



The Impact of Critical Age Issues on Reading Skills of Female Gifted Students in Tehran

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Abstract

Teaching foreign languages to young learners is gaining popularity all over the world and as a result the age for learning a second/foreign language is being reduced in many countries. However, the consequence of early language teaching hasn't been entirely investigated and the question related to why we are teaching English at younger ages is not answered sufficiently. The SLA research has investigated the issue of age as a result of LI acquisition research. The studies related to age and the 'Critical Period Hypothesis' (CPH) were mostly conducted in the second language environments and neglected the foreign language contexts. Moreover, the results of such studies, where adults versus children; and younger children versus older children are compared, have conflicting findings. In this research, we are debating over 2 different ages close to puberty age and puberty age on learning reading comprehension. Reading comprehension is one of the areas of difficulty especially at the beginning stages for children. The aim of this study was to determine the relationship between critical period hypothesis and reading skills of female gifted students in Tehran. Intellectual giftedness is an intellectual ability significantly higher than average. It is a characteristic of children, variously defined, that motivates differences in school programming. It is thought to persist as a trait into adult life, with various consequences studied in longitudinal studies of giftedness over the last century. There is no generally agreed definition of giftedness for either children or adults, but most school placement decisions and most longitudinal studies over the course of individual lives have been based on IQ in the top 2 percent of the population, that is above IQ 130, the range of giftedness is between 130 to 144 based on Coren test. This study showed that there was a significant relationship between age and reading comprehension performance of the gifted female students.

Keywords: critical period hypothesis (CPH), gifted students, reading skills

INTRODUCTION

Critical age is the best period in which learners can start learning a new language. So in this research, the researcher wants to investigate the impact of this period on the reading skill of the gifted students. As Skinner said "gifted students" are powerful minded students that have extra ability to gain skills. The researcher chooses these kinds of

students because she thinks surveying this ability in talented students can reach to better results. So based on the title of this research, we are going to find the relationship between critical age issues on reading skills of female gifted students in Tehran and we are going to discuss about the critical age, reading comprehension and female gifted students. We want to find out the special age for female gifted students that they learn more easily and perfectly.

The purpose of this study is to identify the relationship between critical age issues on female gifted students on their reading comprehension in Tehran. Reading is one of the problematic skills in the learning a second language. Most of the time, learners reject the classes of reading. The reading classes are boring. As Pressly (2000) said, reading classes should become more attractive for students. Gifted students are divided in two different levels in their English classes. So it's a good ground to observe the impact of critical age on the reading ability.

The researcher thinks by concentrating on the critical period. We can find a method to attract students. So by combining this period and reading skill, the researcher thinks EFL students can overcome one of the main obstacles in their learning. We will debate over the critical age for female gifted students on learning reading comprehension.

Language learners are unique and special in their personalities though most teachers teach a foreign language to all the students in the same way. Teaching foreign languages to young learners is gaining popularity all over the world and as a result the age for learning a second/foreign language is being reduced in many countries. The efforts for learning FLs are not only a result of globalization but also the result of "younger the better" philosophy. Learning languages become a societal need to have better jobs, wider communication opportunities and higher social standards. The issue of age for learning languages has been the scope of linguistic and FL education studies for a long time. So the most important statement of this research is to find the best or critical age for female gifted students in Tehran on their learning reading comprehension. To learn and have more knowledge about their critical age.

The critical period hypothesis stated that the first few years of life is the crucial time in which an individual could acquire a first language if presented with adequate stimuli. If language input didn't occur until after this time, the individual would never achieve a full command of language—especially grammatical systems. The affirmation for such a period was limited, and support stemmed largely from theoretical arguments and analogies to other critical periods in biology such as visual development, but nonetheless was widely accepted. The nature of such a critical period, however, had been one of the most fiercely debated issues in psycholinguistics and cognitive science in general for decades. Some writers had suggested a "sensitive" or "optimal" period rather than a critical one; others dispute the causes (physical maturation, cognitive factors). The duration of the period also varied greatly in different accounts. In second-language acquisition (SLA), the strongest evidence for the critical period hypothesis was in the study of accent, where older learners did not reach a native-like level. However, under certain conditions, native-like accent had been observed, suggesting that accent was

affected by multiple factors, like identity and motivation, rather than a critical period biological constraint (Moyer, 1999; Bingers et al., 1995; Young-Scholten, 2002).

Research Question and Hypothesis

Q1. Is there any relationship between critical age and reading comprehension in gifted students?

H01) There is no relationship between critical age issues and reading comprehension in gifted students.

METHOD

Participants

The population from which the participants of study consisted of sixty female EFL learners from Farzanegan School. The subjects were selected from sixth grade of primary school, first and second grade of high school or “first, second and third grade of Secondary School” and their age range was varied from 12 to 14 and they were selected on the basis of convenient sampling. Farzanegan School is one of famous schools for gifted students so we chose 60 female gifted students from 3 different classes with 3 different ages of that school. Their IQ was between 136 to 148 which means they were gifted students based on Coren test. In these 3 classes the average of their IQs were the same. So we have 3 different groups:

Group 1: Class 201, Female learners, 12 years old, 20 gifted students, Similar IQ

Group 2: Class 202, Female learners, 13 years old, 20 gifted students, Similar IQ

Group 3: Class 203, Female learners, 14 years old, 20 gifted students, Similar IQ

Instruments

The instruments utilized in this study are a) Multiple choice for reading comprehension in pre intermediate level b) Coren test for their IQ

Data collection procedure

The first step was to find a school for gifted students. After some searches we found Farzanegan School for female gifted students in Tehran. The second step was to consider 3 different ages with similar IQs and in 3 different classes. So we consider (class 201, 202 and 203) with 3 different ages (12, 13 and 14 years old). The levels of them were sixth grade of primary school, first and second grade of high school or in another way first, second and third grade of secondary school. We had 60 female gifted students, in each class we had 20 students. The last step was the reading comprehension test. We gave the students the multiple choice questions and the answer sheets and asked them to answer. After some minutes they answered 30 questions of that test. So we gathered our data.

RESULTS

A Pearson correlation test was carried out to figure out whether age and scores were correlated.

Table 1. The results of applying Pearson correlation test between their age and score

		Age	Score
Age	Pearson Correlation	1	-.057
	Sig. (2-tailed)		.666
	N	60	60
Score	Pearson Correlation	-.057	1
	Sig. (2-tailed)	.666	
	N	60	60

As sig (0.666) is more research error (0.05), therefore there is no significant correlation between students' age and their Score. To find out whether there is a significant difference between the two groups, a t-test was run.

Table 2. Descriptive Analysis groups (12 and 13)

	Age	N	Mean	Std. Deviation	Std. Error Mean
Score	12	20	17.65	8.635	1.931
	13	20	23.50	3.317	.742

Table 3. The results of applying T-test between ages (12 and 13) and their scores

		Levene's Test for Equality of Variances		t-test for Equality of Means					
		F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	95% Confidence Interval of the Difference Lower Upper
Score	Equal variances assumed	57.633	.000	-2.828	38	.007	-5.850	2.068	-10.037 -1.663
	Equal variances not assumed			-2.828	24.48	.009	-5.850	2.068	-10.114 -1.586

As table 2 shows, sig amount of Leven's test is less than 0.05, we can understand that there was a significant difference between the two groups with respect to their scores.

Table 4. The result of applying T-test on students (Age 14, 13)

	Age	N	Mean	Std. Deviation	Std. Error Mean
Score	13	20	23.50	3.317	.742
	14	20	16.75	4.266	.954

Table 5. The results of applying T-test between ages (13 and 14) and their scores

	Levene's Test for Equality of Variances		t-test for Equality of Means						
	F	Sig.	t	df	Sig. (2- tailed)	Mean Difference	Std. Error Difference	95% Confidence Interval of the Difference	
								Lower	Upper
Equal variances assumed	1.214	.277	5.587	38	.000	6.750	1.208	4.304	9.196
Equal variances not assumed			5.587	35.823	.000	6.750	1.208	4.299	9.201

As table 3 shows sig amount of Leven's test is less than 0.05, therefore we can understand that there was a significant difference between the two groups with respect to their scores.

A one-way between subject's ANOVA was conducted to compare the effect of age on scores for 12, 13 and 14 years old students.

Table 6. ANOVA

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	537.300	2	268.650	7.768	.001
Within Groups	1971.300	57	34.584		
Total	2508.600	59			

This table gives both between-groups and within-groups sums of squares, degrees of freedom etc. In the above table, there was a significant effect of Age on Sore at the $p < .05$ level for the three conditions [$F(2, 57) = 7.768, p = .001$].

Table 7. Multiple Comparison

Age	(J) Age	Mean Difference (I- J)	Std. Error	Sig.	95% Confidence Interval	
					Lower Bound	Upper Bound
12	13	-5.850*	1.860	.007	-10.33	-1.37
	14	.900	1.860	.879	-3.58	5.38
13	12	5.850*	1.860	.007	1.37	10.33
	14	6.750*	1.860	.002	2.27	11.23
14	12	-.900	1.860	.879	-5.38	3.58
	13	-6.750*	1.860	.002	-11.23	-2.27

*. The mean difference is significant at the 0.05 level.

According to data of table, there is a significant difference between Scores of ages 13 and 14.

DISCUSSION AND CONCLUSION

The present study was carried out with the intention of investigating the relationship between critical age issues with reading comprehension of female gifted students in Tehran. The main finding of the analysis was critical period of female gifted students in Tehran, in which students can acquire reading comprehension more easily, rapidly and perfectly. In Lenneberg's original formulation of the critical period hypothesis, this period was identified as ranging from age 2 to puberty. Lenneburg (1967) believed that brain lateralization is complete at puberty "the puberty age in female gifted students in Tehran is 13 years old" making post-adolescent language acquisition difficult, with complete learning of a second language a goal unlikely to be realized. As explained earlier, before 13 years old and after 13 years old, the scores of reading comprehension test were lower than 13 years old. The puberty age of these students was 13 years old so it is a peak or climax of their learning reading comprehension. Students are expected to realize, know and use some points of reading comprehension such as reading method, reading skills, reading span, reading speed, reading strategies, reading vocabulary and so on. If the students have and know these skills, they will understand it more easily. We have debated on 3 different groups "3 classes with "3 different age profiles 12, 13 and 14". Their IQs were the same and the number of students was the same too but their scores were different. Based on statistics, the results showed us one age as perfect age for learning reading comprehension. The age that can use and learn all reading skills together was exactly their puberty age or 13 years old of female gifted students in Tehran. Puberty is the process of physical changes through which a child's body matures into an adult body.

Thus, based on these statistics "SPSS" the null hypothesis was rejected and the following conclusions can be drawn: A number of conclusions can be drawn from this study. The first and important one is a relationship between critical age and reading comprehension of female gifted students in Tehran. The second is the range of female gifted students' IQs in Tehran that it is between 136 to 148 based on previous statistics.

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