

Introduction

During the past few decades, there has been a rapid growth to a new global community as the boundaries of our countries and cultures come closer together. Children today should have the ability to speak more than one language in order to communicate effectively as adults. Children need to be able to speak more than one language. (Bickford)

Although it is traditional in America to teach students a second language starting junior high, or high school, it has been demonstrated through scientific research that it is easier for students to learn a second language at a high rate relative to a teenager. (Bickford)

The Learning Window

The “learning window” for children occurs from birth, to the age of ten. Students after the age of ten have been demonstrated by research as having a less hopeful chance of being able to speak a language fluently. According to Harry Chugani of Wayne State University’s Children Hospital of Michigan, children begin to lose their ability to learn a second language around the age of ten. (Bickford) This theory is reinforced by Dr. Susan Curtiss, Professor of Linguistics of UCLA states, “The power to learn language is so great in the young child that it doesn’t seem to matter how many languages you throw in their way. . . . They can learn as many spoken languages as you can allow them to hear systematically and regularly (Curtiss).” Curtiss is stating that a young student has the strongest ability to learn a second language. Thus, through proper teaching, a young student has the ability to fluently learn a second language.

Earlier is Better

Experts believe that learning a second language before the age of ten will allow the child to have a better pronunciation for the language. Pronunciation is an important quality for language proficiency. This is due to the physiological changes that take place in a maturing brain as a child enters puberty. In addition, the more time a student dedicates to learning, the more knowledge he or she may acquire. (Marcos, “Learning a Second Language”)

Lenneberg’s Critical Period Hypothesis

Modern linguistic theories assume there is a mechanism for languages that has to be triggered within a certain time frame. Eric Lenneberg, a psychologist at Harvard University, came up with a theory about the “learning window” known as the Critical Period Hypothesis. Lenneberg’s Critical Period Hypothesis consists of the following:

“Thus we may speak of a critical period for language acquisition. At the beginning it is limited by lack of maturation. Its termination seems to be related to a loss of adaptability and inability for reorganization in the brain, particularly with respect to the topographical extent of neurophysiologic process...The limitations in man may well be connected with the peculiar phenomenon of cerebral lateralization of function, which only becomes irreversible after cerebral growth-phenomena have come to a conclusion. (Lenneberg 1967, 179). Though language is species-specific, various other animals have critical periods—even for acquiring communicative skills (Lenneberg cited by Donath).”

Critical Period Hypothesis Studies

“There is evidence that the primary acquisition of language is predicted upon certain developmental stage which is quickly outgrown at the age of puberty.”

(Lenneberg 1967) Lenneberg theorizes that after lateralization, a process by which two sides of the brain develop specialized functions, the brain loses plasticity. He claimed that lateralization of the language function is normally completed at puberty making post adolescent language acquisition difficult. Neurolinguistics today agree that the critical period depends on the creation of cortical specialization. Generally loss of plasticity in the brain results from the development of cortical specializations. There is a crucial time frame for triggering the mechanism. (Winitz, Collier)

Studies of Feral Children (learning language in general)

Supports most frequently quoted for the CPH are the case studies of the children who had been isolated from language and who tried to acquire the language before and after their critical period. Unlike the cases of Amala and Kamala, who were said to be reared by wolves and found in 1920, studies of teaching a language are reported in the following three cases.

The first case was a deaf mute child named Isabelle, who was found at the age of six and half. She spent alone in a darkened room before being found, but she succeeded in her language learning because she was at the age of six and half. Brown (1958: 192, cited in Aitchison 1989:85) recorded:

Isabelle passed through the usual stage of linguistic development at a greatly accelerated rate. She covered in two years the learning that ordinarily occupies six years.

By the age of eight and one half Isabelle was not easily distinguishable from ordinary children of her age.

It is reasonable to consider that she was able to acquire her language because she started learning before the critical period came to an end.

The second case was Genie, who was found at the age of about fourteen (Curtiss, Fromkin, Krashen, Rigler, and Rigler 1974). Because she started learning a language after the critical period, her progress was slower than other children. For example, her two-word stage, at which every child goes through uttering two words at a time like 'Want milk' and 'Mummy play,' lasted much longer. Genie used this type of primitive form and its negation such as 'No want milk' for a longer period. Her ability to learn vocabulary was superior to other children. However, her grammatical development was much slower and unsuccessful, because her critical period had passed already. Since she started learning a language after she was already pubescent, Genie had to take quite a long time to acquire a language. (Katsumi)

The third case was Chelsea, who started to learn language in her early thirties (Curtiss 1988). She showed poor grammatical ability like Genie, but her vocabulary was better. It was recorded that her syntax created sentences such as 'the woman is bus the going' and 'banana the eat.'

All these cases of children reared in isolated environments reveal the difficulties of learning a language after the critical period.

CPH Second Language Acquisition and first language dominance

While some adult learners of foreign languages can speak foreign languages quite naturally even if they started learning after puberty, most learners fail to reach native-speaker's level. Coppieters (1987) examined twenty-one adult French speakers who had begun learning French as a second language. When their grammatical performance was compared with native speakers, it was impossible to distinguish the non-native speakers by the number of mistakes and inappropriate wordings. The judgment of grammaticality was, however, different between native and non-native speakers. Coppieters claimed that the divergence between the two groups was more marked in functional distinctions. Another example is in Thompson's study (1991). He reported that the learners who arrived in the United States before they became ten years old succeeded in learning more natural English than those who arrived at later age. The two subjects who came from Russia at the age of four failed to achieve native-like pronunciation because of, Thompson claims, their high proficiency in Russian. This hints at the dominance of the first language.

Japanese Studies – Second language acquisition

Frequently cited research with Japanese children and adults shows that adults did not get better results than children (Cochrane 1980). Subjects were asked to distinguish English /r/ and /l/ sounds after exposure of 245 hours for the adults and 193 hours for the children. The children outperformed the adults, but after the adults were taught the phonemic distinction in the follow-up experiment, the adult got better scores, while children did not.

Sato's study (1987) suggests that open (CV) syllable preference in Japanese is not evident in second language learners' pronunciation when they began learning before the age of twelve. But Tarone's study (1987) about the learners beginning after twelve years old, shows a difference. The acquisition of pronunciation is the field in which adult learners cannot perform better than children in many cases because speaking and listening are heavily based on natural learning environments outside classroom.

Oyama's study (1976) includes two adult native speakers' judgment of naturalness of accents. She investigated 60 male residents in the United States who had come there age six to twenty and reported that the age of arrival in the States had a strong effect. But the number of years of residence in the States had a negligible effect in cases where they started learning languages after puberty. Her data suggests that it is important for 'young' learners to be exposed to their target language sufficiently to acquire a natural pronunciation. To sum up, above-mentioned reports support the CPH on listening and speaking despite some social and psychological variances. (katsumi)

The Sensitive Period and the Multiple Periods

The CPH is under criticism, with a large quantity of counter evidence. Nevertheless, no other hypothesis will explain the truth better than language learning by matured students and the brain damaged patients' recovery of language become more difficult with aging.

Because it is difficult to fix the exact span of years during which language learning can take place naturally, some researchers have presented a revised version of the CPH. They use the term 'sensitive period,' rather than 'critical period,' for second language

acquisition. The distinction between the CPH and the sensitive period hypothesis is whether acquisition is 'possible only within the definite span of age' or 'easier within the period.' Oyama (1979:88) says that sensitive periods are preceded and followed by less responsive periods. Seliger's proposal (1978) is that there may be multiple critical or sensitive periods for different aspects of language. The period 'during which a native accent is easily acquirable' appears to end earlier than the period governing the acquisition of a native grammar. (Katsumi)

Universal Grammar

A central concern in current research is the role of Universal Grammar (UG) in second language acquisition. Universal Grammar is the innate system of cognitive structures. While most researchers acknowledge that an innate system of language specific principles is responsible for a large part of first language acquisition, there is considerable discussion about the role of UG in second language acquisition (See Flynn, 1983, Felix 1985, White 1985, Hilles 1986, Zobi 1986; Rutherford, 1986; Bley-Vroman, 1988; and Bley-Vroman et al., 1988). UG performance tests were administered to Chinese and Vietnamese immigrants who had immigrated before puberty and still having problems with the English Language. Only 2 out of 6 persons tested performed at a level of native speakers using the principles of the Universal Grammar. (JOUP, U.of New Orleans)

Immersion

The capacity to learn may vary depending on how successful the child is in his own native language. In other words, if the child has problems learning his native language, then he will have troubles learning a second language. Also, the degree of

learning may vary depending on how the teacher incorporates the language into the curriculum. Learning is more advanced if the second language is used to actually teach math or English for instance. This is called “immersion,” when academic lessons are taught in both the native language and the second language. Of course, it is imperative that the first or native language be used to teach the class the same material before being taught in another language.

A study of French immersion programs in Louisiana supports the assertion that foreign language boosted brainpower. Research reveals that fifth and sixth graders who received 30 minutes of French every day significantly outperformed students in a controlled group of English/language arts only. (“Curriculum: Foreign Languages” Association for Supervision and Curriculum Development)

This report suggests that we should not be teaching language in isolation, but integrating language as part of the content in the regular student day. (“Lessons from Immersion” ERIC Digest, Clearinghouse on Language and Linguistics, Center for Applied Linguistic Integrating Language and Content.)

Benefits of Learning a Second Language

“Research suggests that children who learn a second language early on are apt to become multilingual, become more proficient in their native language and score better in their achievement tests.” (Bowles) Many studies have been completed, which prove that not only are students that study foreign language more likely to learn their native language and excel at standard tests, but that these students will be further able to

communicate with a larger population, appreciate foreign cultures, improve their overall school performance, and contribute to society.

Communication

A second language not only allows people to communicate with a larger population but also allows for benefits in the workplace. It is important in today's society to be able to communicate with a variety of cultures in a variety of settings. (Looking to the Standards) Speaking a foreign language allows a person to communicate with people they would otherwise not be able to communicate with because of the language barrier. The ability to speak a second language also offers an advantage in the workplace because it opens up job opportunities. (Marcos, "Why, How, and When Should my Child Learn a Second Language") A survey was completed of business expectations regarding foreign language studies which stated, "international study should not be considered a separate specialization as much as a component of academic and occupational training programs." (McClendon) The ability to communicate and understand other cultures is becoming increasingly important in business society, and many employers look for employees that are fluent in two or more languages. Speaking another language also gives one an edge over another employee with equal training when competing for a promotion.

Improved Overall School/Intellectual Performance

Studies have suggested that students who study foreign language are more creative and are more capable of solving complex problems than those students that do not study a foreign language. (Marcos, "Why, How, and When Should my Child Learn a Second Language") These students also demonstrate superiority in divergent thinking,

memory ability, attention span, and score higher in both verbal and non-verbal intelligence. (Benefits of Second Language Learning) “One study showed that by the fifth year of an immersion program, students outperformed all comparison groups and remained high academic achievers throughout their schooling.” (Marcos, “Why, How, and When Should my Child Learn a Second Language”) Students that study a second language also tend to have higher test scores in subjects such as reading, language, and mathematics. It has also been observed that for every additional year of a foreign language a student receives, the more likely the student is to excel at other subjects. (Benefits of Second Language Learning)

Improved Standardized Test Scores

Research states, according to a 1992 report, *College Bound Seniors: The 1992 Profile of SAT and Achievement Test Takers*, students who had taken 4 or more years of a foreign language scored higher on the verbal portion of the SAT I. (Marcos, “Why, How, and When Should my Child Learn a Second Language”) Other more recent studies have been conducted that further support this report. In addition to SAT I scores, SAT II foreign language test scores as well as advanced placement examination scores for foreign languages would increase on an average. Higher standardized test scores would help students become accepted to college and would ensure that the student is prepared for further foreign language studies in college. These students may even be applicable to receive college credit for work done in high school.

Enhancing of Primary Language

Foreign language students are at a benefit because they are able to develop a greater understanding of their primary language. Through learning the structures of other languages students are able develop a better understanding of how the English language works. Second language education has been proven to significantly strengthen the student's primary language in areas such as grammar, vocabulary, reading, and communication skills. (Benefits of Second Language Learning)

Many educators and parents worry that the study of a second language early in the child's development of their primary language, will negatively affect the progression of this primary language. This is not the case, because studies state that the earlier a child starts a second language, the greater the positive effect on the primary language.

(Alberta) Studies have been conducted and offer evidence "that no long-term delay in native English language development occurs in children participating in second language classes, even in full immersion programs." (Marcos, "Why, How, and When Should my Child Learn a Second Language")

Deeper Understanding of Culture

In today's society, it is very important to be able to look beyond cultural boundaries. "Language, communication, and education have become the national defense of the year 2000. Language and understanding other culture will be more critical than ever in this new world." (McClendon) Students that study a second language are introduced to a great variety of culture and as a result demonstrate a greater cultural sensitivity. In addition to this, students are provided with superior cross-cultural skills and are able to better accustom themselves to a variety of cultural contexts. (Benefits of

Second Language Learning) The awareness of other cultures will allow students to better appreciate their own culture as well as those of their peers and even strangers. In the workplace this is a very valuable trait because foreign companies are often more receptive to culturally aware businessmen/businesswomen.

Contribution to Society

People that are able to speak a second language are a benefit to American society because they “enhance our economic competitiveness abroad, improve global communication, and maintain our political and security interests.” (Marcos, “Why, How, and When Should my Child Learn a Second Language”) Foreign relations are very important, and there is a desperate need for qualified people who speak foreign languages in areas such as science, technology, medicine, and global commerce. (Alberta)

TEACHING SUGGESTIONS

Language Learning Should Begin at Home

In order to take advantage of the child’s “learning window,” parents must take an active role by introducing foreign languages to their children. A parent does not necessarily have to be bilingual in order to carry on this task. Parents could simply expose their children to multilingual books, audiotapes, and videos. Parents could also gain access to new home language learning software’s that can be played on a home computer. New language software allows parents to learn various ways of teaching their child culture, grammar, and real language. Children are then able to uncover another language by interacting with audio, visuals, and textual information about foreign languages and cultures. (Bickford) Opal Dunn, a consultant in early language learning, states, "Languages are for life and they can't be taken away from you once you've learned

them. By helping your child and continuing to help her, you'll have made a lasting contribution to her quality of life and understanding of others and their culture. (Dunn)" Dunn explains how meaningful and useful knowing a second language is. Knowing a second language is a skill kept for life and will always show a lasting impression.

Different Acquisition of Pronunciation and Grammar

Speech is 'material' in the sense that it is realized motorically by means of a mechanism with specific biomechanical constraints, and perceptually processed through sensory mechanisms having specific limits of resolving power. Flege (1981) analyzes voice onset times (VOT) values in English and French to illustrate accented English spoken by French Canadians. He comes out with his own phonological translation hypothesis and says:

“I would like to propose that a tendency by mature speakers to interpret sounds occurring in a foreign language in terms of sounds found in their native language may be a more important cause of foreign accent than any limitation on phonetic learning imposed by neurophysiological maturation.”

Aitchison's classification (1989:67) of some 'hallmarks' based on Lenneberg (1967) also draws a line between phonetic and grammatical acquisition. Aitchison says that biologically controlled behavior such as pronunciation has the following characteristics:

1. The behavior emerges before it is necessary.
2. Its appearance is not the result of a conscious decision.
3. Its emergence is not triggered by external events (though the surrounding environment must be sufficiently 'rich' for it to develop adequately).
4. Direct teaching and intensive practice have relatively little effect.
5. There is a regular sequence of 'milestones' as the behavior develops, and these can usually be correlated with age and other aspects of development.

It sounds reasonable for language teachers to examine the five points above when they are designing a language course. The characteristics look similar to the behaviorist approach since they claim the 'priority of behavior' and 'exclusiveness of consciousness.' The remarkable feature lies in the evaluation of 'rich' quantitative and qualitative environments.

CONCLUSION

For many years, schools all over the world have shown an interest in beginning the study of a foreign language in grades earlier than high school. Carolyn Bickford, a writer for a learning program called Soleil Software, reinforces the need for learning a second language by stating, "In this initiative, foreign languages are part of the core curriculum, together with traditional areas of study such as math, science and social studies. However, change in the educational system comes slowly, and it may be years before language programs are implemented at the elementary level. At the same time, the ability to speak a foreign language has never been more important (Bickford)."

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