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## Impact of the Interactive Story Reading Method on Receptive and Expressive Language Vocabulary of Children \*

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**Abstract:** This study aims to review the impact of the interactive story reading method on 48-72 month children's vocabulary based on receptive and expressive language. The study group is 52 children in the 48-72 months age group at the nurseries of primary schools at Ankara province. The research employed a combined pattern analyzing both quantitative and qualitative data. The data were collected via "General Information Form", "Expressive and Receptive Language Test in Turkish (TIFALDI)" developed under the leadership of Gul Guven and Berument The "Teacher Observation Form", the "Teacher Interview Form" and the "Family Interview Form". In conclusion of the study, a significant difference in favor of the experiment group in the posttest was observed with respect to average posttest scores of experiment and control groups, following the implementation of the Interactive Story Reading Program. The comparison of the follow-up test and pretest score averages revealed a significantly high value in favor of the total for the follow-up test for the children in the experiment group. The agreement among the forms filled out by two observers with reference to the results of the observation and video analysis regarding the implementation of the "Interactive Story Reading Method" by the teachers, was assessed to be good/very good agreement. In the light of these results it can be said that the interactive story reading method have a fundamental impact on receptive and expressive vocabulary knowledge of 48-72 months old children.

**Keywords:** *Interactive story reading, vocabulary, receptive language, expressive language*

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### Introduction

Language plays a functional role in enabling children to express themselves, to get acquainted with social and cultural values, and to meet their social communications needs. The children can discover the environment and express themselves using the language. Language also offers a means for the child to think. The development of language and thought serves as the basis of the individual's interactions with her environment, as well as the means to comprehension. In areas such as conceptualization, establishing links, and problem solving, linguistic development and cognitive development operates in interaction. Vygotsky stated that thought and speech merged into one activity around the ages two or three, leading to a verbal foundation for thought, giving speech an intellectual tone as it is used for thought. That very relationship between language and thought develops through interactions with events in the actual world, reflecting the ability to understand the rules governing the outside world (Mooney, 2000; Topbas, 2005; Deniz, 2008; Sever, 2008; Bodrova and Leong, 2010).

Expanding and growing vocabulary, a crucial indicator of the child's language development, is also a major factor contributing to the academic, social and cultural development as well. Paving the way for effective and meaningful communication skills and change of ideas in daily life, vocabulary constitutes an important part of cognitive development and communications as well (Ilter, 2014). For words also support the growing breadth and pace of thought.

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Children need an extensive mesh of knowledge regarding concepts and words in the pre-school years, to be able to learn better. That is why education programs entailing extended learning opportunities, organizing knowledge and providing repetitions, truly help (Pollard-Durodola et al., 2011). The most effective means of vocabulary development, on the other hand, is reading. Interactive reading of children's books provide children with an "enriched language environment" in the process of acquiring cognitive, emotional, and linguistic skills from the pre-school days onwards (Erbay and Samur, 2010). Children develop a grasp of the breadth of meaning, by witnessing multiple use cases of a single word in various story books. Vocabulary and the diversity of meaning play yet another major role in helping children develop skills to understand texts and transfer knowledge through their future learning experiences.

Content from sciences, mathematics, or social studies provide opportunities for enriching the meaning of known words, and providing explanations, hence allow children to proceed from a receptive stance towards words (from understanding words), to expressing them (using words) (Spencer and Guillaume, 2006). Interactive reading provides unique opportunities for children to experience words more than once, with different implications. Answering questions asked before, during and after story reading, encouraging children to talk about and discuss the topic and characters allow them structure their knowledge.

A glance at the literature reveals numerous studies (Brabham, 1996; Wasik & Bond, 2001; Bortnem Mclaughlin, 2005; Justice et al., 2005; Willett Wilkinson, 2006; Christ, 2007; Freeman, 2008; Geraghty, 2008; Mol et al., 2009; Muncy, 2011; Hindman, Wasik & Erhart, 2012; Sargenti, 2012; Simek, 2014) on the impact of interactive or verbal story reading activities on the vocabulary of children. The practices with the families and teachers usually revealed positive impact of book reading on the vocabulary acquisition and preparation for literacy on part of the children. The studies employing interactive reading and reading aloud activities regarding specific fields of content (Morrow et al., 1997; French, 2004; Leung, 2008; Gonzalez et al., 2011), on the other hand, are rather limited in numbers, and the studies have a positive effect on the receptive and expressive language development on part of the children. Building on a review of the literature and research results, the present study intends to investigate the influence of the interactive story reading method on the receptive and expressive language development among children.

## Methodology

### *Research Pattern*

The study employed a mixed pattern method. The mixed pattern method is one of the primary means used for strengthening a research pattern. The mixed pattern method refers to the combined use of qualitative and quantitative research perspectives in any stage of the research, or in two or more stages of the research processes (Kiral and Kiral, 2011; Yildirim and Simsek, 2011). In this context, as the mixed pattern method is experimental in essence, interview, observation, and image analysis methods among qualitative research methods, along with an experimental pattern with the pre-test/post-test/follow up test with control group was utilized.

### *Study Group*

The study group is 52 such children chosen by random selection in the 48-72 months age group at the nurseries of primary schools to the Ministry of Education in the district of Etimesgut, Ankara in 2014-2015 academic year. 26 children who exhibit normal process development and who attend the preschool of Primary School A were included in the experiment group, while 26 children who exhibit normal process of development and who attend the preschool of Primary School B constituted the control group. A total of 52 children from a total of four classes, two for the experiment group and two for the control group, were enrolled in the study.

### *Data Collection Tools*

The data to serve as the basis of the study were "General Information Form", Turkish Expressive and Receptive Language Test (TIFALDI), "Teacher Observation Form", "Teacher Interview Form" and "Family Interview Form".

- *General Information Form*: In order to get information about the children enrolled in the study, and their families, the researcher prepared the "General Information Form". The general information forms were filled out by the researcher, on the basis of the information provided in the school's personal development files for the children.
- *Turkish Expressive and Receptive Language Test (TIFALDI)*: The Turkish Expressive and Receptive Language Test (TIFALDI) is composed of the Receptive Language Vocabulary Sub-Test and Expressive Language Vocabulary Sub-Test (Gul Guven and Kazak Berument, 2010).
- *TIFALDI Receptive Language Vocabulary Sub-Test*: TIFALDI Receptive Language Vocabulary Sub-Test (Gul Guven and Kazak Berument, 2010) comprises a total of 159 cards -two of which are exercise cards- ordered in the increasing

order of complexity, applied on an individual basis, and assessing the language comprehension skills and vocabulary among children in the 2-12 age group. Each card contains four images drawn by a professional artist in black and white, and with a uniform level of quality, placed in a multiple-choice format. One of the images refers to the target word. The Receptive Language Vocabulary Sub-Test was applied as a pre-test and post-test in the beginning and the end of the study. When the internal consistency factors are calculated separately for each age in the 2-12 age group, a Cronbach's alpha range from 0.88 to 0.96 was observed.

- *TIFALDI Expressive Language Vocabulary Sub-Test*: TIFALDI Expressive Language Vocabulary Sub Test comprises a total of 95 cards ordered in the increasing order of complexity, applied on an individual basis with the children in the 2-12 age group, assessing language use and vocabulary. During the application stage, the child was asked to present a verbal statement of the image shown by the researcher. The test was applied after the Receptive Language Vocabulary Sub-Test, both in the beginning and the end of the test. When the internal consistency factors of the Expressive Language Sub-Test are calculated separately for each age in the 2-12 age group, a Cronbach's alpha range from 0.88 to 0.96 was observed.
- *Teacher Observation Form*: The "Teacher Observation Form" drawn up to evaluate the performance exhibited by the teachers during the application of the Interactive Story Reading Method, is composed of 18 items. The teachers were asked to provide a brief presentation of the stories, to read them with suitable tone and stress, to have children included in the story in a balanced manner, to provide appropriate directions regarding the activities, to implement the activities in line with their stages, and to remember asking questions to help with evaluation, during and after the activity. The researcher and an independent observer viewed the video recordings of the activities for eight weeks, and noted on the form their assessments of the teachers' practices.
- *Teacher Interview Form*: The "Teacher Interview Form" was developed to gather the thoughts of the teachers regarding the program they had implemented, at the end of the Interactive Story Reading process.
- *Family Interview Form*: The "Family Interview Form" was developed to gather the thoughts of the families regarding the program implemented, at the end of the Interactive Story Reading process.

#### *Application Process*

Before commencing with the application process, Turkish Expressive and Receptive Language Test (TIFALDI) was applied as a pre-test for the children in the experiment and control groups. The teachers in the experiment group were provided a three-days training on the features of the "Interactive Story Reading Method" to be applied, the description of the stories, achievements and indicators, the actual cases leading to such achievements, the ways of communication with the children, the characteristics of the physical environment to provide such communications, the stimulants to be provided, and the methods and techniques to be employed. Following the training, an information meeting was held with the primary teachers and families of the children in the experiment group was held, providing information on the objectives and contents of the "Interactive Story Reading Method", as well as how it is to be applied. Once pretesting was completed, the teachers in the experiment group had read the nine stories on scientific concepts, authored by the researchers, using the interactive story reading method, and implemented activities to prepare for and to evaluate the stories. The activities were implemented two days a week, for 45-50 minutes a day, with both classes in the experiment group receiving them in the successive order. As the last week saw educational activities on two stories, three days were used for the activities. Throughout the eight-weeks period, the researcher provided guidance to the teachers of the experiment group, about the principles and characteristics of the "Interactive Story Reading Method". During the activities, photos and videos of the event were taken. In the case of the control group, on the other hand, the existing curriculum was kept in place, with the teacher of the class keeping the program in its conventional flow.

During the application of the Interactive Story Reading Method, the "Teacher Observation Form", the "Teacher Interview Form", and the "Family Interview Form" were applied in order to assess the effectiveness of the method.

Once the application of the Interactive Story Reading Method with the experiment group was completed, the researcher applied the Turkish Expressive and Receptive Language Test (TIFALDI) post-test with the children in the experiment and control groups, in order to assess the expressive vocabulary development among the children. Five weeks after the post-test, the children in the experiment and control groups were also subjected to the permanence tests.

#### *Data Analyses*

In line with the primary objective of the research, the analysis of the data led to the testing of the significance of the difference between the pretest and posttest score averages from " Turkish Expressive and Receptive Language Test (TIFALDI)" for the experiment group and the control group, using "Mann Whitney U test". Wilcoxon Rank Sum Test was applied to test the difference between the average scores of the experiment and control groups in the pretest and posttest, as well as the difference between the pretest, posttest, and follow-up test average scores of the experiment group. In the case of the "Teacher Observation Form", the agreement between observers was noted using the Cohen's

kappa factor values. The "Family Interview Form" and "Teacher Interview Form" were, on the other hand, assessed through a content analysis.

### Findings and Discussion

1. *The qualitative findings which were obtained to evaluate the effectiveness of the interactive story reading method are presented below:*

The performance of the teachers in the experiment group, in light of the fundamental principles of the program where the Interactive Story Reading Method was applied, was assessed using the "Teacher Observation Form". Statistical methods were applied to assess the level of convergence between the observers who viewed the same sets of video records and filled the "Teacher Observation Forms". Confidence in qualitative research usually refers to consistency between the datasets comprising the responses of more than one coder (Creswell, 2014). That is why the study had two observers to ensure objectivity of the observation results. The observer other than the researcher, who was expected to fill out the "Teacher Observation Form" was provided information on the purpose of the study, the method employed in research, the "Interactive Story Reading Method", the issues to take note of when filling out the "Teacher Observation Form", and the video records regarding the application. The observer's questions were then answered. Once confident with the level of information on part of the observer, the researcher asked the observer to view the video records after each week's application, for a period of eight weeks, and to fill out the "Teacher Observation Form". The researcher's observations were coded 'Observer 1', while the other observer's observations were coded 'Observer 2'. Each week, "kappa factors" were calculated to determine the level of agreement between Observer 1 and 2 separately.

According to Sencan (2005), the level of agreement between the two observers can be used to calculate Cohen's Kappa Factor, and can be duly interpreted as per the following table.

*Table 1. Kappa Factor Values*

Kappa Factor Values	
Weak Agreement	< .20
Acceptable	= .20 - .40
Average Agreement	= .40 - .60
Good Agreement	= .60 - .80
Outstanding Agreement	= .80 - 1.00

Table 1 categorizes the cases where the kappa factor for the level of agreement between the observers is .20 or less as weak agreement, while the range .20 to .40 is categorized as acceptable agreement, .40 - .60 range is categorized as average agreement, .60 - .80 range is categorized as good agreement, and .80 - 1.00 range is categorized as outstanding agreement.

*Table 2. Kappa Factor Values for Observer 1 and 2's Teacher Observation Form Assessments for the Teacher of the Experiment Group A (n=item count)*

Interactive Story Reading Method Practices	n	Kappa	ss	p
1. Worm in a Curvy Tunnel	18	1.000	.000	.000
2. My Beans Are Growing	18	1.000	.000	.000
3. What Would Happen Without Rain?	18	1.000	.000	.000
4. I Want To See Myself	18	1.000	.000	.000
5. How to Save a Hippopotamus?	18	1.000	.000	.000
6. As the Snowflakes Fall	18	.824	.169	.000
7. Echo in Search for its Sound	18	.769	.218	.001
8. The Secret in the Stones	18	.769	.218	.001
9. Naughty Friend of my Cat	18	.640	.326	.004

p < 0.05

A glance at Table 2 reveals that "outstanding agreement" were found between the observers for "Worm in a Curvy Tunnel, My Bean is Growing, What Would Happen Without Rain?, I Want To See Myself, How to Save a Hippopotamus, and As the Snowflakes Fall" (0.824 - 1.000), while "Secret in the Stones and Echo in Search for its Sound, and Naughty Friend of my Cat" were marked by "good agreement" (0.640-0.769) (Sencan, 2005).

Table 3. Findings regarding the Kappa Factor Values for Observers' Teacher Observation Form Assessments for the Teacher of Experiment Group B

Interactive Story Reading Method Practices	n	Kappa	ss	p
1. Worm in a Curvy Tunnel	18	1.000	.000	.000
2. My Beans Are Growing	18	1.000	.000	.000
3. Echo in Search for its Sound	18	1.000	.000	.000
4. The Secret in the Stones	18	1.000	.000	.000
5. What Would Happen Without Rain?	18	.824	.169	.000
6. I Want To See Myself	18	.824	.169	.000
7. Naughty Friend of my Cat	18	.769	.218	.001
8. How to Save a Hippopotamus?	18	.769	.218	.001
9. As the Snowflakes Fall	18	.769	.218	.001

$p < 0.05$

A glance at Table 3 reveals that “outstanding agreement” were found between the observers for “Worm in a Curvy Tunnel, My Bean is Growing, Echo in Search for its Sound, What Would Happen Without Rain, I Want To See Myself, and Secret in the Stones”, while “As the Snowflakes Fall, Naughty Friend of my Cat, and How to Save a Hippopotamus” were marked by “good agreement”.

The analysis of Tables 2 and 3 reveals findings supporting the argument that the insights the researcher provided to the teachers prior to the application of the “Interactive Story Reading Method”, on the characteristics of the program, achievement and development indicators, the cases to be developed with a view to achievements, the stages to implement, how to communicate with children, the characteristics of the physical environment to support the communications, the stimulants to take effect, the methods and techniques to be employed, and an overall view of the program, as well as the feedback provided prior to weekly and daily application alongside the training, and the effectiveness of guidance actually created a difference.

*The teachers were presented with semi-structured interview questions under the “Teacher Interview Form” with respect to the “Interactive Story Reading Method”. The questions presented to the teachers, and the findings gathered in response are as follows:*

A glance at the views of the teachers of the experiment group, on whether the “Interactive Story Reading Method” contributed to their personal and professional development reveals an understanding of the positive contributions of the “Interactive Story Reading Method” for their professional development, that it provided substantial motivation for both the children, and the teachers, that they will take the application principles of the “Interactive Story Reading Method” into account in their future activities, given the positive impact of the program.

A review of the teachers' views about the matters they had utmost difficulty when implementing the “Interactive Story Reading Method” revealed that neither teacher felt initially comfortable, given the presence of an observer in the classroom, and that both teachers had timing issues as the program application sometimes clashed with special day events. It is possible to argue that the teachers felt uncomfortable as they were not used to the presence of an observer in the classroom. Given the busy schedules for exhibits and shows for special days such as the April 23<sup>rd</sup> National Sovereignty and Children's Day, and Mother's Day, they had sometimes scheduling problems, leading to difficulties regarding the implementation of the program.

The teachers' recommendations about the “Interactive Story Reading Method” focused on the importance of funny representation of the roles of characters in the story, in terms of raising their interest and instilling scientific vocabulary among them. The teachers also noted that the greater interest on part of the children, on animal characters in particular. A well-thought selection of characters, inclusion of elements of fun, high-quality images and the association of the story topic with the life and interests of the children could have played a part in this context.

Table 4. The Analysis of the Family Interview Form responses regarding the implementation of the “Interactive Story Reading Method”

Families' views on the program	n	%
Provision of information to the families at the end of the study	22	84.6
Increased interest and attention on scientific matters	22	84.6
Expanded vocabulary	21	80.7
Provision of information about research to the families	20	76.9
Increased knowledge of the living and non-living things in the nature	18	69.2
Memory development	18	69.2
Educational activities other than routine work	17	65.3
Opportunity to spend some quality time with the family	12	46.1
Interest in literacy	10	38.4
Other	3	11.5

Table 4 presents the distribution of the families' views about the case before and after the implementation of the “Interactive Story Reading Method”, through content analysis. According to Table 4, as of the end of the education program, 84.6% of the families expressed increased interest and curiosity on part of the children, about scientific issues, while 80.7% noted expanded vocabulary; 76.9% were glad with the provision of information prior to the study, and 84.6% were glad with the provision of information in conclusion of the study; 69.2% found the study effective in terms of helping memory development of their children; 46.1% considered the books sent to the homes were good opportunities for spending time with the family, and witnessed an increase in the children's level of knowledge about living and non-living things in the nature; finally 38.4% noted an increased interest on part of the children, about literacy.

The families' views presented in Table 4 reveal observations of increased cognitive and language development in particular, among the children. This can be considered as a sign of progress in the level of development of children, or associated with increased level of awareness on part of the families. Another matter the families especially emphasize is the provision of information to them during the study. Provision of information to the families before and after the implementation process have arguably helped families focus on the education of their children and increased awareness about education.

Studies so far and practices in contemporary education emphasize the importance of parents' participation in education and continuous supply of information in terms of reinforcing the knowledge and skills instilled through continuity in between the school and home, providing a lasting process for education. When informed with a correct perspective, motivated for participation in education, the families would take permanent, consistent and effective parts in education in a background of increased interaction through the provision of feedback, and see their level of awareness about the education of their children increase.

*The quantitative findings are presented below:*

Table 5. Standard Score Averages, Standard Deviations and Wilcoxon Test Results regarding the Margins Between Pre-test and Post-test Scores of Children in the Experiment Group, in the Receptive Language and Expressive Language Tests

		n	$\bar{x}$	ss	z	p
Experiment	Pre-test Receptive Language Standard Score	26	118.7	9.7	-4.458	0.001*
	Post-test Receptive Language Standard Score	26	133.8	4.9		
Experiment	Pre-test Expressive Language Standard Score	26	120.9	10.1	-4.217	0.001*
	Post-test Expressive Language Standard Score	26	130.1	8.5		

p < 0.05

According to Table 5, the Wilcoxon Signed Rank Test results for the overall pre-test/post-test scores of the children in the experiment group for the Expressive and Receptive Language Vocabulary Sub-Tests of “Turkish Expressive and Receptive Language Test (TIFALDI)” reveal a statistically significant difference between the pre-test and post-test standard scores achieved by the children in the experiment group ( $z=-4.458$ ;  $p=0.001$ ) ( $p<0.05$ ). The pre-test standard scores the children in the experiment group achieved in the receptive language test are significantly lower compared to their post-test standard scores.

Another statistically significant difference is observed between the pre-test and post-test scores of the children in the experiment group, in the expressive language test as well ( $z = -4.217$ ,  $p = 0.001$ ) ( $p < 0.05$ ). The pre-test standard scores the children in the experiment group achieved in the expressive language test are significantly lower compared to their post-test standard scores. In light of these results, one can argue that the “Interactive Story Reading Method” had a positive effect on the receptive and expressive vocabulary development among the children in the experiment group.

Muncy (2011) investigated the effect of the “Voicing the Text” method in oral reading practices, on the receptive vocabulary capacity. The encounters the children had with the words, along with opportunities provided through the day for the use of these new words helped teaching vocabulary by reading stories. The study revealed that the experiment group was observed to achieve more progress compared to the control group. The study revealed that the reading of the stories using the “Voicing the Text” method helped vocabulary learning substantially. Geraghty (2008), in a study comparing the impact of stories versus informational texts in terms of vocabulary development by the children, focused on the use of eight variables regarding verbal language use on part of the teacher and children (average utterance length on part of the teachers; average utterance length on part of the students; what, why, where, when, how, and who questions on part of the teachers; rare words uttered by the teachers; rare words uttered by the children; use of target words by the teachers; use of target words by the children; participation count by the children). The study found, again, a significant difference between the pre-test and post-test scores the children received in the receptive and expressive language tests. Brabham (1996), in a study titled “Effects of Teacher's Reading Aloud Styles on Vocabulary Acquisition and Comprehension of Children”, investigated how reading aloud styles of the teachers' helped develop the vocabulary acquisition and comprehension of children. The study reached to the conclusion that reading aloud styles had significant effects on both vocabulary acquisition, with respect to books, as well as every year of schooling. In case of interactive reading, discussion of the meanings during reading led to the production of more words compared to the analyzed performance style applied prior to and after the reading. Both reading styles were found to be more effective compared to reading alone.

Numerous studies have revealed that interactive book reading activities expanded the vocabulary of children (Lonigan and Whitehurst, 1998; Wasik and Bond, 2001; Ezell and Justice, 2005; Mol et al., 2009; Lever and Senechal, 2011; Gonzalez et al., 2011; Hindman et al., 2012; Hindman and Wasik, 2013).

The conclusions reached in Table 6 and the results of the studies noted above concur on the point that the story method expand the general receptive and expressive vocabulary of children. The study results reveal a discernible impact of education programs for vocabulary development, in terms of expanding the vocabulary of children and their comprehension skills, whereas practices for vocabulary development increase not only the development with respect to specified target words, but also the general receptive and expressive language and vocabulary development on part of the children. The “Interactive Story Reading Method” implemented with the experiment group in the study may have supported vocabulary development on part of the children, through the interactive reading of the stories; preparatory and complementary activities focusing on language, applied before and after the stories to reinforce the word acquisition; repetition of the words prior to, during, and after the reading of the story and presentation of questions related to them; the repetition of the stories on the second day assigned in that week using a different method (re-reading of the story, having the children tell the story by looking at the pictures, reviewing the story with close- and open-ended questions); drawing the children's interest and increasing the probability that the children have a higher chance of coming across different uses and forms of the words by combining vocabulary learning with other academic fields (arts, games, music, science, language, mathematics, preparation for literacy); and supporting the activities with visual and aural materials with a view to helping with receptive and expressive language skills.

*Table 6. Standard Score Averages, Standard Deviations and Wilcoxon Test Results regarding the Margins Between Pre-test and Post-test Scores of Children in the Control Group, in the Receptive Language and Expressive Language Tests*

		n	$\bar{x}$	ss	z	p
<b>Control</b>	Pre-test Receptive Language Standard Score	26	118	9.3	-4.284	0.001*
	Post-test Receptive Language Standard Score	26	130.1	7.8		
<b>Control</b>	Pre-test Expressive Language Standard Score	26	120	11.5	-3.675	0.001*
	Post-test Expressive Language Standard Score	26	124.5	9.5		

$p < 0.05$

According to Table 6; a statistically significant difference is observed between the pre-test and post-test scores of the children in the control group, in the receptive language test ( $z = -4.284$ ,  $p < 0.05$ ). The pre-test standard scores the children in the control group achieved in the receptive language test are significantly lower compared to their post-test standard scores.

Another statistically significant difference is observed between pre-test and post-test scores of the children in the control group, in the expressive language test as well ( $z = -3.675$ ,  $p < 0.05$ ) ( $p < 0.05$ ). The pre-test standard scores the children in the control group achieved in the expressive language test are significantly lower compared to their post-test standard scores.

The review of Table 6 reveals a positive difference in favor of the post-test, regarding the receptive and expressive language vocabulary of the children in the control group. The children in the control group where just the Ministry of Education's Preschool Education Program is applied had also seen receptive as well as expressive vocabulary growth, due to the fact that the teachers of the control group provided effective Turkish language activities as stipulated in the Ministry of Education's Preschool Education Program, with a view to ensuring that the children in the control group speak correctly and elegantly, and expanding their vocabulary as well as their communication skills, not to mention drama, pre-literacy, and mathematics activities which may involve other opportunities to activate receptive and expressive language skills. The social life children in the control group had outside the preschool they attended (family, friends etc.) and the communication opportunities provided by mass media (such as television or computers) also may have something to do with the expansion of receptive and expressive vocabulary of the children.

*Table 7. Standard Score Averages, Standard Deviations and Mann-Whitney-U Test results for Turkish Expressive and Receptive Language Test (TIFALDI) Post-test Scores of the Children in the Experiment and Control Groups*

		n	$\bar{x}$	ss	Mean Rank	z	p
Post-test Receptive Language Standard Score	Experiment	26	133.8	4.9	29.81		
	Control	26	130.1	7.8	23.19	-1.589	0.112
	Total	52	131.9	6.7			
Post-test Expressive Language Standard Score	Experiment	26	130.1	8.5	30.71		
	Control	26	124.5	9.5	22.29	-2.016	0.044*
	Total	52	127.3	9.4			

$p < 0.05$

According to Table 7, the standard scores the experiment and control groups achieved in Turkish Expressive and Receptive Language Test (TIFALDI), Receptive Language Sub-Test does not exhibit a statistically significant difference ( $z = -1.589$ ,  $p = 0.112$ ) ( $p < 0.05$ ). In the case of the standard scores the experiment and control groups achieved in the expressive language post-test, however ( $z = -2.016$ ,  $p = 0.044$ ) there is a statistically significant difference ( $p < 0.05$ ). The post-test standard scores the children in the experiment group achieved in the expressive language test are significantly higher than those achieved by the children in the control group. Furthermore, a distinct increase in the scores the experiment group achieved in the expressive vocabulary post-test is also considered a positive achievement.

Sargenti's (2012) study on the impact of the story book reading activity carried out at the Head Start school, on the development of receptive and expressive vocabulary of children, notes significant difference between the pre-test and post-test scores for receptive language, between groups. The children who received higher scores in pre-tests were found to achieve higher scores in the post-test applied after learning target vocabulary. No significant difference was observed with the pre-test scores in the receptive language test, and the post-test scores in the expressive language test. The children were usually found to perform worse in the expressive post-test. In a piece on "The Influence of Presentation Contents in Story Reading, on the Receptive Vocabulary Development among Pre-School Children", Marken (2008) tried to assess the impact of the conditions for language proficiency and story book reading in terms of receptive vocabulary development. The study found that the groups (mono-lingual, bi-lingual) had comparable pre-test average scores. After the intervention, the post-test results of the groups exhibited no significant difference between the groups, in terms of receptive language vocabulary expansion with reference to language level or story reading conditions.

Mol et al. (2009) carried out a meta-analysis on Interactive Book Reading in Earlier Stages of Education, and provided a quantitative review of 31 studies entailing active participation of children and a supplementary education program, before, during, and after the story reading activity. The analyses revealed that expressive vocabulary is influenced particularly by interactive reading, while the scale of the influence is not significantly larger than those of receptive language vocabulary skills. Furthermore, the meta analysis revealed that the inclusion of the whole group by their teachers, in the interactive reading activity, helped increase the skill levels of the children. Closer observation and the provision of consulting services to the teachers, rather than short education sessions with video recordings, were noted to have helped the teachers adapt to the education techniques to match the development levels of the children, and to internalize the principles of the program.



The research results noted above run in parallel to the results obtained in Tables 7. Studies to assess the influence of interactive book reading activities in particular, on the vocabulary of the children reveal a positive increase in the expressive as well as receptive vocabulary on part of the children. Such studies suggest statistically significant differences caused by practices for the acquisition of target vocabulary, on the expressive language development in particular. Mol et al.'s (2009) meta-analysis on the impact of interactive reading found that, despite the mediocre influence observed on the expressive vocabulary, the programs implemented would be rather more useful for expressive vocabulary, as the programs would focus rather on revealing and strengthening the children's verbal responses. Leung (2008) noted that the standard test scores for receptive and expressive language vocabulary could vary with reference to variables such as oral reading activities and the texts read.

The average standard scores observed in the study, for the receptive language vocabulary revealed no statistically significant difference between the experiment and control groups with respect to receptive language vocabulary sub-test, while the average post-test scores of the experiment group ( $\bar{x} = 133.8$ ) were still higher than those of the control group ( $\bar{x} = 130.1$ ). One could argue that this result is in favor of the experiment group. In the light of these results, it is possible to argue that the "Interactive Story Reading Method" did not lead to a significant difference in the receptive language vocabulary of the control group in comparison to that of the experiment group, but that an increase was observed particularly in the expressive language vocabulary.

*Table 8. Standard Score Averages, Standard Deviations and The Wilcoxon Test Results on the Difference Between the Standard Scores the Experiment Group Children Received in the Pre-Test, Post-Test and Follow-Up Test in "Turkish Expressive And Receptive Language Test (TIFALDI)"*

		n	$\bar{x}$	ss	z	p
Experiment	Pre-test Receptive Language Standard Score	22	120.4	9.2	-4.019	0.000*
	Follow-up Test Receptive Language Standard Score	22	134.7	3.6		
Experiment	Post-test Receptive Language Standard Score	22	133.8	4.9	-2.263	0.429
	Follow-up Test Receptive Language Standard Score	22	134.7	3.6		
Experiment	Pre-test Expressive Language Standard Score	22	123.1	9.1	-4.032	0.000*
	Follow-up Test Expressive Language Standard Score	22	132	7.7		
Experiment	Post-test Expressive Language Standard Score	22	130.1	8.5	-.889	0.374
	Follow-up Test Expressive Language Standard Score	22	132	7.7		

$p < 0.05$

According to Table 8, the children in the experiment group are observed to exhibit a statistically significant difference in terms of their pre-test and follow-up test scores in the Receptive Language Vocabulary Sub-Test of "Turkish Expressive and Receptive Language Test (TIFALDI)" ( $z = -4.019$ ,  $p = 0.000$ ) ( $p < 0.05$ ).

The children in the experiment group are observed to exhibit no statistically significant difference in terms of their post-test and follow-up test scores in the Receptive Language Vocabulary Sub-Test of "Turkish Expressive and Receptive Language Test (TIFALDI)" ( $z = -2.263$ ,  $p = 0.429$ ) ( $p > 0.05$ ).

The children in the experiment group are observed to exhibit a statistically significant difference in terms of their pre-test and follow-up test scores in the Expressive Language Vocabulary Sub-Test of "Turkish Expressive and Receptive Language Test (TIFALDI)" ( $z = -4.032$ ,  $p = 0.000$ ) ( $p < 0.05$ ).

The children in the experiment group are observed to exhibit no statistically significant difference in terms of their post-test and follow-up test scores in the Expressive Language Vocabulary Sub-Test of "Turkish Expressive and Receptive Language Test (TIFALDI)" ( $z = -.889$ ,  $p = 0.374$ ) ( $p > 0.05$ ).

According to these results, the average post-test score in the aftermath of "Interactive Story Reading Method", and the average scores achieved in the follow-up test to take place approximately five months after the post-test, are higher compared to the average scores achieved in the pre-test. On the other hand, no statistically significant difference was observed between the overall scores in the post-test and follow-up test. As the language development in children remained in progress through the five-months period to follow the posttest as well, the lack of a statistically significant difference between the scores achieved in the post-test and the follow-up test despite a rise in the standard scores can be explained through lasting effect of the "Interactive Story Reading Method". One can forcefully argue that the "Interactive Story Reading Method" had a positive effect on the receptive and expressive vocabulary development of children.

### Conclusion and Recommendations

In conclusion of the study, a significant difference in favor of the experiment group in the posttest was observed with respect to average posttest scores of experiment and control groups, following the implementation of the Interactive Story Reading Program. The comparison of the pretest-posttest score averages of the children in the experiment group revealed a significant difference in favor of the posttest. Furthermore, the comparison of the pretest/posttest score averages of the control group revealed a significant difference. Finally, the comparison of the pretest/posttest score averages for the children in experiment and control groups led to a significant difference in favor of the experiment group. The comparison of the follow-up test and posttest score averages for the children in the experiment group did not lead to a significant difference while the comparison of the follow-up test and pretest score averages revealed a significantly high value in favor of the total for the follow-up test. The concurrence among the forms filled out by two observers with reference to the results of the observation and video analysis regarding the implementation of the "Interactive Story Reading Method" by the teachers, was assessed to be good/very good concurrence. In the light of these results it can be said that the interactive story reading method have a fundamental impact on receptive and expressive vocabulary knowledge of 48-72 months old children.

In the light of the research results, it can be recommended to carry out; the influence of the "Interactive Story Reading Method" can be investigated in light of various variables such as age, cognitive development, parents' level of education, socio-economic strata, and attendance in pre-school educational institutions. In addition to studies on the development of children's vocabulary, further studies can be implemented to assess the word comprehension abilities of the children; the impact of the "Interactive Story Reading Method" on cognitive skills can be investigated. Studies where various disciplines can be investigated as independent variables to support vocabulary development on part of pre-school children (e.g., the influence of music on the development of vocabulary) can be implemented. The influence of using informative as well as non-fiction books, alongside stories regarding certain content areas, on vocabulary acquisition, can be investigated. The influence of the interactive reading method vis-à-vis that of the simple reading method, on the receptive and expressive language vocabulary, can be studied further.

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