Reading, syntactic, and working memory skills of bilingual Portuguese-English Canadian children

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ABSTRACT: The purpose of the study was to examine the nature of language, memory, and reading skills of bilingual students and to determine the relationship between reading problems in English and reading problems in Portuguese. The study assessed the reading, language, and memory skills of 37 bilingual Portuguese-Canadian children, aged 9–12 years. English was their main instructional language and Portuguese was the language spoken at home. All children attended a Heritage Language Program at school where they were taught to read and write Portuguese. The children were administered word and pseudoword reading, language, and working memory tasks in English and Portuguese. The majority of the children (67%) showed at least average proficiency in both languages. The children who had low reading scores in English also had significantly lower scores on the Portuguese tasks. There was a significant relationship between the acquisition of word and pseudoword reading, working memory, and syntactic awareness skills in the two languages. The Portuguese-Canadian children who were normally achieving readers did not differ from a comparison group of monolingual English speaking normally achieving readers except that the bilingual children had significantly lower scores on the English syntactic awareness task. The bilingual reading disabled children had similar scores to the monolingual reading disabled children on word reading and working memory but lower scores on the syntactic awareness task. However, the bilingual reading disabled children had significantly higher scores than the monolingual English speaking reading disabled children on the English pseudoword reading test and the English spelling task, perhaps reflecting a positive transfer from the more regular grapheme phoneme conversion rules of Portuguese. In this case, bilingualism does not appear to have negative consequences for the development of reading skills. In both English and Portuguese, reading difficulties appear to be strongly related to deficits in phonological processing.

KEY WORDS: Bilingualism, Reading disability, Reading in Portuguese

INTRODUCTION

Bilingualism, or even multilingualism, is an aspect of educational reality for children in many areas of the world. As a result of immigration or ethnic background, many children grow up in the first few years of life learning to speak one language and then attend school in another language, the majority language of the country or province.

Canada has two official languages, English and French. In addition, multiculturalism is an official policy of Canada. In many communities across Canada, this policy means that children who come from homes in which neither English nor French is spoken receive most of their schooling in English.
or French (depending on the area of the country in which they live) but also receive some instruction in their ‘heritage’ or home language. Their linguistic environment is obviously different from that of children who come from homes in which one of the official languages of Canada is spoken and who receive reading instruction in that language. Little is known about the nature and extent of English (or French) and heritage language proficiency of these children.

One possibility is that there is a significant relationship between the skills in the two languages. This hypothesis, advanced by Cummins (1979), is the linguistic interdependence hypothesis. A corollary is the central deficit hypothesis, that children who have learning problems in their second language will also manifest similar difficulties in their first language. That is, children with deficient language and cognitive skills will experience problems regardless of the language.

There is the script dependent hypothesis in which reading problems are related to the orthographic features of the language and the predictability of the correspondence between graphemes and phonemes (e.g., Liberman, Shankweiler, Fischer & Carter 1974; Lindgren, DeRenzi & Richman 1985).

The available studies, of which there are very few, indicate a correlation between reading skills in two languages. In a study of groups of Berber- and Arabic-speaking children educated in Arabic in Morocco, Wagner, Spratt & Ezzaki (1989) found that early differences in reading and language skills between the Berber- and Arabic-speaking children disappeared by the later grades. When French was introduced as a second or third language, French reading skills were related to reading skills in Arabic. In a study of children who were learning French as their third language (their main instructional language was English, their first [heritage] language was a language other than English because their parents were recent immigrants to Canada), Swain, Lapkin, Rowen & Hart (1990) found that their proficiency in French was related to their proficiency in their heritage language. In addition, it did not matter whether their first language was a romance or a non-romance language.

For English-speaking children learning Hebrew as a second language, Geva & Siegel (1991) found significant and substantial correlations between performance on word identification, pseudoword reading, working memory, and syntactic awareness tasks in English and Hebrew. In a study of bilingual Canadian Japanese children whose first language was Japanese and who received reading instruction primarily in English but some instruction in Japanese, Cummins, Swain, Nakajima, Handscombe, Green & Tran (1984) found a correlation between skills in Japanese and in English. They found similar results with bilingual Canadian-Vietnamese children. In a study of college students who had difficulty learning a foreign language, Ganschow, Sparks, Javorsky, Pohlman & Bishop-Marburg (1991) found that those students who had difficulty learning a foreign language also had difficulty