

# ***The Relationship between the Age of Firstly Being Exposed to Second Language and the Language Proficiency among Children in Chengdu, Sichuan Province, Take English as an Example***

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**Abstract:** This paper will take English as an example, evaluating the English proficiency by the grades of their Junior School Entrance Examination and Speech Production Test of 55 students in the same class in Chengdu, Sichuan Province. And finally, discuss the relationship between their ages of firstly being exposed to English and their English proficiency, at the same time, put forward some constructive suggestions for government, schools, and parents in terms of second language learning, helping improve the teaching effectiveness.

**Keywords:** age, second language proficiency, children, Chengdu

## **1. Introduction**

### **1.1. Background**

Entrenched as an ubiquitous topic of discussion, how age affects the second language acquisition has now become one of the many dilemmas in present era. Some experts hold that the younger the better, which means that younger children has a good competence to learn the second language based on the critical period theory, quote the whole acquisition of language can come across only before the finish of neurological plasticity, however, after this period, it will be acquired more difficult and will face unexpected failure [1]. They said that the whole acquisition of language can come across only before the finish of neurological plasticity, however, after this period, it will be acquired more difficult and will face unexpected failure. Whereas others argue that adult have more strong motivation and competence.

And nowadays, the transcultural communication becomes more and more frequent, so the bilingual or even multilingual becomes even important.

Moreover, parents strongly aware that learning a second language is vital for their children's academic attainments and future career development.

### **1.2. Significance**

Firstly, after searching and reading some related papers, the author found that there's a research gap. Although there are many researches about the relationship between exposing age and second language proficiency, there's no research take children in Chengdu, Sichuan province as their targets, and none of them view the grades of the Junior High Entrance Examination as part of the second language proficiency, which is really important in China.

Secondly, as an inland city different from Shanghai, Guangdong, and Hongkong, which are international cities long time ago and children there always live in a bilingual environment. However, in Chengdu, the compulsory English class starts from grade 3, and just some elementary knowledge is taught. Moreover, in recent years Chengdu developed particularly quickly, due to the new Silk Road. In such context, learning and being proficient in English become super important which pave the way of children's future career. So for parents, they want some data to clearly show what is the best age to learn a second language, so that they can arrange their children's development more efficiently and precisely. For schools, specific research and conclusion can benefit them in allocate the time of each course and stimulate teaching plans to reach best results. For government, targeted research for typical population can help them put forward plans more targetive for students in a specific region.

Last but not least, the top universities now take the bilingual teaching mode, in order to nurture international talents, so if one is not good at English, he may destined having no opportunity to attend those universities.

### **1.3. Research Question and Hypothesis**

The research question are as follows:

- (1) Whether there's critical period among children in Chengdu, Sichuan Province?
- (2) Whether the younger the children in Chengdu, Sichuan province were exposed to a second language the better?

Thus, hypothesis could be proposed:

- (1) Children in Chengdu, Sichuan Province have critical period, which means that after a certain age, they can not learn as efficiently as before.
- (2) The earlier children are exposed to the second language, they will be more excel in it.

## **2. Literature Review**

The author searched for six related papers, and all of them conducted researches of the effect of age (age of being exposed to a second language) on the second language proficiency.

However, there are a great deal of differences between them in terms of participant, aspect of second language proficiency, methods used to assess participants' second language proficiency.

### **2.1. Researches with Conclusion that not the Younger the Better**

Manan and Khadija-Tul-Kubra drew on multiple tools, surveyed 11 low-fee English-medium schools in Pakistan, and they held that early-English policy is problematic because students usually receive only decontextualized and bookish input, and they receive nearly no naturalistic exposure to English [2].

### **2.2. Researches with Conclusion that the Younger the Better**

Zhang investigated 100 Chinese learners who begin learning at different levels and ages, and collected data by the questionnaire, and he held that the younger the learner starts to learn a second language, his performance will more like a native [3]. Johnson and Newport compared the English

proficiency of 46 native Korean or Chinese speakers who had arrived in the United States between the ages of 3 and 39, and who had lived in the United States between 3 and 26 years by the time of testing by using a grammaticality judgment task. And they argued that there's a clear and strong advantage for earlier arrivals over the later arrivals, which means the longer time one is exposed a second language the better, and this is also one part of the theory the younger the better [4]. Abrahamsson and Hyltenstam asked participants to response the newspaper advertisement and asked some native speakers to evaluate their nativeness, and finally found that a majority of early learners and a few of later learners were perceived as the native speaker of the second language [5].

### **2.3. Researches with Conclusion that Age of being Exposed to the Second Language has Influence on Second Language Proficiency**

Stevens used U.S. census data to investigate the relationship between age at onset of second language learning and levels of English language proficiency among foreign-born adults in the United States, and concluded that adults' second language proficiency is strongly related to immigration age [6]. Huang and Becky used grammaticality judgment task to assess grammar knowledge, and measured speech by ratings made by native English speaking raters to participants' foreign accents. They argued that the age of learning effect was robust for these two second language domains [7].

## **3. Research Methodology**

### **3.1. Participant**

The author would like to choose 55 12-year-old children just graduated from same class at the same primary school, Chengdu Experimental Primary school, so that the language environment and teaching quality won't affect their second language proficiency, and those participants including 27 boys and 28 girls.

### **3.2. Method**

Two methods are applied in this research. The first one is a questionnaire, which is used to collect data like age of their first time being exposed to the second language and their scores of English in the final test of primary school. And their language background will be asked to exclude some unwanted variables, like children who take out class curriculum or whose parents speak English at home. So questions When you were in school, did you take any English-related classes or interest classes other than the scheduled English classes? Do your parents speak English or teach you extra English-related knowledge at home? What was your English score in the primary school entrance examination? At what age did you start to learn English? will be asked.

Due to the policies nowadays, the parents and students won't be told the exact scores but only degrees. To be specific, A plus for 95 or more, A for 90 to 94, B for 80 to 89, C for 70 to 79, D for 60 to 69, E for scores below 60, so the author will take the median of each degree as the score of the respondents, and for degree below 60, 55 will be taken for their grades.

And after that, the author will do the Speech Production Test. Firstly, record their talks at the assigned topic, then ask the English-speaking professional oral examiner to grade their recordings from fluency and pronunciation. This test is conducted to complete the missed part of the final test that is the oral competence of English proficiency.

The scale of Marks is as followed:

A plus: Expression is fluent and self-correction rarely occurs Accurate use of rich and varied pronunciation features, ability to express subtle differences, and no barriers to understanding by the

listener.

A: Expression is fluent, with occasional repetition or self-correction. Occasional deviations in the use of diverse pronunciation features. Easy for listener to understand during expression, and the accent of the mother tongue has minimal impact on the listener's understanding.

B: No obvious expression difficulties, sometimes showing repetition. Use a variety of pronunciation features, but the degree of mastery varies. The listener can basically understand during the expression, but some words are not pronounced accurately.

C: Usually fluent, but need to maintain expression through repetitive self-correction or reduced speed of speech, using limited articulatory features.

D: There are long pauses in expression, limited ability to connect sentences, and frequent mispronunciations, which cause some difficulties for listeners to understand.

E: Unable to communicate in English, expressions are usually incomprehensible.

And finally, the data will be collected and the author will do some analysis and make a graph. The x-axis will be the different ages, and the y-axis will be the sum of the average junior high entrance test scores and Speech Production Test scores, and these two test will have the same full score 100. And then to see how age effects second language proficiency.

### 3.3. Expected Outcomes

This research is to further testify whether previous theories are true among children in Chengdu, Sichuan Province, the younger the better or just on the contrary that not the younger the better. Moreover, the author hope this research could take as reference for parents and even policy makers. For parents, to tackle their problems of when to start learning a second language can be best for their children. And for policy makers, to help them to decide when to start a compulsory course of second language, how to arrange course, like how many classes a semester can best utilize their age advantages to improve their second language proficiency.

### 3.4. Hypothesis

The author hypothesized that language could be acquired only within the critical period, and the younger the children are exposed to English the better their proficiency will be, and then datas of children's standardized and oral tests grades will be collected and analyzed to test the hypothesis.

## 4. Results

### 4.1. Background Information (Independent Variables)

After integrating the information on the questionnaire, the author find that there are 10 students learn English after class, so the number of the total sample will be reduced to 45. Moreover, there is one parents teach their children English at home personally. So the number of valid sample is 44. The data shows that only 3 respondents started learn English after the beginning of the compulsory English course in their school, that is 9 years old, 9 students started learning English at 3 years old, 1 students started learning English at 5 years old, and 21 students started learning English at 6 years old, 5 students started at 7 years old, and the rest of the students started at 8 years old. In this class, none of them started being exposed to English at the age of 4 years old.

### 4.2. English Scores of Secondary School Entrance Examination

The results shows that scores of respondents whose starting age of learning English is 9 years old is all below 60, the passing score, the average scores of respondents who started learn English at 7 and 8 years old is almost the same. 3 of whom started learning English at 7 years old got D, and the rest

got E, so the average score of them is 71. And 4 respondents starting learn English at 8 years old got E, and only 1 students got D, so their average score is 67. And for students started learning English at 6 years old, more of whom got higher score, specifically, 3 students got E, 10 students got D, and 8 students got B, as a result, their average score is approximately 77.4. The only one participants who firstly exposed to English at 5 years old got A. And for the rest pupil beginning to learn English at 3 years old, 1 got E, 1 got D, 3 got B, 3 got A and 1 got A plus, so their average score is approximately 85.6.

### 4.3. Scores of Speech Production Test

The author invited the foreign teachers in her school as judges, and they were told to grade by degree as same as that for the Secondary School Entrance Examination, and from the aspects of grammar, fluency, coherence and cohesion and lexical.

Table 1: Ages of firstly being exposed to English and degrees of Speech Production Test

Age/ Degree	3	5	6	7	8	9
A plus	1					
A	1					
B	5		4	1		
C	2	1	10	3	1	
D			7	1	3	1
E					1	2

In conclude, the average scores of the Speech Production Test of pupils starting exposed to English at 3, 5, 6 and 7 years old is 85, 75, 73.6, 75, and for participants who began to learn English at 8 and 9 years old, their average scores are 65 and 58.3 respectively.

So, in general, participants who exposed to English in a younger age perform better in both tests.

### 4.4. Analysis

The line graph below clearly shows the connection between the age of firstly being exposed to English (x-axis) and the total scores of two tests (y-axis).

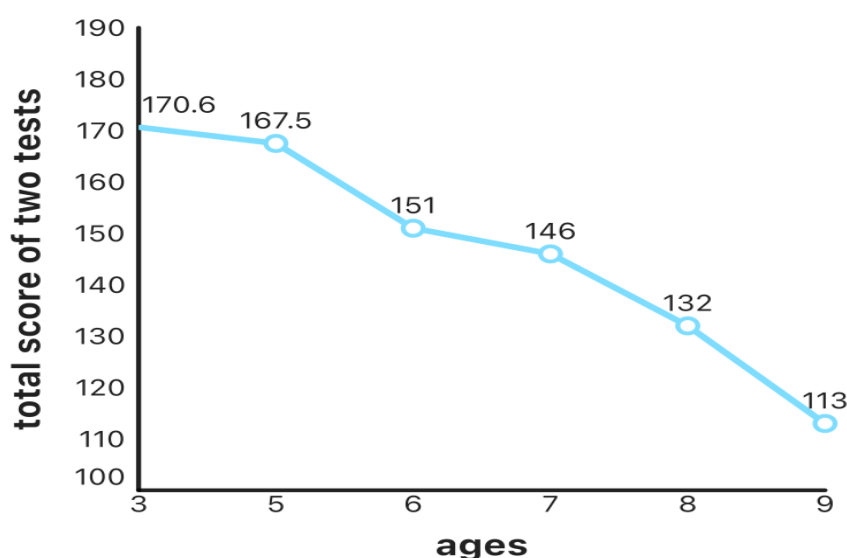


Figure 1. Relationship between total scores of two tests and ages

It can conclude that the general trend is that the total scores of two tests decrease by the increase of the age, as a result, it's obviously that the younger the children are exposed to English, the better their proficiency. Although there are some weird data before we calculate and analyze, it's the common situation. There is possibility of failing to bring out the best potential or performing well because of luck, but all these kinds of errors are acceptable.

## 5. Discussion

### 5.1. Major Findings of the Study

Student's proficiency of English are tested through their scores of Secondary School Entrance Examination and Speech Production Test. Through analysis, the author find that children who were exposed to English earlier perform better in both standardized tests and oral test, which are. As a result, it's suffice to say, the younger one is exposed to English the better one will perform in the usage of that language.

### 5.2. Application of Findings

According to these results, the author would like to give several suggestions for parents, schools and government.

Firstly, parents should send their kid to learn English or immerse them in an English environment as early as possible, so that they could develop a genuine interest of English and their sense of writing, using or speaking of English, which will undoubtedly conducive to their future study or career. However, through analyzing the data showed previously, the author find that, this kind of consciousness is still hysteretic among parents in Chengdu, Sichuan Province, and some parents even don't aware of this, so this paper could provide sufficient evidence to persuade them to attach more importance on English.

Moreover, primary schools should bring forward the English course starting at grade three, thus children whose don't have the financial or educational conditions can study English much earlier. And I even encourage the English teaching should be introduced into the kindergarten, which

further advances children's age of having equal chance to learn English. In today's era, in China, in College Entrance Examination, English account for 20 percent of the full score, most classes in the world-class university are taught by English, and the most cutting-edge paper of every subjects especially science and engineering are written by English. So primary school, as a place to lay foundation of their future study, should takes the responsibility, capturing the critical age, help children to learn English well. And in Chengdu, Sichuan Province, there are still many remote places, the English class in the compulsory stage is there only way to learn. So optimizing the English teaching in primary school by taking advantage "the younger the better" theory is really essential.

Finally, government in Chengdu should attach great importance to this feature of children, and enact some policies to encourage students to learn English earlier, and hold some sessions to spread the advantages of learning English at a younger age to their parents, which helps them to make decision about when to send their children to learn English is better.

### 5.3. Limitation for Further Study

In this study, the number of sample is just 55, so due to the limitation of the sample, this sample may not general enough to cover all situations in Chengdu. Moreover, this study takes Secondary School Entrance Examination as one aspect of language proficiency, however, many people consider that just one study couldn't precisely show the language proficiency. Lastly, this paper is limited in space and cannot cover all the details of the whole process.

Considering the above shortcomings, the author presented some suggestions for further studies:

Firstly, in the future study, researchers could include lager number of participants to make results more precise and universal.

Secondly, more scientific methods are needed in later study to measure the proficiency of English to ensure the data of the research more persuadable.

Lastly, the future research could make detailed description and explanation of the every steps from research design to the last conclusion.

## 6. Conclusion

Through the research and analysis, the conclusion can be made that in Chengdu, Sichuan Province, the younger the children was exposed to English, the better their proficiency will be. Thus government, schools and parents can take reference to this research and formulate better second language study plans for children, in order to improve their study efficiency and second language proficiency, helping them to pursue better education and nurturing the international citizen that our country need.

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