



COGNITIVE BENEFITS OF LEARNING LANGUAGE

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Foreign language programs are often one of the first items to be scrutinized and cut when elementary, middle, and high schools in the U.S. face poor performance evaluations or budget crunches. However, many studies have demonstrated the benefits of second language learning not only on student's linguistic abilities but on their cognitive and creative abilities as well. Duke TIP interviewed several experts in the field about the advantages of foreign language learning for children.

Martha G. Abbott, Director of Education for the American Council on the Teaching of Foreign Languages (ACTFL)

Therese Sullivan Caccavale, president of the National Network for Early Language Learning (NNELL)

Ken Stewart, 2006 ACTFL National Language Teacher of the Year; AP Spanish teacher at Chapel Hill High School in Chapel Hill, North Carolina

SHOULD FOREIGN LANGUAGE INSTRUCTION START EARLIER IN THE U.S.?

Abbott: It is critical that foreign language instruction be available to all students throughout their PK-12 academic experience. Knowing other languages and understanding other cultures is a 21st Century skill set for American students as they prepare to live and work in a global society. No matter what career students enter, they will be interacting with others around the world on a routine basis and doing business locally with those whose native language is not English.

Beginning foreign language instruction early sets the stage for students' to develop advanced levels of proficiencies in one or more languages. In addition, younger learners still possess the capacity to develop near native-like pronunciation and intonation in a new language. Finally, young learners have a natural curiosity about learning which is evident when they engage in learning a new language. They also are open and accepting of people who speak other languages and come from other cultures.

Caccavale: Yes, because it has been shown to enhance children's cognitive development. Children who learn a foreign language beginning in early childhood demonstrate certain cognitive advantages over children who do not. Research conducted in Canada with young children shows that those who are bilingual develop the concept of "object permanence" at an earlier age. Bilingual students learn sooner that an object remains the same, even though the object has a different name in another language. For example, a foot remains a foot and performs the function of a foot, whether it is labeled a *foot* in English or *un pied* in French.

Additionally, foreign language learning is much more a cognitive problem solving activity than a linguistic activity, overall. Studies have shown repeatedly that foreign language learning increases critical thinking skills, creativity, and flexibility of mind in young children. Students who are learning a foreign language out-score their non-foreign language learning peers in the

verbal and, surprisingly to some, the math sections of standardized tests. This relationship between foreign language study and increased mathematical skill development, particularly in the area of problem solving, points once again to the fact that second language learning is more of a cognitive than linguistic activity.

A 2007 study in Harwich, Massachusetts, showed that students who studied a foreign language in an articulated sequence outperformed their non-foreign language learning peers on the Massachusetts Comprehensive Assessment System (MCAS) test after two-three years and significantly outperformed them after seven-eight years on all MCAS subtests.

Furthermore, there is research (Webb bibliography) that shows that children who study a foreign language, even when this second language study takes time away from the study of mathematics, outperform (on standardized tests of mathematics) students who do not study a foreign language and have more mathematical instruction during the school day. Again, this research upholds the notion that learning a second language is an exercise in cognitive problem solving and that the effects of second language instruction are directly transferable to the area of mathematical skill development.

The notion of "earlier is better" in language learning seems to be upheld by the fact that longer sequences of foreign language instruction seem to lead to better academic achievement, overall. Because second language instruction provides young children with better cognitive flexibility and creative thinking skills, it can offer gifted students the intellectual and developmental challenges they need and desire.

Stewart: Absolutely. Every piece of research in the field points to the benefits of starting a second language as early as three years of age. The other key to becoming proficient in another language is a long, continuous contact with the language. Until we have a well articulated PK-16 second language "buy-in" from legislators, school boards, administrators, and parents, the U.S. will continue to lag behind other nation, thus prolonging monolingualism.

ARE IMMERSION PROGRAMS EQUALLY EFFECTIVE FOR YOUNGER AND OLDER STUDENTS?

Abbott: The advantage for younger learners is that they have the ability to mimic closely the native pronunciation and intonation of a new language. In addition, literacy skills that are being developed in the native language transfer to the learning of the new language. For this reason, research studies have shown academic gains by students who have begun learning another language at an early age.

Immersion programs for older students are very effective as well. Depending on the age of the students, they may or may not develop native-like pronunciation and intonation. However, the older student already possesses an internalized grammar of the native language which is useful in learning a new language.

Regardless of age, immersion programs are effective because they use second language acquisition as the vehicle for learning the general education curriculum. This makes the content of the course inherently more interesting for the student and maximizes the instructional time by accomplishing two goals at once: language acquisition and content learning.

Caccavale: Currently, over 100 public schools in the U.S. have foreign language immersion programs. Research on immersion programs show that when they are properly structured, they can be equally effective for younger and older students in developing oral proficiency and that all immersion students can achieve functional levels of bilingualism.

However, children who start learning a second language before puberty seem to outperform, over the long run, older children and adults who begin the study of a second language after puberty and continue to study that language for the same number of years. Similarly, children who start learning a language at young ages have better opportunities to develop native pronunciation and intonation. But motivation is key- as research shows that that motivation can help students to overcome some age-related factors in second language learning.

Stewart: Certainly immersion programs come the closest to providing students, young or old, with the intensive language experience they need to become proficient. In my opinion, it's the next best thing to study abroad. Not everyone has the means to study or live abroad, but immersion programs can do a lot to bring the language and culture to them. There are some excellent models in place in certain advantaged areas of the country. Every child deserves the chance to become a citizen of the world in such a rich experience.

ARE SOME INDIVIDUALS NATURALLY TALENTED WHEN IT COMES TO SECOND LANGUAGE ACQUISITION?

Abbott: Of course there are some students who "take to" language learning more readily than others. We tend to see that children, who are more verbal in their native language, use this tendency to their advantage when learning a second language. The challenge is not to send a message to students that language learning is difficult and that one has a knack for it or not. This is not the case. All students have the ability to learn a second language - even those who have specific learning difficulties. The research shows that these learning disabilities surface at the same level in the foreign language classroom as they do in the general education classroom. Students with accommodations need to have the same adaptations made in the language classroom as they do in the general education classroom.

Caccavale: There is a difference between language acquisition and language learning. There are some individuals who seem to develop analytical thinking skills more readily than others, and this helps them in the learning of grammatical concepts. However, that does not mean that only those students who are highly analytical should study a foreign language, as second language acquisition (listening and speaking) is a global process. Just as everyone needs to develop skills in a variety of curricular areas, everyone can benefit from learning a foreign language, whether it is because of the cognitive advantages or the exposure to and understanding of other cultures.

Stewart: Like an artistic or musical talent, language systems click better with some learners. However, as with any new venture, learning a language can be greatly enhanced with perseverance and practice. There is still a lot to learn in terms of linguistics and second language acquisition. I come from a monolingual family and culture with little second language experience; so, I believe that I have a knack for languages. I claim that the desire and drive to learn a language are the single-most determining factors in achieving fluency.

HOW SHOULD STUDENTS CHOOSE WHICH FOREIGN LANGUAGE TO STUDY?

Abbott: Of course the best choice is for a student to select a language that he or she is interested in learning. For many the choice is based on the language background of the family but it can also be based on a teacher's reputation or the language that their friends are taking. Many times parents try to predict which language will be most useful in the future, but this is a difficult projection to make. The important factor is that students begin any language as early as possible and continue in a well-articulated sequence. Since research indicates that learning a third or fourth language then comes more easily. Students can always switch languages at a later date if it appears that another might be more useful for a specific career path.

Stewart: It is not so much which language a student chooses, but rather that they make a choice and stick with it. I have Latino students who become excellent French students, for example. Thus, students who break out of their comfort zones can have an enriching experience in the end. Parents and language educators should embrace all languages and encourage learning multiple languages. As a Spanish teacher, I am constantly advocating for students to start a third language. Portuguese, for example, is a natural transition for advanced Spanish students. One of the life-long benefits of learning another language is that you're always learning, and it keeps the brain actively engaged. Recent studies have connected learning a second language with delaying Alzheimers for this very reason. So, while languages should be started in Pre-K, it's never too late to start learning another language. I was particularly impressed with a program in the European system where children and grandparents were going to school together to learn a second language.

HOW CAN PARENTS WHO DO NOT HAVE A LANGUAGE OPTION IN THEIR SCHOOL OBTAIN FOREIGN LANGUAGE INSTRUCTION FOR THEIR CHILDREN?

Abbott: Parents need to get organized and "speak up" for language education in their communities. Many elementary level programs have been implemented based on parent demand. Parents should advocate for language programs in their local communities and keep up with national initiatives in language education and federal and state legislation.

For home-school and pre-school parents, more resources are becoming available. Publishers and media developers are capitalizing on the renewed interest in language instruction and are developing programs for children based on language learning. In addition, the web offers many free language learning opportunities.

Caccavale: Although parents may not be able to get a foreign language program instituted at their child's school in the immediate future, they can help to do so in the long run. Parents can find and share resources and hold informational meetings with other parents, school administrators, and school board members. School boards represent parents, and school board members are willing to listen to well-informed parents who have done their research and who are able to present the benefits

of foreign language learning effectively. Even with a tight school budget, the slow and steady insistence of parents can help to get foreign language classes instituted.

WHAT ARE THE BEST AVENUES TO STUDY A FOREIGN LANGUAGE, AND WHAT ARE SOME ALTERNATIVES IF THE SCHOOL DOES NOT HAVE A FOREIGN LANGUAGE PROGRAM OR OFFER A LANGUAGE OF INTEREST?

Caccavale: Interactive learning is the best since language learning is a social activity. Many online courses and software programs do offer interactive learning. However, no one can really take the place of a classroom teacher, because a teacher can recast a question and engage students in dialogue to get them to re-think or more readily understand concepts by using a variety of modalities to illustrate their applications.

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