



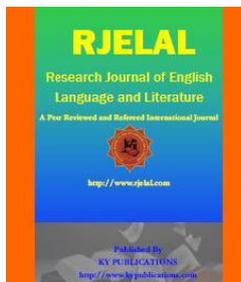
## LANGUAGE LEARNERS' ATTRITION RATE: A CASE STUDY IN ILI

SEYED IMAN GHOLAMI ZAFARANI<sup>1</sup>, SEYED AHMAD KASAIAN<sup>2\*</sup>, SEYED JALAL  
ABDOLMANAFI-ROKNI<sup>3</sup>

<sup>1</sup>Department of English Language Teaching, Gorgan Branch, Islamic Azad University, Gorgan, Iran  
& Department of English Language Teaching, Golestan Science and Research  
Branch, Islamic Azad University, Gorgan, Iran

<sup>2</sup>Department of English Language Teaching, Farhangian University, Mazandaran. Sari, Iran

<sup>3</sup>Department of English Language and Literature, Golestan University, Gorgan, Iran



### ABSTRACT

The present study was an attempt to investigate the possible differences between placed and promoted students in their attrition rate. To do so, a total of 320 language learners from the Iran Language Institute (ILI), Babol branch, were selected as the participants of the study. The performances were assessed during the term. The obtained data were analyzed through utilizing both descriptive and inferential statistics including Chi square. The result of the statistical analyses revealed that promoted students had a better performance and a lower attrition rate. The findings of this study provided some implications for educational policy makers at the ILI, syllabus designers at the research center of the ILI and EFL teachers in the language teaching profession to pay more attention to the age factor of language learners and their educational background and take into consideration the shortcomings of placement tests and procedures in language learning process.

**Keywords:** placed student, promoted student, attrition rate, EFL learners

©KY PUBLICATIONS

### Introduction

An important issue in the field of foreign language teaching is the observation of an attrition in the number of students in certain programs. The attrition itself is an indication of a problem. This study concerns itself with the issue of the attrition rate of the placed versus promoted language learners at the ILI as a typical language institute in Iran. As we know, there are several reasons for learners' attrition in language institutes and the ILI is not an exception. Some of these worth-mentioning factors are managerial, financial, motivational, educational and age factors. Investigating the financial and managerial factors is beyond the scope

of the present study; so in this study we only focused on the motivational, educational and age factors.

Placement tests have some disadvantages which will cause some problems in both primary allocation of the learners to the right level and their pursuing their language learning process in higher levels. The reason for the stated problems is that if a learner is placed in an inappropriate level, he will feel that the presented educational materials are beyond what Krashen calls the  $i+1$  level. As a result, the learner will bit by bit lose motivation in the inappropriate level of learning and this will

inevitably lead him to leaving the educational system.

It should be mentioned that age plays an important role as well since the considerable age difference between the placed and promoted language learners will cause the placed older learners feel more embarrassed and ashamed in case they lag educationally behind. As we know, most private language schools have two important goals namely, cultural and financial goals. Thus, the higher attrition rate of students will impose both some cultural and financial costs to the learners and to the system.

Considering the above-mentioned factors, we can come to the conclusion that the young adult department at the ILI as the infrastructure of the system plays a significant role in making homogeneous classes in every aspect, including age, educational and motivational factors. On the whole, it could be recommended that the private school policy makers take into account the importance of classroom homogeneity and consider the issue of placement tests to older learners of the language more meticulously. Furthermore, controlling homogeneous classes will be much easier for the teachers and will surely be more productive to the system thus leading to a decrease in the attrition rate which itself will lead to higher efficiency of the language learning system.

On the other hand, if a language learner is mistakenly placed at a higher level, it is quite clear that he will face many difficulties in digesting and comprehending the difficult grammatical and lexical notions and his failure at the end of the term will be indispensable. Due to his trust to the reputation of the institute he may enroll in the same level again but he will certainly fail again owing to the mismatch between his linguistic abilities and the difficulty level of the course. Eventually, after repeating this process for two or three times, he will indispensably leave the system which will cause a negative publicity for the institute.

Another aspect of the problem is also possible when the language learner is placed at a lower level compared with his level of linguistic competence. Though being potentially less destructive, the course will impose boredom on the

learner leading to a tendency to take part in the placement procedure once again. In this case, there are two possibilities: If he is placed at the same level again by another examiner, he will continue the course unwillingly and if he is placed at a higher level, a kind of distrust toward the placement procedure and the examiners will be inevitable.

Considering the above-mentioned factors, we can come to a conclusion that there is a close relationship between the placement test and the language learners' level of motivation. For instance, in young adult department, when a learner finishes the last term, it is recommended that a placement test be given to him only for the purpose of providing extra motivation to pursue the courses in the adult department. Furthermore, it is strongly recommended that the above-mentioned learners of the young adult department be placed at the same level due to psychological and motivational factors and the discipline of the institute.

#### **Review of Literature**

There are several variables which might be predicative of L2 acquisition outcomes. Age of acquisition which is typically the age at which learners begin to learn a new language is certainly predictive of L2 acquisition. In various studies a significant negative correlation was found between this variable and attained L2 proficiency at the end state (e.g. Birdsong, 2005; Dekeyser & Larson-Hall, 2005). These studies which were typically in the areas of morpho-syntax and pronunciation revealed that both morpho-syntax errors in production and degree of judged non-native accent increased with advancing age of acquisition. Among dozens of study, this age factor proved to be reliably the strongest predictor of ultimate attainment. Lenneberg (1967), Long (1990) and Pinker (1994) are some of the scholars who signaled changes that occur around puberty. Moreover, Collier (1989) believes that successful language acquisition depends on the learners' age.

There exists a common belief among many scholars (e.g. Long, 1990; Scovel, 1988) that achieving native-like attainment by late L2 learners will only be limited to one or a few tasks not across a variety of linguistic behaviors. The term "Joseph Conrad effect" was coined to capture this notion.

Considering cognitive aging, it was proved by many researchers like Bachman et al. (1992) and Park (2000) that there is an observed performance decline over age starting in young adulthood. Also, Park (2000) has identified three main components of cognitive aging: decreases in processing norm, deficits occurring in working memory, and reduction of suppression (i.e. the ability to focus attention on relevant material).

#### **Age and Second Language Acquisition**

The ways children learn second language seem to differ significantly from those of adults. This has led researchers to investigate the development of the Critical Period Hypothesis (CPH). CPH was originally introduced by Penfield and Roberts in 1959 and was later made popular by Lenneberg in 1967. Brown (2007) refers to this hypothesis (CPH) as "a biologically determined period of life when language can be acquired more easily and beyond that time language is increasingly difficult to obtain" (p. 57). According to him, "crucial point for second language acquisition occurs around the age of puberty, beyond which people seem to be fairly unable to acquire a second language" (p.58). Also, this has caused confusion among many who took it for granted that as soon as you reach a certain age level (12-13) you would be considered too late for successful second language acquisition (Brown, 2002).

Thus, it is important to investigate whether L2 learning capacity declines over a period. There are rather few studies investigating SLA achievement between old and young language learners thoroughly. Seright (1985) points out that only few studies that deal with success and age-related issues between young and old learners prove younger learners as better performers than adult L2 learners. Furthermore, Seright backs her claims by citing an experiment on the learning of Esperanto conducted by Thorndike in 1928. Singleton and Ryan (2004) stipulate that the finding shows that young learners perform better than the old ones. In addition, she also cites d'Anglejan et al.'s (1981) study on Canadian immigrants who were learning French in an intensive language course showing how young learners achieved more success

than older learners, or less success with age (Singleton & Ryan, 2004).

On the other hand, there is evidence that provides support for the hypothesis "the older the better" in terms of second language acquisition. However, Singleton and Ryan (2004) add that all of those investigations were the result of formal instruction. In other words, these investigations were short-term research and based on SLA in primary school classrooms and L2 bilingual programs. Furthermore, they emphasized that the results of some immigrant studies revealed an advantage for older learners. Most of the relevant studies that Singleton and Ryan make reference to consider children as at least one element of comparison.

Therefore, there are few studies that incorporate teenagers and adults of different ages and that show evidence that older learners perform better than those who are younger. Singleton and Ryan point out (2004) that some immigrant studies suggest that L2 learning improves with age and they cite a study in 1974 by Ervin-Tripp conducted on 31 young English speaking children who had been exposed to French for a period that spanned nine months to support his claim. The results of Ervin-Tripp's research revealed that the older students outperformed the younger learners in every field of the learning process (Singleton & Ryan, 2004).

Since the early 1990s, studies have shown positive results of older beginners that achieve high level of L2 proficiency. Singleton and Ryan (2004) explain how White and Genesee (1996) hardly found any differences between English grammatically test scores among native-like French speakers beginning learning English after the age of twelve and those attained by native-speakers in control groups. Furthermore, Singleton and Ryan mention an investigation carried out by Bongaerts et al. (1995) about Dutch learners beginning to learn English in a classroom environment after the age of twelve. This research showed that classroom learners managed to gain English pronunciation ratings within the same range as native-speakers (Singleton & Ryan, 2004). Interestingly, this shows that even though L2 acquisition began at the age of 12 and in classroom settings, those learners could attain a native-like

accent. As previously mentioned, there are evidence that backs the idea of "the younger the better" and also research studies which indicate that older students can exceed younger learners.

Besides, there is another hypothesis that indicates that younger learners are more efficient in achieving a native-like accent in second language. It has to be taken into consideration that this happens and it is essential that the exposure to the target language is adequate. Moreover, this is approved by Singleton and Ryan(2004) as they state "the strong version of this position being that unless exposure to the L2 begins in the childhood years an authentic accent will not normally be taken in"(p.84). It is also good to discuss that it is better over the long run to start learning L2 at an early age. Krashen et al. (1979) investigated this subject further and showed the short-term and long-term results in L2 learning. They assert that:

"(1) Adults pass through early levels of syntactic and morphological development faster than children (where time and exposure are held constant).

(2) Older children learn at a faster pace than younger children (again, in early stages of syntactic and morphological development where time and exposure are held constant).

(3) Acquirers who begin natural exposure to second languages during childhood generally achieve higher second language proficiency than those beginning as adults." (p.161)

There seems to be no clear evidence which can undoubtedly conclude that children learning an L2 will outperform older language learners in the long run. Singleton and Ryan (2004) conclude that it is not possible to conclude based on current studies that younger L2 learners are more efficient and successful language learners than the older ones. On the other hand, they do approve the fact that there is considerably reliable evidence to support the hypothesis that over the long run, those students who start learning an L2 when they are kids generally gain higher levels of proficiency than those who begin at later stages in life (Singleton & Ryan, 2004). However, the studies that contradict this hypothesis are those made in a classroom setting. However, it is hard to compare classroom

instruction over the long run and natural L2 acquisition which does not usually take place inside a classroom.

#### **Role of Age in SLA**

The question "when is the best age for second language acquisition" seems to be connected with the amount of input or exposure to the target language. Scholars are still trying to understand sufficiently what effect age has on the language learner when the exposure to the target language is not enough. Munoz (2010) points out that the amount and the quality of the language input is extremely important to young learners at the early stages of second language learning. She presents some results that compare younger and older language learners and maintains that young learners consistently show better language results than those who start SLA later on in life as adults. Similarly, she declares that those results provide positive support for the CPH and indicate what has been discussed earlier about the existence of certain age period and incomplete language acquisition.

Discussing this further, this strong evidence supports the claim that children benefit much more by participating in the cultural environment, in which they naturally encounter the language input rather than starting at an early age in classroom environment. It shows that children are exposed to more quality of natural input of the target language (Munoz, 2010, pp. 40-41). This also suggests that exposure is more important than the age factor when talking about SLA.

According to Larson-Hall (2008), most studies on the critical period seem to favor "the younger, the better" theory. Nevertheless, those research studies were conducted when learners were active participants and culturally involved in the target country. The participants were actively exposed to the target language every day and received great amount of exposure to the target language outside of the classroom. Researchers agree on the importance of the amount of exposure regarding the critical age of SLA because there is no guarantee for "the younger the better" when the exposure is minimal.

As pointed out by Larson-Hall (2008), children and adults learn language with the help of

different strategies and have different learning abilities and styles. She believes that young learners can learn in an indirect way that makes minimal exposure to the second language not enough to form phonological, morphological or syntactic system. This statement is confirmed when previous results are analyzed and show that there is no linguistic advantage of SLA, having in mind "the younger the better" when the exposure is minimal (Larson-Hall, 2008).

One of those earlier studies conducted by Oller and Nagato (1974) and later cited by Larson-Hall (2008) involves Japanese elementary school students who started to learn English (1-2 hours per week). They compared these students with older students who began their SLA in junior high schools. Statistical differences were observed within the younger learners but not within the older and the conclusion was that the advantages of the younger learners were not present anymore.

Oller and Nagato's (1974) argument for this particular reason show no differences within the older group and results were purely statistical because there were 50 students in the older group and had 24 in the younger group which shows that if effects sizes are small, the results from statistics can disappear (Tversky & Kahneman, 1971). However, more recent investigations regarding "the earlier, the better" are still questionable and the focal point has led scholars to further investigate the language exposure and motivational factors. To further explore the motivation and attitudes towards learning a second language, Larson-Hall's (2008) research reports that young learners have more positive attitude towards studying a foreign language. In conclusion, her study focused on if there was any correlation between starting early and high scores in environment that provided minimal input of exposure to the second language as the debate has often been about how age plays an important role in a natural or immersion environment. Based on what she says, this is not always the case as she argues that "age does seem to play a non-negligible role in improving second language acquisition, given that language learners receive sufficient input" (p.24). Besides, it is obvious that age can play a role in improving second language acquisition, but it is

more important to provide students with enough exposure to the target language all through their learning process.

Defense of the position that language learning is constrained by a critical period demands that we specify the point in time, and ideally the reason why language learning potential changes at that stage of maturation. Nonetheless, there has been little agreement about what age constitutes the critical point and sound scientific reasons for proposing such ages have rarely been offered. Claims about the age at which the critical period comes to an end have included various realms such as 5 years (Krashen, 1976), 6 years (Pinker, 1994), 12 years (Lenneberg, 1967), and 15 years (Johnson & Newport, 1989).

Another interpretation to the critical period hypothesis might be that second language learning becomes compromised with age, potentially due to factors not specific to language that nevertheless interfere with the individual's ability to acquire a new language. These may involve educational and social variables influencing learning potential and opportunity and cognitive aging that gradually makes some of the mechanisms necessary for learning a complex body of knowledge such as a new language erode.

The second group of factors are related to changes in cognition that occur with aging. Most cognitive domains do not posit critical periods in development, and there are nonetheless age-related changes in cognitive processing. Some changes relating to age in cognitive processes relevant to language learning are a decreased ability to learn paired-associates (Salthouse, 1992), more difficulty encoding new information (Rabinowitz, Craik & Ackerman, 1982), and less accuracy in recalling detail as opposed to gist (Hultsch & Dixon, 1990). Kemper (1992) points out that older adults' second-language proficiency, like their first-language proficiency, can also be influenced by such factors as working-memory limitations, cognitive slowing, or lack of attention.

Indeed, research that compares younger and older learners of foreign languages suggests that in some respects, older learners outperform young language learners. A number of short-term

studies have revealed that older learners acquire certain aspects of language more quickly and efficiently compared to younger learners. Researchers attribute this outcome to the brain's maturation, a greater amount of world knowledge, and promoted learning capabilities (knowing 'how to learn') of older children and adults (Harley, 1986). However, other studies have revealed that eventually younger learners maybe more proficient in the long run, even though older learners are quicker in the short run (Krashen, Scarcella & Long, 1979), particularly in the area of oral communication (Harley & Wang, 1997). To put it in nutshell, there appears to be general consensus that younger learners are far more likely to master native-like pronunciation than are older learners. There are other compelling reasons which argue for early language learning.

Since there is evidence that suggests there are cognitive benefits to early childhood bilingualism, an early start and continuing progress toward bilingualism is desirable (Lee, 1992). Further, students who take a foreign language in the elementary grades may demonstrate academic gains in other areas of the curriculum (Wilburn Robinson, 1998). Moreover, it takes a long time to gain proficiency in a foreign language, especially when it is learned in a school. Thus, the earlier learners start the higher level they are likely to achieve more (Haas, 1998). Also, a quality world-class education includes foreign language study. For example, in 14 of 15 industrialized countries surveyed in 1993, foreign language learning began at age 10 or before (Bergentoft, 1994). Omitting certain academic experiences simply because older learners are more efficient maybe insufficient justification for curriculum design. That is, just because older learners maybe faster learners does not mean that foreign language learning should be delayed.

Evidence of language learning strategy differences in adults with different language learning histories is not rich. Lerea and LaPorta (1971) examined adults who had learned an L2 in elementary school and monolingual adults. They taught two lists of 9 paired-associate words to all of the study participants. The word pairs involved an English word and its Hebrew translation (all

participants were fluent in English and unfamiliar with Hebrew). One list was introduced auditorily and participants were asked to repeat the words with proper pronunciation. The other list was presented visually (Hebrew words were presented using Roman characters) and participants were asked to transcribe the presented words. After each learning experiment, the participants took a quiz on their memory of the pairs of words in each of the lists. They were requested to repeat each trial and testing phase until they memorized each word pair in the lists perfectly.

Predictions about differences in how early and late L2 learners will learn new language labels for familiar objects are a little trickier. One prediction might be that if early L2 learners are making less use of L1 during new language word learning, their performance should be worse than the late L2 learners' performance, whose strategy may make more use of L1 information. However, evidence shows that bilinguals (more likely to be early L2 learners) develop a stronger mastery over new language vocabulary than monolinguals (more likely to be late L2 learners) (Keshavarz & Astaneh, 2002) and it would lead to the reverse prediction, considering the fact that new language learning often involves learning new labels for familiar items.

Available evidence of children performing better than adults in second language acquisition is misleading because the manner of learning instead of age might be the principal factor in determining successful acquisition. Most children learn a second language in a natural setting whereas adults learn it in a formal classroom setting. Because adults possess many psychological barriers and negative attitudes about speaking a non-native language, they are less likely to experience and try meaningful learning. Most students in higher education must take foreign language courses in order to graduate. Other students take foreign language courses for the sake of learning the language, but are not taught how to study effectively or are afraid of speaking in class for fear of embarrassment.

#### **Research Question**

Is there a significant difference between placed students and promoted students studying English at the ILI in terms of their attrition rate?

**Methodology**

**Research Design**

The present study has an exploratory design in the sense that it seeks to explore the possible differences between the performances of placed and promoted students as well as their attrition rate across proficiency levels at the ILI.

**Participants**

The participants of the present study were 320 male language learners from Babol branch of Iran language Institute (ILI). The participants' age range was between 15 and 35 and they belonged to basic, elementary, pre-intermediate, intermediate, high-intermediate and advanced levels of proficiency. It should be mentioned that these participants were allocated to different classes by the ILI staff.

**Procedure**

The sample of the present study included both placed and promoted students studying in the adult department of Iran Language Institute (ILI) who entered the program either through a placement test or through transition from young adult department. Both placed and promoted language learners were in the same educational system and taught by the same teacher and methodology during the term. The educational department was contacted directly and arrangements were made by the researchers to obtain students' grades from the department at the end of the term. Only the students whose performances have been evaluated by the same examiners were included in the study. In other words, at each level, the examiners had to be the same to minimize rater difference unreliability.

**Results**

In order to see whether there is a difference in the attrition rate of placed and promoted learners in different levels, the Chi-Square test was utilized and the following results were obtained.

**Table 1. Descriptive statistics and Chi- square for Elementary level**

N	Mean	Std. Deviation	Minimum	Maximum
Elementary 190	1.55	.4985	1.00	2.00

	Observed N	Expected N	Residual
Promoted	85	95.0	-10.0
Placed	105	95.0	10.0
Total	190		

**Test Statistics**

	Elementary
Chi Square	2.105
Df	1
Asymp. Sig.	.147

Considering the cut-off value of  $\text{sig} > .05$ , as it is shown in the table above, in elementary level there is no significant difference in the expected number of students in the two groups. To see how similar the two groups were at pre-intermediate level, the number of students in the two groups were compared using Chi-square goodness of fit.

**Table 2. Descriptive statistics and Chi- square for pre-intermediate level**

N	Mean	Std. Deviation	Minimum	Maximum
Pre-inter 170	1.52	.5006	1.00	2.00

	Observed N	Expected N	Residual
Promoted	80	85.0	-5.0
Placed	90	85.0	5.0
Total	170		

**Test Statistics**

	Pre-intermediate
Chi Square	.588
Df	1
Asymp. Sig.	.443

Considering the cut-off value of  $\text{sig} > .05$ , as it is shown in the table above, in pre-intermediate level, too, there is no significant difference in the expected number of students. A similar comparison was made for the intermediate students. Table 3 includes the results.

**Table 3. Descriptive statistics and Chi-square for intermediate level**

N	Mean	Std. Deviation	Minimum	Maximum
Intermediate 150	1.44	.4988	1.00	2.00

	Observed N	Expected N	Residual
Promoted	83	75.0	8.0
Placed	67	75.0	-8.0
Total	150		

**Test Statistics**

	Elementary
Chi Square	1.707
Df	1
Asymp. Sig.	.191

Considering the cut-off value of  $\text{sig} > .05$ , as it is shown in the table above, in intermediate level there is no significant difference in the attrition rate of the two groups so the hypothesis stating that "there is no difference in the attrition rate of placed and promoted learners" is confirmed in the intermediate level as well. The next two groups to be compared were high intermediate and advanced levels.

**Table 4. Descriptive statistics and Chi-square for high-intermediate level**

N	Mean	Std. Deviation	Minimum	Maximum
High-inter 137	1.40	.4919	1.00	2.00

	Observed N	Expected N	Residual
Promoted	82	68.5	13.5
Placed	55	68.5	-13.5
Total	137		

**Test Statistics**

	Elementary
Chi Square	5.321
Df	1
Asymp. Sig.	.021

**Table 5. Descriptive statistics and Chi-square for advanced level**

N	Mean	Std. Deviation	Minimum	Maximum
Advanced 126	1.39	.4911	1.00	2.00

	Observed N	Expected N	Residual
Promoted	76	63.0	13.0
Placed	50	63.0	-13.0
Total	126		

**Test Statistics**

	Elementary
Chi Square	5.365
Df	1
Asymp. Sig.	.021

Considering the cut-off value of  $\text{sig} > .05$ , as it is shown in the table above, in high intermediate and advanced levels there is a significant difference in the attrition rate of the two groups so the hypothesis stating that "there is no difference in the expected number of placed and promoted learners at all proficiency levels" is rejected. Finally, as it is clear from the tables above, we can safely conclude that there is an attrition in the number of placed students at advanced levels.

**Conclusion & Pedagogical Implications**

By considering the statistics, it can be concluded that the attrition rate of the two groups of placed and promoted learners was not that much significant in lower levels of learning the English language at the ILI whereas in higher levels the attrition rate of placed learners was much higher than that of promoted learners especially in high intermediate and advanced levels which means that the placed learners left the institute much more frequently than the promoted learners. This is due to the fact that when these learners reach the high levels of the ILI the gap between their linguistic competence and the level's difficulty level becomes too deep to be filled easily so that they will have no chance except leaving the system.

The findings of the present study have some implications for different stakeholders in the field of second language acquisition:

- First, in the phase of identifying educational policies, educationalists should always bear in mind the concept of age of learners in identifying and defining educational policies. They should remember that reaching a dynamic and homogeneous class without recognizing the individual differences of learners, their age and educational background is impossible.
- Second, in the phase of syllabus design, the syllabus designers should try to separate students according to their age and linguistic knowledge. The discipline-specific design of syllabi must be in accordance with learners' related background knowledge to guarantee their effectiveness. The educational material provided in the course books should be based on learners' age and educational background to prevent high attrition rate in future.
- Third, in the phase of teaching and classroom procedure, teachers should try to be creative enough to create such an atmosphere in class that all learners feel relaxed in participating in classroom discussions. By doing this, adult learners' affective filter will be lowered so that they won't feel shy or embarrassed. Infantilization may be a good technique in this regard.
- Fourth and the last, in the phase of language testing and measurement, test makers whether professional test makers or teachers themselves should bear in mind age difference of the learners and try to incorporate easier items for younger learners and more difficult items for the adults.

#### Suggestions for Further Research

Since no single study is perfect on its own, listing some suggestions which comes to the researchers' mind can be beneficial for those who are interested in doing similar studies. The followings are some of these suggestions for further

research. The participants of this study were limited and selected only from one branch of the ILI. The same study can be carried out with the learners of other branches of the ILI or other language institutes. Since non-probability sampling (convenience sampling) was used in the present study due to research limitations, it is suggested that the same study be repeated using probability (random) sampling.

#### REFERENCES

- Bachman, D., Wolf, P., Linn, R., Knoefel, J. E., Cobb, J., Belanger, A., D'Agostino, R. B., & White, L. R. (1992). Prevalence of dementia and probable senile dementia of the Alzheimer type in the Framingham study. *Neurology*, 42, 115-119.
- Bergentoft, R. (1994). *Language planning around the world: Contexts and systemic change*. Washington, D.C., National Foreign Language Center Monograph Series.
- Birdsong, D. (2005). Why not fossilization. In Z.-H. Han & T. Odlin (Eds.), *Studies of fossilization in second language acquisition* (pp. 173-188). Clevedon, UK: Multilingual Matters.
- Bongaerts, T., Planken B. & Schils, E. (1995) Can late learners attain a native accent in a foreign language? A test of the critical period hypothesis. In *The age factor in second language acquisition* (D. Singleton & Z. Lengyel, editors), pp. 30-50. Clevedon, U.K.: Multilingual Matters.
- Brown, H.D. (2002). *Principles of language learning and teaching*. White Plains, NY: Longman.
- Brown, H.D. (2007). *Principles of language learning and teaching*. White Plains, NY: Pearson.
- Collier, V.P. (1989). How long? A synthesis of research on academic achievement in second language. *TESOL Quarterly*, 23, 509-531.
- DeKeyser, R. & Larson-Hall, J. (2005). What does the critical period really mean? In J. Kroll, and A. De Groot (Eds.), *Handbook of bilingualism: Psycholinguistic approaches* (pp. 89-108). Oxford: Oxford University Press.
- D'Anglejan, A., Renaud, C., Arseneault, R. H., & Lortie, A. M. (1981).

- Difficultédapprentissage de la langue seconde chez l'immigrant adulte en situation scolaire [Second language learning difficulties in adult immigrants in a school situation. Quebec: Centre international de recherchesur le bilinguisme, University of Laval Press. Cited in L. Seright (1985) Age and aural comprehension achievement in Francophone adults learning English. *TESOL Quarterly*, 19, 455-73.
- Haas, M. (1998). Early vs. late: The practitioner's perspective. In M. Met, (ed.), *Critical issues in early second language learning* (pp. 23-35). Glenview, IL: Scott Foresman Addison-Wesley Publishing Co.
- Harley, B. (1986). *Age in second language acquisition*. San Diego, CA: College Hill Press.
- Harley, B., & Wang, W. (1997). The critical period hypothesis: Where are we now? In A. M. B.de Groot & J. F. Kroll (Eds.), *Tutorials in bilingualism: Psycholinguistic perspectives* (pp.19-51). Hillsdale, NJ: Erlbaum.
- Hultsch, D.F., & Dixon, R.A. (1990). Learning and memory in aging. In J.E. Birren & K.W. Schaie (Eds.), *Handbook of the psychology of aging* (3rd ed., pp. 259-274). San Diego, CA: Academic Press.
- Kemper, S. (1992). Language and aging. In F.I.M. Craik & T.A. Salthouse (Eds.), *The handbook of aging and cognition* (pp. 213-270). Hillsdale, NJ: Erlbaum.
- Keshavarz, M. H. & Astaneh, H. (2002). *The impact of bilinguality on the learning of English vocabulary as a foreign language (L3)*. Proceedings II Simposio Internacional Bilinguismo.
- Krashen, S. (1976). Formal and informal linguistic environments in language learning and language acquisition. *TESOL Quarterly*, 10, 157-168.
- Krashen, S. D., Scarcella, R. C., & Long, M. H. (1982). *Child-adult differences in second language acquisition*. Rowley, MA: Newbury House.
- Krashen S., Long, M. & R. Scarcella (1979). Age, rate and eventual attainment in second language acquisition. *TESOL Quarterly*, 9, 573-582. Reprinted in S.D. Krashen, R.C. Scarcella and M.H. Long (eds) (1982), *Child-Adult differences in second language acquisition* (pp. 161-72). Rowley, Mass.: Newbury House Publishers.
- Johnson, J. S., & Newport, E. L. (1989). Critical period effects in second language learning: The influence of maturational state on the acquisition of English as a second language. *Cognitive Psychology*, 21, 60-99.
- Larson-Hall, J. (2008). Weighing the benefits of studying a foreign language at a younger starting age in a minimal input situation. *Second Language Research*, 24(1), 35-63. Retrieved from [http://peer.ccsd.cnrs.fr/docs/00/57/07/38/PDF/PEER\\_stage2\\_10.1177%252F0267658307082981.pdf](http://peer.ccsd.cnrs.fr/docs/00/57/07/38/PDF/PEER_stage2_10.1177%252F0267658307082981.pdf).
- Lee, K.L. (1992). *Early childhood education curriculum*. Seoul, Korea: Kyo Moon Sa.
- Lerea, L. & LaPorta, R. (1971). Vocabulary and pronunciation acquisition among bilinguals and monolinguals. *Language and Speech*, 14, 293-300.
- Lenneberg, E. H. (1967). *Biological foundations of language*. New York: Wiley.
- Long, M.H. (1990). Maturational constraints on language development. *Studies in Second Language Acquisition*, 12, 251-285.
- Munoz, C. (2010). On how age affects foreign language learning. *Advances in Research on Language Acquisition and Teaching*, 39-49. Retrieved from <http://www.enl.auth.gr/gala/14th/Papers/Invited%20Speakers/Munoz.pdf>.
- Oller, J. W., & Nagato, N. (1974). The long-term effect of FLES: an experiment. *Modern Language Journal*, 58, 15-19. Retrieved from <http://www.enl.auth.gr/gala/14th/Papers/Invited%20Speakers/Munoz.pdf>.
- Park, D. C. (2000). The basic mechanisms accounting for age-related decline in cognitive function. In D. C. Park & N. Schwarz (Eds.), *Cognitive aging: A primer* (pp. 3-21). Philadelphia, PA: Psychology Press.

- Pinker, S. (1994). *The language instinct*. New York: Morrow.
- Rabinowitz, J. C., Craik, F.L. M. & Ackemlan, B. P. (1982). A processing resource account of age differences in recall. *Canadian Journal of Psychology*, 36, 325-344.
- Salthouse, T.A. (1992). *Mechanisms of age-cognition relations in adulthood*. Hillsdale, NJ: Erlbaum.
- Scovel, T. (1988). *A time to speak: a psycholinguistic inquiry into the critical period for human speech*. New York: Newbury House.
- Seright, L. (1985). Age and aural comprehension achievement in francophone adults learning English. *TESOL Quarterly*, 19(3), 455-473. Retrieved from <http://onlinelibrary.wiley.com/doi/10.2307/3586273/abstract>.
- Tversky, A., & Kahneman, D. (1971). Belief in the law of small numbers. *Psychological Bulletin*, 76, 105-10. Retrieved from <http://www.isites.harvard.edu>.
- Singleton, D. M., & Ryan, L. (2004). *Language acquisition: The age factor*. Clevedon: Multilingual Matters.
- White, L., & Genesee, F. (1996). How native is near-native? The issue of ultimate attainment in adult second language acquisition. *Second Language Research*, 12(3), 238-65. Retrieved from <http://slr.sagepub.com/content/12/3/233.full.pdf+html>.
- Wilburn Robinson, D. (1998). The cognitive, academic, and attitudinal benefits of early language learning. In M. Met, (Ed.), *Critical issues in early second language learning*. Glenview, IL: Scott Foresman Addison-Wesley Publishing Co.