

Using L1 as a Scaffolding Tool in L2 Learning

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Abstract

This research attempted to explore the effectiveness of using L1 in learning L2 in the ESL classroom. Since the government school students have very less exposure towards second language learning this research adapted additive bilingual approach which will help them understand and pick up the target language easily. This study includes both BICS and CALP theory as Vygotsky's theory confines social interaction which supports the concept of BICS and the additive bilingual approach confines the zone of proximal development (ZPD) as well as scaffolding. Based on this, lesson plans were prepared, and classes were handled to students in a government school. The data collected from the pre and posttest were assessed, and results were given with few pedagogic implications at the end of the study.

Keywords: Social Interaction, ZPD, Bilingual, BICS and CALP

1.0 Introduction

India is a multilingual nation where multi-cultural people live. In this state communication becomes essential between societies. As a result being bilingual is an inevitable thing which helps a person to excel in his profession. In this context teaching second language in primary and secondary schools, and in universities are essential to make the students excel in the academic proficiency and to ensure their cognitive development. The study hypothesizes:

- Using first language as a supporting tool in second language classroom will enable the students to better comprehension.
- There will be no significant difference between boys and girls in their comprehension ability.

2.0 Objective of the Study

The study aims to identify the role of first language in the second language classroom. It attempts to explore how the use of mother tongue in the classroom leads to better comprehension and language pick up.

3.0 Literature Review

Second language acquisition is one of the prominent areas in the field of English language teaching and learning. There are various studies already done in this area. Kristin M. Lillywhite in his under graduation thesis entitled *Developing Cognitive Academic Language Proficiency (CALP) in Diverse Classrooms* had dealt with the process of second language acquisition. In this study he examined the distinction between basic interpersonal conversation skills (BICS) and cognitive academic language proficiency (CALP). He related this concept with the U.S Public education system which was originally proposed by linguist Jim Cummins.

The objective of the study was to identify how public school teachers conceptualize second language acquisition and literacy instruction. Also in his thesis Kristen addressed the distinction between BICS/CALP and the possibilities of using these in real classroom settings. The study shows the various factors that affect students' second language acquisition: low student motivation and various cultural factors.

4.0 Theoretical Overview

The Socio-Cultural Theory of Cognitive Development by L.S. Vygotsky (1978), Russian Psychologist has been adapted for this study. In this development theory Vygotsky had strongly asserted that societal influence plays a vital role in a child's development. Children are deeply rooted to their culture and society and though their social interaction with the fellow adult will make them move forward in their development process. The development includes both linguistic and cognitive development.

4.1 Zone of Proximal Development

Vygotsky is known for his two concepts. One is Zone of Proximal Development and the other is Scaffolding. Here it is crucial to be noted that the term scaffolding was not derived by Vygotsky yet the concept alone. Vygotsky defines the concept Zone of Proximal Development as: "*It is the distance between the actual developmental level as determined by independent problem solving and the level of potential development as determined through problem solving under adult guidance or in collaboration with more capable peers*" (Vygotsky 1978). He calls the functions which are in process and are yet to be matured as "buds" and "flowers" and they are yet to be turned as "fruits".

4.2 Scaffolding

Based on the concept of zone of proximal development derived by Lev Vygotsky, Jerome Bruner derived his theory "Scaffolding" around 1976 as part of Social Constructivist Theory. Bruner points out that when students learn a new concept, they need help of their teacher or a skilled adult. They think independently but depend on the adult support to acquire new skills and knowledge. Slowly this adult support will fade away.

Keeping the concept of scaffolding and zone of proximal development as the background, a teaching module was prepared in association with the additive bilingual approach. Based on the module five lesson plans were prepared and it was taught to the pupils with tasks.

5.0 Bilingualism

Merriam-Webster defines the term “Bilingualism” as:

1. The ability to speak two languages
2. The frequent use (as by a community) of two languages
3. The political or institutional recognition of two languages.

Cambridge dictionary defines the term as: “the fact of being able to use two languages equally well.” Oxford dictionary identifies it as “fluency in or use of two languages.” For this study the definition given by Encyclopedia Britannica would be the suitable one: **ability to speak two languages.**

Jim Cummins concept of bilingualism is related to this research. Cummins et. al (2000) pointed out that “Children who learn more than one language from earliest childhood are referred to as ‘simultaneous bilinguals’, whereas those who learn another language later may be called ‘sequential bilinguals.’” (Lightbown and Spada 30) Though there will be a minor early delay in the simultaneous bilinguals there are no substantiation to prove that the delay in the “linguistic development or interferes with cognitive development.” (31)

5.1 Types of Bilingualism

“Typologies of bilingual education cannot always fit all the diverse types and specific cases found in schools in different parts of the world.” (Jasone Cenoz, pp.3) There are various types of bilingualism: a) balanced and dominant; b) Compound, Coordinate and Subordinate; c) Early/ Simultaneous and Late/Sequential; d) Incipient, Receptive and Productive; e) Additive and Subtractive; f) Elite and Folk; g) Bicultural L1, Monocultural L2, Accultural and Deculturated.

5.2 Bilingual Education in India

India is a multilingual nation. Though there are more than 300 spoken languages in India, the VIII schedule of the constitution of India recognized only 22 languages as official languages in India. Therefore almost in all states except Tamilnadu three-language formula was proposed for education in 1957. In Tamilnaadu, leaving the third language Hindi, only the regional language and English are taught in schools except in Kendriya Vidyalaya. Teachers in government schools teach through the regional language. The increased usage of English in Global market developed the demand for the language. Bilingual education is needed for students to get more opportunities for higher education as well as for employment.

5.3 Cummins BICS and CALP

Cummins in his early research on childhood bilingualism stated that children learn a second language in two different aspects: one to use among themselves and the other to use in academic setting. He calls these two varieties as “BICS (basic interpersonal communication skills) and CALP (cognitive academic language proficiency)” (Lightbown and Spada 31). These two varieties overlap to a certain extent although there is significant difference between them. However it is widely agreed

that “the language needed for the academic discourse is more difficult for children to acquire than the informal language of day-to-day interaction.” (Cummins 2000).

Cummins differentiated between social and academic language acquisition. BICS is a language skill needed in the social set up to develop interpersonal communication. It is the day-to-day language that second language learners need to be acquired in order to interact in the society. In general children can pick up BICS in short time as they communicate among their peers. Children start using words that they repeatedly heard or frequently needed words and phrases that require for the usage in classroom, playground etc. On the other hand CALP refers to formal academic learning. Having included all the four skills it is essential for students to be proficient in the academic areas. Comparing to BICS, CALP takes more years to acquire.

5.4 Additive Bilingual Education

Indeed children ought to begin using their school language at the earliest. Considerable research suggests that children’s home language helps them to successively acquire the second language in a long run. Lily Wong Fillmore (2000) pointed out that young children who spend more time in school setting, away from their family where the family language is absent or forbidden, they tend to slow down or even lose in their mother tongue. (Lightbown and Spada 32) “Wallace Lambert (1987) called the loss of one language on the way to learning another **subtractive bilingualism.**” (32) In order to avoid this language loss the better approach is **additive bilingualism.** Maintaining the family language at home while learning a second language will help the children develop both language and cognition.

Not much research has done in the area of bilingual education in India. And the studies done are mostly quantitative and analytical. Though the recent studies are experimental they are yet to be carried out extensively. In this context the current study is an action research done in one of the government schools in Coimbatore. The Additive Bilingual Approach is used in teaching students in relation with ZPD and Scaffolding. Pre and Posttest are taken. Based on the students’ performance in the test the results are given.

6.0 Research Design

The study was conducted in a government school in Coimbatore. The school is situated in the housing unit area which is the central part of Coimbatore. Students who are in and around this area are the students of this school. The students’ parents are daily wages workers, coolie, and petty shop owners. Most of their parents studied only up to twelfth standard and less than that. Students from this background come to this school. In order to enable these students to access the second language the additive bilingual approach is used as it helps the learners to learn an L2 with the support of an L1. Also the researcher has used an L1 as a scaffolding tool in teaching an L2. This research is a quasi-experimental research which has taken a class of 30 students for the experiment. It focuses on students’ comprehension ability.

6.1 Pretest

The teachers in this school teach the students through the traditional method. After conducting the pretest five lesson plans were prepared and were taught as part of the experiment. The pretests in both the regional language and the target language are taken based on the lessons taught through the traditional method. The students came out with their own understanding of the lessons. The researcher assumed that the students may have less knowledge in the second language. The pretest in both the languages is productive type as it is to be discovered the students' proficiency in each language.

6.2 Posttest

The post-test had taken after the prepared lesson plans were taught through the additive bilingual approach. The post test is also taken in both the languages. A short story is given in each language and few comprehending questions asked in the worksheet. The students answered the questions based on their understanding of the story. The questions in the L1 posttest are productive type where as in the L2 are multiple choice. This is because to quantify the students' progress effectively.

7.0 Data Analysis and Interpretation

The researcher has collected data through pre and posttest as it is essential for any action research to collect data to substantiate the hypothesis. The data collected were analyzed to find out the effectiveness of the method. In any research the crucial part is to select the appropriate method and procedure to organize it.

7.1 Tools for Analysis

- Mean and Standard Deviation
- Paired t-test
- Independent t- test (for two samples - null hypothesis) eg. Male/ female; control and experimental

7.1.1 Purpose of the Tools Used

- Mean and Standard Deviation are used to get the average score and standard deviation of the students' comprehension.
- Paired t-test is to compare the mean score of the pretest and posttest of the students.
- Independent t-test is to compare the mean score of the posttest between girls and boys.

7.2 Results

The results were given based on the assessment of the mean, standard deviation, paired t-test and independent t-test of the samples' pretest and posttest. Microsoft Office Excel 2007 version has been used to assess the results.

Tamil

t-Test: Paired Two Sample for Means

	<i>Variable 1</i>	<i>Variable 2</i>
Mean	2.269230769	2.807692308
Variance	1.484615385	1.121538462
Observations	26	26
Pearson Correlation	0.072728129	
Hypothesized Mean Difference	0	
Df	25	
t Stat	-1.765516453	
P(T<=t) one-tail	0.044844952	
t Critical one-tail	1.708140745	
P(T<=t) two-tail	0.089689904	
t Critical two-tail	2.059538536	

There is a difference between the mean score of the pre and post test in the regional language.

English

t-Test: Paired Two Sample for Means

	<i>Variable 1</i>	<i>Variable 2</i>
Mean	1.84	3.68
Variance	0.973333333	1.143333333
Observations	25	25
Pearson Correlation	0.028438326	
Hypothesized Mean Difference	0	
Df	24	
t Stat	-6.415136072	
P(T<=t) one-tail	6.19451E-07	
t Critical one-tail	1.710882067	
P(T<=t) two-tail	1.2389E-06	
t Critical two-tail	2.063898547	

The above table shows the mean score difference between the pre and post test conducted in the target language. Here the p value is 1.2×10^{-6} which is less than 0.05. This shows that there is a significant difference between the two. The general hypothesis is proved here.

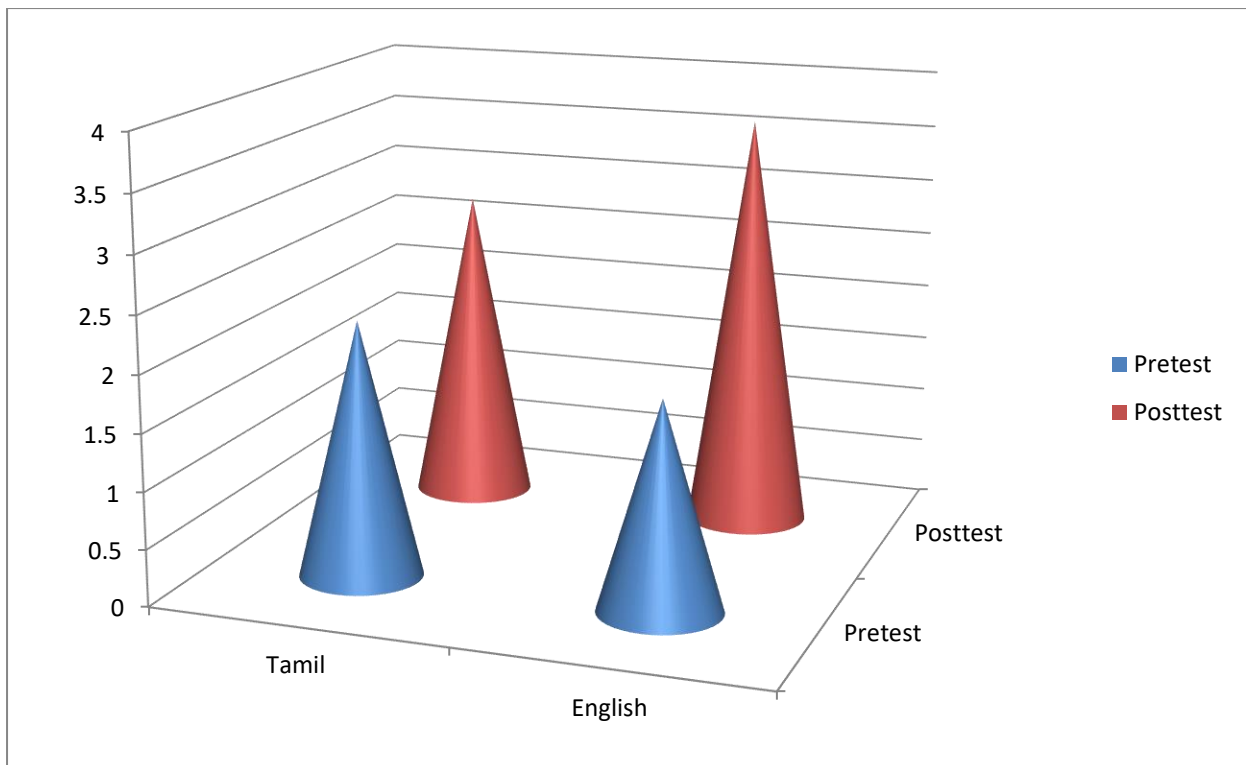
Independent t-test

t-Test: Two-Sample Assuming Equal Variances

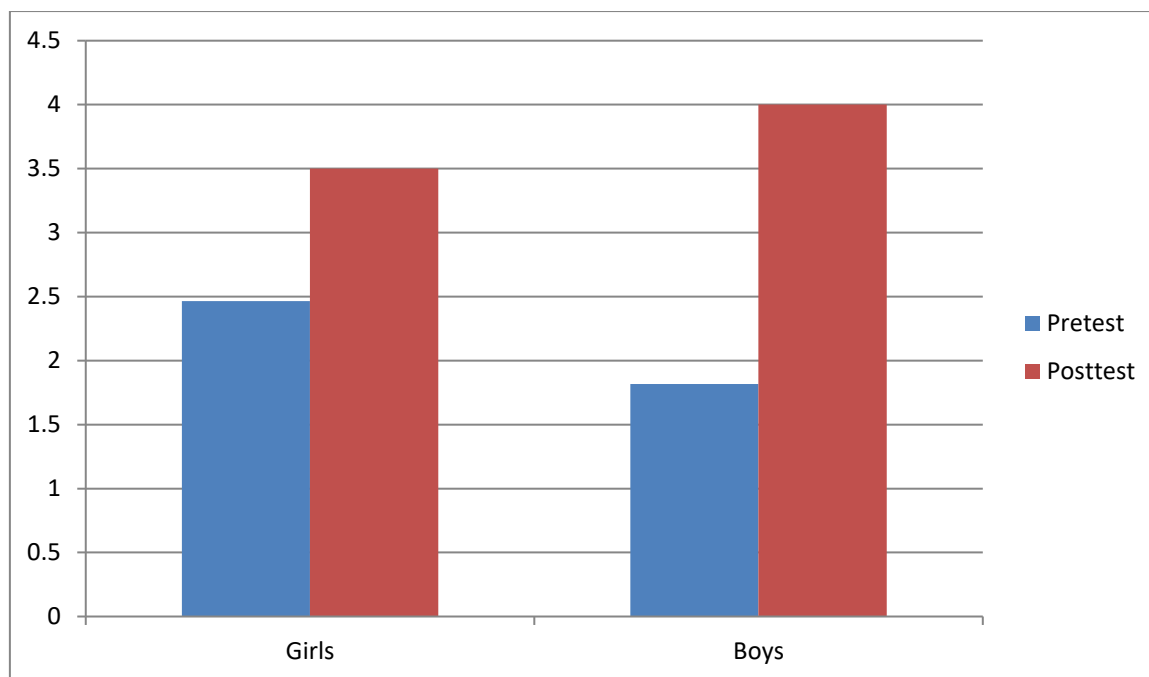
	<i>Variable 1</i>	<i>Variable 2</i>
Mean	3.5	4
Variance	1.181818182	1.166666667
Observations	12	13

Pooled Variance	1.173913043
Hypothesized Mean Difference	0
Df	23
t Stat	-1.152774431
P(T<=t) one-tail	0.1304218
t Critical one-tail	1.713871517
P(T<=t) two-tail	0.260843601
t Critical two-tail	2.068657599

The independent t-test is taken to compare the mean score of the comprehension test written by boys and girls and also to analyze the null hypothesis. Here the mean score of girls is 3.5 and boys' mean score is 4. And the p value is 0.26 which is greater than 0.05. This rejects the null hypothesis proposed at the beginning of the research. As per the mean score the boys scored higher than the girls which illustrates that the boys have better comprehension than girls.



The mean score of pre and posttest in both Tamil and English



The difference between boys and girls in the pre and posttest score.

8.0 Conclusion

With the additive bilingual approach the researcher attempted to teach English in the government schools for the students to pick up the language easily. She selected a government school in Coimbatore for her study. She prepared lesson plans based on Vygotskys theory and organized that through additive bilingual approach in the classroom. A diagnostic test conducted before the experiment starts and a posttest is conducted to analyze the effectiveness of the method in developing students' comprehension. The results were drawn based on the analysis and interpretation of the data collected through pre and posttest.

8.1 Pedagogic Implications

- The teachers in the ESL classroom should handle English as a language rather than as a subject.
- Instead of using either regional language alone or the target language alone the teachers can use this bilingual method for the learners to understand the language better.
- Other than using mother tongue for better understanding the teachers should use the target language in the classroom. So that the students will get a chance to listen to the target language in their classroom. All other three skills can be incorporated through the listening skill. Hence using target language for giving instruction is essential.

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