each language. When bilingual children use cues such as word order to process and produce both languages, they come to learn how cues work within and between two languages, thereby creating a system of cues that differ from monolinguals. In short, bilingual children follow a different course of language development than monolingual children (4).

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An example of this is found in a study (5) that looked at the delay in bilingual children in beginning to use a second-noun strategy for interpreting noun noun verb (NNV) and verb noun noun (VNN) sentences. This strategy requires reporting which of the two nouns in a sentence with a transitive verb is the actor. The choice appears to be language-specific. In a language where word order may be more important than agreement, saliency determines which noun becomes the actor. According to research (6), for English monolinguals, this pattern of choosing second noun agency occurs at approximately seven years of age for VNN sentences and at approximately nine years of age for NNV sentences. Spanish monolinguals begin to use a defined pattern of choosing a second noun agency pattern by 11 years of age for both VNN and NNV sentences (7). The strategy only develops in bilinguals at approximately 14 to 16 years of age (8). Perception and attention to different cues in two different languages demonstrates a difference between monolinguals and bilinguals, with bilinguals showing an in-between pattern regarding perception and attention in each of their languages (8). Bilingual children rely on word order. Older bilinguals continue to rely on word order, although not exclusively. These results point to early differences in the performance of bilinguals when compared with monolinguals and suggest that bilinguals catch up with their monolingual peers in time.

Because of these developmental differences in the bilingual child, one of the recommendations we need to put forward as educational researchers and educators involved in multiple literacies is to be wary of academic performance in literacy tests and psychological tests. For example, bilingual students may do poorly early on tests that involve choice and the use of the second noun agency pattern. Awareness of this pattern seems to be delayed in certain languages. Given this, testing of that skill may not be to the benefit of a bilingual child. The same can be said of measures of subject-verb agreement, which is a popular item used in standardized tests in language and literacy.

Because bilingual children often demonstrate below-average vocabulary scores in each of their languages (9), standardized tests that put an emphasis on isolated lexical items or on lexical items in short sentences will prove to be difficult for these children, and outcomes of such tests will show a deficit in these areas when it should not be considered a deficit. Bilingual children are acquiring vocabulary in two languages, and there is a delay in vocabulary learning when compared with monolingual children.

According to Viberg (10), a recognized strength that bilingual children demonstrate is shown in book reading activities. These children have a tendency to give more detailed and concrete versions of the story in both languages than monolinguals, who tend to give more condensed versions. A test that requires short answers may not benefit the bilingual child. It would seem that semantic links are different in bilingual children, and while this may

prove to be a strength in the long run, depending on the task demanded of the bilingual child, it may not be recognized as such in a school or clinical setting.

Do bilingual children have an advantage over monolingual children?

Early and recent research on bilingualism reveals very few shortcomings regarding the bilingual experience. Early research, such as the landmark study performed by Peel and Lambert (11), and replicated by Lambert and Tucker (12), points to cognitive advantages in bilingual children. Other research with bilingual children (13) suggests that there may be a cognitive difference regarding development in either analysis of representation or control of attention, or possibly both, between children who became bilingual in early childhood compared with monolinguals. Subsequent research (14) has indicated that bilingual children are better than monolingual children at judging the grammaticality of sentences that contained distracting semantic anomalies. Bilingual children are also better than monolingual children at understanding that the meaning of the printed word does not change if it is moved to accompany a different picture (14).

What happens when a child with language impairment is called upon to develop two languages?

One study (15) compared bilingual French/English children with language impairment with monolingual children with language impairment and found no difference for aspects of grammatical morphology examined in both languages. In other words, the language-impaired child could develop second language skills, but both languages were affected by the impairment. These researchers concluded that language impairment may not be an impediment to learning two languages. A study by Salameh et al (16) compared the progress of bilingual Swedish/Arabic children with and without language impairment and found that the two groups developed grammatical structures in a similar way, although the pace of development in bilingual children with language impairment was slower.

What effect does bilingualism have on the development of phonological awareness, and does that have an impact on reading development?

Similar to Lindsey et al (17), the authors understand phonological awareness to be a set of linguistic and metalinguistic skills involving sensitivity to the sound structure of spoken words. Phonological awareness is not the only variable in ensuring that children are successful in literacy. Cross linguistic studies in second language acquisition involving Chinese/English (18) and French/English (19) indicate that phonological awareness is a general, and not a language-specific, contributor to reading acquisition. In other words, if children do well in phonological awareness in one language, then they will also do well in the other language.

What are some of the challenges regarding the acquisition of biliteracies?

Research that the authors are presently conducting targets children for whom the French immersion experience in school has been a disaster. Many of these children have been later identified as having a language processing problem, central auditory processing deficiency and/or poor short-term auditory memories coupled with a working memory problem (retrieval). The challenge here is not bilingualism (20). Bilingual children raised in two languages exhibiting these problems are extremely successful in their oral languages for the most part. However, traditional literacy (defined as reading and writing) can be a problem for these children. All children require support in reading and writing. Bilingual children require support in both their first and second languages. Bilingual children with a language-processing deficit and/or memory retrieval problems require additional support in both languages when it comes to biliteracy.

Biliteracy, defined traditionally as reading and writing in two languages, could be disastrous for these children (21). Again, it is not the two languages that bring on the challenges; it is the memory and processing problems that interfere with learning to read and write language. Our inability to screen for these problems at a very early age does not help us regarding bilingual and immersion education. If such a problem were to be identified, the authors' advice would be to exercise extreme caution regarding these children and early bilingual/immersion programs, given the taxing demands on the auditory and working memory. Early indications in the authors' research suggest that these children will do well orally, but we cannot expect them to do well in traditional literacy and this transfers across linguistic lines.

How can families support bilingualism/biliteracies?

The family context can be a significant support to the development of literacy in the bilingual child. Kenner (22) studied six-year-old bilingual children learning to read and write at home. She observed that the skills of different family members were complementary in fostering the child's learning, and described bilingual families as literacy ecosystems.

In bilingual homes, it is recommended that one parent always speak one language, while the other parent speaks only the other language. When this is not possible, it is recommended that one parent speak one language in certain contexts, while in other contexts, the other parent speaks the other language. Immigrant parents should continue to speak to their children in their native language, as this provides the base for language conceptualization needed in acquiring a second language.

One recent study by Uchikoshi (23) suggests that preschool experience can influence second language vocabulary growth. Children who are enrolled in a preschool program in the second language tend to start kindergarten with a higher expressive vocabulary than children who stay at home. At the same time, the study results suggest that viewing educational television programs in the second

language in the home also has an impact on vocabulary growth. These programs focus on increasing children's vocabulary through repetition and reinforcement commonly found in parent-child book reading. This study piggybacks on research by Tabor et al (24), who relate language speed and growth of literacy to the number of conversations and word variety that a child hears. The correlation between language growth and extra language exposure in the second language at the prekindergarten level strongly suggests that exposure to language is related to speed of language growth. Snow et al (25) and Tabors et al (26) reiterate that the combination of literacy-rich home environments and preschool experience can be beneficial to children's lexical development in their second language.

Recommendations and implications for physicians who counsel bilingual families regarding early childhood literacy promotion and development

There are qualitative as well as quantitative differences in the performance of bilingual children when compared with monolingual children. Professionals need to recognize that bilingual children do not go through the exact same developmental stages at the same rate and order as monolingual children. To compound the problem, some of these stages are language-specific, while others cross linguistic barriers.

We would like to reiterate that although there are cognitive advantages to being bilingual, these advantages are not universal. We are only now becoming able to identify the kinds of cognitive domains where bilingualism might prove to be advantageous. We ask parents, health care providers and educational professionals to exercise caution in allowing bilingual children to sit for tests and evaluations that are made according to, and perhaps favour, monolingual developmental patterns. Knowing that these tests were designed for monolingual children is important when examining a child's performance, as is knowing that only limited information can be obtained from such results.

To counter such forms of tests with bilingual children, Kester and Peña (4) warn that domains must be sampled broadly when testing in schools and clinical settings to ensure that concepts and linguistic features are appropriately represented for each language. For example, grammar tests should explore a wide variety of structures in both languages. We urge physicians who deal with bilingual children and language delays to be especially vigilant. Bilingual children in schools and clinical settings have often been misdiagnosed with language delays or language impairments, when these delays do not really exist. In the present article, we have attempted to further disseminate ongoing research regarding bilingual children to ensure that professionals in all walks of life begin to understand bilingual language acquisition in children, bilingual cognition, bilingual learning and biliteracies.

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