

## Through the *Skylight* with Foreign Languages: Providing All Students With Challenging Elementary School Curriculum

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Recently, I came across a quote by Oliver Wendell Holmes that reads as follows:

“There are  
**one-story** intellects,  
**two-story** intellects, and  
**three-story** intellects with skylights.

All fact collectors, who have no aim beyond their facts, are  
**one-story** minds.

**Two-story** minds  
compare, reason, generalize,  
using the labors of the fact collectors  
as well as their own.

**Three-story** minds  
idealize, imagine, predict – their best illumination comes from above,  
through the **skylight**.”

What better way could there be to describe people who speak more than one language than as *three-story intellects*! We have long heard about “HOTS” (Higher Order Thinking Skills) Schools in various states. These schools, dedicated to overall instruction through various content themes such as foreign languages, the arts, mathematics, etc., provide avenues along which to develop individual student interests and talents. By encouraging children to access higher order thinking skills, they help to develop better critical and analytical thinkers. Since foreign language instruction is known (Curtain and Pesola-Dahlberg, 1999) to develop better critical thinking skills in children, I personally think we should have all of our students wearing tee-shirts inscribed with “I’ve got the HOTS (Higher Order Thinking Skills) for foreign languages!” As parents and educators, we have to start promoting the teaching of foreign languages for the one tangible benefit that all students of foreign languages can and surely will attain from their experience...better creative and divergent (critical and analytical) thinking skills!

Lev Vygotsky, in his seminal linguistic work entitled Thought and Language (M.I.T. Press, Cambridge, 1968) theorizes that children acquiring their native language operate much of the time on a level of rote learning and knowledge, repeating words pronounced and used by others in order to begin to develop their own linguistic repertoire. He likewise theorizes that children (or others) learning a second language tend to access more higher order thinking skills in the process. Vygotsky notes that as soon as a child hears a word used in another language, he/she is linguistically required to compare and contrast that word to a word meaning the same thing in his/her own language. On Bloom’s Taxonomy of learning,

comparing and contrasting are higher order skills than is rote knowledge. Can you see the beginning of a two-story intellect here?

Later, students or natural acquirers of other languages begin not only to compare and contrast the two languages, but to explore other languages and to create with language on their own, to synthesize, to predict what patterns may occur, and to test their linguistic hypotheses against basic facts, all the while accessing the much higher-order thinking skills of evaluation and synthesis.

An article appearing in the Boston Globe (9/10/02, by Judy Foreman) describes a research project recently undertaken by Dr. Ellen Bialystok, famed brain researcher and professor of psychology at York University in Toronto, Canada. This research project compared the performance of both monolingual and bilingual children on what Bialystok calls the “tower game” which involves the building of towers with Lego or Duplo blocks. Children are asked to construct towers with both Legos and Duplos (which are twice as big as the Legos). They are told that each tower represents an apartment building and that one family can live in each block. Comparing towers of equal height (four Duplos are as tall as seven Legos), children are asked to tell which tower can hold more families. Amazingly enough, monolingual subjects, who tended to focus on only one aspect of tower construction, found it very difficult to ignore the obvious fact of tower height and to think any further about the number of blocks comprising each tower. Bilingual subjects, however, answered quickly that more families could live in the Lego tower because it was made up of more blocks. Bialystok notes in her findings that the bilingual subjects repeatedly out-performed monolingual subjects at age 4 on this task which most monolingual subjects could not master until age 5, thereby suggesting that bilingual children may have a one-year cognitive advantage over monolingual peers! Can you build a three-story intellect using Legos or Duplos? Try “building” a foreign language repertoire as well!

In another recently-published report entitled “report of Current Research on the Effects of Second Language Learning on First Language Literacy Skills” (Monique Bournot-Trites, Ph.D. and Ulrike Tellowitz, M.A., commissioned by the Atlantic Provinces Educational Foundation, French Second Language Directors, Halifax, Nova Scotia, January 2002), we find the following conclusion: “The effect of learning a second language (e.g. French) on first language skills has been virtually positive in all studies. Although most studies on the effect of second language learning on first language literacy have been done in the area of French Immersion education, one can also apply the findings to Core French (note: Core French, in Canada, is the equivalent of a well-structured FLES program here in the U.S.) and intensive French programs. **The loss of instructional time in English in favour of the second language has never been shown to have negative effects on the achievement of a first language.** Cummins’ interdependence hypothesis, which maintains that language skills are being transferred from one language to the other, can be assumed to be true for the Core French situation as well. **One can confidently assume that cognitive abilities acquired in the learning of one language can be put to use in the acquisition and proficiency of the other language. In many studies, first language skills were shown to be enhanced, even if instruction time in L1 was reduced in favor of L2 instruction.**” I can just see those one-story intellects shaking their heads and wondering “How in the world...?”

Let's return to the quote at hand and analyze a bit further:

The one-story intellects: could they possibly be some of our nation's most influential policy makers? People who used to dream and now live with statistics and facts they feel they cannot possibly change? People who look at dire budget situations and feel that it is never a good time to start something new? People who look at the whole situation as that infamous four-quart gallon into which a fifth quart will simply not fit?

The two-story intellects: Perhaps even many of our colleagues and educational leaders: those who seem to understand the value of second language instruction, but again wonder how it will happen without some kind of financial windfall... those who see the connection between program mandates and eventual teacher certification programs in elementary foreign languages, but who are unwilling to start the process of encouraging colleges to offer second language teacher certification and instead are waiting for certified elementary foreign language teachers to simply appear on their doorsteps before starting new programs. This is, in essence, the old "Catch-22" in which the dreams of many new programs remain caught, and even stuck.

The three-story intellects: people like Dr. Sam Placentino and Dr. James O'Connell, former Superintendent and Assistant Superintendent of the Holliston, MA Public Schools, who had the courage to dream of new programs and skylight visions for all children in the years of Proposition 2 ½ in Massachusetts, bringing into a middle-class suburban school district one of the only French Immersion and later public school Montessori Programs in the entire United States, using imagination and creative thinking to overcome the adversities of one-story intellects who refused to think in any way but their own; people like Dr. Nancy Young, current Holliston Superintendent, who has continued the dream of the Immersion Program and has overseen the implementation of a FLES Spanish program for all students in our public schools. These are the people who see the "gallon of water" question as being easy to solve: if you use the regular school curriculum to build your foreign language program, you are thereby simply coloring the water in that infamous gallon container, **thereby changing its entire appearance without adding one ounce to its volume**, and yet, through context-enriched foreign language instruction, **allowing your students to develop not only the knowledge of a second language, but enhanced knowledge of the regular school curriculum and multi-story intellects as well.**

Have we produced any three-story intellects over the years in foreign language programs? I know plenty of them! Take Matthias, a young man whose severe language-based learning disability encouraged many one and two-story intellects to say that he should not continue in the context of the French Immersion program, because it might cause too much confusion... because learning one language would be hard enough for him. Well, due to the fact that his teachers and parents all happened to be three-story thinkers, this child went on...and on...and on...not only to outperform all of his classmates on the S.A.T.II in French, but to continue on to his post-graduate and doctoral studies in organic chemistry, currently performing post-doctoral work at the University of California at Irvine! And Marybeth, who, upon graduating from Boston College with a degree in French, went on to be hired as an intern at Goldman Sachs, not because she had any background in accounting, but because her

background in dealing with other peoples and other cultures would (and did) make her an excellent candidate for Goldman's International Division where she never used a word of French, but knew how to interact with new cultures in new situations. The list is endless, as are the stories of successful graduates from second-language programs throughout the U.S.A.

A recent bibliography developed by Elizabeth Webb at the Georgia Department of Education synthesizes many research studies conducted on students in Georgia schools and beyond. Some of these research results are described as follows:

**“Data from the College Board’s Admission Testing Program revealed that the SAT-Verbal scores of students who had taken four or five years of foreign language were higher than the verbal scores of students who had taken four or five years of any other subject.** A large-scale study conducted by Eddy in 1981 concluded that students who studied foreign languages for longer periods of time did better on various SAT sub-tests and on the test as a whole than students who studied less foreign language, even when the variable of verbal giftedness was controlled. T. C. Cooper’s study (Modern Language Journal 71/4, 381-387) of 23 metropolitan high schools in the southeast revealed that students who take a foreign language I high school scored significantly higher on the verbal portion of the SAT than those who did not. Economic background, which was measured by the number of students receiving free and reduced lunches, did not affect students’ performance. Even those who came from lower socio-economic backgrounds, but took foreign language, performed “basically just as well as their more fortunate peers.”

In one study (by L.S.Dumas, 1999), research indicated that “learning a second language is a powerful experience that helps the brain of young children develop. The young brain will actually grow the neural connections needed to learn the language. That is no longer possible after age 12. Seven states have instituted a second-language requirement for all children in elementary school: Arizona, Arkansas, Louisiana, North Carolina, Montana, New Jersey, and Oklahoma. **A study of 13,200 third and fifth graders in Louisiana public schools revealed that, regardless of race, gender, or academic level, kids taking foreign language classes did better in the English section of the Louisiana Basic Skills Test than those who did not.**”

This piece of information is astounding in light of the fact that a recent article written by famed educational writer E. D. Hirsch (American Educator, Spring 2003) suggests that there is currently in our nation’s schools, by Grade 4, a thirty million word “gap” in vocabulary between our nation’s richest and poorest students which is surmised to be responsible for the decline in reading comprehensions scores among fourth graders in general. If foreign language study is able to narrow this gap and result in similar performance on the verbal section of the SAT test, then why are not all of our nation’s children enrolled in foreign language classes from the early elementary grades on? **Foreign language study could possibly come to be known as “The Great Equalizer” in helping to balance the verbal deficits of our nation’s poorest children.** This, combined with the research by Bialystok leading toward an overall cognitive advantage for bilingual children, makes a powerful statement in support of foreign language instruction for all children as early as possible.

Back to the “gallon of water” argument put forth by many educators and administrators who seem to think that teaching children a second, or foreign, language will interfere with their language development in their first language: Not only has this never been proven to be the case, but more studies show the following:

Saunders (1998) specifically examined the performance of third grade students enrolled in the Georgia Elementary Foreign Language Model Program. She compared students who had not received any foreign language instruction with students one year younger who had received four years of instruction, five days each week, for thirty minutes per day. She found “those students in the ESFL Program scored significantly higher on the Math portion of the ITBS (Iowa Test of Basic Skills) than the older students had scored. “

Again, we expected verbal scores to be higher, but math scores as well?

Another carefully constructed study (Armstrong and Rogers, 1997) “demonstrated that third graders who were taught Spanish for thirty minutes, three times per week, showed statistically significant gains in their Metropolitan Achievement Test scores in the areas of Math and Language after only one semester of study. This study verifies two earlier studies that showed that foreign language instruction either had no detrimental effect on the basic skills or a positive effect on students’ achievement in basic skill areas. **The results of this study are particularly interesting since one class of students in the experimental group had actually received 1 ½ fewer hours of math instruction per week, yet still outperformed the students in the control classes in math.**”

Although it would be impossible to summarize herein the result of all of the studies included in this comprehensive bibliography, the results continue to impress us: **significant gains in measures of performance IQ by foreign language students as early as Grade 1; elementary school children who have studied a foreign language out-performing their peers on standardized tests of not only English language arts, but also Math and Social Studies; improved cognitive skills resultant from second language learning, and additional socio-cultural benefits gained from learning another language.**

One thing clear from years of research conducted on foreign language programs is the following: **learning to speak another language takes time, which, in the school setting, means years and years of exposure to the second language in a well-articulated long sequence of language learning.** It is for this reason that we must advocate for the development of foreign language programs for all children, beginning at the elementary and even pre-school level. Three or four years of study at the high school level may indeed help to raise SAT verbal scores, but certainly will not result in the level of communicative proficiency envisioned in the National Standards for Foreign Language Learning, published by the American Council on the Teaching of Foreign Languages.

“When you wish upon a star, makes no difference who you are, everything your heart desires will come to you. If your heart is in your dream, no request is too extreme, when you wish upon a star as dreamers do...” If you never look upward to find the stars, then you cannot possibly dream upon them! Support foreign language instruction for all children, and keep your

eyes on the skylight of their minds. High levels of achievement in all areas will surely follow, and they will become three-story thinkers for a lifetime of intellectual gains.

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