

Foreign Language Study in Elementary Schools: Benefits and Implications for Achievement in Reading and Math

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Educators and policy makers in many countries have been expressing concern about how to improve students' achievement in reading and math. This article explores and proposes a solution: introduce or increase foreign language study in the elementary schools. Research has shown that foreign language study in the early elementary years improves cognitive abilities, positively influences achievement in other disciplines, and results in higher achievement test scores in reading and math. Successful foreign language programs for elementary schools include immersion, FLES, and FLEX programs.

KEY WORDS: immersion; dual-language; FLES; FLEX; foreign language; second language; elementary school; increased cognitive skills; increased achievement test scores; NCLB.

For nearly three decades, I have had the pleasure of accompanying my American students on visits to other countries, sharing the excitement of their first attempts to put their second language into practice while exchanging currency, asking directions, ordering meals, and making purchases. These students have invariably been favorably impressed by the ability of people from various countries, particularly young children, to understand and speak more than one language and return home more motivated to improve their ability to communicate in a second language. They realize that speaking a second language has many benefits, such as communicating with people from various parts of the ever-shrinking world and developing a clearer understanding of the cultural perspectives of people from different backgrounds.

What my students experience and may not realize is that, in addition to these advantages, people who are bilingual or multilingual and have begun

learning a foreign language at an early age receive other benefits as well. Research shows that foreign language study improves cognitive abilities, positively influences achievement in other disciplines, and results in higher achievement test scores, especially when study of a second language begins in the elementary school years (Cumming-Potvin, Renshaw, & van Kraayenoord, 2003; Garcia, 2001; Hakuta, 1987; Landry, 1974; Marcos, 2001a; Turnbull, Lapkin, & Hart, 2001; Weatherford, 1986).

Additionally, educators and policy makers in many countries have been expressing concern about the need to improve students' achievement in reading and math as well as scores on state or national exams (Feng, 1999; Fowler, 2001; Friel, 2003; Rosenthal, 2004). The focus of this article is to explore one possible solution to the mounting pressure to increase math and reading scores: introduce or increase sustained foreign language study, particularly in the elementary schools.

CONCERNS ABOUT DEVELOPING READING AND MATH PROFICIENCY

Educators currently puzzle over the problem of how to assist students attain proficiency in reading and math. In some schools, more instructional time is

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being devoted to reading and math and less time to social studies, science, foreign languages, art, music, health and physical education (Rosenthal, 2004). In an Ohio elementary school, the 15-minute afternoon recess has been eliminated (Friel, 2003) and in some Maryland elementary schools, social studies instruction is already being reduced by 20–33% to allow for increased instructional time in reading and math or practicing for state or national tests.

How can educators help students become more successful in reading and math and, at the same time, be prepared to participate in a global economy and global community?

A POSSIBLE SOLUTION: INCLUDE FOREIGN LANGUAGE IN THE ELEMENTARY SCHOOLS (FLES)

While there may be several possible solutions, there is one that will provide the added benefits of increasing knowledge and skills in other disciplines. Why not look outside the areas of reading and math to find ways to help children improve their reading and math skills by providing a sustained second language program in the elementary schools?

THREE MAIN APPROACHES TO FOREIGN LANGUAGE STUDY IN ELEMENTARY SCHOOLS

It is common for school districts to make foreign language study available at the high school level, though students in some school systems begin foreign language study in the middle school or elementary schools. The studies cited above show that the introduction of foreign languages in the elementary school actually has multiple benefits, including helping improve skills in other areas. In addition, younger children are more receptive to language learning and develop a more native-like pronunciation when second language learning begins before the onset of

adolescence (Marcos, 2001b). Some models for elementary foreign language programs include immersion or dual-language programs, FLES programs, and FLEX programs (Table I).

Immersion or dual-language programs. Six-year-old Elizabeth lives in a modest neighborhood in Fairfax County, Virginia, with her mother and sister. Though her family and neighbors nearly all speak English, when she goes to first grade in the nearby public school each morning, she enters into a completely French-speaking environment. Teachers and children greet each other in French, the morning announcements are made in French, and science, math, and health classes are taught in French. At lunchtime, a dramatic transformation occurs as the French-speaking environment changes into an English-speaking one with the afternoon classes, activities, and interactions conducted entirely in English. At the beginning of her first year in this immersion school, Elizabeth had fun learning to understand the French being spoken, but often responded in English. As the year progressed, she and the other children eventually not only responded in French, but also chatted and played with each other in French.

In immersion or dual-language programs, children learn all or at least half of their subjects in the second language. The second language is used as a vehicle for communication and instruction in those classes rather than viewed as a separate subject. The first language is introduced for instruction in the second or third year of elementary school, if not before. Children in immersion programs develop a high level of proficiency in the second language. Immersion programs require teachers who are bilingual or nearly bilingual and who are also certified to teach the core subjects (Marcos, 2001b).

The amount of time that the first and second languages are used varies from program to program according to local needs and resources. Some schools divide the use of the languages by time and others by

Table I. Types of Foreign Language Programs in Elementary Schools

	Immersion or Dual-Language Programs	FLES Programs	FLEX Programs
Characteristics	<ul style="list-style-type: none"> • Some or all of the subjects are taught in the second language. • Students learn the second language by using it as a means of communication in the classes. 	<ul style="list-style-type: none"> • The foreign language is taught as a subject once or twice per week. • Students learn to speak and use the second language. 	<ul style="list-style-type: none"> • One or more foreign languages are explored on a regular basis. • Students study about the language and culture.
Proficiency developed	<ul style="list-style-type: none"> • Some students become bilingual, developing near-native pronunciation. 	<ul style="list-style-type: none"> • Near-native pronunciation is sometimes achieved. 	<ul style="list-style-type: none"> • The basis for further foreign language study and for developing good pronunciation is established.

subject. For instance, in some schools, the morning classes are taught using one language and the afternoon classes are taught using the second language. In other schools, certain subjects are taught in one language and the remaining subjects in the second language. Lastly, in some programs, the language may change by day or week. In all cases, with qualified, dedicated staff consistently implementing the use of both languages in a challenging curriculum, students in many countries have shown benefits such as becoming bilingual, improved attitudes toward cultural and linguistic diversity, and improvements on standardized test scores (Freeman & Freeman, 2004).

FLES programs. Stephanie attends a public elementary school in rural Pennsylvania. She arrives at school each morning and greets her friends, teachers, and principal in English, but when she sees one young teacher in the hallway, she automatically says, "Buenos días, Señorita." The teacher responds, "Hola, Estefanía. ¿Como esta?" While all of her other classes are conducted in English, on Monday, Tuesday, and Thursday mornings, Stephanie and her 2nd grade classmates enter Señorita Bradley's classroom for 45 minutes of Spanish class. The children have each adopted a Spanish name by which they are called during that class, learn the alphabet, numbers, and classroom vocabulary, follow and give directions, read stories, play games, and perform simple math problems and conversations in Spanish.

In a FLES program, the second language is taught as a separate subject three to five times per week. The level of proficiency attained by the students varies from program to program and depends upon the amount of instructional time allotted for the second language as well as the amount of use of the second language during class by both the teacher and the students (Marcos, 2001b).

FLEX programs. Before Daniel went to kindergarten in Buffalo, New York, his only exposure to a language other than his native English was when he would watch the characters on his favorite television show open and close a door and hear them say "Abierto" and "Cerrado". After only a few months in school where he has language class once a week, he can count to 10, greet others, identify objects in the classroom, and sing a song in French, Japanese, and Spanish. Today, he is helping his mother decorate a "Bûche de Noël" or Yule Log Cake as a treat for his class as they learn about holiday traditions in France. Daniel is learning that children in other countries have interesting ways of speaking and living that are sometimes similar and sometimes different from his own.

In a FLEX (Foreign Language Exploratory) program, foreign language is studied in a more general sense once or twice per week. Students learn about one or more languages and about the cultures of the countries where each language is spoken. The level of proficiency attained is less than in immersion or FLES programs, but students in FLEX programs develop a solid basis for further foreign language study in the later years and generally develop more native-like pronunciation than students who have never studied a foreign language during the elementary school years (Marcos, 2001b).

While multiple benefits for students are derived from all three types of foreign language programs in elementary schools, research by Collier and Collier (2003) shows that dual-language programs provide the further advantage of helping to close the achievement gap between English speakers and English learners in the United States. Collier and Collier recommend dual-language programs that are at least 5–6 years in length, in which at least 50% of the instructional time is in the second language, that emphasize a high-quality core curriculum, and that include professional development for teachers focusing on dual-language implementation.

BENEFITS OF FOREIGN LANGUAGE STUDY IN THE ELEMENTARY SCHOOL

Much research has shown that foreign language study, especially when introduced in the early elementary school years, has wide-ranging benefits for academic success in many areas. Beyond the obvious benefits of being able to communicate with speakers of another language and developing an understanding of other cultures and cultural perspectives, studies have shown three additional benefits of learning a foreign language: increased cognitive skills, higher achievement in other academic areas, and higher standardized test scores.

(1) Foreign language study leads to increased cognitive skills

Children who study a second language are more creative and better problem solvers than students who do not study a second language (Landry, 1974; Marcos, 2001a; Weatherford, 1986). Imagine young students learning a foreign language, hearing and distinguishing different sounds, understanding that those sounds have meaning to many, though they are constructed in ways that are different from their first

language. These children not only develop an ability to reproduce those sounds in a way to make meaning, but also begin to compare and contrast the ways different languages use combinations of letters and sounds to create meaning.

Younger school age children are at a stage of development when they are especially receptive to language learning (Marcos, 2001b; Roberts, 2002). Research has shown that foreign language programs in elementary schools develop better divergent thinkers and a certain adaptability and willingness to change from one language to the other (Landry, 1974; Marcos, 2001b; Weatherford, 1986). As a veteran teacher of French and Reading of students in Grades 2–12, I have noted that my younger students (particularly those in the elementary schools) are less inhibited trying to speak and understand a new language. These younger students question language structure less and are able to pronounce the language with ease and pronunciation that is near to that of a native speaker. They are not only tolerant of my speaking a second language but enjoy making meaning of these new sounds and attempting to reproduce them.

Studies have also shown the development of cognitive flexibility in children in bilingual programs in Puerto Rico (Hakuta, 1987) and California (Milloy & Fischer, 2002). Hakuta (1987) noted positive correlations between bilingualism and non-verbal measures of cognitive ability in young children. Dual language pre-school children in London, England, exhibited cognitive advantages performing tasks when compared to single language children of the same age who were performing the same tasks. The researchers assert that being a dual language child allows that child to participate in two social worlds and become more attuned to subtleties of communicative interactions (Berguno & Bowler, 2004). These expanded cognitive abilities, creative thinking and problem solving skills, and adaptability are transferable to other academic areas.

(2) Foreign language study is linked with higher achievement in other academic areas

Children who study a foreign language tend to develop new perspectives and depth of understanding about the vocabulary and structure of their first language (Cumming-Potvin, Renshaw, & van Kraayenoord, 2003). When learning a second language, students are constantly exposed to words and patterns that are similar to their first language or from

which words in their first language were developed. My experience from my own second language learning and from observing my students learning a second language has been that many grammatical structures in the first language are taken for granted or even overlooked. As children grow they develop a feel for what sounds right and is appropriate in various circumstances. When learning to put together words and structures to make sense in a second language, students are forced to think about why certain structures work well and they tend to make comparisons to their native language. Recently, when learning about similarities and differences between schools in the France and in the United States, one of my young students remarked that the French say “school elementary” in lieu of “elementary school” as is done in English. She noticed, without having been taught, that in French, an adjective generally comes after the noun it modifies. Not only did she display an awareness about language structures, but the beginning of an understanding that people who speak other languages approach language and life, in general, from a perspective different from the one she has always known.

At a magnet school in Charlotte, North Carolina, students are immersed in French, German, or Japanese in kindergarten and don't study English vocabulary, grammar, or spelling until third grade. In 2001, 94% of the third graders and 100% of the fifth graders in that immersion school scored at or above grade level in reading in English (Roberts, 2002). Similar results have been observed at immersion schools in Fairfax County, Virginia (Marcos, 2001b). Imagine if we could experience such results in all schools!

In schools in many countries, where students have outperformed American students in reading and math, foreign languages are introduced and emphasized at an early age (Pufahl, Rhodes, & Christian, 2001). Turnbull, Lapkin, and Hart (2001) studied achievement test scores in reading, writing, and mathematics of over 5000 students in immersion programs throughout the province of Ontario, Canada. In Grade 3, the test scores of immersion students were comparable to scores of students in the regular program. However, by Grade 6, test scores of immersion students in mathematics and writing surpassed those of students in the regular program.

Finally, students of foreign languages also develop an understanding of geographical and cultural perspectives that enhances learning in other classes such as social studies, science, art and music

(Roberts, 2002). A positive correlation has been found between foreign language study and higher grades in subjects such as English, math, science, and social studies (Marcos, 2001b; Weatherford, 1986). When my elementary students were studying French school schedules, they were delighted to observe that French students have a 1½ or 2 hour lunch and use the 24-hour clock to identify the times that they attend class. After some class discussion about these observations, they concluded that leisurely meals are a high priority in francophone countries and the use of the 24-hour clock is similar to what Americans call military time, demonstrating an understanding that francophone people experience daily life from a cultural perspective different from their own.

(3) Foreign language study is correlated with higher achievement test scores

If studying a foreign language results in higher achievement in other academic areas, it is logical that higher scores on standardized tests would occur. Marcos (2001b) reported that the students in the Fairfax County, Virginia, immersion schools not only scored as well or better than comparison groups on achievement tests, but that they remained high academic achievers for the rest of the academic experience.

In Kansas City, Missouri, an independent public charter school features instruction in French in most subject areas with English language arts beginning in 1st grade. The elementary school is open to all children residing in the Kansas City, Missouri, School District. The student body includes 40% of the students receiving free or reduced lunches and 60% minority students. Nearly all the students in the school showed gains in their achievement test scores and surpassed students in comparative school settings where a second language was not studied (Garcia, 2001).

CONCLUSION

In today's global community, where interacting with people from various countries and cultures is more commonplace than ever, it makes sense to prepare our students to be able to do so by teaching foreign language as early in their academic career as possible. Even the No Child Left Behind Act, designed to address the need for American children attain proficiency in reading and math, recognizes foreign language as a core subject (Abbott, 2003).

In addition to the simple advantage of learning a foreign language, second language study increases a child's cognitive abilities, enhances achievement in

other subjects, and is positively correlated with higher scores on achievement tests. Children who begin the study of a FLES develop more native-like use of the language and tend to transfer skills learned to reading, math, and other academic areas. Former U.S. Secretary of Education Roderick Paige acknowledges that "foreign language learning improves a student's cognitive and academic performance" and "goes hand in glove with the No Child Left Behind goals of ensuring high student outcomes for all children" (Abbott, 2002, p. 140). Given the evidence, foreign language study in combination with a strong core curriculum in the elementary school may be the key to improved achievement in reading and math as well as to preparing our children to be successful participants in the global community.

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