Forming Sentences in a Foreign Language:
Learning Differences between Adults and Children

Abstract

Neurolinguists and language theorists agree that the first few years of life are optimal for language learning. Language learning appears to be an instinct with a biological basis. Children hear only certain sentences uttered by their parents, but quickly gain the ability to form an infinite number of sentences from a small vocabulary. This suggests that the structural rules for grammar are innate to humans. The current theory on language learning is that these rules apply to all languages and that children are born knowing them.

In his 45 years of experience as a language educator, my mentor François Thibaut has observed that children's brains are most malleable for language development during the first three years of life and can be imprinted with the sound of any language during that time. Thibaut likens a toddler's brain to a computer without a printer—although the toddler is learning the language, he or she may not start speaking it right away. For adults, on the other hand, language learning is much more difficult. However, adults can form their own sentences in a foreign language after 20 hours of instruction, but children cannot.

As an teaching assistant of preschool-age children at French language immersion summer programs, I observed that although children are able to learn some vocabulary of a foreign language as well as basic sentences that are frequently repeated, most children have difficulty forming their own sentences despite many hours of instruction. In practice, grammatical rules of a foreign language are difficult for children to learn. The purpose of this article is to further explore this issue and how it impacts the methods of teaching foreign language.

Introduction

Language acquisition has fascinated the human mind for more than two thousand years. From the time of Aristotle, the pervading theory of language acquisition was that the human mind was akin to a blank slate and that all knowledge, including language, was acquired through experience: "[w]hat [the mind] thinks must be in it just as characters may be said to be on a writing tablet on which as yet nothing actually stands written."[1] Linguist Noam Chomsky disagreed with Aristotle. He theorized that humans have an innate ability to acquire language.[2] He aptly termed this ability a "language acquisition device" that was part of the human brain.[3] He further developed the theory into Universal Grammar, which this paper will explain.[4] Various arguments, including those of linguist Steven Pinker, have been made to prove Chomsky's theories, but none has been definitive. This paper will examine whether Chomsky's theories are applicable to learning a foreign language.

Author's Foreign Language Profile

After being certified by the French Ministry of Education as fluent in French, I conducted research on linguistic theory in an effort to determine the best way to learn a foreign language. My mentor François Thibaut, educator and director/founder of The Language Workshop for Children and The French Language Salon in New York City, is a researcher and French language instructor for children and adults. Before beginning my research, I reflected on my personal

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[1] Aristotle, *De Anima*, trans. J.A. Smith (Oxford: Clarendon University Press, 1931), 430a.

[2] Noam Chomsky, *Language and Mind* (Cambridge: Cambridge University Press, 2006), 24.

[3] ibid, 120.

[4] ibid, 24.

experience learning French as a native English-speaking child whose parents are not French and do not speak French.

I began learning French at age three in summer camp intensive programs offered in New York City, where instruction was by "immersion," which meant that all instructors only spoke French with the children, regardless of their French-speaking abilities. Because I began so early, I was able to acquire an authentic French accent. As a toddler, I learned French by playing games and singing songs. Learning was playing and playing was learning. At home, I watched the Language Workshop for Children's Professor Toto® animations in French to continue to be exposed to French. At age six,[5] I was enrolled by my parents in private language lessons with Mr. Thibaut and continue to this day. In addition to studying grammar from books, I learned five new French verbs per week and read the French Language Salon stories, which included idiomatic expressions. I also made vocabulary flashcards, which consisted of an image on one side and the French word on the other. Rather than translating the French vocabulary words into English, I wrote sentences using the words in context; this enabled me to think in French. My lessons also included debates in French about current events. The fact that these private lessons have put equal weight on conversation as well as written grammar has helped me learn to speak "*presque comme une française.*"[6]

As a teenager, I interned as a teaching assistant of preschool-age children at French language immersion summer programs for two years. I observed that although children are able to learn some vocabulary of a foreign language as well as basic sentences that are frequently

[5] According to Thibaut, this is the age at which a child can begin to understand the grammar of a foreign language.

[6] Translation: *Almost like a French person.*

repeated, most children have difficulty forming their own sentences despite many hours of instruction. For example, after four weeks of French immersion summer camp, totaling 140 hours, 4-year-old Mia was able to repeat new vocabulary with an authentic French accent and was able to say her name, her age, and how she was feeling in French, but was unable to form her own sentences using the vocabulary she had learned. Perhaps Chomsky's linguistic theories of Universal Grammar apply only to one's native language, to which a child is exposed on a constant basis. If so, how should a foreign language be taught to integrate this discovery?

Current Theories on Language Acquisition

To explore this question, it is necessary to understand Chomsky's theories. Chomsky noticed that children hear only certain sentences uttered by their parents, but quickly gain the ability to form an infinite number of sentences from a small vocabulary.[7] From this observation, he theorized that the structural rules for grammar (nouns and verbs, phrase structures and word structures, etc.) are innate to humans, whose brains contain a "language acquisition device."[8] These rules, which Chomsky called Universal Grammar, thus apply to all languages and are not included in the grammar rules of a particular language.[9] Chomsky defines a grammar as a device, autonomous and independent of semantics, that analyzes and generates all the grammatical sentences of a language while rejecting the ungrammatical ones.[10] In summary, Chomsky

[7] Chomsky, *Language and Mind,* 141-142.

[8] ibid, 120.

[9] Noam Chomsky, *Aspects of the Theory of Syntax,* (Cambridge, MA: The MIT Press, 2015), 6.

[10] Noam Chomsky, *Syntactic Structures* (Mansfield Centre, CT: Martino, 2015), 13.

believes that the ability to learn language is innate, unique to humans, and autonomous from cognition.

Before proposing his own theory of syntax, or word order, Chomsky rejects the "finite state grammar"—a word-chain device that builds sentences by selecting words one at a time—as an accurate model for languages.[11] Instead, he proposes transformational generative grammar: a finite set of rules that provides a structural description to an infinite number of sentences from a finite set of elements—words and phrases—of a particular language.[12] This model is governed by three types of rules: phrase structure rules, transformational rules (the adding, deleting, moving, and substituting of words), and morphophonemic rules (which convert strings of morphemes into strings of phonemes).[13] Every sentence has two types of structure: "deep structure"—the phrase structure defined by "super-rules"[14] common to all human languages, or Universal Grammar—and "surface structure"—the version of a sentence that is spoken and heard and that is derived from the deep structure by a series of transformations.[15] Chomsky's "principles and parameters" theory proposes that children are born knowing the super-rules (or principles) of language and all they have to learn is whether their language has the parameter value head-first (verb before object), as in English and romance languages (such as French), or

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[11] Chomsky, *Syntactic Structures,* 20-21.

[12] ibid, 46.

[13] ibid, 45-46, 107. A morpheme is a unit of morphology, or a word, and a phoneme is a unit of sound, or a letter.

[14] Steven Pinker, *The Language Instinct: How the Mind Creates Language* (London: Penguin Books, 2015), 103.

[15] Chomsky, *Language and Mind,* 15

head-last (object before verb).[16] According to Chomsky, the fact that children are born knowing these super-rules demonstrates that language development has a biological basis.

Pinker further developed and modified Chomsky's linguistic theories. Pinker believes that language is an instinct—a biological adaptation used to communicate information—evidenced by children's ability to learn language quickly without being formally taught.[17] Written language, on the other hand, is not based on instinct because it requires formal instruction.[18] Pinker asserts that complex language is universal because children reinvent it, as evidenced by the fact that a pidgin[19] language can become a full complex language, called a creole, if a group of children is exposed to it at the age when they learn their native language.[20] Pinker agrees with Chomsky's assertion that the ability to learn language is distinct from all other aspects of human cognition.[21] As evidence for that assertion, he points to individuals with "chatterbox syndrome," whose ability to speak is not compromised despite their intellectual impairments, and those with Specific Language Impairment, whose language is compromised but whose cognition is not.[22] Elaborating upon Chomsky's theory of principles and parameters, Pinker believes that all languages share a common plan of syntactic, morphological, and phonological rules and principles—Universal Grammar—with a small set of varying parameters,

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[16] Pinker, *The Language Instinct,* 104-105.

[17] ibid, 5.

[18] ibid, 186.

[19] "A simplified speech used for communication between people with different languages" (The Merriam-Webster Dictionary 2016).

[20] Pinker, *The Language Instinct,* 20-22.

[21] ibid, 78.

[22] ibid, 37, 41.

which can drastically change the superficial appearance of a language.[23] According to Pinker, Universal Grammar helps children learn language from their parents and, without it, language learning would be impossible.[24]

Pinker believes that language is an expression of thought—and not vice versa.[25] He argues that thoughts do not depend on words; as evidence, he points to occasions when what an individual says is not quite what he or she meant to say.[26] Thus Pinker rejects the Sapir-Whorf hypothesis of linguistic determinism—that "people's thoughts are determined by the categories made available by their language"—and linguistic relativity—that "differences among languages cause differences in the thoughts of theirs speakers."[27] He theorizes that people do not think in their spoken language, but in a language of thought, which he calls *"mentalese;"* knowing a particular language is essentially knowing how to translate *mentalese* into strings of words and vice versa.[28] Pinker proposes that sentences are put together like mental trees, and emphasizes that grouping words into phrases is essential to connecting grammatical sentences with their proper meanings.[29] According to Pinker, understanding a sentence is a four-step process: grouping words into phrases; finding the subject, verb, object, etc. in each phrase; looking up

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[23] ibid, 240.

[24] ibid, 9.

[25] ibid, 45, 47.

[26] ibid, 47.

[27] ibid, 46.

[28] ibid, 72-73.

[29] ibid, 90.

definitions in the mental dictionary; and finally, joining together branches of phrases.[30] Words are thus used as "universal currency among members of a community."[31]

Pinker also explains how children acquire their native language. By the age of 10 months, babies have already learned to distinguish the features—more specifically, the phonemes—of their own language, but not those of other languages.[32] Because this transition occurs before babies are able to understand or produce words, Pinker argues that language learning cannot depend on associating sound with meaning.[33] According to Pinker, children learn to speak in five stages: syllable babbling; gibberish babbling; one-word utterances (age one); two-word strings; and finally, fluent grammatical sentences (ages two to three).[34] As evidence of Universal Grammar, Pinker points to the fact that children follow grammatical rules most of the time and that their most common errors involve conjugations of irregular verbs which by definition do not follow the usual pattern and must be memorized.[35] My experience teaching 3- and 4-year-olds confirms this to be children's most common grammatical error in their native language. For example, 4-year-old Spencer would say "drived" instead of "drove" and "builded" instead of "built."

Pinker believes that most language learning occurs when children generalize from their teachers' and parents' speech as well as from their own behaviors that are rewarded or not

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[30] ibid, 195.

[31] Pinker, *The Language Instinct,*146.

[32] ibid, 268.

[33] ibid.

[34] ibid, 269-270, 273.

[35] ibid, 275-278.

rewarded.[36] According to Thibaut, a toddler's brain is like a sponge, soaking up information about language by listening to their teachers' speech. That which guides children's generalization is, according to Pinker, "similarity:" using their built-in Universal Grammar, children categorize speech into nouns and verbs and a small number of phrase types; this automatically enables them to create an infinite number of sentences.[37] Language learning is part of normal development up to six months of age, then declines steadily, most likely due to the decline in the development of brain synapses and metabolic rate.[38] This would explain the reason it takes students years to learn the grammar of a foreign language, whereas children are able to learn the grammar of their native language in only a year or two. Pinker offers a reason why the language-learning mechanism subsides: once used, it is no longer needed.[39]

Integration of Linguistic Theories into Foreign Language Teaching

Based on some of the work of Chomsky and Pinker, Thibaut developed a highly successful foreign language teaching method for children. Thibaut was also inspired by the work of language theorist Eric Lenneberg, who proposed that language development occurs at around the same age for every healthy child, regardless of their environment; this shows that language learning is genetically determined and is a result of maturation rather than environment.[40] In his 45 years of experience as a language educator, Thibaut has observed that children's brains are

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[36] ibid, 432.

[37] ibid, 432, 434.

[38] ibid, 298.

[39] ibid, 300.

[40] Eric H. Lenneberg, "On Explaining Language," Science 164, no. 3880 (1969): 635-43, http://www.jstor.org/stable/1725957.

most malleable for language development during the first three years of life and can be imprinted with the sound of any language during that time.[41] Indeed, Pinker also maintains that the language-learning circuitry of the brain is "more plastic in childhood."[42] Reminiscent of Aristotle's comparison of the mind to a blank slate, Thibaut likens a toddler's brain to a "computer" without a "printer"—although the toddler is learning the language, he or she may not start speaking it right away.[43] His teaching method is based on the idea that "listening and understanding—not speaking—are the building blocks of language."[44] Pinker, too, argues that speaking may be unnecessary in learning the grammar of a language because saying something aloud, in contrast to listening to the speech of others fluent in the language, does not provide a child with more information about the language.[45]

According to Thibaut, it is important to make learning a foreign language enjoyable for both children and adults—for children, through "games, songs, and activities,"[46] and for adults, through conversation topics that interest them—because it ensures that they will be more engaged and thus will absorb more of the language. I found that this is especially important when teaching toddlers, who can be shy and easily distracted. For example, 4-year-old Jay, another of my students at French language immersion summer camp, would hesitate to respond when asked basic questions in French about his name and age, but would belt out every word of French songs

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[41] "How Learning a Foreign Language at an Early Age Can Improve Your Child's Academic Performance." *First at Four Focus*. Flint, Michigan: ABC12, December 19, 2016.

[42] Pinker, *The Language Instinct,* 298.

[43] Langley, Monica. "Bringing Up (Bilingual) Baby." *The Wall Street Journal*. October 6, 1999.

[44] Unknown, Jonathan. "A Petite Class in French." *The New York Times*, November 6, 1988.

[45] ibid, 284.

[46] Unknown, "A Petite Class in French."

such as *Alouette*[47] and *Frère Jacques*.[48] It is also essential to emotionally engage students of all ages, often through humor, for example, because of the strong link between emotion and memory.[49] My own experience as a French language teaching assistant supports Thibaut's ideas about the importance of emotional engagement. To encourage shy children's responses to questions in French, I would suggest to them comical, incorrect answers. For example, when I pointed to 4-year-old Scarlett's blue shirt and asked what color it was, she was reluctant to respond, but when I suggested it was red or purple or white, she laughed and replied, *"Non, c'est bleu!*"[50]

Neurolinguists and language theorists agree with Thibaut that the first few years of life are optimal for language learning. But if children learn languages more readily than adults, then why are adults able to form their own sentences after 20 hours of instruction, for example, whereas children are not? According to Thibaut, this is because grammatical rules—such as how to form questions from declarative sentences—can be taught only to adults, and not to children.[51] When teaching children a foreign language, the instructor can only provide facts about the language; this allows the children to discover the rules themselves. In Thibaut's own words: "You don't really teach them a language. You expose them to a language."[52] Thibaut emphasizes that children are capable of speaking any language like a native and, although they will make

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[47] Translation: *Lark* (a song used to teach children the names of the body parts).

[48] Translation: *Brother Jack* (the equivalent song in English is "Brother John").

[49] "How Learning a Foreign Language at an Early Age Can Improve Your Child's Academic Performance." *First at Four Focus*. Flint, Michigan: ABC12, December 19, 2016.

[50] Translation: *No, it's blue!*

[51] Unknown, "A Petite Class in French."

[52] Millard, Pauline M. "Not-so-Foreign Words." *Daily Record*, June 24, 2001.

mistakes in the foreign language at first, they will eventually correct themselves. Adults, on the other hand, will know how to connect words to form their own sentences, but they will not develop as authentic an accent as children.

Conclusion

This paper has examined the theories of Chomsky and Pinker on language acquisition. My mentor Thibaut has created a successful teaching method for foreign languages based on some of their theories as well as on research of his own. As a native English speaker who began learning French at age 3, I am proof that his teaching method works. I also have personal experience from my own teaching of children that confirms much of Thibaut's research. In our experience, children require much more instruction than adults to learn the grammar and syntax of a foreign language. Thus, it remains unclear whether there exists a Universal Grammar. Perhaps language acquisition is an extension of the human ability to discern and repeat patterns. The theory of Universal Grammar should be tested under controlled conditions in the context of the acquisition by children of a *foreign* language—not a language spoken at home—to gain more insight into the acquisition of language and improve teaching methods for foreign language.

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