

## Teaching Kindergarten Children English Vocabulary by Total Physical Response in Physical Education Courses\*

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### Abstract

This study deals with the effect of Total Physical Response (TPR) on English vocabulary teaching to kindergarten students in Physical Education and Play. TPR is a method of developing foreign language communication skills through physical movement and mostly imperative moods. TPR is employed to help teach a foreign language by combining speech and actions. This was an eight-week study program carried out with kindergarten children in Bursa Private Tan Schools. A total of 32 students (16 control and 16 experimental) participated in the study. A pretest in the 1st week and a posttest in the 8th week consisting of 16 questions were applied to both groups. Words determined from the kindergarten curriculum were taught to the control group by a classical method in the classroom and to the experimental group by TPR in the Physical Education and Play sessions. The related t-test results demonstrated that there were significant differences in pre-test and post-test scores on question basis ( $p < 0.01$ ). The results of the research indicate that the Physical Response Method applied in Physical Education and Play was more effective, fun and motivating for Kindergarten students in learning English vocabulary than traditional foreign language teaching methods.

**Keywords:** TPR, physical education, sport, education through play, foreign vocabulary teaching

### Introduction

Language is a social system that provides understanding among individuals (Dilaçar, 1968). When people are still babies, they begin to learn their first language (L1) by first understanding and then speaking it. They start learning a foreign language / second language (L2) during the preschool period. The term “mother tongue” is believed to have derived from “lingua Materna” in medieval Latin, meaning the language of a mother (Oksaar, 2003). Günther and Günther (2004) define the mother tongue as the language which an individual acquires from her mother and develops naturally during childhood. The language or languages learned after the mother tongue are referred to as foreign languages / second languages (Lewondowski, 1990; Larsen-Freeman and Long, 1991).

According to Lightbown and Spada (2006), language learning is the individual's developmental knowledge in the target language. Krashen (1982) states that the term language acquisition is preferred over language learning and that children can acquire a second language as well as the first language. Chomsky argues that the ability to acquire a language is genetically inherent in human beings. He states that in spite of all the "stimulus poverty", it is possible for the human brain to acquire such a complex system as a language in a very short time and in a perfect way according to the principles of Universal Grammar which is inherent in the human brain (Chomsky, 1981). There are four basic principles in foreign language teaching: listening, speaking, reading and writing. Starting from the first stage of primary education, even from the preschool period, teaching a foreign language along with the mother tongue has become an issue that the world is increasingly focusing on.

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Nowadays, it is an undeniable fact that learning a foreign language is something ordinary for most of us. The question of learning at least a second foreign language is on the agenda. The increase in the importance of learning foreign languages has led scientists to create new language learning methods, to research which aspects of the target language should be taught, and to conduct research on different methods to be applied during language lessons. Many psychologists and linguists, such as Watson, Piaget, Bruner, Vygotsky, Chomsky have conducted much research on language teaching methods, developed different perspectives, and, as a result, found a variety of language teaching methods.

In this context, for example, the grammar-translation method became a very popular language teaching method in the nineteenth and twentieth centuries and is still in use today (Ur, 2012). According to this method, the important goal is to be able to read and understand literary works and other kinds of texts of the language. The focus is on grammar and translation. Language and grammar rules are taught. However, writing, speaking, and listening skills are ignored (Richards and Rodgers, 2001). Grammar-oriented and memorization-based methods were used more often in foreign language teaching in the past. Modern methods emphasize the communicative aspect of the language. The aim of new methods is to establish the context for language learners to communicate in the target language and to create realistic classroom environments where students can express themselves verbally and in writing (Demir, 2014).

The language teaching methods developed in the last 30 years focus on verbal acquisition. Thornbury (2004) draws attention to the importance of verbal knowledge. While grammar knowledge gives learners limited opportunities for expressing themselves, verbal knowledge eliminates such a restriction (Demir, 2014). TPR is a teaching method developed in the 1970s focusing on verbal knowledge. The aim is to coordinate speech and action and combine language and body movements. It is still a popular method (Asher, 2000). The objective of TPR is to teach the target language comprehensively and to develop basic communication skills. Language learners are expected to follow the commands physically.

## **TPR**

TPR was developed in 1965 by psychologist James Asher. It is a method that aims to develop listening-comprehension first and then verbal communication skills at the beginner's level through physical actions by eliminating psychological pressure. In other words, it aims to teach the language through physical activities. Actions and the use of the imperative mood are seen as the basis of language learning. The imperative mood is used as a linguistic tool directed by the teacher. While the students perform the movements shown by the teacher and watch what other friends do, the learning processes continue (Demir, 2014).

TPR is a foreign language teaching method focusing on the improvement of the comprehension skill first and then verbal skills through physical movements, without any pressure, at the beginner's level (Asher, 1977). Asher developed this methodology by making use of developmental psychology, learning theories, humanitarian education, and previous practices. TPR can be easily applied in the classroom. The teacher encourages children to recognize and respond to such simple instructions as sit, get up, hands up and so on. Students first listen and then try to do as instructed (Pinter, 2006). According to De Cecco (1968), the simplest verbal behavior can be defined as reacting to verbal stimulus through physical action. In this context, TPR can be described as a behavioral language learning theory.

Language learning, a coded program in human beings by birth, progresses as a result of a specific development program. Babies, within the framework of this innate bio program, begin to move, get to know their environment, understand their parents and then start to speak their native language along with their psychomotor development. This process determines the most appropriate way of learning a second language / foreign language. Asher argues that second language acquisition should follow the same way. In this acquisition process, children develop their ability to understand what they hear before they start speaking. The ability to understand what is heard is acquired through physical reactions to the verbal commands of the parents (Asher, 1972).

What distinguishes the TPR method from other methods is that listening-comprehension comes before speech. After learning how the target language works, speech begins automatically. Students listen and respond to the instructions given by the teacher. In the end, the roles change, and the students begin to command. The teaching of imperative moods is of primary importance in TPR, which usually works better with young students. The teacher says "start running" and the student responds physically. The speech will not be perfect, but it is learned the way the mother tongue is acquired. No one can expect babies to talk. Babies begin to perceive what they hear first, then respond physically, and finally speak when they are ready after a certain period of psychomotor development.

One important advantage of TPR for preschool children is that it is not text-dependent. TPR can often be verbal. This is an excellent type of activity for mixed skill classes. It can be a rewarding method for children with dyslexia and other learning problems. One can use many other teaching techniques for young students in addition to TPR. It could be better to use different techniques with different children/groups. The advantages of TPR are its accessibility, vitality, and attractiveness to students. Even though TPR works better especially with young students, it can be used for adults and even for the elderly. TPR is something that both teachers and students enjoy (Dyson, 2012).

Anxiety is one issue that TPR focuses on. When there is anxiety between learning and what is to be learned, learning may become difficult. For successful language teaching, the level of anxiety must be lowered. According to Asher, the fastest and least stressful way to understand the target language is to implement the commands given by the teacher without translating them into the mother tongue. The TPR method was developed to reduce stress and anxiety. TPR aims to reduce the pressure in language learning by improving listening and comprehension skills, matching language with applied actions. In this approach, the student tries to fulfill what the teacher commands.

Asher's method is directed to the right brain hemisphere, while other foreign language teaching methods are covered in the learning context of the left-brain hemisphere. This is because the child's native language is acquired through physical (motor) activities, which take place in the right-brain hemisphere (Yavuz, 2011). TPR method focuses on verbal competence at the beginner's level, while the development of speaking skill is left to its natural pace. Adults should also acquire a second language through right-brain-based activities (Asher, 2002).

Verbal communication and physical movements are prominent in TPR. When you wave hands and say hello, the students will respond to you in a gentle and exciting way. Now it is time to implement the TPR method. They can be instructed to do what the teacher says and does in the classroom or in the sports field. Sporting activities, playing games involving physical actions, asking them to touch the part you determine on the floor or wall are all included in the TPR method (Dyson, 2012).

### **Physical Education and Sports and TPR**

Moving makes children happy. By moving, they begin to get to know their environment, discover new places, and recognize new people and objects. Moving is their greatest source of joy and learning. Therefore, the mobility of children, especially in early childhood, should not be restricted by their parents. On the contrary, it should be an important part of their development, and the range and diversity of movement should be enhanced (Orhan, 2019).

Physical education and sports/play lessons provide opportunities for children to move, do sports and play games. Physical education aims to encourage children to take up a sport as a habit, help them know about their bodies, keep them physically active and help them learn through movement. Çelik (2008) defined physical education as educating people through physical activities. TPR helps teach a foreign language through physical movements. Physical education and sports/play is a course in which the TPR method can be applied comfortably. The teacher demonstrates the target words to be taught, such as run, jump, and throw, and then asks the students to do the same. During the lesson, the students follow every command given by the teacher. Thus, the foundation of learning a foreign language in a fun and healthy way can be laid.

Asher (1977) underlines that most of the grammatical structures of the target language and hundreds of phrases can be taught by skillful use of the imperative mood. TPR selects the target words among from the most commonly used words. Since the participants of this study are preschool students, the target words of the English language teaching program consist of commonly used words. This study examines the effect of TPR on vocabulary teaching in Physical Education and Play and investigates the success level of TPR in language teaching.

### **Material and Method**

This is a quasi-experimental and quantitative study focusing on the effect of TPR teaching method on verbal competence. Participants of the study were divided into experimental and control groups to both of which a pretest and a posttest were applied, and the results were analyzed in SPSS 23.0 program.

## Research Design

In this study, the effect of TPR language teaching method on lexical competence was investigated. A pre-test consisting of 16 multiple choice and matching questions was applied to both groups before the 6-week teaching period began. The target words to be used in the study were selected from the pre-school English language teaching curriculum. The lesson plans were determined according to the target words, TPR, and communicative approach language teaching method. The experimental group was taught the determined target words in accordance with the TPR method by play, physical exercise, and movements while the control group learned the same target words by verbal communication in the classroom environment in accordance with the Communicative Approach. When the 6-week teaching program ended, a posttest consisting of 16 multiple choice and matching questions was applied to both groups. The results of the tests were statistically analyzed to reveal which study group had a higher level of vocabulary learning. The findings demonstrated the importance of TPR on the teaching of vocabulary.

## Data Analysis

Firstly, the data were checked to see whether the distribution was normal. Then the data, normally distributed, were analyzed using the paired t-test.

## Participants

A total of 32 kindergarten students aged 6 volunteered for this study. The control group consisted of 6 female and 10 male students while the experimental group was composed of 9 female and 7 male students.

## Results

Table 1 shows the statistical analysis of the answers given by the control and experimental groups to the questions. It indicates that there is a significant difference between the total scores of the pre-test and post-test questions of the control and experimental groups ( $p < 0.000$ ). It suggests that the application of TPR in physical education and play classes significantly increases the language learning success of kindergarten students ( $p < 0.01$ ).

The pretest mean for the control group was  $17 \pm 0.0$ ; the post-test mean was  $34.0 \pm 0.00$  and the variance was 0,000. The mean of the control group increased in the posttest, but the variance was the same as in the pre-test. Although the pretest and posttest mean of the control group increased, the related t-test could not be performed due to the variance being 0,000. The pretest mean for the Experimental Group was  $29 \pm 0.0$ ; The mean for the posttest  $30,6667 \pm 1,79947$  and the variance was 3,238. It can be seen that the mean for the correct answers and standard deviation of the experimental group increased.

**Table 1. Control and Experimental Group Total Responses**

		Pairwise Differences							
		Mean	STDEV	Std. Error Mean	95% confidence interval of the differences		T	Sd	P
					Lower Limit	Upper Limit			
Total questions (Control-Experimental)	Total Pretest Total Posttest	-14,2592	1,4830	,28541	-14,8459	-13,6725	- 49,960	26	,000

Table 2 shows the t-test statistics of the experimental group, which suggest that the Total Physical Response method significantly increased the language learning of the kindergarten children as a foreign language teaching and learning method in physical education and play lesson ( $p < 0.01$ ).

**Table 2. Related T-Test Statistics for Total Scores (Experimental Group)**

		Pairwise Differences							
Pair		Mean	STDEV	Std. Error Mean	95% confidence interval of the differences		T	Sd	P
					Lower Limit	Upper Limit			
Pair	Experimental Group Post – Experimental Group Pre	30,6667	1,7994	,46462	12,6701	14,6631	29,415	14	,000

Table 3 shows the evaluation of the answers given by the students in the experimental group according to t-test results. The related t-test results for the experimental group show a significant difference (change in scores) between the pre-test and post-test on question basis (question 6, question 7, question 8, question 9 (p6, p7, p8, p9 <0.01)). The table demonstrates similar results for question 3, question 11, question 12, question 13, question 15 (p3, p11, p12, p13, p16 > 0.05).

**Table 3: Related T-Test Statistics for Experimental Group on Question Basis**

		Pairwise Differences							
Pair		Mean	STDEV	Std. Error Mean	95% confidence interval of the differences		T	Sd	P
					Lower Limit	Upper Limit			
Pair 3	Q pretest 3 Q posttest 3	,06667	,25820	,06667	-,07632	,2096	1,000	14	,334
Pair 6	Q pretest 6 Q posttest 6	,46667	,51640	,13333	,1807	,7526	3,500	14	,004*
Pair 7	Q pretest 7 Q posttest 7	1,06667	,25820	,06667	,9236	1,2096	16,000	14	,000*
Pair 8	Q pretest 8 Q posttest 8	-,93333	,25820	,06667	-1,0763	-,7903	-14,000	14	,000*
Pair 9	Q pretest 9 Q posttest 9	-,93333	,25820	,06667	-1,0763	-,7903	-14,000	14	,000*
Pair 11	Q pretest 11 Q posttest 11	,13333	,35187	,09085	-,06152	,3281	1,468	14	,164
Pair 12	Q pretest 12 Q posttest 12	,13333	,35187	,09085	-,06152	,3281	1,468	14	,164
Pair 13	Q pretest 13 Q posttest 13	,13333	,35187	,09085	-,06152	,3281	1,468	14	,164
Pair 15	Q pretest 15 Q posttest 15	,13333	,35187	,09085	-,06152	,3281	1,468	14	,164
Pair 16	Q pretest 16 Q posttest 16	,06667	,25820	,06667	-,07632	,2096	1,000	14	,334

## Discussion

This study was conducted to investigate the effectiveness of TPR in foreign language teaching. The total number of the kindergarten students participating in the study, all aged 6, was 32 and 16 of them were in the experimental group while 16 were in the control group. The students in the experimental group were taught English words by using TPR in Physical Education and play lessons while the students in the control group learned the same vocabulary by means of classical methods. The study lasted 8 weeks. The 1st and the 8th weeks were spared for the pre-test and post-test applications respectively and the remaining 6 weeks were the teaching period.

The results of the study indicated that the students in the experimental group were more successful in learning the target English words and structures than the students in the control group ( $p < 0.01$ ). In addition, it was observed that the lessons were more entertaining, and the students were more concentrated with the children in the experimental group. Similar results were found in Nilgün Yavuz's (2011) research called "Using Total Physical Response-Storytelling Method in Teaching Japanese".

Various studies conducted by James Asher, the founder of TPR, in the last two decades show that there is a significant difference in the scores of the students educated by TPR. For example, in a study conducted on university students in the elementary level Spanish class, TPR was applied to the experimental group while the control group was taught Spanish through the traditional teaching methods. Pimsleur Spanish Proficiency Test was applied to both groups and it was found that there was a significant increase in the test scores of students who were taught through TPR (Wolfe and Jones 1982).

A study in Oman shows that TPR can be a successful approach to the education of young children. It helps language learning, as it is a fun and entertaining teaching method, creating a stress-free environment that makes students feel comfortable in a new language. On the other hand, this approach is not widely used because of the length of the curriculum, and lack of qualified teachers (Al-Harrasi, 2014).

Although the TPR method has many positive aspects, it has been criticized that it is insufficient in improving reading and writing skills. In the 1990s, Blain Ray added storytelling to the method because of the criticism that it was limited to the beginner level of vocabulary teaching. Thus, he improved the TPR method and corrected the shortcomings, creating TPRS, the Teaching Proficiency Through Reading and Storytelling Method. This method facilitates the teaching of vocabulary and grammar structures in stories. Storytelling was supported by motor activities, group work, role-playing techniques, and the use of visual and audio tools. Thus, as new knowledge is coded into long-term memory and associated with daily life, it is easier to remember what is acquired.

Davidheiser (2001) states that the Total Physical Response-Storytelling Method (TPRS) is a natural way of learning the language and is better because it differs from standard teaching techniques, improving pronunciation and vocabulary memory, reducing anxiety, and encouraging active learning.

Braunstein (2006) discovered that even adult ESL students expecting more traditional education respond positively to TPRS. He reported that the students were enthusiastic about the class and that the method helped them remember words and understand English better.

Watson (2007) compared two high school groups at the elementary level using the TPRS method. At the end of the study, he gave an oral and a written examination to the students he had separated as control and experimental groups. The results showed that the experimental group students learning with TPRS were more successful than the control group students.

## Conclusion

To conclude, this paper demonstrates that TPR is effective in teaching kindergarten students a foreign language. TPR techniques used along with sports and games make learning a foreign language more entertaining and better and easier for children. In addition to a foreign language, maths (numbers, addition, subtraction) can be taught more easily to preschool students in physical education and sports through similar methods.

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