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## EFFECTIVENESS OF THE TRAINING PROGRAM DEVELOPED FOR TEACHERS OF STUDENTS WITH READING DIFFICULTIES ON THE KNOWLEDGE AND COMPETENCIES OF TEACHERS

### EFICACIA DEL PROGRAMA DE FORMACIÓN DESARROLLADO PARA PROFESORES DE ALUMNOS CON DIFICULTADES LECTORAS SOBRE LOS CONOCIMIENTOS Y COMPETENCIAS DE LOS PROFESORES

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#### ABSTRACT

This research aims to test the effectiveness of the Competency Enhancing Training Program for Teachers Working with Students with Reading Disabilities (OGÖYEP), which was developed to increase the knowledge and proficiency of teachers working with students with reading difficulties, depending on the needs of the students in improving their reading skills. The research was designed using the exploratory sequential mixed method design, which is one of the mixed method designs. First, the needs of teachers in the training program were identified, and then the effectiveness of OGÖYEP was tested. Twenty classroom teachers for the needs analysis in the qualitative dimension of the research, thirty-two classroom teachers in the quantitative section, sixteen being in the experimental group and sixteen in the control group, participated in the study. As a result of the needs analysis, it was seen that teachers needed support in the methods, techniques and strategies that students with reading difficulties can use to improve their reading skills. OGÖYEP, which was developed to meet these needs of teachers, includes four units: pre-reading, during reading, post-reading and methods, techniques and strategies that can be used throughout the reading process. OGÖYEP was organized with four lecture sessions each week and continued for four weeks. The research results showed that the teachers in the experimental group of OGÖYEP increased their knowledge and competence in improving the reading skills of students with reading difficulties. Social

validity findings revealed that teachers found the training program effective and efficient.

#### Keywords:

Teacher education, students with reading difficulties, teacher education program, mixed method

#### RESUMEN

Esta investigación pretende comprobar la eficacia del Programa de Formación para la Mejora de las Competencias de los Profesores que Trabajan con Alumnos con Dificultades de Lectura (OGÖYEP), desarrollado para aumentar los conocimientos y la competencia de los profesores que trabajan con alumnos con dificultades de lectura, en función de las necesidades de los alumnos para mejorar sus habilidades lectoras. La investigación se diseñó utilizando el diseño de método mixto secuencial exploratorio, que es uno de los diseños de método mixto. En primer lugar, se identificaron las necesidades de los profesores en el programa de formación y, a continuación, se comprobó la eficacia de OGÖYEP. Participaron en el estudio veinte profesores de aula para el análisis de necesidades en la dimensión cualitativa de la investigación, treinta y dos profesores de aula en la sección cuantitativa, dieciséis en el grupo experimental y dieciséis en el grupo de control. Como resultado del análisis de necesidades, se vio que los profesores necesitaban apoyo en los métodos, técnicas y estrategias que los alumnos con dificultades lectoras pueden utilizar para mejorar sus habilidades lectoras. OGÖYEP, que se

desarrolló para satisfacer estas necesidades de los profesores, incluye cuatro unidades: prelectura, durante la lectura, postlectura y métodos, técnicas y estrategias que pueden utilizarse a lo largo de todo el proceso de lectura. OGÖYEP se organizó con cuatro sesiones lectivas cada semana y se prolongó durante cuatro semanas. Los resultados de la investigación mostraron que los profesores del grupo experimental de OGÖYEP aumentaron sus conocimientos y competencias en la mejora de las habilidades lectoras de los alumnos con dificultades lectoras. Los resultados sobre la validez social revelaron que los profesores consideraban que el programa de formación era eficaz y eficiente.

#### Palabras clave :

Formación del profesorado, alumnos con dificultades lectoras, programa de formación del profesorado, método mixto

#### INTRODUCTION

The concept of competence refers to the characteristics that must be possessed in order to successfully fulfill the requirements of a profession (Şişman, 2002). Having the general competencies of the teaching profession requires teachers to have knowledge about their own teaching fields, to facilitate students' learning, to recognize students' needs and meet these needs, and to transform the goals in the curriculum into student behaviors (Guerriero, & Deligiannidi, 2017). In order to provide students with each behavior targeted in the curriculum, it is necessary to make changes in traditional teaching practices that cause students to fail during teaching and include new practices, know what methods, techniques and strategies are appropriate in the course, and have knowledge and skills on how to apply these methods or strategies, all of which are included within the scope of teacher competencies as important components that increase the quality of education.

#### Teacher Knowledge and Competencies in Improving Reading Skills

The development of reading skills, which is the basic element of the teaching-learning process, is related to teachers' field experiences and self-efficacy (Haverback & Parault, 2011). According to Dolezalova (2015), teacher competencies in developing reading skills consist of three areas: professional competence, psychodidactic foundations and conditions, and personal competence. Professional competence includes knowing the structure, development and importance of reading, being able to choose appropriate texts for students, the conditions for reading to take place and the ability to use information

about reading pedagogically. Psychodidactic foundations and conditions are choosing effective methods and techniques in developing reading skills, knowing students' learning styles and individual differences, and using texts with different structures.

Research shows that there is a relationship between the courses teachers take, their field experiences, and their self-efficacy in teaching reading and writing (Haverback, & Parault, 2011). The research conducted by Damar (1996) revealed that there is a relationship between the difficulties encountered in teaching reading and writing to students and the qualifications of teachers. In another study, Darling -Hammond (2006) concluded that there is a relationship between teacher quality and student success. Teachers are expected to demonstrate expertise in many areas including the content of effective reading instruction as well as instructional strategies that help students access and understand content (Allington, 2013).

The critical component of a good reading education is that teachers, with whom students constantly interact in the school environment, have sufficient theoretical knowledge and apply this knowledge successfully in the classroom environment (Alyılmaz, & Ürün Karahan, 2018). However, research has shown that teachers do not include enough teaching of reading comprehension in classroom practices (Ateş, 2011), do not teach students the use of reading comprehension strategies (Pressley, 1998) and that they have a lack of knowledge regarding fluent reading skills (Lane et. al., 2009).

Teachers have difficulty finding solutions to the reading difficulties of students with reading difficulties since there is no special program they can apply to improve their reading skills. Current teacher training programs do not provide teachers with the knowledge and skills that will enable them to develop effective teaching methods (Osborn et. al., 2003), and the failure to explain proven effective methods in a language that teachers can understand negatively affects teacher competence (Russell, & Joseph, 2001). Additionally, it is also an important problem that teachers graduate without adequately learning which methods, techniques and strategies they can use to improve the reading skills of students with reading difficulties during their undergraduate education, and that they do not have sufficient knowledge in intervening with reading difficulties when they start their careers (Baydık, 2011).

Melekoğlu, & Çakıroğlu (2018) state that teachers working with students with reading difficulties realize that the methods, techniques and strategies they use while teaching normally developing students are not

effective or less effective on these students, causing them to seek to learn or produce new strategies, methods and techniques. Teachers who have the necessary professional competencies have a higher sense of efficacy and are more successful in the learning-teaching process (Abd Hamid et. al., 2012). Teachers with a high level of knowledge also have the ability to prevent reading failure with effective teaching in the early grades (Snow et. al., 1998). This situation reveals that interventions designed to overcome the difficulties that students may experience during the development of reading skills, which have a complex and multidimensional structure, depend on the knowledge and competence of teachers.

### Research Goals

Considering the limited number of studies examining the knowledge and competence of teachers working with students with reading difficulties regarding the development of reading skills, it is seen that teachers do not receive training on how to implement reading methods, techniques and strategies, and the existing studies attempt to reveal the current situation based on teachers' opinions and perceptions. Considering that the number of students with reading difficulties is very high and that it is possible to encounter them in almost every school or every classroom, there is a need to increase teachers' knowledge and competencies regarding the practices they will need. However, when the relevant literature is examined, it is seen that there is no research that meets this need. Within the scope of this research, it is thought that the research will contribute to both effective intervention and increasing teacher knowledge and competencies, as teachers working with students with reading difficulties will learn the methods, techniques and strategies they can use to improve reading skills in their classes. In addition, it is believed that the prepared teacher training program will be useful and meet the needs of teachers in terms of eliminating the deficiencies in the educational content prepared to intervene in students with reading difficulties and to increase their proficiency in effective methods, techniques and strategies, even though they took courses on teaching reading and writing in their undergraduate education.

This research aims to examine the effect of the OGÖYEP on the knowledge and competencies of teachers working with students with reading difficulties in increasing their students' reading skills. For this purpose, answers were sought to the following questions:

**Research Question 1:** What do teachers think about their needs in OGÖYEP?

**Research Question 2:** What is the effect of OGÖYEP on teachers' knowledge levels regarding the development of reading skills of students with reading difficulties?

**Research Question 3:** : What is the effect of OGÖYEP on teachers' self-efficacy in improving the reading skills of students with reading difficulties?

**Research Question 4:** What is the effect of OGÖYEP on teachers' competencies in preparing teaching activities to improve the reading skills of students with reading difficulties?

**Research Question 5:** What are teachers' opinions about the effectiveness of OGÖYEP? (Social validity)

## MATERIALS AND METHODS

### Research Design

In this research, exploratory sequential mixed method design, which is one of the mixed method designs in which qualitative and quantitative methods are used together, was adopted. Exploratory sequential mixed methods is a design in which the researcher starts by exploring qualitative data and then uses these findings in the quantitative research dimension (Creswell, 2017). Firstly, qualitative data to determine the needs of teachers was collected, which was followed by the collection of quantitative data to prepare, implement and test the effectiveness of OGÖYEP in line with the requirements, where exploratory sequential design was preferred with a chronological orientation.

Case study design was preferred in the qualitative dimension of the research. Since case studies examine a single situation or event in depth (Büyükoztürk et. al., 2015), a case study was used in this study to examine in detail and depth the needs of teachers in improving the reading skills of students with reading difficulties.

In the quantitative dimension of the research, a pretest-posttest control group design, one of the quasi-experimental research models, was used. In the model where there are two groups, the experimental group and the control group, the groups were formed by the unbiased assignment method, where measurements were made before and after the experiment. An experimental procedure was applied to the experimental group, but no application was performed to the control group. Pre-test and post-test measurement results were compared within themselves to decide to what extent the independent variable was effective. In order to determine the effectiveness of the experimental procedure, the posttest-pretest difference of the groups was compared and the effectiveness of the experimental procedure was observed. The independent variable of the research is OGÖYEP, the dependent variable is teachers' knowledge and competencies regarding improving the reading skills of students with reading difficulties.

### Sampling

In the qualitative dimension of the research, criterion sampling method, one of the purposeful sampling methods, was used. Since the units that met the criteria determined for the sample were included in the sample, the criteria for the interview we would conduct to determine the needs of teachers in developing students' reading skills were a) working in a primary school, b) having a student with reading difficulties, and c) volunteering. Twenty teachers who met the criteria were interviewed. Eleven (55%) of the teachers are women and nine (45%) are men. One of the male teachers (5%) has a master's degree and one (5%) is continuing his master's degree. The remaining teachers (90%) have a bachelor's degree.

In the quantitative dimension of the research, sixteen teachers were assigned to the control group as an impartial study group and the experimental group consisted of sixteen teachers, which made a total of thirty-two teachers. Six (37.5%) of the teachers in the control group are female and ten (62.5%) are male. All teachers (100%) have a classroom teaching bachelor's degree. All of the teachers (100%) have years of service over fifteen years. Seven (43.75%) of the teachers in the experimental group are female and nine (56.25%) are male. While one of the female teachers (6.25%) continues postgraduate education, one of the male teachers (6.25%) also received postgraduate education.

Before applying OGÖYEP to the teachers in the experimental group, Achievement Test, Reading Skill Development Teaching Effectiveness Evaluation Form and Self-Efficacy Evaluation Scale for Teachers to Improve Reading Skills of Students with Reading Difficulties (OGÖYEPÖ) was implemented as a pre-test to reveal whether the teachers in the experimental and control groups have similar characteristics. Means, Standard Deviations and Independent Groups t Test Results of Pretest Results by Groups are given in Table 1.

Tabla. 1. Means of Pre-Test, Standard Deviations and Independent Groups t-Test Results by Groups.

Application	Test	Group	N	Mean	Sd	t	df	p
Pre-test	Achievement Test	Control	16	18,63	3,28	0,14	30	0,89
		Experimental	16	18,50	1,41			
	Reading Skill Development Teaching Activity Evaluation Form	Control	16	25,82	6,52	-0,05	30	0,96
		Experimental	16	25,93	6,37			
	Pre-Reading	Control	16	37,19	3,33	0,35	30	0,73
		Experimental	16	36,81	2,64			
	During Reading	Control	16	62,25	3,00	-1,71	30	0,10
		Experimental	16	64,25	3,59			
	Post-Reading	Control	16	27,06	3,02	-0,69	30	0,49
		Experimental	16	27,63	1,20			
	OGÖYEPÖ	Control	16	126,19	6,81	-1,08	30	0,29
		Experimental	16	128,69	6,27			

Source: Own elaboration

When Table 1 is examined, it can be seen that the pre-test mean scores of Achievement Test, Reading Skill Development Teaching Effectiveness Evaluation Form, OGÖYEPÖ and its sub-dimensions, which are before reading, during reading, and after reading, do not show a significant difference according to the groups ( $p > 0.05$ ). Before the experimental procedure, the knowledge and competence of teachers in the experimental and control groups to improve the reading skills of students with reading difficulties were at similar levels.

#### Experimental Procedures

The stages of development of OGÖYEP and its implementation to the teachers in the experimental group are listed respectively.

#### Development of OGÖYEP

Interviews were held to determine the needs of teachers regarding the development of reading skills of students with reading difficulties. While choosing the content of OGÖYEP, topics that teachers need to improve the reading skills of students with reading difficulties and also topics related to teaching methods, techniques and strategies that will increase their knowledge and proficiency were included. Topics: (1) Pre-reading activities in the development of reading skills, (2) During-reading activities in the development of reading skills, (3) Post-reading activities in the development of reading skills, (4) Multiple reading techniques that can be used throughout the reading process. Then, the teaching-learning process was planned in accordance with the content. In the teaching-learning process, methods such as question-answer, discussion, case study, lecture and group discussion were used, in which teachers would take an active role.

### Implementation of OGÖYEP

After obtaining official permissions, OGÖYEP started to be implemented. A work program was prepared by communicating with school administrators and appropriate time periods were determined for teachers to participate in training. OGÖYEP is planned to be implemented for four weeks with four lesson sessions each week. Thus, a training program consisting of a total of sixteen lesson sessions was applied to the teachers in the experimental group.

### Data Collection Tools

A semi-structured interview form was used to determine the needs of teachers, and OGÖYEPÖ, Achievement Test and Teaching Effectiveness Evaluation Form was used to evaluate the effectiveness of OGÖYEP, which was developed in line with the needs analysis.

### Qualitative Data Collection Tools

**Semi-Structured Interview Form:** After scanning the literature on the development of reading skills of students with reading difficulties, a draft interview form was created to determine the topics needed by teachers. After the preparation of the draft form, the clarity and understandability of the questions in the form were evaluated by obtaining opinions from three classroom teachers and three academicians who had experience in reading skills. Adjustments were made to the questions within the framework of the feedback received. The interview form prepared for the pilot application was applied to three teachers working in primary schools. By evaluating the data obtained from the pilot application, the questions in the interview form were finalized and made ready for use in the research.

### Quantitative Data Collection Tools

**OGÖYEPÖ:** A preliminary trial scale consisting of fifty-two items was created after scanning the relevant literature to examine the methods, techniques and strategies that were demonstrated by the research results to be effective in intervening with reading difficulties. Three teachers with experience in teaching reading were asked for their opinions on the items that needed to be corrected, added or removed in the pre-test scale. In addition, opinions were obtained from two experts regarding the level of comprehensibility of the items, their ability to measure the relevant subject, and items that would cause conflict in the target audience's interpretation of the scale items and were thought to be similar or should be added. Adjustments were made at the preliminary trial scale, taking into account the feedback from teachers and experts.

In order to determine the validity and reliability of OGÖYEPÖ, an application was made with two hundred and fifty-two teachers. To check the assumptions that the sample size is sufficient and the data are suitable for factorization is important for factor analysis (Field, 2013), the Kaiser-Meyer-Olkin (KMO) coefficient was calculated and the Bartlett Sphericity test was applied. The results obtained showed that the number of samples was sufficient and the scale data were suitable for factor analysis (KMO= 0.95>0.70; Bartlett Sphericity ( $\chi^2(496) = 5915.57$ ;  $p<0.001$ ). Factor analysis was conducted using the Principal Axis Factoring method. As a result of the factor analysis, four factors with eigenvalues above one were identified. However, it was observed that the contribution of the components after the fourth point in the eigenvalue factor graph to the variance was both small and approximately the same. Taking these results into consideration, the analysis for three factors was repeated. The Promax method, one of the rotation methods, was used to make the factors more evident. In the analysis performed for the three factors, the items were evaluated in terms of overlap and factor load values meeting the acceptance level, and no items were removed from the scale. The results of the exploratory factor analysis showed that the measurement tool has a three-factor structure.

In the next stage, Confirmatory Factor Analysis was applied and the three-factor structure of the measurement tool was tested. As a result of CFA, the factor loadings of the items in the pre-reading activities, during-reading activities and post-reading activities factors are 0.77-0.87, 0.53-0.78 and 0.70-0.86 respectively. The reliability coefficients of the sub-dimensions of the scale are respectively: Alpha coefficient for the pre-reading activities factor is 0.95; the alpha coefficient for the reading sequence activities factor was calculated as 0.94, and the alpha coefficient for the post-reading activities factor was calculated as 0.91. For discriminant validity analysis, the total

scores obtained from the scale were ranked from highest to lowest. The mean scores of the upper and lower groups on each item showed a significant difference ( $p < 0.01$ ). The mean scores of the upper group on each of the scale items are significantly higher than the mean scores of the lower group. The results indicated that each of the thirty-two items in the scale was significantly distinctive.

**Achievement Test:** Within the scope of the research, an achievement test was developed in which the units of OGÖYEP, which was developed to increase teacher knowledge and competencies, were discussed. Firstly, the draft achievement test consisting of fifty items was submitted to expert opinion along with the table of specifications. Corrections were made to the test items based on the feedback obtained from the experts' evaluations in terms of scope and understandability. As a result of these studies, a draft achievement test consisting of forty items was prepared. Validity and reliability studies of the draft form were conducted with two hundred seventy-four teachers.

Item difficulty ( $P_j$ ) coefficient takes values between 0 and 1. Values close to 1 indicate that the item is easy, and values close to 0 indicate that the item is difficult. The item discrimination ( $R_{jx}$ ) coefficient is within the range of  $\pm 1$ . Items with a discrimination coefficient of 0.30 and higher should remain in the test, items with a discrimination coefficient of 0.20-0.29 should be corrected and included in the test, and items with a discrimination coefficient of 0.19 and lower should be removed from the test (Tekin, 2003). Item difficulty ( $P_j$ ) and item discrimination ( $R_{jx}$ ) coefficients were calculated using the Excel program.

The item difficulty coefficients of the items in the achievement test are between 0.20 and 0.94, the item discrimination coefficients had values between 0.06 and 0.57. Eight items with item discrimination coefficient values below 0.19 were removed from the test. As a result of item analysis, thirty-two items remained in the test. The average difficulty coefficient of the final test is 0.59; the average discrimination coefficient is 0.32. The obtained values showed that the achievement test was relatively easy and had distinctive features. The reliability of the achievement test was examined by calculating the KR-20 coefficient. The KR-20 coefficient was calculated as 0.76. KR-20 values of 0.70 and higher indicate that the reliability of the test based on internal consistency is sufficient (Tavşancıl, 2005).

**Reading Skill Development Teaching Activity Evaluation Form:** To collect information about teachers' preparation of teaching activities by including the methods, techniques and strategies that they can use before, during, after and throughout the process to improve

the reading skills of students with reading difficulties, and to evaluate the reading skill development teaching activity of teachers after the experimental application, a form was prepared to evaluate the development of editing skills. After describing the characteristics of a student with reading difficulties in the form, the reading mistakes made by the student are shown in a sample text. In the form given to them, teachers were given five objectives that they should provide to students with reading difficulties and were asked to plan a teaching activity. Methods, techniques and strategies suitable for five purposes have been determined in the answer key of the Reading Skill Development Teaching Effectiveness Evaluation Form. Since a method, technique and strategy is effective in achieving more than one purpose, it was possible to use it more than once in accordance with the intended purpose in creating the answer key. An evaluation tool with Yes/No options was prepared to evaluate the methods, techniques and strategies used by teachers for specified purposes. The answers given were scored as 0-1. 0=None, 1=Present. The form was evaluated out of one hundred points. Each item was scored equally.

The reading activity evaluation form and answer key were sent to two experts and they were asked to create an answer key for the achievements. According to expert opinions, in two of the outcomes, feedback was received that one more method, technique and strategy could be added in addition to the methods, techniques and strategies determined by the researcher. In addition, an opinion was expressed to remove the method, technique and strategy determined in an outcome. Based on the feedback received, the reading activity evaluation form was finalized.

After the experimental process, the forms were scored by two experts. The score of each activity was determined by taking the average of the scores given by two raters.

## Data Collection and Analysis

### Collection and Analysis of Qualitative Data

Face-to-face interviews were held by making an appointment with each teacher. Before starting the interviews, teachers were informed about the purpose and scope of the research. It was stated to the teachers that their real names would not be used during the research and that the research process would continue by giving them pseudonyms. Interviews were conducted with teachers who voluntarily agreed to participate in the research, and consent forms were obtained from the teachers. During the research, teachers were given code names such as T1 and T2. Interviews with teachers lasted an average of 52-68 minutes.

The data obtained from the interviews with the teachers were transcribed without making any changes to the audio recordings. After the transcribed interviews were evaluated one by one, an interview coding key was created for each question, including the categories containing the answers to the questions. In order to determine inter-rater reliability, the interview coding key was duplicated for each teacher. The first author and an expert read the interview forms independently and marked the appropriate category for each question in the interview coding key. After filling out the interview coding keys, the interview coding keys filled out by the researcher and the expert were compared to ensure consistency. While making comparisons, if the first author and the expert marked the same category in the relevant question or did not mark any categories in the relevant question, consensus was obtained. If the first author and the expert marked different categories, the first author's analysis was taken as reference and considered as a difference of opinion. In the last stage of the coding process, the frequency and percentage values of the main concepts determined were calculated.

### **Validity and Reliability**

Content analysis aims to bring together similar data within the framework of certain concepts and themes and organize and interpret them in a way that the reader can understand (Büyükoztürk et al., 2015). For this reason, validity and reliability studies were carried out in terms of credibility, transferability, consistency and confirmability (Lincoln, & Guba, 1985). To ensure the credibility of the research, information about the number of teachers and the pseudonyms they will use during the research is included. The data collection tools used in the research, the data collection process and the techniques used in data analysis are explained in detail. By applying for expert review, feedback was received throughout the research design, collected data, data analysis and writing of the results. Transferability was tried to be achieved by remaining as faithful to the nature of the data as possible, without adding comments to the data obtained from the interviews with the teachers, and direct quotations were frequently included for this purpose. The interview coding key prepared within the scope of consistency was given to an expert with experience in qualitative research methods along with the interviews and he was asked to express his opinion on the suitability of the coding.

### **Collection and Analysis of Quantitative Data**

OGÖYEPÖ, Achievement Test and Reading Skill Development Teaching Effectiveness Evaluation Form was delivered to the teachers in the experimental and control groups before starting to implement OGÖYEP and pre-test data were collected. At the end of the application,

post-test data were obtained by applying the measurement tools to the groups again.

Within the scope of the research, whether the pre-test and post-test score averages obtained from OGÖYEPÖ, Achievement Test and Reading Skill Development Teaching Effectiveness Evaluation Form showed a normal distribution in the experimental and control groups was examined. Shapiro-Wilk normality test was applied to examine the distribution. The results showed that the pretest and posttest mean scores obtained from the measurement tools had a normal distribution.

Independent groups t-test was applied to compare the pretest and posttest-pretest scores of the experimental and control groups on the OGÖYEPÖ, Achievement Test and Reading Skill Development Teaching Effectiveness Evaluation Form. A dependent sample t test was used to compare the post-test and pre-test scores of OGÖYEPÖ, Achievement Test and Reading Skill Development Teaching Effectiveness Evaluation Form within the groups. The confidence interval was determined as 95% and p values <0.05 were considered statistically significant. Within the scope of the research, Cohen's d value was calculated to determine the effect size.

### **Validity**

In order to increase internal validity in this study, care was paid to the voluntary participation of teachers in the experimental and control groups and the selection of subjects with similar backgrounds. Sampling effect, expectation effect, and pre-test experimental interaction effect are factors that threaten external validity (Büyükoztürk et al., 2015). In order to ensure the external validity of this research, care was taken to ensure that the teachers in the experimental and control groups were not in the same school, that the teachers in the experimental group did not receive information from any source other than the education program, and that the teachers in the control group did not obtain information about activities to improve their reading skills. Thus, the possible effects of the effect of expectations factor were prevented.

## **FINDINGS**

### **Qualitative Findings**

Semi-structured interviews were conducted with twenty teachers to determine the content of OGÖYEP. The themes and sub-themes of the analyzes are presented below.

Difficulties in Applying Reading Methods, Techniques and Strategies

The difficulties encountered by teachers in applying reading methods, techniques and strategies were examined under the sub-theme of lack of knowledge.

## Lack of Knowledge

Almost all of the teachers (18: 90%) stated that they had difficulties in using reading methods, techniques and strategies due to their lack of knowledge. Teachers said that they had limited knowledge, knew few methods, techniques and strategies, and that students with reading difficulties had difficulties in how to apply what they knew to improve their reading skills. T2 explained this situation as follows:

*"I don't know how to behave when we encounter students with reading difficulties and how to treat them. Of course, I feel inadequate in this regard. I don't use a very unusual method, it's standard."*

Two of the teachers (2: 10%) stated that they did not use special methods, techniques or strategies suitable for students with reading difficulties and that they preferred to only have the text read. T12 stated:

*"I'm already trying to bring short paragraphs for them. Do you see what I mean? So that they don't get tired and their eyes don't get scared. Sometimes, during lessons, I make them write a word or something. Such work occur once in a thousand."*

However, teachers added that the methods, techniques and strategies they wanted to use in reading activities were not suitable for application to the whole class and this was related to the crowded classes. T4 stated:

*"I cannot do anything special for them. Because there are 30-35 students. But on the days we read, I make them read, too. I'm watching carefully. Other than that, I can't do anything special. There is no time left."*

It has been shown that teachers do not have sufficient knowledge about applying the reading methods, techniques and strategies.

## Self-Efficacy Perceptions in Coping with Reading Difficulties

Teachers' views on self-efficacy in coping with reading difficulties are presented under the sub-theme of *effective intervention*.

### Effective Intervention

The majority of teachers (18: 90%) stated that they thought they were inadequate in coping with reading difficulties.

T20: *"I really don't see myself as competent playing with these children. A special method is required for them. It's a pity for the children. It remains in the background."*

Teachers who thought they were inadequate stated that they needed to use different methods, techniques and strategies when working with students with reading difficulties, and that the students could not progress due to their lack of sufficient knowledge.

## Requirements to Improve Students' Reading Skills

The issues that teachers need to improve the reading skills of students with reading difficulties were examined under the sub-theme of *educational content*.

### Educational Content

All of the teachers (20: 100%) stated that they needed to learn reading methods, techniques and strategies in a training program prepared for students with reading difficulties to improve their reading skills.

T15 stated: *"How can we help a child understand? In terms of strategy. A child has a reading comprehension problem. Vocabulary is problematic. How can we define how we can improve that child's reading comprehension?"*

Teachers emphasized that they wanted to learn fluent reading and reading comprehension methods, techniques and strategies and increase their vocabulary knowledge, and stated that they wanted these to be realized with sample practices in the classroom. In general, teachers said that they wanted to obtain information about the methods, techniques and strategies that would help students with reading difficulties to catch up with the routine and level in the classroom in the subjects they need, and also about the methods, techniques and strategies that are suitable for the student's individual differences and how to use them in the classroom.

T10 stated: *"For example, I would like to attend a seminar on fluent reading. I would prefer it to progress in terms of expression and application."*

## Quantitative Findings

In order to analyze the sub-goals of the research, the scores of the control and experimental groups from Achievement Test, Reading Skill Development Teaching Effectiveness Evaluation Form and OGÖYEPÖ, were compared. The results obtained provided information about the effect of OGÖYEP on teacher knowledge and competence.

## Comparison of the Pretest-Posttest Score Averages of the Control Group from the Measurement Tools for OGÖYEP



Tabla 2. Means, Standard Deviations and Dependent Groups t-Test Results of the Pre-test and Post-test Results for the Control Group.

Group	Test	Application	N	Mean	Sd	t	df	p
Control	Achievement Test	Pre-Test	16	18,63	3,28	-0,40	15	0,69
		Post-Test	16	18,94	1,98			
	Reading Skill Development Teaching Effectiveness Evaluation Form	Pre-Test	16	25,82	6,52	-0,05	15	0,96
		Post-Test	16	25,92	3,65			
	Pre-Reading	Pre-Test	16	37,19	3,33	-1,67	15	0,12
		Post-Test	16	38,25	4,04			
	During Reading	Pre-Test	16	62,25	3,00	-1,09	15	0,29
		Post-Test	16	63,50	4,16			
	Post-Reading	Pre-Test	16	27,06	3,02	-0,92	15	0,37
		Post-Test	16	27,69	3,20			
	OGÖYEPÖ	Pre-Test	16	126,19	6,81	-1,29	15	0,22
		Post-Test	16	128,06	8,50			

Source: Own elaboration

When Table 2 is examined, it is seen that there is no significant difference between the control group’s Achievement Test, Reading Skill Development Teaching Effectiveness Evaluation Form, OGÖYEPÖ and its sub-dimensions, pre-reading, reading order, post-reading pre-test and post-test score averages ( $p > 0.05$ ). At the end of the experimental procedure, it was observed that the teachers’ knowledge levels, self-efficacy and ability to prepare teaching activities regarding the development of reading skills of students with reading difficulties did not change in the control group.

Comparison of Pretest-Posttest Score Averages from Measurement Tools in the Experimental Group for OGÖYEP

Tabla 3. Means, Standard Deviations and Dependent Groups t-Test Results of Pre-test and Post-test Results for the Experimental Group

Group	Test	Application	N	Mean	Sd	t	df	p	Cohen d
Experimental	Achievement Test	Pre-Test	16	18,50	1,41	6,15	15	0,00	1,54
		Post-Test	16	21,75	1,48				
	Reading Skill Development Teaching Effectiveness Evaluation Form	Pre-Test	16	25,93	6,37	4,32	15	0,00	1,08
		Post-Test	16	33,98	7,63				
	Pre-Reading	Pre-Test	16	36,81	2,64	5,72	15	0,00	1,43
		Post-Test	16	40,88	3,28				
	During Reading	Pre-Test	16	64,25	3,59	4,73	15	0,00	1,18
		Post-Test	16	70,38	6,04				
	Post-Reading	Pre-Test	16	27,63	1,20	5,46	15	0,00	1,37
		Post-Test	16	31,00	2,45				
	OGÖYEPÖ	Pre-Test	16	128,69	6,27	3,87	15	0,00	0,98
		Post-Test	16	138,50	11,66				

Source: Own elaboration

When Table 3 is examined, it is seen that there is a significant difference ( $p < 0.05$ ) between the Achievement Test, Reading Skill Development Teaching Effectiveness Evaluation Form, OGÖYEPÖ and its sub-dimensions, pre-reading, reading order, post-reading pre-test and post-test score averages of the experimental group ( $p < 0.05$ ). It was found that impact factor is between 0.98-1.54. The Achievement Test posttest score average of the experimental group is higher than the pretest score average, Teaching Effectiveness Evaluation Form post-test score average is greater than

the pre-test score average, OGÖYEPÖ post-test mean scores are significantly higher than the pre-test mean scores. At the end of the experimental procedure, the teachers' knowledge levels, self-efficacy and ability to prepare teaching activities regarding the development of reading skills of students with reading difficulties increased. It was found that the experimental procedure was effective in increasing teachers' knowledge and competence in improving their reading skills.

**Comparison of the Posttest-Pretest Difference Mean Scores from the Measurement Tools for OGÖYEP in the Experimental and Control Group**

Tabla. 4. Means, Standard Deviations and Independent Groups t-test Results of Pretest-Posttest Difference by Groups.

Application	Test	Group	N	Mean	Sd	t	df	p	Cohen d
Pre-test-Post-test Difference	Achievement Test	Control	16	0,31	3,09	3,14	30	0,00	1,11
		Experimental	16	3,25	2,11				
	Reading Skill Development Teaching Effectiveness Evaluation Form	Control	16	0,09	6,98	3,12	30	0,00	1,10
		Experimental	16	8,05	7,45				
	Pre-Reading	Control	16	1,06	2,54	3,15	30	0,00	1,14
		Experimental	16	4,06	2,84				
	During Reading	Control	16	1,25	4,58	2,82	30	0,01	0,99
		Experimental	16	6,13	5,18				
	Post-Reading	Control	16	0,63	2,73	2,99	30	0,01	1,06
		Experimental	16	3,38	2,47				
	OGÖYEPÖ	Control	16	1,88	5,80	3,14	30	0,00	0,96
		Experimental	16	9,81	10,15				

Source: Own elaboration

When Table 4 is examined, it is seen that the average scores of Achievement Test, Reading Skill Development Teaching Effectiveness Evaluation Form, OGÖYEPÖ and its sub-dimensions, pre-reading, reading order, post-reading post-pretest difference showed a significant difference ( $p < 0.05$ ) and the impact size is 0.96-1.11. The experimental group's Achievement Test, Reading Skill Development Teaching Effectiveness Evaluation Form, OGÖYEPÖ and its sub-dimensions, pre-reading, reading order, post-reading posttest-pretest difference score averages, are significantly higher than the control group's posttest-pretest difference score averages. It is also observed that the teachers in the experimental group increased their knowledge levels, self-efficacy and competence in preparing teaching activities to improve students' reading skills more than the teachers in the control group. In addition, the practices carried out in the experimental group were more effective in improving teachers' knowledge levels, self-efficacy and competence in preparing teaching activities to improve their reading skills. The applications applied to the experimental group had a high level of impact on the level of knowledge, self-efficacy and teaching activity preparation competencies. This result showed that OGÖYEP applied to the experimental group was effective in increasing teachers' knowledge and competence in improving the reading skills of students with reading difficulties.

**Social Validity**

At the end of the experimental process, teachers reported that they found OGÖYEP useful and sufficient to meet the needs of students with reading difficulties in terms of using methods, techniques and strategies to improve their reading skills and applying them on activities. It has been stated that OGÖYEP contributes to increasing students' knowledge and proficiency in improving their reading skills, that the presentations include sample activities and sample videos during the implementation of the education program, ensure permanence, and that the program content is comprehensive and sufficient. It was suggested that OGÖYEP should reach more teachers.

## RESULTS-DISCUSSION

Teachers' pedagogical knowledge consists of teaching strategies that guide students on how to acquire or improve their reading skills. The education received during undergraduate education plays an important role in preventing reading difficulties in professional life. However, the fact that current teacher training programs do not provide teachers with the knowledge and skills that will enable them to develop methods that are effective in preventing reading difficulties, and at the same time, the absence of a teacher training program that shows how to apply methods, techniques and strategies to cope with reading difficulties, causes teachers to lack knowledge in improving students' reading skills. Van den Hurk et al. (2017) argue that there is still a need for more research on teacher knowledge in the field of literacy and that improving students' literacy skills largely depends on the teacher's level of knowledge. Therefore, within the scope of the research, examining the needs of teachers working with students with reading difficulties in OGÖYEP, the effectiveness of OGÖYEP, and evaluating the opinions of teachers regarding OGÖYEP has been aimed.

In the interviews conducted with the teachers, teachers stated that the obstacle to the development of reading skills of students with reading difficulties was their insufficient knowledge level. These obstacles were caused by limited knowledge of reading methods, techniques and strategies, and not knowing how to use them when working with students with reading difficulties. Teachers' lack of knowledge about reading skills has an impact on students' reading success and classroom reading practices. In a study conducted by Leader-Janssen, & Rankin-Erikson (2013), prospective teachers' knowledge and self-efficacy regarding reading education were examined and it was concluded that teachers' knowledge was one of the important predictors affecting their classroom practices. It has been observed that teachers' limited knowledge of the methods, techniques and strategies they use to prevent reading difficulties also affects their evaluation of themselves as inadequate. This situation has shown that teachers need training to increase reading skills and that research-based methods, techniques and strategies that have been determined to increase students' reading success should be included in the training program.

### Suggestions for practice

Students with reading difficulties cannot receive the compensatory strategies and intensive evidence-based education they need to cope with reading-related problems (Mills, & Clarke, 2017). This situation is mostly associated with teachers' inadequate training and lack of knowledge. Gersten et al. (2001) stated that teachers need

professional development seminars structured in the light of scientific research. For this reason, in-service training and seminars can be organized for teachers at regular intervals to provide them with information about improving reading skills and to keep this knowledge up to date.

The fact that teachers are restricted to only curricula, textbooks and workbooks while improving students' reading skills and cannot diversify teaching by using resources other than these (Pressley et al., 2001) negatively affects the process. The methods, techniques and strategies included in OGÖYEP can be printed and turned into a guide that teachers can benefit from. Since the training program increases the knowledge level of teachers on improving the reading skills of students with reading difficulties, it can be implemented and disseminated to more teachers. The content and sample activities of OGÖYEP can be used in similar teacher training programs.

Future studies that evaluate the effectiveness of the program through student outcomes and reveal both teacher and student development can be designed.

## CONCLUSIONS

It has been concluded that OGÖYEP, which was prepared based on the needs of teachers working with students with reading difficulties, is effective in increasing teachers' knowledge levels, self-efficacy and ability to prepare teaching activities for students to improve their reading skills. In the qualitative research findings, it was observed that the teachers' knowledge in applying methods, techniques and strategies was insufficient, that they mentioned a limited number of methods, techniques and strategies, and that they were evaluated as incompetent, and that they were also supported by the quantitative findings in which the experimental effect of the training program was examined. Considering the necessity for teachers to receive training prepared and presented by experts and competent people working in the field of reading difficulties, taking into account their needs, it has been determined that OGÖYEP, which was created to support the development of reading skills of students with reading difficulties, is effective and gives positive results.

When the intra-group comparison results were examined, the self-efficacy evaluation scale post-test mean scores of the teachers in the experimental group were significantly higher than the pre-test mean scores. As a result of the experimental procedure, it was observed that while the self-efficacy of the experimental group students with reading difficulties increased in terms of improving their reading skills, there was no change in the self-efficacy of the teachers in the control group in improving the reading skills of students with reading difficulties.

The comparison results between the groups revealed that the self-efficacy evaluation scale posttest-pretest difference score averages of the teachers in the experimental group were higher than the posttest-pretest difference score averages of the control group. OGÖYEP increased the self-efficacy of teachers in the experimental group regarding improving the reading skills of students with reading difficulties. That teachers act by knowing that they have the necessary information about what they can do and what practices they will use while improving reading skills could enable them to act consciously regarding the methods, techniques, and strategies they would use when working with students with reading difficulties.

When the intra-group comparison results were examined, it was observed that the achievement test post-test mean scores of the teachers in the experimental group were significantly higher than the pre-test mean scores. As a result of the experimental process, it was seen that the experimental group's knowledge about improving the reading skills of students with reading difficulties increased, but the knowledge of the teachers in the control group about improving the reading skills of students with reading difficulties did not change.

Intergroup comparison results showed that the achievement test posttest-pretest difference score averages of the teachers in the experimental group were higher than the posttest-pretest difference score averages of the control group. It has been observed that OGÖYEP increases teachers' knowledge levels regarding improving the reading skills of students with reading difficulties.

When the intra-group comparison results were examined, it was determined that the post-test mean scores of the teaching activity preparation competencies of the teachers in the experimental group were significantly higher than the pre-test mean scores. As a result of the experimental process, it was found that the proficiency of the experimental group in preparing teaching activities to improve the reading skills of students with reading difficulties increased, and that there was no change in the competencies of teachers in the control group in preparing teaching activities to improve the reading skills of students with reading difficulties.

Intergroup comparison results showed that the posttest-pretest difference score averages of the teaching activity preparation competencies of the teachers in the experimental group were higher than the posttest-pretest difference score averages of the control group. As a result of the experimental procedure, the teachers in the experimental group increased their competence in preparing teaching activities to improve the reading skills of students with reading difficulties. This result revealed that the

teachers in the experimental group used more methods, techniques and strategies while preparing teaching activities at the end of the training, and there was an increase in their proficiency levels in preparing teaching activities.

Teachers who participated in OGÖYEP stated that the training program was useful, reminded of information thought to be known, and reminded of the importance of using methods, techniques and strategies to improve reading skills. They stated that they gained new information, learned the application stages of the new information, and saw these stages on sample reading texts. Therefore, the training program was found satisfactory. Teachers stated that this information not only increased their own knowledge and proficiency, but also would have a positive impact on their reading activities with students with reading difficulties. The entire training process, consisting of sample activities and sample videos, was found useful and memorable.

## REFERENCES

- Abd Hamid, S.T., Syed Hassan, S.S., & İsmail, N.A.H. (2012). Teaching quality and performance among experienced teachers in Malaysia. *Australian Journal of Teacher Education*, 37(11).
- Allington, R. L. (2013). What really matters when working with struggling readers. *Reading Teacher*, 66(7), 520-530.
- Alyılmaz, S., & Ürün Karahan, B. (2018). *Okuma eğitimi* [Reading training]. Anı Publishing.
- Ateş, S. (2011). İlköğretim beşinci sınıf Türkçe dersi öğretim sürecinin anlama öğretimi açısından değerlendirilmesi [Evaluation of fifth-grade Turkish course learning and teaching process in terms of comprehension instruction] (Doctoral thesis). Gazi University.
- Baydık, B. (2011). Okuma güçlüğü olan öğrencilerin üstbilişsel okuma stratejilerini kullanımı ve öğretmenlerinin okuduğunu anlama öğretim uygulamalarının incelenmesi [Examining the use of metacognitive reading strategies of students with reading difficulties and their teachers' reading comprehension instruction practices]. *Eğitim ve Bilim*, 36(162), 301-319.
- Büyükköztürk, Ş., Çakmak, E., Akgün, Ö.E., Karadeniz, Ş., & Demirel, F. (2015). *Bilimsel araştırma yöntemleri* [Scientific research methods]. Pegem Akademi Publishing.
- Creswell, J. W. (2017). *Karma yöntem araştırmalarına giriş* [Introduction to mixed method research]. Pegem Akademi Publishing.
- Damar, M. (1996). *İlkokuma yazma öğretiminde karşılaşılan güçlüklerle öğretmen nitelikleri arasındaki ilişki* [The relationship between the difficulties encountered in teaching primary reading and writing and teacher qualifications]. (Unpublished master's thesis). Hacettepe University.

- Darling-Hammond, L. (2006). *Powerful teacher education: Lessons from exemplary programs*. A Wiley Imprint.
- Dolezalova, J. (2015). Competencies of teachers and student teachers for the development of reading literacy. *Procedia-Social and Behavioral Sciences*, 171, 519–525. <https://doi.org/10.1016/j.sbspro.2015.01.156>.
- Field, A. (2013). *Discovering statistics using IBM SPSS*. Sage Publications.
- Gersten, R., Fuchs, L. S., Williams, J. P., & Baker, S. (2001). Teaching reading comprehension strategies to students with learning disabilities: A review of research. *Review of Educational Research*, 71(2), 279–320.
- Guerriero, S., & Deligiannidi, K. (2017). The teaching profession and its knowledge base. In S. Guerriero (Ed.), *Pedagogical knowledge and the changing nature of the teaching profession* (pp. 19-36). OECD Publishing.
- Haverback, H.R. & Parault, S.J. (2011). High efficacy and the preservice reading teacher: A comparative study. *Teaching and Teacher Education: An International Journal of Research and Studies*, 27(4), 703-711. <https://www.learntechlib.org/p/197029>
- Lane, H. B., Hudson, R. F., & Leite, W. L. (2009). Teacher knowledge about reading fluency and indicators of students' fluency growth in reading first schools. *Reading Research Quarterly*, 25, 57-86. <https://doi.org/10.1080/10573560802491232>
- Leader-Janssen, E., & Rankin-Erickson, J. L. (2013). Pre-service teachers' content knowledge and self-efficacy for teaching reading. *Literacy Research and Instruction*, 52, 204-229.
- Lincoln, Y., & Guba, E. G. (1985). *Naturalistic inquiry*. Sage.
- Melekoğlu, M.A., & Çakıroğlu, O. (2018). Özel öğrenme güçlüğü olan çocuklar [Children with specific learning difficulties]. Vize Academy.
- Mills, J., & Clarke, M. (2017). Dyslexia and the need for teacher training: A collaborative three-pronged approach between a university and a community partner. *Leadership and Research in Education*, 4(1), 77-89.
- Osborn, J., Lehr, F., & Hiebert, E.H. (2003). *A focus on fluency*. Pacific Resources for Education and Learning.
- Pressley, M. (1998). *Reading instruction that works: The case for balanced teaching*. Guilford.
- Pressley, M., Allington, R. L., Wharton-McDonald, R., Block, C. C., & Morrow, L. (2001). *Learning to read: Lessons from exemplary first-grade classrooms*. Guilford.
- Russell, G., & Joseph, D. (2001). The realities of translating research into classroom practice. *Learning Disabilities Research & Practice*, 16, 120-130.
- Şişman, M. (2002). Eğitimde mükemmellik arayışı - Etkili okullar. [The pursuit of excellence in education - Effective schools]. Pegem Publishing.
- Snow, C. E., Burns, M. S., & Griffin P. (1998). *Preventing reading difficulties in young children*. National Academy Press.
- Tavşancıl, E. (2005). *Tutumların ölçülmesi ve SPSS ile veri analizi* [Measurement of attitudes and data analysis with SPSS]. Nobel Publishing.
- Tekin, H. (2003). *Eğitimde ölçme ve değerlendirme* [Assessment and evaluation in education]. Yargı Publishing.
- Van den Hurk, H. T. G., Houtveen, A. A. M., & Van de Grift, W. J. C. M. (2017). Does teachers' pedagogical content knowledge affect their fluency instruction? *Reading and Writing*, 30, 1231–1249. DOI: 10.1007/s11145-017-9721-9