

Assessment Question:

What are the most important differences between learning a first language and learning a language in the classroom?

1. Introduction

Any adult who has seriously tried to learn a second language (SL) in a classroom can attest to the difficulty of reaching native-level fluency. Indeed, even after years of studying a SL, the exchange of ideas can often be an arduous task racked with errors and miscommunication. Students may spend a lot of time, energy and money on lessons only to become disgruntled with their slow progress.

1.1 A Child's Process is Different

The process a child goes through in learning a first language (FL) is quite different. Lightbown and Spada (1999: 2) say that by age four, it is commonly recognized that children have mastered the basics of their FL. This is an amazing feat for such a complex task in such a short time. How is it that children seem to acquire language so easily while adults struggle to learn a language in the classroom? One might think that an adult should have an advantage over a child because of superior intellect, the ability to think abstractly, world knowledge, and understanding of language structure from having mastered at least one language. However, these advantages may also obstruct the natural learning process (Brown, 2000: 61). Also, children also seem to have some advantages in language learning.

In this paper I will review the leading theories for both first language acquisition (FLA) and second language acquisition (SLA) and the important methodologies used in the SL classroom. I will identify some important differences between the two. Only adults will be discussed with regard to learning a language in the classroom.

2. Learning a First Language

Brown (2000: 21) writes about the remarkable transformation infants go through from crying-cooing babies to adept conversationalists. Research has shown that a few weeks after birth infants begin to distinguish between sounds such as “ba” and “pa,” but they go through an entire year or longer before they begin to speak their first words (Lightbown and Spada, 1999: 1). A couple of years after beginning to speak, “children can comprehend an incredible quantity of linguistic input; their speech capacity mushrooms as they become the generators of nonstop chattering and incessant conversation” (Brown: 2000: 21). How can this amazing feat be accomplished in such a short time? Theories of language acquisition strive to explain this phenomenon. The following is a review of some leading theories.

2.1 Behaviouristic Approaches

Traditional behaviorists explain FLA as a result of learner imitation, practice, feedback on success, and habit formation. By imitating the sounds and patterns in their environment, children are reinforced by the encouragement, praise or successful communication with those around them. The child's success in acquiring the language is directly affected by the regularity of positive reinforcement and by the quality and quantity of input (Lightbown and Spada, 1999: 9).

Lightbown and Spada (1999: 10) define the terms as such: *Imitation*: Word-for-word repetition of all or part of someone else's utterance. For example, Mother: "Do you have your ball and glove?" Child: "Ball and glove." *Practice*: Repetitive manipulation of form. For example, child: "I can throw the ball." "She can throw the ball." "Jenny can throw the ball." They point out, however, that children, unlike parrots who repeat the familiar, don't simply imitate everything they hear. Rather, they choose things to imitate that are relevant to the present learning situation, and imitate the new words and structures until they become hardwired. Once learned, they move on to other novel words and phrases.

The forms of language children use cannot be attributed solely to imitation and practice (Lightbown and Spada, 1999: 15). Children create their own sentences by recognizing patterns in the language and using them in new contexts. Although behaviorism can explain the more basic elements for language acquisition, it cannot account for the acquisition of more elaborate structures. As (Brown, 2000: 24) points out, this approach "failed to account for the abstract nature of language, for the child's creativity, and for the interactive nature of language acquisition." Other theories are needed.

2.2 Nativist Approach

Noam Chomsky proposed a nativist theory, in which children are biologically programmed for language, just as they are for functions such as learning to walk. Their built-in ability enables them to become competent language users regardless of their learning environment. Chomsky referred to this innate knowledge or "little black box" as the language acquisition device (LAD) (Brown, 2000: 24). The LAD contains the universal principles of all languages and helps to keep the child on track instead of confused by all the complex rules of the language. Language samples which the child is exposed to set off the LAD (Lightbown and Spada, 1999:16).

Once it is activated, the child is able to discover the structure of the language to be learned by matching the innate knowledge of basic grammatical relationships to the structures of the particular language in the environment. (Lightbown and Spada, 1999: 16)

The LAD is now more commonly referred to as Universal Grammar (UG) and is thought to be comprised of principles shared by all languages. Children have to learn how their language makes use of and deviates from these principles (Chomsky 1981, Cook 1988, White 1989) in Lightbown and Spada (1999: 16).

2.2.1 Critical Period Hypothesis (CPH)

Eric Lenneberg (1967) argued that the LAD will work successfully only if it is activated at a certain time—the critical period, which Brown (2000: 53) defines as “a biologically determined period of life when language can be acquired more easily and beyond which time language is increasingly difficult to acquire.” There have been a few documented cases of children who had been deprived of normal language input and were later unable to make up for the lost time, lending support to the CPH.

2.2.3 Integrated System

An interesting aspect of the nativist approach is that the child’s FL is considered a genuine system in itself, and that language development is not merely going from an erroneous structure to a more acceptable grammatically correct structure:

The child’s language at any stage is **systematic** in that the child is constantly forming hypotheses on the basis of the input received and then testing those hypotheses in speech (and comprehension). As the child’s language develops, those hypotheses are continually revised, reshaped, or sometimes abandoned. (Brown, 2000: 25)

Jean Berko (1958) in Brown (2000:25) showed how children learn by using an integrated system rather than by a series of separate discreet items. She demonstrated how children as young as four could talk about two “wugs” if shown a “wug” or if told how a person today could “gling” could then talk about how yesterday the person “glinged” or “glang.” With nonsense word tests, she showed that children “applied rules for the formation of plural, present progressive, past tense, third singular, and possessives” (Brown 2000: 25).

2.2.4 Pivot Grammar

As nativist researchers examined and compared a child’s “telegraphese” to the complex language of five- to ten-year olds, they discovered early grammar systems of children referred to as **pivot grammars** (Brown 2000: 26). Two words uttered would typically fall into two different classes. For example, in “My cap,” “That dog,” and “Mommy shoe,” the words on the left were called pivot words because they could revolve around words on the right, which were in a more “open” class. Two words from the same class were understood not to go together. Many rules were discovered in the generative framework of the child, and the rules seem to be anchored in children’s UG (Brown, 2000: 26).

2.2.5 Parallel Distributing Processing Model (PDP)

Spolsky (1989) in Brown (2000: 26) challenged the Chomskyan view of understanding generative rules that connections were serial, or had just one neural connection between a pair of neurons in the brain. He proposed the PDP model in which a single neuron could be connected to a multitude of other neurons. Spolsky said that rather having to apply a series of rules one after the other, the child's performance may be like that of an orchestra's playing a symphony, with several synchronic levels of neural interconnections.

2.3 Interactionist Approach

Lightbown and Spada (1999: 22) explain that interactionists attribute more influence to the environment. Language is understood to develop from a complex interchange between a child's innate aptitude and the linguistic environment. Child directed speech—language which is altered to make it more easily understood—is seen as an important contribution in the child's language development. Interactionists don't see language acquisition as separate from the child's experience and cognitive development, but rather, affected and influenced by other kinds of skills and knowledge. Jean Piaget saw that children use language to express their understanding of their physical interaction with their environment, in that the interaction resulted in a symbol system which represented the child's thoughts and comprehension of his/her environment.

2.3.1 Social Interaction

Vygotsky (1978) in Lightbown and Spada (1999: 23) determined social interaction to be the sole factor for language development. A supportive social atmosphere with lots of interaction was essential and was all that was needed for the child's acquisition of a higher level of knowledge and language performance. To show the importance of interaction, Vygotsky cites the case of Jim, a hearing child with deaf parents whose lack of normal one-on-one interaction resulted in his abnormally delayed FLA. Berko and Gleason (1982) in Brown (2000: 42) are in agreement:

While it used to be generally held that mere *exposure* to language is sufficient ... it is now clear that, in order for successful language to take place, *interaction*, rather than exposure, is required; children do not learn language from overhearing the conversations of others or from listening to the radio, and must, instead, acquire it in the context of being spoken to.
(Brown, 2000: 42)

3. Learning a Second Language

The theories established for SLA are closely associated with the theories for FLA. While some consider the learner's innate faculties of greatest importance; others highlight the capacity of the environment in shaping language acquisition; still others offer a combined approach with both environmental aspects and learner traits (Lightbown and Spada, 1999:31). There are, however, some important differences for adults, for example, how an "affective filter" may inadvertently block language acquisition. The following will be a brief review highlighted by the differences of FL theories.

3.1 Behaviorism

Behaviorists consider imitation, practice, reinforcement and habit formation fundamental to SLA. However, the habits formed in FLA are believed to interfere with the habits needed in SLA (Lado, 1964 in Lightbown and Spada, 1999: 34). The Contrast Analysis Hypothesis predicts that the learner will easily acquire the target language structures if the learner's FL and the target language are similar, but will have difficulty if the structures are different.

3.2 Krashen's Monitor Model

Steven Krashen (1982) proposed a theory consisting of five hypotheses which he asserted was consistent with research findings. Since its introduction, the monitor model has been influential in SL practices. The following is a review of his five hypotheses cited in Lightbown and Spada (1999: 38-40).

3.2.1 The Acquisition-Learning Hypothesis

Krashen asserts that adults learning a SL gain knowledge of the language in two ways: 'acquisition' and 'learning'. Just as a child naturally picks up a FL, adults *acquire* language which is understood, and *learn* by studying rules and forms. Krashen believes that only acquired language is then accessible for fluent conversation and that learning cannot be transformed into acquisition.

3.2.2 The Monitor Hypothesis

Krashen says that the *acquired* system accounts for fluency while the *learned* system performs as an editor or 'monitor' to make small changes to the acquired system's production. He points out that learners only use the monitor when they know the rules and have the time to find them.

3.2.3 The Natural Order Hypothesis

He agrees with observations made that, much like children learning a FL, SL learners acquire characteristics of the language in predetermined sequences regardless of the order which they may be learned in the classroom. Rules which seem simple and which are easily explained will not necessarily be the ones the learner learns first. For example, advanced learners often neglect to add an -s to third person singular verbs.

3.2.4 The Input Hypothesis

Krashen argues that the only way to acquire language is by having exposure to comprehensible input or input which is slightly beyond the learner's level of competence. He believes that the affective filter hypothesis can explain why some adults, while exposed to ample comprehensible input, still do not attain high levels of competence.

3.2.5 The Affective Filter Hypothesis

Accessible language input can be blocked by things such as motives, attitudes and emotional stress, and Krashen refers to this as the 'affective filter'. When the learner is calm and motivated, the filter will be down and language can be learned more easily. When the learner is anxious, unmotivated or self-conscious the filter will be up and will block acquisition. Children don't seem to have developed this filter.

3.3 Connectionism

Connectionists are opposed to the LAD hypothesis. They credit the environment and input more than the learner's innate ability, and assert that what is inherent is merely the capability to learn. By having a countless number of exposures to the target language, learners eventually amass a solid comprehension. Learners develop strong neural connections from hearing the language in specific contexts repeatedly (Lightbown and Spada, 1999: 42).

3.4 Interactionsism

Michael Long (1983) believes that modified interaction is necessary for input to be comprehensible. He says that learners need a chance to interact with other speakers so that they adjust their speech to suit the learner's level of understanding. According to Long, "there are no cases of beginning-level learners acquiring a SL from native-speaker talk which has *not* been modified in some way" (Lightbown and Spada, 1999: 43). He says that research has shown that native speakers regularly modify what they say when speaking to non-native speakers in prolonged conversations.

4. Learning a Second Language in the Classroom

The classroom context will greatly differ depending on the method used by the teacher. Some methods, such as the direct method and communicative method attempt to more closely imitate FL, for example, using only the target language and focusing on meaning. Others, such as the audiolingual and grammar translation methods, attempt to take advantage of an adult's cognitive capabilities by concentrating on, for example, learning forms, habit formation and repetition. The following is a brief review of the most important classroom methods which the SL learner may encounter.

4.1 Grammar Translation Method

The grammar translation method was the prominent teaching method in the eighteenth and nineteenth centuries: With “a focus on grammatical rules, memorization of vocabulary ... translations of texts and doing written exercise,” (Brown, 2000:15) it provided a means for scholarly instruction and reading proficiency, but scant time for oral practice. Students learned ‘about’ the language but not how ‘use’ it. Prator and Celce-Murcia (1979) in Brown, (2000: 15) outline the main features of the method:

- Teacher uses FL a large majority of the time giving minimal reference to target language.
- Vocabulary is taught in lists and out of context.
- Complexities of grammar are explicated in long detail.
- Form and inflection are the focal point of grammar instruction and correct sentences are created by following grammatical rules.
- High level of reading material is introduced early.
- Text reading is used for grammatical analysis and content is considered secondary.
- Drills consist of translating sentences taken out of context.
- Little if any pronunciation practice.

Despite its persistent worldwide popularity, Richards and Rodgers (1986) in Brown (2000: 16) point out “it has no advocates...there is no literature that offers a rationale or justification for it...” Of all the methods used in the classroom, this one bears the least resemblance to learning a FL.

4.2 Direct Method

Francis Gouin, inspired by his three year old nephew's virtual fluency in French, came up with the series method. This evolved into the direct method, still used in Berlitz classes throughout the world. The main idea is that SLA should be very similar to FLA, with a lot of spontaneous verbal communication, no translation, and little or no mention of grammar (Brown, 2000: 44-45). The criticism of its weak theoretical foundations may have been due to the realization that FLA is not the same as SLA. The principles of the Direct Method are reviewed by Richards and Rogers (1986) in Brown (2000: 45):

- Teacher instructs only in the target language.
- Common usage of words, phrases and sentences are taught.
- Teachers begin with simple oral exchanges with students, then progressively to more difficult.
- Teaching aims are conducted orally.
- Tactile objects, pictures and demonstrations are used to teach concrete vocabulary, while association of ideas are used for abstract vocabulary.
- Accurate pronunciation and correct grammar are emphasized.

4.3 Audiolingual Method (ALM)

During WW1 the American army began intensive oral/aural courses known as the Army Specialized Training Program (ASTP) and were later adopted by educational institutions as the audiolingual method (Brown, 2000: 74). Lightbown and Spada (1999: 118) explain that this method concentrates on accurate oral skills, as errors occurring using spontaneous speech could become habitual. The features of ALM are summarized by Prator and Celce-Murcia (1979) in Brown (2000: 74):

- A reliance on memorization of phrases, mimicry and overlearning.
- Sentences and structures are learned by repetition.
- Little attention is paid to the explanation of grammar.
- New words are learned in context.
- Students are encouraged to speak only the target language.
- Proper pronunciation is essential.
- Reinforcement of accurate responses.
- Meaning and content considered not as important as proper manipulation of the language.

Approval for the ALM method began to decline as students failed to achieve long-term communicative capability. It was realized that habit formation, overlearning and avoidance of errors was not the best way to learn a SL (Brown, 2000:75). Lightbown and Spada (1999: 119) point out that students have no reason to think about repetition void of meaning and, in fact, often don't understand what they are repeating—resulting in poor concentration. Although the ALM provided potentially good tools for SLA, its lack of concentration on meaning and fluency detracted from its success.

4.4 Designer Methods

After Chomsky's linguistic revolution, audiolinguilism began to lose popularity (Brown, 2000: 103). As a deeper structure of language was sought, the 1970's saw a host of creative methods which David Nunan (1989) in Brown (2000: 103) referred to as "designer" methods. Brown points out, that this was an important time for research which inspired many creative methods for SL teaching. "They were an important part of our language history, and they gave us some insights about language learning that still

enlighten or teaching practices” (Brown, 2000:103). Some of the most popular of these methods are: community language learning, suggestopedia, the silent way, total physical response, and the natural approach. These methods explored some of the differences and similarities shared by FLA and SLA and helped lead to a more comprehensive method—the communicative approach.

4.5 The Communicative Approach

Brown (2000: 267) explains that the communicative approach was both the result of and departure from previous approaches. As in FLA, this method takes into account the essential need for real communication in SLA, and also utilizes the advantages that adults have over children. Brown summarizes the main characteristics of the Communicative Approach:

- All elements of communicative ability are the focus of classroom goals and are not limited to only speech and grammar.
- Language is used in real and meaningful ways, without an overemphasis on language forms.
- Fluency and accuracy are both important principles, but accuracy may take a backseat to fluency to maintain students’ interest in meaningful conversation. However, at the risk of communication breakdown, fluency should not be advocated in place of clear, coherent, communication.
- Students are encouraged to speak freely and to use unrehearsed dialogue receptively and productively rather than being controlled by the teacher or by overemphasis on language forms.

5. Learning a First Language and Learning a Language in the Classroom: Differences

There are several differences between FLA and learning a SL in the classroom. Cognitive and affective differences between the adult and child, the social and physical environment, and the method used by the teacher in the classroom all make for a very different experience for the learner. The following, in my opinion, are the most important differences.

5.1 Time and Consistency of Acquisition

The most striking difference between the two seems to be in the time needed for and inconsistency of becoming fluent in the target language. FL learners become fluent rather quickly. Most remarkably, all children with a normal developmental environment will naturally, fluently and efficiently attain their FL without any special instruction (Brown, 2000: 20). By contrast, most adults learning in the classroom will take far longer to reach such levels and may, in fact, never do so, even after many years and sometimes a lifetime of study.

5.2 Critical Period

Brown (2000: 54) says that there is a general acceptance by researchers of a critical period for SLA. A critical period may be the result of the lateralization process, or plasticity, where the maturing brain assigns different functions to the right or left side. The critical period is marked by the end of the brain's plasticity. Some researchers including Eric Lenneberg (1967) in Brown (2000: 55) believe the process is complete by around puberty, while others believe it to be earlier. Afterwards, learning a language is much more difficult, and adults have to learn language just as they would any other new skill. Brown (2000: 62) says that as a child becomes an adult the left hemisphere of the brain (which governs the analytical and intellectual functions) becomes more dominant and this could make the learner too intellectually centered or overly analytical while learning a SL.

5.3 Abstract Thinking

Jean Piaget (1972), in Brown (2000: 61) described the cognitive stages a child goes through in which the final stage (formal operational) occurs around the age of puberty and enables the person to think abstractly. This level of maturity and experience may be beneficial in learning a SL as Lightbown and Spada (1999: 32) point out: "The first language learner does not have the same *cognitive maturity*, metalinguistic awareness, or world knowledge as older SL learners." Although this might be helpful for learning some aspects of the language, for example, grammatical explanations (Ausubel in Brown, 2000: 61), it may also become a hindrance compared with FL learners who are, although unaware of learning a language, more centered or "in the moment." As Ellen Rosansky explains about the child: "He is not only egocentric at this time, but when faced with a problem he can focus (and then only fleetingly) on one dimension at a time. This lack of flexibility ... may well be a necessity for language acquisition" (Rosansky 1975: 96) in Brown (2000: 61).

5.4 Language Ego

Alexander Guiora et al. (1992) in Brown (2000: 64) proposed a fascinating theory called the language ego to explain a person's identity s/he develops with his/her FL, and the difficulty this causes adults in learning a SL. He explains that young children are very egocentric and do not recognize a separation between themselves and the world around them. But as they become adults they develop inhibitions about this self identity which is associated with SLA and the language ego. They become anxious about making mistakes and seeming foolish in their new language identity. I can attest to this, as many of my university level students claim that their biggest trouble speaking English stems from their 'shyness'. But young children who aren't yet aware of forms are not concerned with making mistakes. Although Guiora talked about young learners of a SL, my assumption is that his theory would also apply to children learning a FL.

5.5 Rote Learning

In many classrooms, especially grammar translation, rote learning of vocabulary and structure is practiced in meaningless ways. Ausubel, in Brown (2000: 63), points out that rote learning is useless if not associated with existing knowledge. Brown (2000: 63) adds that adults “usually use rote learning for only short-term memory and somewhat artificial purposes.” As pointed out earlier, children learn a FL by using repetition and imitation in meaningful ways. Therefore, SL teachers should limit the use of rote learning to in context, meaningful learning and for pronunciation practice.

5.6 Limited Exposure

Most students, especially those who are studying a SL in their own country, may have very limited exposure to the language, perhaps only in the classroom. The learner may have to begin speaking, often trying to use complex ideas and phrases with very little previous exposure to the target language. A child learning a FL has the advantage of being constantly inundated with meaningful input (mostly from the mother) without speaking for approximately the first two years of his/her life. This is followed by years of meaningful and intense interaction. Certainly, the child has an advantage in the beginning over the SL learner in the classroom due to this fundamental grounding. Although children grow-up with lots of meaningful social interaction, it may be lacking or nonexistent in some classrooms, for example, in the grammar translation classroom.

5.7 Interference

Possessing a FL while learning another can be helpful in understanding the structure of a SL. It also enables the learner to use translation. But it can also be a hindrance, especially the further apart the two occur (Brown 2000:68). It can lead to errors if the structure of the new language differs from the FL. In this sense, having a “fresh start” can be advantageous to the FL learner. In my experience, the structure of Korean makes it much more difficult to learn than it is to learn French, which is more similar in structure to English.

5.8 Correction and Encouragement

Children speaking their FL likely receive much more encouragement than adults and are rarely corrected: “Parental corrections of language errors have been observed to be inconsistent or even non-existent for children of pre-school age” (Lightbown and Spada 1999: 15). They add that parents tend to correct meaning, not form, and will sometimes repeat the child’s utterance in a more complete grammatical form. The classroom can be very different, as teachers may tend to correct errors and disregard acceptable utterances.

5.9 Strategies

Unlike children learning their FL, classroom learners can utilize learning strategies. For example, motivating oneself and setting goals; using mnemonic devices to help remember vocabulary; paying attention; having an awareness of one's own preference style for learning; developing self-confidence; lowering anxiety; and learning to take risks. These strategies are outlined in an excellent book by H. Douglas Brown called: Strategies For Success: A Practical Guide For Learning English. The decision to use these strategies must be consciously made and may be of tremendous benefit.

6. Discussion

Whether because of the LAD, a gene that is switched on or a childhood survival mechanism which later dissipates in adulthood, it is clear that children possess a brain make-up which is more conducive language acquisition. They seem to have a system for language learning which processes information differently than adults. Their inability to think abstractly provides a better grounding for them 'in the now' without having to 'step outside' themselves to understand any new language they encounter. This enables them to better concentrate on meaning, which researchers have shown is crucial for language acquisition to take place.

Whereas a child's use of the five senses becomes a natural part of the language acquisition process, adults exposure to the language may be limited to the artificial environment of the classroom where he or she is confined to a seat and must depend on cognition for SLA. Children's newly acquired motor development and lack of cognition enables them actively explore their changing environment, while acquiring language in synchronicity with other newly evolving skills.

6.1 Conclusion

Having an awareness of the differences between learning a FL and learning a language in the classroom can have implications for the teacher. Recent research has shown the importance of meaningful input and meaningful interaction for language acquisition to take place. Adults should be able to communicate freely and express their thoughts and ideas without being overly corrected. Because adults have the ability to think abstractly and understand forms and language structure, the teaching of grammar can be limited to errors which are common among the students or errors resulting in communication problems. Games and tasks in which students have to work together using only the target language are excellent for bringing some of the more childlike aspects of FLA into the SLA experience. Not only do students have fun when they are working towards a goal, but they become less aware of learning the language and more focused on meaning.

Because of the disadvantages adults have in brain make-up and classroom environment, it is essential that teachers help students become aware of the advantages they possess over children. If adults utilize all the strategies mentioned in section 5.9, it may be possible to become just as successful as children in learning a language. Good language learners may be endowed with some kind of superior aptitude, but they are also likely more aware of, and adept at using available strategies.

References

- Brown, H. D. (2000) *Principles of Language Learning and Teaching*. White Plains: Longman. Fourth Edition.
- Berko, J. (1958) *The Child's Learning of English Morphology*. *Word* 14: 150-177.
- Berko-Gleason, J. (1982) *Insights from Child Acquisition for Second Language Loss*. In Lambert & Freed 1982.
- Chomsky, N. (1981) *Lectures on Government and Binding*. Dordrecht: Foris. Chapter 1.
- Cook, V. (1988) *Chomsky's Universal Grammar*. London: Basil Blackwell.
- Guiora, A.; Beit-Hallami, B.; Brannon, R.; Dull, C.; and Scovel, T. (1972b). *The Effects of Experimentally Induced Changes in Ego States on Pronunciation Ability in Second Language: An Exploratory Study*. *Comprehensive Psychiatry* 13.
- Krashen, S. (1982) *Principles and Practice in Second Language Acquisition*. Oxford: Pergamon.
- Lenneberg, E. (1967) *The Biological Foundation of Language*. New York: John Wiley and Sons.
- Lado, R. (1964) *Language Teaching: A Scientific Approach*. New York: McGraw Hill.
- Lightbown, P. and Spada, N. (1999) *How Languages are Learned*. New York: Oxford University Press. Second Edition.
- Long, M. H. (1983) 'Native Speaker/ Non-Native Speaker conversation and the Negotiation of Comprehensible Input.' *Applied Linguistics*: 126-41.
- Piaget, J. (1972) *The Principles of Genetic Epistemology*. New York: Basic Books.
- Prator, C. and Celce-Murcia, M. (1979) *An Outline of Language Teaching Approaches*. In Celce-Murcia & McIntosh 1979.
- Richards, J. and Rodgers, T. (1986) *Approaches and Methods in Language Teaching*. Cambridge: Cambridge University Press.
- Rosansky, E. (1975) *The Critical Period for the Acquisition of Language: Some Cognitive Developmental Considerations*. *Working Papers on Bilingualism* 6: 92-102.

Spolsky, B. (1989) *Communicative Competence, Language Proficiency, and Beyond*.
Applied Linguistics 10:138-156.

Vygotsky, L. S. (1978) *Mind in Society*. Cambridge, Mass.: Harvard University Press.

White, L. (1989) *Universal Grammar and Second Language Acquisition*.
Amsterdam/Philadelphia, Pa: John Benjamins.

