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Antonina Pigulskaya
Pace University

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Antonina Pigulskaya

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Bilingualism and its effect on children's literacy proficiency

Literacy skills are an essential component to personal, social, educational, and economic self-actualization. They become especially important to children, more specifically bilingual children, as they learn to incorporate and separate two linguistic systems. This paper examines research of several groups of bilingual children and development of literacy skills.

Home literacy experiences have shown to have an impact on literacy abilities. Hammer, Miccio & Wagstaff (2003) examined 43 Puerto Rican mother-child dyads. The dyads were separated into two groups; those that had learned English and Spanish from birth (simultaneous learners [SI]) and those that learned Spanish from birth and English in a Head Start program (sequential learners [SE]). Parents were given the Home Activities Questionnaire to complete that included questions about the frequency of their child's literacy activities. Examples included reading a book, mother-child literacy activities such as looking at books together, and mother's literacy activities at home. In addition, the Test of Early Reading Ability was administered to the two groups of children to assess their knowledge of early English literacy concepts.

Results found that the value placed on literacy by mothers of simultaneous learners (SI) was comparable to that placed by mothers of sequential learners (SE). In

contrast, however, mothers of SI children engaged in the “press of achievement” activities; that is teaching colors, shapes, alphabet, sounds, numbers, counting, writing at least once a week compared to mothers of SE learners who engaged in these behaviors only once a month.

A significant correlation was found between the press for achievement and the frequency of mother-child reading activities for the entire group. In addition, the mothers of SI children engaged more frequently in teaching literacy skills and in pre-academic abilities such as going to the library. This may be that mothers of SI learners were born in the United States and therefore more familiar with school practices. Both mothers of SI and SE learners valued education but their approach differed. Mothers of SE learners teach literacy through observation and oral tradition while mothers of SI learners teach literacy using pre-academic concepts.

Literacy practices may differ among various ethnic groups. Corsican, a language spoken on the island of Corsica in France, is taught in bilingual French classrooms. Jaffe (2003) found of the 27 students studied only four learned Corsican even though instruction was evenly distributed between both languages. Of note, these children were exposed to Corsican minority culture to encourage appreciation and identification. In addition to teaching reading and writing in both French and Corsican, literary genres that involved translating texts from French to Corsican were also introduced.

The story, “The Tiger, the Brahman and the Jackal” was read to the children from second to seventh grade. The children translated this story into Corsican using Corsican characters. That is, the tiger became a bear, the Brahman a monk, and the jackal a fox, characters typical in the Corsican culture. The teacher asked the students questions about

the story in both French and Corsican. Some similarities were found in the way the children responded to literacy work in the two languages. For instance, in both languages, the children were involved in collective oral preparation for writing. However, differences between French and Corsican literacy work were also found. Specifically, most of the Corsican texts used were presented orally because few books were published in Corsican. The children who could not speak Corsican were allowed to repeat what had been said in class and were not required to generate new sentences as they did in French. Finally, grammar and spelling were less formally taught than in French. Therefore, literacy practices in one language did not carry over to another language.

Learning to read in linguistic systems that are different contributes to how successful the children will be in the two linguistic systems. Bialystok, Luk, & Mc-Bride-Change (2005) examined 204 monolingual English, bilingual English-Chinese, and Chinese-speaking children beginning to learn English (second-language learners) on phonological awareness and word decoding tasks in English and Chinese. Results indicated that phonological awareness developed in response to language exposure and instruction, and once established, transferred across languages for both bilinguals and second-language learners. In contrast, decoding ability developed separately for each language and did not transfer to the other language. In other words, there was no effect of bilingualism on learning to read in another language. In fact, performance depended on the structure of the language, proficiency in that language, and instructional experiences with that writing system.

Bialystok et. al.(2005) investigated three groups of children; two groups lived in Canada and the third in Hong Kong. The first group consisted of 64 monolingual English

speakers in kindergarten and first grade. The second group consisted of 70 English-Cantonese bilingual speakers and the third group, consisted of 70 children who only spoke Cantonese from Hong Kong. All of the tasks were recreated in corresponding versions for both languages, and bilingual children completed the tests in both languages. The *Peabody-Picture Vocabulary Tasks-III (PPVT-III)*, which tests receptive vocabulary, was administered and required the child to point to the word spoken by the researcher that matched one of the four pictures. The *Syllable Deletion* test was administered to test awareness of syllabic units in spoken language. Children were given 16 three-syllable items and were asked to repeat the word without one of the syllables as specified by the experimenter. The *Phoneme Onset Deletion* task was given in which children deleted the first sound of a given word. The *Phoneme Counting* test required the children to count sounds in words, and the *Word Decoding test* required them to read words from a given list.

Results found that younger children obtained higher standard scores than older children. For the PPVT-III, Hong-Kong second-language learners knew more Chinese vocabulary than the Canadian bilinguals. Similarly, for the Canadian group, there was no difference between scores on the English and Chinese vocabulary tests, but the Hong Kong group scored higher on the Chinese test than English. For syllable deletion and phoneme deletion tasks, all three groups were equivalent in their scores.

Bialystok, Luk, & Mc-Bride-Change (2005) found no association between the role of bilingualism on the acquisition of early literacy and phonological awareness skills; rather, a relationship between children's level of proficiency in each language, their progress in literacy development, and the relationship between the two writing systems

was found. A main factor in discriminating among the three groups in their performance on the decoding tasks was their proficiency in each language as assessed by a receptive vocabulary test. The English skills of the bilingual children were still lower than those of monolingual English-speaking children, and their scores in Chinese, a language they heard only at home, were particularly weak. It is rare for young bilingual children to master both of their languages on the same level as monolinguals because their experiences in each language are inevitably less rich and different. Moreover, the abilities that supported English reading could not be recruited for Chinese reading. Awareness of phonemes is more difficult in Chinese as it is a language comprised of characters, not syllables. Thus, reading in two different writing systems does not readily transfer across systems but must be learned individually.

Mumtaz & Humphreys (2001) explored the effects of Urdu on the acquisition of English literacy skills by comparing the reading, memory, and phonological processing skills of bilingual Urdu English and monolingual English children seven to eight years of age. Urdu and English are dissimilar in their syntactic and orthographic structures. For example, in English there are many words that do not share spelling-to-sound correspondence; in contrast, in Urdu, all words have consistent spelling-to-sound correspondence when written. In English, the letters of the alphabet have a constant shape regardless of where they appear in a word: in Urdu each of the 35 symbols have three shapes depending on where it occurs in the word- the beginning, middle or end. Moreover, in English, the letters follow a consonant vowel combination; in Urdu, all letters represent consonants and diacritics are used to represent vowels. Finally, in Urdu,

many words have the same spelling, but the dots and vowel diacritics alter the sound and meaning of the word.

Mumtaz & Humphreys (2001) examined if bilingual Urdu-English speaking children have better phonological skills but limited visual skills as a result of their first-language experience. The study involved 120 children ages seven to eight years; 60 bilingual Urdu-English speaking children and 60 monolingual English-speaking children. To assess the use of Urdu, a questionnaire was administered to all bilingual children. The questionnaire included questions such as what was the first language spoken at home, can the child read and speak in his/her native language, and preferred language of reading. The *British Picture Vocabulary Scale* (BPVS), translated in Urdu, in which the child pointed to one of the four pictures corresponding to the word spoken by the experimenter. Reading age was assessed using a single-word reading task developed by Schonell and Schonell (1952).

Results indicated that non-verbal IQ scores of bilinguals (52.64 out of 60) were higher than monolinguals (39.19). Similarly, the Schonell Reading Age (1952) test indicated that bilinguals scored higher (71.13 out of 100) than monolinguals (53.24). Moreover, on all tests such as Visual Memory in Shapes, Corsi Block Mix, Auditory Digit Span, Rhyme Detection, and Nonword Repetition, bilingual children scored higher than monolingual children. These were additional tests administered to assess the reading of regular, irregular, and nonwords, phonological awareness, visual/auditory memory, and nonword repetition in English.

Mumtaz & Humphreys (2001) concluded that the bilingual children had higher reading ages and better reading of standard words and nonwords than monolinguals.

However, the bilingual children scored lower in visual memory performance because that skill was not needed in their native language. In addition, bilinguals scored higher on regular words and nonwords than monolinguals because they had more phonological skills and were better able to develop a non-lexical, phonological route in reading. Better performance of monolinguals on irregular word reading compared to bilinguals was found as monolinguals applied some form of visual lexical reading strategy, a skill the bilinguals had difficulty. In other words, knowledge of Urdu improved the phonological skills, an auditory ability, of the bilingual children with transference to English reading development. Thus, the effects were positive in terms of acquiring non-lexical reading skills, but negative in terms of acquiring visual (lexical) reading skills.

Proctor, Carlo, August & Snow (2006) studied 135 Spanish-English bilingual fourth-grade children to determine cross-linguistic transference of Spanish decoding skills, fluency, vocabulary knowledge and oral language proficiency on the effects of English reading comprehension. Of the 135 participants, 37 students were from Boston, 46 from Chicago, and 52 from El Paso, Texas. Students in the Chicago and El Paso schools were predominantly of Mexican origin, whereas the Boston students were of Dominican Republic or Puerto Rican origin. Although some students were immigrants, the majority were born in the United States to immigrant parents.

The Computer-Based Academic Assessment System was administered to measure decoding skills, such as alphabetic knowledge and fluency (Proctor et al., 2006). The Woodcock Language Proficiency Battery was used to measure vocabulary knowledge, listening comprehension, and reading comprehension. To assess English and Spanish fluency, the child read words of various difficulty into a microphone as the computer

presented them on the screen. English and Spanish alphabetic knowledge was assessed by having the child read pseudowords using the phonological and orthographic conventions of the target language (Proctor et al., 2006).

No significant differences between English and Spanish decoding were found (Proctor et al., 2006). On average, the students had reasonable alphabetic knowledge in both languages; however, oral language skills varied significantly between languages, with higher scores in Spanish. Of interest was that the average reading comprehension in English was considerably higher than Spanish reading comprehension. The Spanish-instructed students outperformed their English-instructed peers on all Spanish oral language and reading comprehension measures, whereas English-instructed students significantly outperformed the Spanish-instructed students on all English oral language and reading comprehension tests (Proctor et al., 2006).

They concluded that a significant cross-linguistic relationship existed between English fluency and Spanish listening and reading comprehension. That is, faster English-word readers tended to exhibit positive changes in both Spanish reading and listening comprehension. In contrast, Spanish fluency had only positive associations with English oral language and reading outcomes, indicating an inverse relationship between the languages. Therefore, only English fluency appeared to have facilitative cross-linguistic effects (Proctor et al., 2006).

Wang, Park, & Lee (2006) investigated the effects of biliteracy development for children learning to read English whose native language is Korean. Korean and English share a fundamental alphabetic principle; graphemes in both languages correspond to phonemes. However, Korean Hangul has a unique visual and spatial configuration

compared with other orthographic systems. Korean-English biliteracy acquisition provides an excellent opportunity to study cross-language and orthography transfer in two alphabetic systems. Forty-five Korean-English bilingual children were tested in both Korean and English to assess if phonological skills in Korean transferred to English reading. The children were first, second and third graders and were first-generation Korean immigrants who spoke Korean at home and attended English-speaking schools.

Researchers administered English tests such as Onset-Rhyme Detection test, Orthographic Choice task, and a Phoneme Deletion task. In Onset-Rhyme Detection test, the child had to manipulate the difference between the phonological units in spoken English words. In the Phoneme Deletion test, the child had to remove a sound from a word. In Orthographic Choice task, the child pointed to the picture card that looked more like a real word from nonsense card words. The same tests were administered in Korean (Wang et al, 2006).

It was found that English language and reading skills improved from first to third grade. For the Korean tasks, children's performance improved significantly for the orthographic and phoneme deletion task. In addition, Korean Onset Detection, Rhyme Detection, and Phoneme Deletion scores were highly correlated with English real-word and pseudoword abilities. Moreover, English rhyme detection, phoneme deletion, and orthographic skills were strongly correlated with English real-word and pseudoword reading (Wang et al, 2006).

They concluded that a cross-language phonological transfer across different alphabetic languages exists. This study also suggested that better phonological skills in one language leads to better phonological skills in another language. For example,

Korean onset deletion, rhyme detection, and phoneme deletion are highly associated with English real-word and pseudoword reading. Of interest, was that this cross-linguistic phonological transfer was weak in the direction of English to Korean (Wang et al, 2006).

In summary, these studies found that knowledge in one's native language enhances the learning process of English. In addition, for bilingual children, transfer skills exist across languages and improve performance on English tasks. Also, one's literacy home experiences have an effect on the development of language; the better the literacy stimulation, the greater the literacy skills in later life.

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