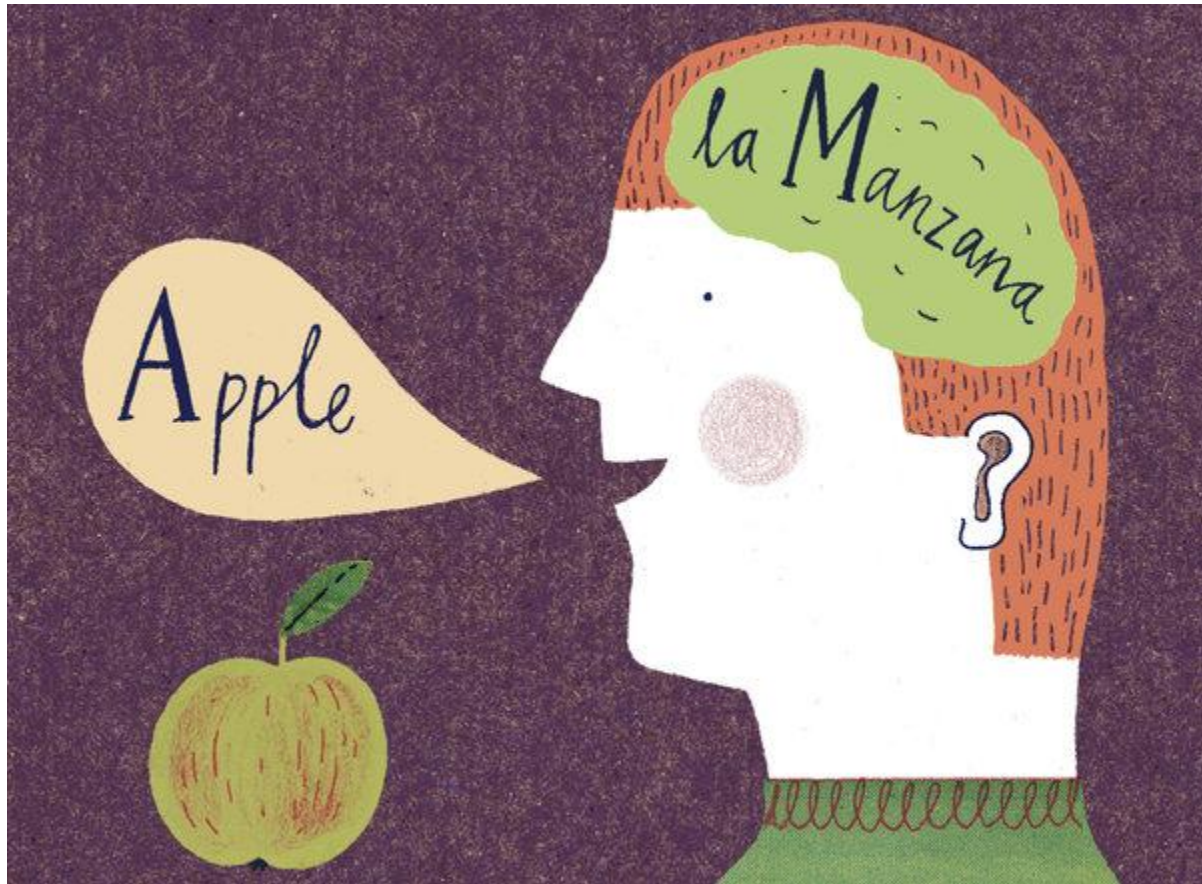


Dual Language Learning

Selected Articles

GRAY MATTER

Why Bilinguals Are Smarter



Harriet Russell

By YUDHIJIT BHATTACHARJEE

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SPEAKING two languages rather than just one has obvious practical benefits in an increasingly globalized world. But in recent years, scientists have begun to show that the advantages of bilingualism are even more fundamental than being able to converse with a wider range of people. Being bilingual, it turns out, makes you smarter. It can have a profound effect on your brain, improving cognitive skills not related to language and even shielding against dementia in old age.

This view of bilingualism is remarkably different from the understanding of bilingualism through much of the 20th century. Researchers, educators and policy makers long considered a second language to be an interference, cognitively speaking, that hindered a child's academic and intellectual development.

They were not wrong about the interference: there is ample evidence that in a bilingual's brain both language systems are active even when he is using only one language, thus creating situations in which one system obstructs the other. But this interference, researchers are finding out, isn't so much a handicap as a blessing in disguise. It forces the brain to resolve internal conflict, giving the mind a workout that strengthens its cognitive muscles.

Bilinguals, for instance, seem to be more adept than monolinguals at solving certain kinds of mental puzzles. In [a 2004 study](#) by the psychologists Ellen Bialystok and Michelle Martin-Rhee, bilingual and monolingual preschoolers were asked to sort blue circles and red squares presented on a computer screen into two digital bins — one marked with a blue square and the other marked with a red circle.

In the first task, the children had to sort the shapes by color, placing blue circles in the bin marked with the blue square and red squares in the bin marked with the red circle. Both groups did this with comparable ease. Next, the children were asked to sort by shape, which was more challenging because it required placing the images in a bin marked with a conflicting color. The bilinguals were quicker at performing this task.

The collective evidence from a number of such studies suggests that the bilingual experience improves the brain's so-called executive function — a command system that directs the attention processes that we use for planning, solving problems and performing various other mentally demanding tasks. These processes include ignoring distractions to stay focused, switching attention willfully from one thing to another and holding information in mind — like remembering a sequence of directions while driving.

Why does the tussle between two simultaneously active language systems improve these aspects of cognition? Until recently, researchers thought the bilingual advantage stemmed primarily from an ability for *inhibition* that was honed by the exercise of suppressing one language system: this suppression, it was thought, would help train the bilingual mind to ignore distractions in other contexts. But that explanation increasingly appears to be inadequate, since studies have shown that bilinguals perform better than monolinguals even at tasks that do not require inhibition, like threading a line through an ascending series of numbers scattered randomly on a page.

The key difference between bilinguals and monolinguals may be more basic: a heightened ability to monitor the environment. “Bilinguals have to switch languages quite often — you may talk to your father in one language and to your mother in another language,” says

Albert Costa, a researcher at the University of Pompeu Fabra in Spain. “It requires keeping track of changes around you in the same way that we monitor our surroundings when driving.” In a study comparing German-Italian bilinguals with Italian monolinguals on monitoring tasks, Mr. Costa and his colleagues found that the bilingual subjects not only performed better, but they also did so with less activity in parts of the brain involved in monitoring, indicating that they were more efficient at it.

The bilingual experience appears to influence the brain from infancy to old age (and there is reason to believe that it may also apply to those who learn a second language later in life).

In a [2009 study led by Agnes Kovacs](#) of the International School for Advanced Studies in Trieste, Italy, 7-month-old babies exposed to two languages from birth were compared with peers raised with one language. In an initial set of trials, the infants were presented with an audio cue and then shown a puppet on one side of a screen. Both infant groups learned to look at that side of the screen in anticipation of the puppet. But in a later set of trials, when the puppet began appearing on the opposite side of the screen, the babies exposed to a bilingual environment quickly learned to switch their anticipatory gaze in the new direction while the other babies did not.

Bilingualism’s effects also extend into the twilight years. In a recent study of 44 elderly Spanish-English bilinguals, scientists led by the neuropsychologist Tamar Gollan of the University of California, San Diego, found that individuals with a higher degree of bilingualism — measured through a comparative evaluation of proficiency in each language — were more resistant than others to the onset of dementia and other symptoms of Alzheimer’s disease: the higher the degree of bilingualism, the later the age of onset.

Nobody ever doubted the power of language. But who would have imagined that the words we hear and the sentences we speak might be leaving such a deep imprint?

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This article has been revised to reflect the following correction:

Correction: March 25, 2012

The Gray Matter column on bilingualism last Sunday misspelled the name of a university in Spain. It is Pompeu Fabra, not Pompea Fabra

Raising multilingual children

MONDAY, MARCH 1, 2010

BY KATHRYN DAVIS

THE PARENT PAPER

[PRINT](#) | [E-MAIL](#)

We live in a multilingual world. It is not uncommon to walk down the street in any U.S. city and hear several different languages being spoken. Around the world, children are learning English as a second language at a very young age, enabling them to develop the skills necessary to interact with people all over the globe. There is no doubt about the benefits of being able to communicate in more than one language. Such ability offers the opportunity for independence, whether for business, education, leisure or travel.

According to the U.S. Census Bureau, about 10 million children between the ages of 5 and 17, or about 20 percent of children over 5, already speak a language other than English at home. Experts are citing more and more evidence of the benefits of multilingual development from an early age. While there has been some suggestion that learning a second language can delay speech acquisition and language development, research demonstrates otherwise.

More and more parents are seeking to provide their children with the advantages that bilingualism offers. That goal leads to some basic questions. When does language acquisition start? When and how should children begin learning a second language?

The basics

The young mind, particularly in infancy, is malleable. In the first few months, crying, whimpering and cooing are the primary forms of communication. Soon a baby starts to distinguish individual sounds and will begin to mimic those sounds or syllables. He will learn to distinguish between "ma" and "da" and will start to babble.

Vocalization is a baby's way of entertaining himself, but it is also how he discovers ways to use his mouth, his tongue and vocal chords to make sounds. At one point, his speech may sound almost as though he is making sense. This is because his tones and patterns are based on the language he hears around him. Eventually, these babblings will develop into individual words that will facilitate true communication. The individual phonemes, or words sounds, that develop are primarily based on the language spoken in the home. Young children who hear more than one language develop additional sounds and, eventually, additional words that represent concepts, objects or people.

Programs that teach infants sign language have claimed to help babies as young as 10 months to communicate, before they are able to articulate with words. Experts say learning to communicate

through a second language, even sign language, can be beneficial to cognitive development. However, raising a bilingual child requires a commitment of consistency in the long-term.

In her article, "Two or More Languages in Early Childhood: Some General Points and Practical Recommendations," Annick De Houwer of the University of Antwerp and Science Foundation in Flanders, Belgium says, "A prevailing idea is that it is very easy for children to learn a new language and that hardly any effort is involved. However, learning language, even one, is a process that takes many years."

While it is true that language acquisition is easier when it is done at a young age, it is the opportunities to hear and use a language consistently over time that brings success. De Houwer points out, "Languages are very complex. To learn all their complexities, one needs a lot of life experience...The environment plays an important role in learning to speak. Children learn to speak only when they hear people talk to them in many different circumstances."

Pros and cons

Is there a downside to bilingualism? Not so many years ago, the prevailing wisdom was that children who learn to speak two languages tended to confuse the two, interchanging words from both languages in their speech, even within the same sentence. However, studies have shown otherwise.

Researchers at the University of British Columbia and Ottawa studied infants to find out whether the demand of acquiring more sounds and words leads to differences in language development. The experiment involved repeatedly presenting two different objects labeled as "bih" and "dih." In every group tested, the bilingual infants noticed the change in the object's name at a later age (20 months vs. 17 months) than the monolingual babies. While this may seem like the monolingual infants were more successful, the researchers theorized that the bilingual infants were focusing more on making a connection between objects and words, rather than just attending to details of sound.

Another study of 40 7-month-old babies by The Language, Cognition, and Development Lab at the International School for Advanced Studies in Trieste, Italy also suggests exposure to more than one language at an early age has benefits. Half of the babies in this study came from homes where two different languages were spoken. The experiment involved using a computer where characters were displayed on one of two screens just after word-like sounds were played. Researchers tested the babies' ability to anticipate upon which screen a character would appear based on various sounds. Only the babies from the bilingual homes were able to use the newly learned sounds to predict where the cartoon would appear. The author of the study, Jacques Mehler, points out that this skill can apply to more than just the ability to switch between languages.

Experts say babies raised in a bilingual environment may exhibit some slight delays in speech development, but that delay is only temporary. Overall, the benefits can be far-reaching.

According to Carey Myles, author of *Raising Bilingual Children*, "Bilingual language skills have also been correlated with improved cognitive performance in children. According to the Center for Applied Linguistics in Washington, D.C., bilinguals take a more creative approach to problem-solving, read earlier on average than their monolingual peers, and score higher on standardized tests like the SAT."

Beyond the obvious benefits of a second language, Myles points out, "...language is a powerful factor in shaping a child's identity. When children in bilingual families understand the culture of each parent, family bonds are strengthened."

Giving children fluency in more than one language is possible, but it is not simple. Parents should have realistic expectations about the process and results of raising a bilingual child. "Even parents able to spend every summer in the 'home country' or to enroll their children in language immersion programs at school may find that their children's language proficiency is not exactly the same in each language," Myles notes. "The good news is that this is completely normal and what most adult bilinguals typically experience, too."

Methods of instruction

Families wishing to promote their child's second language acquisition have options. One parent, one language, (OPOL) is one method in which each parent speaks only one language. In this way, the child learns to distinguish between the two languages. Another method is the "home language approach." Here the family speaks one language inside the home, while the child acquires the community's language outside the home. A third option is immersion, often done through a formal program.

"I think there are probably as many ways as there are families," says Myles. "Parents should consider their situation and what resources they have to support their minority language. I don't think one can say a certain method is better than others; although I don't think artificial schedules, like French at dinnertime, really work."

There are drawbacks to any method. Myles points out that when only one parent is providing exposure to a second language, "it can be hard on that parent. With limited exposure to the minority language, children are naturally stronger in the majority language. It is not uncommon for a parent in that situation to give up using the minority language exclusively with the children, in favor of better communication."

Some parents turn to immersion programs through formal education at schools like the French Academy of [Bergen County](#). "At 2 years old, 90 percent of the curriculum is taught in French," explains Executive Director Anne-Sophie Gueguen. "As the children get older, the number of hours taught in English slowly increases."

By the time children are in fourth grade, Gueguen says they receive equal teaching in both French and English. "The ultimate goal at FABC is to raise children equally in both languages."

Gueguen understands the advantages of speaking two languages, citing skills many do not usually associate with language. "The intellectual stimulation involved in learning two languages, knowing two words for one meaning, reinforces abstraction and problem solving skills. The benefits of this stimulation are remarkable in math."

Another way children often "pick up" a second language is referred to as "receptive bilingualism." In this case, children understand the minority language spoken at home, but do not speak it. "This kind of bilingualism is more common than people realize in the United States," says Myles. There are ways in which parents can encourage children to speak their second language. Sometimes parents tell their children that the grandparents do not understand English. "Some parents simply don't respond until rebellious older children use the appropriate language," Myles explains.

No matter which method parents use, reading books is an excellent means of supporting language acquisition. Early language development depends on vocabulary development. Parents can take advantage of this time spent reading with their children to encourage vocabulary growth in both languages. In fact, any time parents read with their children, the benefits are extensive and it is never too soon to begin this practice.

Though most children who grow up with two languages do so because they live in bilingual homes, there are an increasing number of parents who make the choice of bilingualism for their children. The advantages of a second language are clear, and that's the same in any language.

Educators once opposed raising bilingual children. Experts now say it's beneficial.

By Catherine de Lange, Published: June 11 The Washington Post

When I was a baby, my mother gazed down at me in her hospital bed and did something that would permanently change the way my brain developed. Something that would make me better at learning, multi-tasking and solving problems. Eventually, it might even protect my brain against the ravages of old age. Her trick? She started speaking to me in French.

At the time, my mother had no idea that her actions would give me a cognitive boost. She is French and my father English, and they simply felt it made sense to raise me and my brothers as bilingual. Yet a mass of research has emerged to suggest that speaking two languages while growing up may profoundly affect the way I think.

Cognitive enhancement is just the start. According to some studies, my memories, my values, even my personality may change depending on which language I happen to be speaking. It is almost as though the bilingual brain houses two separate minds. All of which highlights the fundamental role of language in human thought. “Bilingualism is quite an extraordinary microscope into the human brain,” says cognitive neuroscientist Laura Ann Petitto of Gallaudet University.

The image of bilingualism has not always been this rosy. For many parents, the decision to raise children speaking two languages was controversial. Since at least the 19th century, educators warned that it would confuse the child, making him unable to learn either language properly. At best, they thought, the child would become a jack-of-all-trades and master of none. At worst, they suspected it might hinder other aspects of development, resulting in a lower IQ.

These days, such fears seem unjustified. True, bilingual people tend to have slightly smaller vocabularies in each language than their monolingual peers, and they are sometimes slower to reach for the right word when naming objects. But a [key study](#) in the 1962 by Elizabeth Peal and Wallace Lambert at McGill University in Montreal found that the ability to speak two languages does not stunt overall development. On the contrary, when controlling for other factors that might also affect performance, such as socioeconomic status and education, they found that bilinguals outperformed monolinguals in 15 verbal and nonverbal tests.

Although a trickle of research into the benefits of bilingualism followed that study, it is only within the past few years that bilingualism has received a lot of attention.

In part, the renewed interest comes from recent technological developments in neuroscience, such as functional near-infrared spectroscopy (fNIRS), a form of brain imaging that can peer inside the brains of babies as they sit on their parents' laps. For the first time, researchers can watch young brains in their initial encounters with language.

Using this technique, Petitto and her colleagues discovered a profound difference between babies brought up speaking one language and those who spoke two. According to popular theory, babies are born “citizens of the world,” capable of discriminating the sounds of any language. By the time they are a year old, however, they seemed to have lost this ability, homing in exclusively on the sounds of their mother tongue. That seemed to be the case with monolinguals. But [Petitto’s study](#) found that bilingual children showed increased neural activity in response to completely unfamiliar languages even at the end of their first year.

Opening the language window

Petitto says this suggests that the bilingual experience “wedges open” the window for learning language. This seems to help people like me acquire new languages throughout our lives. “It’s almost like the monolingual brain is on a diet, but the bilingual brain shows us the full, plump borders of the language tissue that are available,” Petitto says.

Indeed, the closer the researchers looked, the more benefits they discovered, some of which span a broad range of skills. Ellen Bialystok, a psychologist at York University in Toronto, first stumbled upon one of these advantages while asking children to spot whether various sentences were grammatically correct. Both monolinguals and bilinguals could see the mistake in phrases such as “apples grewed on trees,” but differences arose when they considered nonsensical sentences such as “apples grow on noses.” The monolinguals, flummoxed by the silliness of the phrase, incorrectly reported a grammar error, whereas the bilinguals did not.

Bialystok suspected that rather than reflecting expertise in grammar, the bilinguals’ performance demonstrated improvement in the brain’s executive system, a broad suite of mental skills that center on the ability to block out irrelevant information and concentrate on a task at hand. In this case, the bilinguals were better able to focus on the grammar while ignoring the meaning of the words. In subsequent studies, bilingual kids aced a range of problems that directly tested their grammatical strength.

Paula Rubio-Fernandez and Sam Glucksberg, psychologists at Princeton University, have found that bilinguals are [better at putting themselves in other people’s shoes](#) to understand their side of a situation. This is because they can more easily block out what they already know and focus on the other viewpoint.

Flexible and focused brains

So what is it about speaking two languages that makes the bilingual brain so flexible and focused? An answer comes from [the work](#) of Northwestern University’s Viorica Marian and colleagues, who used eye-tracking devices to follow the gaze of volunteers engaged in various activities.

In one setup, Marian placed an array of objects in front of Russian-English bilinguals and asked them to “pick up the marker,” for example. The twist is that the names of some of the objects in the two languages sound the same but have different meanings. The Russian word for “stamp” sounds like “marker,” which in English can mean a pen. Although the volunteers never

misunderstood the question, the eye-tracker showed that they would quickly glance at the alternative object before choosing the correct one.

This almost imperceptible gesture gives away an important detail about the bilingual brain, revealing that its two languages are constantly competing for attention in the back of the mind. As a result, whenever bilinguals speak, write or listen to the radio, their brains are busy choosing the right word while blocking the same term from the other language. This is a considerable test of executive control — just the kind of cognitive workout, in fact, that is common in many commercial brain-training programs, which often require you to ignore distracting information while tackling a task.

It did not take long for scientists to wonder whether these mental gymnastics might help the brain resist the ravages of aging. To find out, Bialystok and her colleagues collected data from 184 people with diagnoses of dementia, half of whom were bilingual. [The results](#), published in 2007, were startling: Symptoms started to appear in the bilingual people an average of four years later than in their monolingual peers. In 2010, they [repeated the study](#) with a further 200 people showing signs of Alzheimer's disease. In that group, there was a delay of about five years in the onset of symptoms in bilingual patients. The results held true even after factors such as occupation and education were taken into account. "I was as surprised as anyone that we found such large effects," Bialystok says.

An effect on behavior

Besides providing a brain boost, speaking a second language may have a profound effect on behavior. Neuroscientists and psychologists are coming to accept that language is deeply entwined with thought and reasoning, leading some to wonder whether bilingual people act differently depending on which language they are speaking.

That would certainly tally with my experience. People often tell me that I seem different when I speak English than when I speak French.

Susan Ervin-Tripp of the University of California at Berkeley studied the question in the 1960s, when she asked Japanese-English bilinguals to complete a set of unfinished sentences in two separate sessions, first in one language, then the other. She found that her volunteers consistently used very different endings depending on the language. For example, given the sentence "Real friends should . . .," a person using Japanese replied ". . . help each other out," yet in English the same person opted for ". . . be very frank." The findings led Ervin-Tripp to suggest that bilinguals use two mental channels, one for each language, like two different minds. More-recent studies have come up with similar findings.

One explanation is that each language brings to mind the values of the culture experienced while learning it, says Nairan Ramirez-Esparza, a psychologist at the University of Washington. She recently asked bilingual Mexicans to rate their personality using English and Spanish questionnaires. Modesty is valued more highly in Mexico than it is in the United States, where assertiveness gains respect, and the language of the questions seemed to trigger these differences.

When quizzed in Spanish, each volunteer was more humble than when the survey was presented in English.

Researchers may just be seeing the tip of the iceberg when assessing the impact of bilingualism, and many questions remain. Chief among them is whether an older, monolingual person could benefit from studying a second language.

Bialystok is convinced the answer is yes, even if the performance boost is less pronounced than for those who grew up bilingual. “Learn a language at any age, not to become bilingual, but just to remain mentally stimulated,” she says. “That’s the source of cognitive reserve.”

And for that I say to my mother: Merci!

A longer version of this article appeared in [New Scientist magazine](#).

Bilingual Americans can bypass media biases

Global Times | 2012-6-11 20:50:07

By Charles Gray



Illustration: Sun Ying

The visa issues involving the Confucius Institutes in the US have already turned out to be neither as serious nor as ominous as partisans on both sides have claimed. However, we should use this current issue to consider the tremendous benefits that accrue to both nations by continuing to back and support this program.

For the US side, it is important to continue to support the Confucius Institutes in order to increase the access to Chinese language courses for US students. The increase in trade and tourism between the US and China has already led to a dramatic rise in the number of Americans seeking an education in Putonghua.

In many cases, the students are taking the classes specifically to prepare for an economic future where the US and China will be ever more closely linked. The primary difficulty has been in finding qualified educators to teach these classes as opposed to finding students to take those classes.

However, beyond the economic reasons to learn Putonghua, there is the need to create a population that can directly communicate with China, and analyze the positions of its people and government alike. Someone who only speaks English is at the mercy of many gatekeepers, such as editors who decide which articles to translate or publish, when trying to determine the mood of the Chinese people or the government.

In many cases, this selective choice of what articles to translate can create a warped impression of the true state of affairs. After all, when one considers the number of Chinese newspapers and periodicals, it

becomes plain that only a tiny selection are ever made available in English, and the English-only reader has no ability to determine if they are truly representative of Chinese public opinion.

In other cases, the process of translation itself can be used to control the impression the article gives to the English reading audience, especially when the translator must make a personal judgment of how best to translate ambiguous terms or phrasing.

Additionally, there is a vast amount of Chinese written material that has never been translated, and likely never will be.

The difference between bilingual and monolingual individuals is the same as someone trapped on a tourist route through a city, only allowed to see what their guide wishes to show, and someone who can simply take their own walking tour, seeing what they desire. People fluent in Putonghua can come to their own conclusions about China.

For those who worry about undue political influence by the Confucius Institutes, there is no better solution than to create the largest possible number of bilingual citizens. This is especially important as these students graduate and enter business and government careers where their decisions may have a major and long-term impact on Sino-US relations.

In addition, bilingual citizens will be able to see China as a nation and people, rather than a collection of stereotypes. While this will not eliminate occasions where the US and China will find themselves in competition, it will help avoid the unfortunate tendency in some quarters to see China as an alien "other" rather than a legitimate participant on the world stage.

The lack of a large body of citizens who are bilingual and culturally informed has stood behind some of the US' most costly missteps in Asia. Rather than worrying about the Confucius Institutes, Americans should be thanking them, and working as hard as possible to continue to expand the number of bilingual citizens.

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Benefits of Being Bilingual

Second Language Learning: Everyone Can Benefit

Kathleen M. Marcos*

Ñandutí: Foreign language Learning grades pre-K-8

The 1990s have been a decade of renewed interest in language learning. As always, political and economic concerns play a major role in the nation's perception of the value of learning a second language (Met and Galloway, 1992). In addition, there is now a growing appreciation of the role that multilingual individuals can play in an increasingly diverse society, and there is also a greater understanding of the academic and cognitive benefits that may accrue from learning other languages. During the past five years in particular, researchers, policymakers, educators, employers, parents, and the media have reexamined the advantages of foreign language learning.

In 1989, a presidential resolution declaring the 1990s the “decade of the brain” was announced. An increased level of research on brain development has been under way throughout the 1990s. Some of this research has analyzed the effect of language acquisition on the brain. The results of these studies have generated media interest in how early learning experiences—including first and second language acquisition—promote cognitive development. Newsweek magazine, for example, devoted a special edition to the critical first three years of a child's life and indicated that there is a window of opportunity for second language learning that begins when a child is one year of age (Lach, 1997). A recent article in *Time* magazine suggested that foreign languages should be taught to children as early as possible (Nash, 1997). And the television newsmagazine Dateline NBC aired a segment on first and second language acquisition in November 1997.

This article summarizes findings from numerous sources on the benefits of studying second languages and offers suggestions to parents and educators for encouraging language learning at home and at school. (A detailed list of ways to foster a language-proficient society appears in “Putting It All Together: Fostering a Language- Proficient Society” on page 70 of the [ERIC Review](#), from which this article is reprinted.)

Benefits of Second Language Learning

Personal Benefits

An obvious advantage of knowing more than one language is having expanded access to people and resources. Individuals who speak and read more than one language have the ability to communicate with more people, read more literature, and benefit more fully from travel to other countries. Introducing students to alternative ways of expressing themselves and to different cultures gives greater depth to their understanding of human experience by fostering an appreciation for the customs and achievements of people beyond their own communities. Ultimately, knowing a second language can also give people a competitive advantage in the work force by opening up additional job opportunities (Villano, 1996).

Cognitive Benefits

Some research suggests that students who receive second language instruction are more creative and better at solving complex problems than those who do not (Bamford and Mizokawa, 1991). Other studies suggest that persons with full proficiency in more than one language (bilinguals) outperform similar monolingual persons on both verbal and nonverbal tests of intelligence, which raises the question of whether ability in more than one language

enables individuals to achieve greater intellectual flexibility (Bruck, Lambert, and Tucker, 1974; Hakuta, 1986; Weatherford, 1986).

Academic Benefits

Parents and educators sometimes express concern that learning a second language will have a detrimental effect on students' reading and verbal abilities in English. However, several studies suggest the opposite. For example, a recent study of the reading ability of 134 four- and five-year-old children found that bilingual children understood better than monolingual children the general symbolic representation of print (Bialystok, 1997). Another study analyzed achievement test data of students in Fairfax County, Virginia, who had participated for five years in immersion—the most intensive type of foreign language program. The study concluded that those students scored as well as or better than all comparison groups on achievement tests and that they remained high academic achievers throughout their schooling (Thomas, Collier, and Abbott, 1993). Finally, a study conducted in Louisiana in the 1980s showed that regardless of race, sex, or academic level, students who received daily instruction in a foreign language (taught as a separate subject rather than through immersion) outperformed those who did not receive such instruction on the third-, fourth-, and fifth-grade language arts sections of Louisiana's Basic Skills Tests (Rafferty, 1986). Numerous other studies have also shown a positive relationship between foreign language study and English language arts achievement (Barik and Swain, 1975; Genesee, 1987; Swain, 1981). All of these results suggest that second language study helps enhance English and other academic skills.

Some studies have found that students who learn foreign languages score statistically higher on standardized college entrance exams than those who do not. For example, the College Entrance Examination Board reported that students who had averaged four or more years of foreign language study scored higher on the verbal section of the Scholastic Aptitude Test (SAT) than those who had studied four or more years of any other subject (College Entrance Examination Board, 1992; Cooper, 1987). These findings, which were consistent with College Board profiles for previous years (College Entrance Examination Board, 1982; Solomon, 1984) and with the work of Eddy (1981), suggest that studying a second language for a number of years may contribute to higher SAT scores. (1)

Societal Benefits

Bilingualism and multilingualism have many benefits to society. Americans who are fluent in more than one language can enhance America's economic competitiveness abroad, maintain its political and security interests, and work to promote an understanding of cultural diversity within the United States. For example, international trade specialists, overseas media correspondents, diplomats, airline employees, and national security personnel need to be familiar with other languages and cultures to do their jobs well. Teachers, healthcare providers, customer service representatives, and law enforcement personnel also serve their constituencies more effectively

Is Earlier Always Better?

Although people can learn languages at any age, some studies suggest that children who learn a language before adolescence are more likely than older learners to attain native-like pronunciation (Harley, 1986; Patkowski, 1990). A number of researchers have found that children have an innate ability to acquire the rules of any language, and that this ability diminishes by adulthood (Curtiss, 1995; Johnson and Newport, 1989). Older language students should take heart, however, in the results of other studies that report that although young children acquire pronunciation easily, they are not particularly efficient learners of vocabulary or other aspects of language structure (Genesee, 1978; Swain and Lapkin, 1989). Of course, the more years devoted to learning a language and the more opportunities available to use it in everyday situations, the greater the proficiency achieved (Curtain, 1997).

when they can reach across languages and cultures. Developing the language abilities of the students now in school will improve the effectiveness of the work force later.

Getting Started

At School

Parents who are interested in enrolling their children in elementary school foreign language programs should first inquire about existing programs in the school district. If the neighborhood school does not offer foreign language instruction, it is possible that immersion programs or language-focused schools exist elsewhere in the school district. Enrollment information will be available at individual schools or at district administrative offices. If there are no foreign language schools or programs offered in the school district, then private language classes may be the only option.

Although second language classes are not always readily available, many resources exist to help parents and educators establish a program in their school or school district. (2)

Second Language Learning and Children With Special Needs

The accompanying article points out the many benefits of studying a second language. Parents and teachers of children with learning disabilities or giftedness may have a special interest in how their children acquire a second language. **Learning Disabilities.** Generally speaking, students with learning disabilities can learn a second language and enjoy the many personal benefits of familiarity with a second language and culture (Baker, 1995). One important study of learning-disabled children taking a foreign language reported that students of average and below-average IQ performed as well as students of above-average IQ on oral production and interpersonal communication tasks (Genesee, 1976). Special multisensory techniques that emphasize the direct and explicit teaching of speech sounds through drill cards and reading, writing, and speaking exercises can facilitate the language learning of special student populations (Schneider, 1996; Sparks and others, 1991). Some speech pathologists and pediatricians may discourage early foreign language learning, particularly when a child is diagnosed with dyslexia, aphasia, or a hearing impairment or

At Home

Long before their children begin school, parents can begin to facilitate second language learning. Children can learn elements of a second language from a babysitter, a nanny, a family member, or a friend; they can also attend a multilingual preschool or a preschool with a language program. If a child has a number of positive experiences with another language, he or she can become quite receptive to learning other languages.

Throughout the school years, parents can show their children that the ability to speak a second language is valued by encouraging an interest in other languages and cultures. Parents can show their respect for other cultures and ways of speaking by inviting people who speak other languages into their homes and by attending cultural events featuring music, dance, or food from other countries. They can also provide their children with books, videos, and similar materials in other languages, and they can send their children to foreign language camps.

To supplement language classes, parents of older children might also wish to explore the possibility of enrolling them in international exchange programs. Students normally live abroad with a host family, which provides them with a safe and sheltered environment where they can practice their language skills. These experiences offer valuable opportunities to complement second language study with firsthand exploration of a different culture.

Conclusion

Research has shown that second language study offers many benefits to students in terms of improved communicative ability, cognitive development, cultural awareness, and job opportunities. Society as a whole also profits economically, politically, and socially when its citizens can communicate with and appreciate people from other countries and cultures. Parents and educators would be wise to take advantage of the many available opportunities and resources for second language learning for the benefit of children coming of age in the 21st century.

scores low on tests of intelligence (Baker, 1995). A language specialist should be consulted before a child with a severe learning disability begins a second language program, but many students with learning disabilities can and do benefit from second language learning experiences.

Giftedness. Because linguistically gifted students are particularly good candidates for attaining native or near-native proficiency in other languages, some educators have advocated offering foreign language instruction early in childhood to fully develop that potential (Brickman, 1988). Typically highly verbal and with advanced vocabularies, these students ideally should be taught using curricula specially geared to their innate strengths, such as strong language, conceptualization, socialization, and productivity traits (Allen, 1992). Early exposure to second languages and cultures will help parents and teachers identify those children likely to exhibit strong language aptitude.

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Notes

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(1) Although the College Board studies show a correlation between studying a foreign language and achieving higher scores on the SAT, it is difficult to prove causality. It may be that the SAT scores of students who take several years of a foreign language are also influenced by other variables, such as their socioeconomic class, the educational level of their parents, or the resources available in their secondary school.

(2) Suggestions on advocating for second language study, developing a coherent rationale, and establishing a school program can be found in Curtain and Pesola (1994); de Lopez, Lawrence, and Montalvo (1990); and Lipton (1995).

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