



ISSN: 2148-9955

## **International Journal of Research in Education and Science (IJRES)**

[www.ijres.net](http://www.ijres.net)

### **The Effect of Foreign Language Education on Preschoolers' Native Language Development**

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#### **To cite this article:**

Uslu, B. & Ersan, C. (2020). The effect of foreign language education on preschoolers' native language development. *International Journal of Research in Education and Science (IJRES)*, 6(3), 381-395.

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## The Effect of Foreign Language Education on Preschoolers' Native Language Development

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### Article Info

#### Article History

Received:  
31 March 2020

Accepted:  
10 June 2020

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#### Keywords

Preschool children  
Native language  
Foreign language  
Solomon four-group  
design

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### Abstract

The purpose of the present study was to examine how foreign language education may affect preschool children's native language development. The study was carried out with 70 children who were 48-60 months-old and attending a public preschool in Alanya, a district of Antalya, in Turkey. The research method of the study was Solomon Four-Group Design. Turkish Early Language Development Test (Tedil-3) was the data collection tool and used to measure children's native language skills. The experimental process took 8 weeks. Mann Whitney U and Wilcoxon Signed Ranks Tests were used in the analysis of the data, as the data did not show normal distribution. After determining the effect of the experimental procedure, the children included in the control groups also benefitted from the same experimental procedure for 8 weeks under the "right to benefit from the experiment process" which has never been applied before in any studies in Turkey. Within the framework of the literature, findings were discussed and various suggestions were presented.

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### Introduction

Language is a communication tool that was born out of the necessity of conveying ideas and participating socially. Newborns are acquainted with the world through hearing their native language and acquire it in a short time by observing and imitating the language, so that they can communicate with their parents, caretakers and other people in their environment (Aksan, 1998; Behrmann, 2018). The acquisition of the native language is a very long and complex process, but native language acquisition of each individual is completed as a result of a series of widely accepted stages (Al-Husban, 2020; An & Mindrila, 2020; Chua & Lin, 2020; Cüceloğlu, 2011; Ergin & Koçak, 2018; Gurgenedze, 2018; Laadem & Mallahi, 2019; Serçe & Sünbül, 2015; Zandler et al., 2017). Besides, it is emphasized that learning or speaking only one language is not enough today and learning one or more foreign languages is becoming more and more essential (as cited in Sığırtmaç & Özbek, 2009). Additionally of interest, findings of other studies conducted on the relationship between early foreign language acquisition and native language skills have reached contradictory conclusions. The effective acquisition of native language and foreign language at an early age plays an important role in language development throughout life. At the beginning of the school years, children experience rapid increases in their native language and foreign language vocabulary, especially with the effect of formal learning environments (Clark, 1995).

In the literature, many different research results can be found regarding the relationship between foreign language and native language acquisition. For example, a series of cross-sectional studies have been conducted to examine lexical processing skills in children learning native and foreign languages (Jia et al., 2006; Kohnert & Bates, 2002; Turunen, 2019). Participants, consisting of 5-year-old children whose native language is Spanish and foreign language is English, have been subjected to formal English (L2) experiences at school. Among the lexical processing criteria, image naming (Jia et al., 2006) and word verification were performed. The findings revealed that there were positive increases in both languages, and it was observed that relatively more learning outcomes occurred in L2 in the passing weeks (Kohnert & Bates, 2002).

When the relationship between preschool children's language skills and early reading skills is investigated, different conclusions are found. Some studies have found positive predictive relationships between language and later reading skills. For example, Lonigan et al. (2000) stated that children's receptive and expressive vocabulary skills predict their subsequent native and foreign language skills. Windsor et al. (2010) studied with early childhood groups that had either language impairment or had normal language development regarding the level of the native language (Spanish) and foreign language (English). They found that both normal and

language impaired groups were performing better in their native language (Spanish) as well as in the foreign language (English).

Other evidence for the relationship between early foreign language acquisition and native language skills has contradictory findings. Storch and Whitehurst (2002) found that the development of native language acquisition during the preschool period weakened foreign language acquisition. In addition, the measurements performed by the US Department of Health and Human Services revealed that children's initial vocabulary abilities did not predict foreign language acquisitions that occurred until the end of a teaching period (US DHHS, 2003). Due to differences in measurements and designs, studies have inconsistent findings. Therefore, additional research is needed to clarify the relationship among foreign languages, components of the native language and subsequent language acquisition. As can be seen, more research is needed on this subject, as there is relatively little information about the acquisition and output of two different languages.

On the other hand, bilingualism is reported to have a positive effect on the brain when acquired at an early age. It has been observed that students who speak more than one language perform better in mathematics and reading skills than their peers (Merritt, 2013). In addition, it was observed that children who were involved in learning two languages in early childhood are more skilled in focusing on relevant information, as well as ignoring irrelevant and misleading stimuli. The reason for this is that by learning another language, they move between two different “systems of rules” and acquire a higher level of difficulty in terms of recognition, interpretation, and language proficiency. Therefore, two languages support critical thinking and improve problem solving (Merritt, 2013). *Learning a second language can also improve native language skills. In general, not much attention is paid to grammatical structures of the native language, but when the second language highlights the functioning of grammar, conjunctions and sentence structure, awareness about L1 grammar increases.* These transferable skills give bilingual individuals more information about their native language, so they use language more effectively both in communication and in writing (Merritt, 2013).

Although student-centered teaching approaches are foreseen in the teaching of foreign languages (English) at all educational levels in the existing programs, it is observed that traditional teaching methods are widely used in practice (Kocaman, 1983). Given the research on language and language teaching, it is clear that acquiring language requires developing a number of strategies. Determining these strategies in the field of foreign language teaching is crucial in terms of fulfilling foreign language learning goals.

In foreign language teaching, it is necessary to create real life environments for individuals and show them that they can navigate matters and overcome obstacles they encounter by using the target language. Andresen et al. (2000) developed a list of criteria for life-based learning. Researchers state that some features are necessary for a learning process to be truly experiential. The first of these features relates to the purpose of experience-based learning—experiences should include meaningful knowledge for students. The second point is to create an environment where students are personally engaged in the learning process. Another feature is the necessity for students to have continual opportunity to write or discuss their experiences throughout the process. The students are a part of the process, not only with their minds, but also with their senses and emotions. Students' previous knowledge and habits should be included in the process. Finally, teachers need to create and foster feelings of trust, respect, openness, excitement and curiosity so that students can learn.

It should not be overlooked that the information presented so far regarding foreign language education in preschool period is the results of foreign research. There are some studies in Turkey regarding preschool children's foreign language education. In most of these studies, the opinions of parents and teachers about foreign language education during preschool period were examined (Çetintaş & Yazıcı, 2016; Güngör Aytar & Oğretir, 2008; İler & Er, 2007; Karakus, 2016; Küçük, 2006). In these studies, it is understood that both parents and teachers gave their positive opinions about learning a foreign language during early years. On the other hand, in a study conducted in an experimental design (Sığırtmaç & Özbek, 2009), it was determined that the English vocabulary training given to 4-6 year-old children positively affects their English vocabulary. In addition, in another study that Modiri conducted, the levels of achievement of 5-6 year-old children who had traditional English education based on memorization with English educational activities reinforced with music activities (Modiri, 2010) were compared. The study of Karakoç (2007), which is another example of the positive perception of foreign language education in preschool period, is also remarkable. Karakoç developed an English curriculum for kindergartens in her master thesis. In the vast majority of private preschool education institutions, children receive foreign language education, which is emphasized as a curricular bonus, which increases enrollments for these schools. Experimental studies in this sense, (Modiri, 2010; Sığırtmaç & Özbek, 2009; Uslu, 2017, 2018) reveal the positive effects of preschool children having foreign language education. However, the additional possible impact of foreign language education on preschool children's mother tongue

development remains uncertain both nationally and internationally. It is inevitable to make use of different methods and approaches to facilitate and accelerate the process of teaching and learning foreign languages and to improve native language. For this reason, in the present study, the effect of life-focused foreign language teaching practices on native language development of 4 and 5 year-olds was investigated via experimental research model.

## Method

### Research Design

In the present study, the effect of the Life-Focused Foreign Language Acquisition Program (LFFLAP) on the development of 4-5-year-old preschool children's native language (Turkish) was examined. In this respect, the study was carried out in an experimental design. In experimental designs, the primary purpose is to test the cause and effect relationship between the variables discussed. A researcher who plans an experimental study is expected to assign neutral/unspecified assignments to the transaction groups whose levels are determined in terms of an independent variable, to manipulate the independent variable and to control external variables as much as possible during this manipulation process (Büyükoztürk, et al., 2009).

The experimental format of Solomon Four-Group Design was used for this research. The Solomon Four-Group Design model consists of four stages:

- 1) First, participants are assigned to four different groups randomly. Two of these groups are designated as experimental, and the other two are control groups.
- 2) Pre-test is applied to only two groups, one experiment and one control group.
- 3) The experimental process is applied to two experimental groups, one of which is pre-tested, and one is not pre-tested.
- 4) Post-test is applied to all four groups (Huck & Sandler, 1973).

Solomon's Four-Group Design is primarily a model developed to determine the pre-test effect in an experimental study and the interaction that can occur between the pre-test and the experimental process (Trochim, 2006). As presented in Table 1, the efficacy of the experimental process (Measurement 1=Measurement 3 and Measurement 3=Measurement 5) with time and maturation (Measurement 2=Measurement 6 and Measurement 1=Measurement 6), experiment and control (initial) homogeneity (Measurement 1=Measurement 2) and pre-test effect (Measurement 2=Measurement 4; Measurement 4=Measurement 6 and Measurement 1=Measurement 4) can be tested (Ertosun et al., 2015; Shuttleworth, 2009). *In this respect, the Solomon Four-Group Design is defined as the strongest experimental model in terms of ensuring internal validity and external validity (Clark & Shadish, 2008).*

Table 1. Symbolic Representation of the Experimental Process

Group	Pre-test	Experimental Process	Post-test
E1	M1	X	M3
C1	M2		M4
E2		X	M5
C2			M6

At the end of the study, as seen in Table 2, there is no significant difference between measurement 3 and measurement 5, but if there is a significant difference between measurement 1 and measurement 3, it can be said that this difference is due to the experimental process. If there is no significant difference between measurement 2 and measurement 6; measurement 1 and measurement 6, it can be concluded that time and maturation have no effect on the dependent variable.

Similarly, if there is no significant difference between measurement 1 and measurement 2, it can be said that the groups are homogeneous in terms of the dependent variable at the beginning of the experimental process. Finally, if there is no significant difference between M2 and M4, M4 and M6, or M1 and M4, it can be claimed that the pre-test sensitivity does not have any effect on the independent variable. Then it can be said that the difference in the post-test averages between the experimental and control groups is due to the experimental process.

Table 2. Study Hypotheses and Possible Inferences for Hypotheses

Hypotheses	Inference
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1	If there is no meaningful difference between M3-M5 If there is a meaningful difference between M1-M3	The difference is due to the experimental process.
2	If there is no meaningful difference between M2-M6 If there is no meaningful difference between M1-M6	Time and maturation have no effect on the dependent variable.
3	If there is no meaningful difference between M1-M2	The groups before the procedure are homogeneous in terms of the dependent variable.
4	If there is no meaningful difference between M2-M4 If there is no meaningful difference between M4-M6 If there is no meaningful difference between M1-M4	Pre-test sensitivity has no effect on the dependent variable.

### Study Group

The study was carried out during the fall semester, between September and November, of the 2018-2019 academic year. The study group consisted of 84 children, 48-60 months old, who received education in four different classes in an official and independent kindergarten in district of Alanya, in Turkey. The reason for choosing the kindergarten where the experimental process is applied is that there were six classes formed with 48-60 month-old children. In addition, as Ersan and Tok (2020) previously applied, the amount of monthly fees that kindergartens receive from parents for children's education is taken into consideration. In this context, the kindergarten, where the experimental process is applied, charges a median tuition between the base and maximum prices determined by the provincial commission. Before the experimental study, necessary permissions were first obtained from the relevant Directorate of National Education, and then from the school administration. Following the approval of the school management and teachers, the parents of the children who were attending in four different classes were selected randomly and invited to school. The parents of the children were informed about the experimental process and written consent was obtained from each parent regarding their permission to allow their child to participate in the study. In addition to this, 14 children, although they participated in the experimental process (received LFFLAP), did not want to participate in the measurement of native language skills and were not included in the analysis. Due to the nature of the Solomon Four-Group Design, two of the four classes were determined as experimental and the other two as control groups.

Table 3. Descriptive Statistics on Children Included in the Experimental and Control Groups

Group	n	Average Age	Gender	
			Girl	Boy
E1	18	54.56	9	9
C1	17	55.29	8	9
E2	17	57.47	12	5
C2	18	52.78	12	6

It can be said that the parents of the children included in the experimental and control groups are quite close in terms of education and socio-economic levels. It is stated that the vast majority of the mothers in the experimental and control groups were secondary school graduates and a few were high school graduates. In terms of fathers, it is stated that the vast majority were high school graduates and only a few were university graduates. In terms of economic income, parents declared that they had a monthly income between 2200 and 4500 Turkish liras. Therefore, it can be said that the children and their parents who were experimentally treated were at a medium and medium-low economic level.

### Data Collection Tools

**Turkish Early Language Development Test (TELD-3)** originally developed for American Language and Culture by Hresko et al. in 1999, the Test of Early Language Development-Third Edition (TELD-3) was created to identify expressive language skills of children between 2 years 0 months and 7 years 11 months. The first time it was developed was actually in 1981, but it was revised slowly and took its final form in 1999. TELD-3 is considered as one of the best measurement tools in terms of reliability and validity in determining children's early language development. TELD-3 has been adapted for Spanish and Portuguese languages in an international context (Topbaş & Güven, 2014). It was adapted to Turkish, with the name TELD-3 in 2009 by Topbaş and Güven. It is reported that TELD-3 serves six purposes. These are: 1) identifying children in their

early language skills who were underdeveloped compared to their peers. 2) Revealing the strengths and weaknesses of children in terms of verbal language competence. 3) Providing multiple developmental assessment opportunities. 4) Adjusting the scope of the program and process for a possible language speech therapy. 5) Serving as a measurement tool that allows the study of language skills in early childhood and 6) laying the groundwork for providing intervention services to children who have problems in terms of language development.

TELD-3 is designed as parallel forms to evaluate both receptive and expressive language skills in the form of A and B. There are separate picture booklets and separate application registration forms for each of these forms. Each A and B measurement sets contain 76 items in total. Form A contains 24 questions that measure the semantic knowledge of the receptive language subtest, and 13 questions that measure syntax/morphology. Regarding the expressive knowledge, there are 22 questions that measure semantic knowledge and 17 questions that measure syntax/morphology. In form B, 25 questions measure semantics and 12 questions measure syntax/morphology regarding receptive language sub-test. In the expressive language subtest, there are 24 questions measuring semantics and 15 questions measuring syntax/morphology.

In the process of evaluating a child's language skills, either form A or form B is used. In the present study Form A was used. Within the scope of the items in A or B forms, children are asked questions and they are expected to answer these questions. These questions may require verbal answers from time to time, and sometimes they may include fulfilling an instruction. Before starting the TELD-3 test, the child's chronological age is calculated. The measurement process is started with the question corresponding to the age of the child calculated in years and months (e.g.: 4 years 3 months). Thus, this question is considered the starting point. From here on, a coding is made for each question the child answers. When the answer is correct, it is 1 point and when it is incorrect it is coded as 0. If the child replies incorrectly three times in a row from the starting point, the measurement process is terminated. The raw scores obtained with this method are converted into standard scores for the receptive and expressive language skills with the help of the tables provided in the practitioner's handbook. In addition, the verbal language total score can be obtained with the help of these converted scores regarding the receptive and expressive language skills with the help of the application booklet. In fact, the scores mentioned in this study were examined as "total language" (Topbaş & Güven, 2014). Practitioners of the TELD-3 test are required to receive a special training on the process. The second author of the study has received the necessary training and certification in this context. In the study, the second author carried out the application and evaluation of TELD-3 to children.

### Experimental Processes

The first author of the study applied the experimental process. The application process is designed for a duration of 8 weeks. The practitioner asked for approval from the families of children in the experimental, control groups for the publication of the results obtained on a voluntary basis (anonymously), and this approval was obtained in writing from all volunteers.

In the first session, the practitioner met the children and had a conversation with them (they had nametags) by talking about herself in the target language (English).

***Life-focused Foreign Language Acquisition Program (LFFLAP)*** within the framework of this program, for 8 weeks there were 5 sessions (each took 20 minutes) every day on weekdays. During the implementation of the program, teachers of the experimental groups were present at all sessions. Studies examining the significant effect of LFFLAP activities on Turkish preschool children's foreign language skills have been conducted (Uslu, 2017, 2018) and it has been seen that LFFLAP has a significant effect on children's foreign language skills.

*Curiosity* was used as the most effective tool at the beginning of the sessions to ensure the motivation of the children and make the pre-learning activities fun. The child's own life and knowledge were the center of the activities. In this context, the first 20 minutes was carried out with welcome and practice activities (via drama). The second 20 minutes children were exposed to English (via pictures, posters and flashcards). The third 20 minutes the practitioner jumped, danced, played and climbed with the children and these activities were carried out both in and outdoors depending on the weather conditions. In the fourth 20 minutes, group activities were carried out. The last period of 20 minutes consisted of more relaxing activities such as storytelling, playing with dough, drawing and coloring (Uslu, 2018).

Command phrases were preferred and simple question words were used to keep the target language (English) simple. The use of false cognates was avoided during the first four weeks of the application and true cognates were used as much as possible such as balloon, dance, music, prince, princess, pilot, police, doctor, drama, cinema, camera, picnic, garage, pizza, potato, tomato, vitamin, bicycle, boat, bravo, telephone, television, video, train, traffic, T-shirt, balcony, restaurant, electricity, robot, rocket, selfie, shampoo and toilet. The foreign language teacher (first author) never used the native language (Turkish) in the class. The classroom teachers stated that they wanted to help in both Turkish and English when needed and were involved with this in the activities when group work, games and family photos were used. The preferences and initiatives of the children were taken into consideration and they were allowed to choose the desired activity. Practical and fun activities were designed to support children's imagination. Children were encouraged to express their feelings and understand others' feelings. In this context, questions were carried out within the framework of activities such as creative drama, pantomime, ball games and drawings (Uslu, 2017).

In the development section, daily-unplanned speech activities were used often. In addition, no course book was used. Demonstration techniques were used to ensure that children watched the language teacher as if they were watching their favorite cartoon. Balls, trampolines, flash cards, posters, books, coloring and drawing, singing, dancing and practical activities were used every week. Stimuli such as "Give me five! Yes! Great! Bravo! and Well Done!" were used frequently to encourage children and special "stickers" were occasionally given if they enjoyed it. At the end of the sessions, repetitions were made regarding what was taught via flash cards as well as briefly summarizing the daily activities. In addition, families were included to continue the implementation process with the usage of the WhatsApp application, so interaction with real life situations was provided outside the school every day (Uslu, 2018). Since the Ministry of National Education (MNE) does not include foreign language education in the public preschool education program, no foreign language program was applied in the control groups. During the implementation, the MNE preschool education program continued in all groups. After the application, the TELD-3 A form was applied as a post-test to the experimental and control groups.

### **Collection and Analysis of the Data**

The data collection process of the study consists of several stages. In accordance with the Solomon experimental design, TELD-3 was only applied to the Experiment 1 (E1) and Control 1 (C1) as pre-test. Following the pre-test application, the experimental process started on September 24, 2018 and completed on November 16, 2018. After the completion of the experimental procedure, TELD-3 was applied to all groups as post-test from November 19 until November 23, 2018. In the analysis of the data, the normality test was performed first (Shapiro Wilk) and it was found that the data did not show normal distribution ( $p < .05$ ). Therefore, the Mann-Whitney U Test was used in order to compare the averages of two different groups that do not show normal distribution in the analysis of the data, and Wilcoxon Signed Ranks Test was used to compare the repeated measurement averages of the same group (Baştürk, 2010).

In this study, as explained in more detailed in the findings section, it is concluded that foreign language education applied to preschool children had a significant effect on their native language skills. This result was confirmed in both experimental groups. In order to test the effectiveness of the experimental process, two different control groups were created. As expected, no significant difference was found in the native language skills of the children in the control group. The present study also aimed to find a solution to this situation that is often overlooked in experimental studies. Accordingly, the same experimental process was applied to both control group children within the framework of the "right to benefit from the experiment" and the data obtained were analyzed and presented. The second group of experimental procedures started on 26 November 2018 and ended on 15 January 2019. After the completion of the experimental process, post-test application was carried out between January 16-18, 2019.

### **Findings**

In this part of the study, the hypotheses created within the scope of the research have been tested. After testing of the hypotheses, the effectiveness of the program given to the control groups within the framework of "the right to benefit from the experiment" was evaluated and presented together with their related tables.

### **Findings Regarding the Hypotheses**

1. Findings regarding the hypothesis “there is no significant difference between M3 and M5; while on the contrary, there is a significant difference between M1 and M3”.

In the study, M1 indicates E1 pre-test mean scores. M3 indicates E1 post-test mean scores and M5 indicates E2 posttest average scores. The results of Mann Whitney U test performed to determine whether there is a significant difference between M3 and M5 (E1 and E2 post-test mean scores) are presented in Table 4.

Table 4. Mann Whitney U test Results Related to the Post-test Mean Scores of the E1 and E2 Groups

Language Skill	Group	n	Mean Rank	Rank Sum	U	p
Receptive	E1	18	20.97	377	135	.278
	E2	19	17.13	325		
Expressive	E1	18	20.42	367	145	.437
	E2	19	17.66	335		
Verbal	E1	18	21.28	383	130	.211
	E2	19	16.84	320		

As can be seen in Table 4, there is no significant difference between the total scores of the receptive, expressive and verbal language obtained from E1 and E2 groups after the experimental process ( $p > .05$ ). TELD-3 was applied as a pre-test to group E1, but group E2 had no pre-test application. It is seen that there is no significant difference between E1 and E2 groups in terms of post-test scores obtained after LFFLAP. From this point of view, it can be concluded that both E1 and E2 groups were affected by LFFLAP at a similar level. Additionally, the E1 group was not exposed to the pre-test effect. However, this is only a possibility within the scope of this finding. In order to determine whether the experimental process was effective or not, it is necessary to compare the pre-test/post-test (M1 and M3) results of the E1 group. The pre-test post-test comparison results of E1 group are presented in Table 5.

Table 5. Wilcoxon Signed Ranks Test Results related to the Post-test/pre-test Mean Scores of E1 Group

Language Skill	Post-test-Pre-test	n	Mean Rank	Rank Sum	z	p
Receptive	Negative Rank	0	0	0	-3.411	.001
	Positive Rank	15	8.00	120		
	Equal Rank	3				
Expressive	Negative Rank	0	0	0	-3.624	.000
	Positive Rank	17	9.00	153		
	Equal Rank	1				
Verbal	Negative Rank	0	0	0	-3.410	.001
	Positive Rank	15	8.00	120		
	Equal Rank	3				

In Table 5, 15 of the children in the E1 group were in positive rank and 3 of them were in equal rank in terms of receptive language skills. Regarding expressive language skills, 17 were calculated in positive rank and 1 in equal rank. In terms of verbal language total scores, it is seen that 15 of the children were in positive rank and 3 of them were in equal rank. None of the children ranked negatively in terms of any language skills. The differences between the post-test/pre-test mean scores of all three language skills of children in the E1 group were significant ( $p < .001$ ). According to the findings in Table 4 and 5, the hypothesis “there is no significant difference between M3 and M5; while on the contrary, there is a significant difference between M1 and M3” was proven accurate. The increase in the language skills of the experimental groups resulted from the experimental process.

2. Findings related to the hypothesis “there is no significant difference between M2 and M6; or M1 and M6”.

M1 indicates E1 group pretest scores. M2 indicates C1 pre-test mean scores and M6 indicates C2 post-test average scores. The results of Mann Whitney U test performed to determine whether there is a significant difference between M2 and M6 (C1 pre-test mean scores and C2 post-test mean scores) are presented in Table 6.

Table 6. Mann Whitney U Test Results related to the C1 Pre-test Mean Scores and C2 Post-test Mean Scores

Language Skill	Group	n	Mean Rank	Rank Sum	U	p
Receptive	C1	17	18.18	309	150	.921
	C2	18	17.83	321		
Expressive	C1	17	20.47	348	111	.164
	C2	18	15.67	282		



Verbal	C1	17	19.44	330	128	.418
	C2	18	16.64	299		

As seen in Table 6, C1 pre-test mean scores and C2 post-test mean scores do not differ significantly in terms of receptive, expressive and verbal language total scores ( $p > .05$ ). Only in terms of expressive language scores, C1 average was calculated as 20.47 and C2 average was calculated as 15.56. Despite the result, the difference was not statistically significant. The results of Mann Whitney U test performed to determine whether there was a significant difference between M1 and M6 (E1 pre-test mean scores and C2 post-test mean scores) are presented in Table 7.

Table 7. Mann Whitney U Test Results regarding E1 PRE-test and C2 Post-test Mean Scores

Language Skill	Group	n	Mean Rank	Rank Sum	U	p
Receptive	E1	18	18.81	338	156	.861
	C2	18	18.19	327		
Expressive	E1	18	17.58	316	145	.601
	C2	18	19.42	349		
Verbal	E1	18	17.81	320	149	.692
	C2	18	19.19	345		

Table 7 shows that there is statistically no meaningful difference between the total scores of the receptive, expressive and verbal language scores obtained from the pretests of E1 and the total scores of the receptive, expressive and verbal language scores obtained from C2 post-tests ( $p > .05$ ). There was a time difference of approximately 10 weeks between C1 pre-test and C2 post-test applications. Similarly, there was almost 10 weeks between E1 pre-test (M1) and C2 post-test. The findings in Table 6 and 7 show that children did not have any development that could cause a significant difference in terms of total receptive, expressive and verbal language skills due to time or maturation. In this respect, the hypothesis “there is no significant difference between M2 and M6; or M1 and M6” was proven. Maturation occurring in children during the experimental process did not have a significant effect on their language skills.

### 3. Findings related to the hypothesis “there is no significant difference between M1 and M2”.

M1 indicates E1 pretest scores and M2 indicates C1 pre-test mean scores. The results of Mann Whitney U test performed to determine whether there was a significant difference between M1 and M2 (E1 and C1 pretest scores) are presented in Table 8.

Table 8. Mann Whitney U Test Results regarding E1 and C1 Pre-test Mean Scores

Language Skill	Group	n	Mean Rank	Rank Sum	U	p
Receptive	E1	18	18.17	327	150	.921
	C1	17	17.82	330		
Expressive	E1	18	15.64	281	110	.160
	C1	17	20.50	348		
Verbal	E1	18	16.36	294	123	.329
	C1	17	19.74	335		

In Table 8, it is seen that there was no significant differences between the pre-test scores of the children in E1 and C1 regarding all language skills ( $p > .05$ ). From this point of view, it can be said that the groups were at the same level in terms of receptive, expressive and verbal language skills at the beginning of the experimental process. Therefore, the hypothesis “there is no significant difference between M1 and M2” was proven. It can be said that the groups were homogeneous in terms of language skills before the experimental process.

### 4. Findings regarding the hypothesis “there is no significant difference between M2 and M4; M4 and M6; M1 and M4”.

M1 indicates E1 pre-test scores. M2 indicates C1 pre-test scores. M4 indicates C1 post-test mean scores and M6 indicates C2 post-test mean scores. The results of Wilcoxon Signed Ranks Test performed to determine whether there was a significant difference between M2 and M4 or not (C1 post-test/pre-test mean scores) are presented in Table 9. It is seen that there was no significant difference between C1 children’s post-test and pre-test scores of receptive, expressive and verbal language total skills ( $p > .05$ ). Regarding receptive language skills, 3 of the

children in C1 were in negative rank, 5 were in positive rank and 9 were in equal rank. When both expressive and verbal language total scores of C1 were considered it is seen that 4 of the children were in negative rank, 4 were in positive rank and 9 of them were in equal rank.

Table 9. Wilcoxon Signed Ranks Test Results related to C1 Pre-test/post-test Mean Scores

Language Skill	Post-test-Pre-test	n	Mean Rank	Rank Sum	z	p
Receptive	Negative Rank	3	5.00	15	-.423	.673
	Positive Rank	5	4.20	21		
	Equal Rank	9				
Expressive	Negative Rank	4	5.75	23	-.704	.481
	Positive Rank	4	3.25	13		
	Equal Rank	9				
Verbal	Negative Rank	4	5.50	22	-.563	.574
	Positive Rank	4	3.50	14		
	Equal Rank	9				

The results of Mann Whitney U test performed to determine whether there was a significant difference between M4 and M6 (C1 and C2 post-test mean scores) are presented in Table 10.

Table 10. Mann Whitney U Test Results regarding C1 and C2 Post-test Mean Scores

Language Skill	Group	n	Mean Rank	Rank Sum	U	p
Receptive	C1	17	17.44	296	143	.753
	C2	18	18.53	333		
Expressive	C1	17	19.97	339	119	.264
	C2	18	16.14	290		
Verbal	C1	17	19.47	331	128	.407
	C2	18	16.61	299		

Table 10 shows that there was no significant difference between C1 and C2 post-test mean scores in terms of the receptive, expressive and verbal language ( $p > .05$ ). In the last analysis related to the fourth hypothesis, Mann Whitney U test results were performed to determine whether there was a significant difference between M1 and M4 or not (E1 pre-test mean scores and C1 group post-test mean scores) are presented in Table 11.

Table 11. Mann Whitney U Test Results regarding E1 Pre-test and C1 Post-test Mean Scores

Language Skill	Group	n	Mean Rank	Rank Sum	U	p
Receptive	E1	18	18.39	331	146	.817
	C1	17	17.59	299		
Expressive	E1	18	15.83	285	114	.196
	C1	17	20.29	345		
Verbal	E1	18	16.61	299	128	.409
	C1	17	19.47	331		

Table 11 shows that there was no significant difference between E1 pre-test mean scores and C1 post-test mean scores in terms of total receptive, expressive and verbal language skills ( $p > .05$ ). Based on the findings presented in Tables 9, 10 and 11, it is seen that the hypothesis —“there is no significant difference between M2 and M4; M4 and M6; M1 and M4” was proven. Pre-test sensitivity did not have a significant effect on children’s language skills.

### Findings Regarding Experimental Procedures Carried Out Within the Framework of the “Right to Benefit from the Experimental Process”

In the study, LFFLAP, which was determined to have a positive effect on the language skills of the children included in the experimental group, was also later applied to the children in C1 and C2. In this context, the second measurements (post-test scores of experimental groups) obtained from the C1 and C2 were accepted as pre-tests. In Table 12 and 13, the results of the analysis on whether the LFFLAP applied to C1 and C2 children was effective or not are presented. The mean scores of children in C1 were compared in terms of language skills after and before LFFLAP was applied. Regarding receptive language skills, 14 children ranked positively and 3 children ranked equally. Within the scope of expressive language skills, 14 children were positive and 3 children

were in equal rank. In terms of total verbal language skills, 15 children ranked positive and 2 children ranked equal. The difference between the mean scores obtained from three language skills was significant ( $p < .05$ ). Therefore, it can be said that LFFLAP had a significant effect on children's language skills in C1.

Table 12. Wilcoxon Signed Ranks Test results regarding C1 Post-test/pre-test Mean Scores after the Experimental Process

Language Skill	Post-test/Pre-test	n	Mean Rank	Rank Sum	z	p
Receptive	Negative Rank	0	0	0	-3.298	.001
	Positive Rank	14	7.50	105		
	Equal Rank	3				
Expressive	Negative Rank	0	0	0	-3.307	.001
	Positive Rank	14	7.50	105		
	Equal Rank	3				
Verbal	Negative Rank	0	0	0	-3.413	.001
	Positive Rank	15	8.00	120		
	Equal Rank	2				

As seen in Table 13, 11 of the children in the C2 group were in positive rank and 7 of them were in equal rank in terms of receptive language skills. Regarding total expressive and verbal language skills, 13 of the children were in positive and five of them were in equal rank. The difference between the mean scores obtained in the context of children's receptive, expressive and verbal language skills was significant ( $p < .05$ ). It can be said that LFFLAP caused a significant increase in language skills of children in the C2 group.

Table 13. Wilcoxon Signed Ranks Test Results regarding C2 Post-test/pre-test Mean Scores after the Experimental Process

Language Skill	Post-test/Pre-test	n	Mean Rank	Rank Sum	z	p
Receptive	Negative Rank	0	0	0	-2.956	.003
	Positive Rank	11	6.00	66		
	Equal Rank	7				
Expressive	Negative Rank	0	0	0	-3.187	.001
	Positive Rank	13	7.00	91		
	Equal Rank	5				
Verbal	Negative Rank	0	0	0	-3.190	.001
	Positive Rank	13	7.00	91		
	Equal Rank	5				

## Discussion

It is seen that all the hypotheses tested in the study were validated. In this context, it can be said that before the LFFLAP, the groups were distributed homogeneously. The maturation that took place during the experimental process did not have a significant effect on children's language skills, and similarly, the pre-test sensitivity did not have a significant effect on the dependent variable. As a result, the increase in the total receptive, expressive and verbal language skills of the children included in the experimental groups resulted only from the experimental process. In addition, it was observed that the foreign language education offered to control groups, within the framework of the "right to benefit from the experiment", had a significant effect on children's native language skills. These findings are similar to the findings of the research conducted by Tabors et al. (2003), Hammer et al. (2009) and Lee et al. (2013).

In a comparison study between Korean monolingual and Korean-English bilingual preschool children (Lee et al., 2013), the bilingual group showed that they possessed higher native language skills (Korean) than the monolingual group. Hammer et al. (2009), on the other hand, concluded that the increase in mothers' English usage provided an improvement in their children's vocabulary in Spanish. In this context, it was observed that there was an increase in native language skills with the increase in exposure to foreign language. In another study, Tabors et al. (2003) examined the relationships between 4-year-old children's native language (Spanish) and foreign language (English) skills in terms of phonological awareness, using meaningful words, letter-word definition, sentence memory and expression variables. Positive and meaningful relations were found between children's Spanish and English skills in all fields except meaningful words. They observed that children who had strong Spanish language skills improved their English skills significantly. A quite different distribution emerged regarding the vocabulary knowledge. Children who developed higher vocabulary in English could not

show such a high level of improvement in Spanish. However, in terms of language development in general, it was observed that in most areas, children's skills in one language were related to their skills in other languages. Similarly, Bedore et al. (2012) conducted a study with Spanish-English preschoolers, and analyzed their language exposure and current input and output levels. They concluded that exposure levels best predict performance on L1 and L2 morphology and semantics. In all of these aspects, foreign language education at an early age leads to significant increases in both children's foreign language skills as well as development of native language skills. On the other hand, in another study that was conducted with Iranian disadvantaged preschool children, it is reported that English education was offered based on phonology and vocabulary teaching and had negative effects on children's native language (Persian) skills (Farzaneh & Movahed, 2015). This situation might be due to the disadvantage of the sampled children, as well as the content and presentation of the foreign language education applied. It might be imprudent for preschool children to be given foreign language education without knowing their lives and their development conditions. The native language development should reach at a certain level, especially when these children are learning the language in another country where it is not used as L1. Children's developmental interests and needs should be taken into consideration while preparing the content of the foreign language program.

With all these aspects taken into consideration, when the principles and methods of LFFLAP were employed, it is seen that the native language skills of the children increased significantly. A foreign language program that focuses on active learning and children's lives develops children's native language skills as well. According to Kabadayı (2003), the difficulties that children face both in their native and foreign language learning in Turkey are because of the incorrect methods being applied. Instead of teaching languages with a single approach, active foreign and native language teaching methods should be embraced. Individuals' lives, preferences and motivations towards different teaching methods should be taken into consideration. Then it can be possible to make their language acquisitions more efficient and effective. This research will make an important contribution to the language acquisition fields (native, foreign and second language learning) as it is based on daily life and aimed at developing children's expressive, questioning and comprehension skills, as well as developing their expressive language skills. It is hoped that a language acquisition program that is focused on preschool children's lives could fill the gap in the education system and provide great support both in native and foreign language teaching (Ho, 2003; Hoque, 2009). Thus, it was found in the experimental studies carried out both in private and public schools by Uslu (2017, 2018), that the experiment group children's foreign language acquisitions were significantly higher. Similarly, Collier (1988) emphasized that when appropriate learning experiences are offered at an early age, both foreign and native language acquisitions of children were more rapid and more permanent than adults. According to the researcher, in order to provide effective language acquisition at an early age, time, rhythm, and repetition are necessary. At this point, it is thought that the production of studies/works prepared on a scientific basis will not only guide the practitioners but also increase the quality of foreign language education offered at an early age (Uslu, 2020). It should not be overlooked that when professional language teachers in foreign language education at an early age use the correct method and appropriate approaches, there is a positive interaction in both native and foreign language development of children (Akdoğan, 2005).

## Conclusion

This study was carried out in order to reveal how foreign language education of preschool children affects their native language development. This study was not carried out in order to reveal either the importance, necessity or frivolity of giving foreign language education to preschool children. As it is presented in both the introduction and the conclusion parts of the study, it is seen that the debate in the literature on children's foreign language learning at an early age still continues. In Turkey, it is well known that a very large majority of private schools teach a foreign language (usually English) in their preschools while public institutions have no foreign education practices in their preschool classes. In fact, foreign language education is provided in most of the private preschool institutions.

It has been thought that foreign language education given to preschool children in these institutions probably improves children's foreign language skills. This study, on the other hand, was aimed at revealing how foreign language education given to preschool children affects their native language development. These positive outcomes are in line with assisting one of the general objectives set by the Turkish Preschool Education Program (2013) which emphasized "ensuring that children speak their native language (Turkish) correctly and beautifully".

The increase in total receptive, expressive and verbal language skills of the children included in the experimental groups is due to the instruction they received. The content of the LFFLAP program consisted of activities such as play, music, drama, gymnastics, etc., in which they got to experience the foreign language during these activities. The increase in the native language skills of children in the experimental groups may not only be closely related to the strong and engaging content of the LFFLAP program but also the practitioner's domination in the field of English as a foreign language and child development studies. From this point of view, it can be wrong to draw a general conclusion that foreign language education given in preschool period also improves children's native language skills. However, it can be said that foreign language teaching raises language awareness and that can lead to children's awareness of their native language. In the present study, children's receptive, expressive and verbal language total skills are limited to the level that Turkish Early Language Development Test (TELD-3) can measure. Besides, foreign language activities applied to children during the experimental procedures is limited to eight weeks.

## Recommendations

Teaching materials and tools suitable for a life-focused learning approach and techniques can be developed within preschool native and foreign language teaching programs. During the preschool period, children are prone to language acquisition and learning in terms of their cognitive and language development characteristics. Therefore, native and foreign language acquisition activities of children in this period can be planned and implemented simultaneously with life-focused teaching practices. On the other hand, we can question the content of the foreign language education programs prepared according to the development characteristics of preschool children, which are presented under the title of "Foreign language education is given to preschool education children in our institution". Just knowing a foreign language may not be enough to give foreign language education to children during the preschool period. In this context, foreign language education programs should be prepared with appropriate content, and the practitioners should be able to interact effectively with children regarding their ages and developmental characteristics. In addition, it is recommended that the native language development of children should be followed carefully in institutions where foreign language education is taught. Finally, in this study, it was seen that the process performed within the framework of the "right to benefit from the experiment" had a significant effect. Thus, it can be said that it is important and necessary to consider control groups in the experimental design studies, if possible, as they have the right to benefit from the process.

## Acknowledgements

We would like to thank to our experiment and control group parents and their beloved children who made this study possible. We would also like to thank to classroom teachers and the school principle for their support and warm welcoming during the study process. Thank you very much to our American sister, Mia Baki, for the proofreading of the article.

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