

Developing a Reading Comprehension Support Program for Primary School Students with Specific Learning Disabilities*

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Abstract

Specific learning disabilities (SLD) is a general term referring to a heterogeneous group of disorders displayed by individuals with special needs. SLD refers to disorders in reading, writing and mathematics. A large proportion of students with SLD need support in reading as well as in reading comprehension skills, an important component and ultimate goal of reading. In this direction, this study aimed to develop the content of a reading comprehension program for second, third and fourth grade students with SLD. Designed as phenomenology which is a qualitative research approach, this study used semi-structured interview, observation, assessment tool administration, literature review and document analysis. Teachers reported that students with SLD have difficulties in reading, writing, reading fluency and reading comprehension; they lack self-confidence and need to be educated in special learning environments; they need support in Turkish and mathematics classes and a reading comprehension program is necessary for them. It was identified that expository and narrative texts and poems were used in primary school programs and some reading comprehension skills were acquired. There were two acquisitions related to reading comprehension in the SLD support program without any specifications as to how these should be taught and what content should be used. This study was limited to interviews conducted with five teachers and observations with 14 students with SLD and eight students with typical development. Although the studies on students with SLD have increased in Turkey in recent years, support programs that can be used at different education levels to improve reading, reading comprehension, writing and math skills for students with SLD are still limited. The program developed within the scope of this research was developed as printed material. Further studies can be planned to use the program in technological platforms by using tablets, computers, etc.

Keywords: Specific Learning Disabilities, Reading Comprehension, Reading Comprehension Program, Dyslexia.

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INTRODUCTION

Children with special needs display a significant developmental and educational difference from their peers as stated in the Special Education Services Regulation of Ministry of National Education (Acarlar, 2013; Ministry of National Education [MoNe], 2018). In general, special education aims to implement and evaluate an individualized, systematically planned education to raise individuals independent of adult support (Eripek, 2007). Children with specific learning disabilities (SLD) are included among the individuals with special needs. Learning disorders indicate a state of inadequacy in basic academic skills such as reading, writing and arithmetic without accompanying neurological, physical illness or intellectual disabilities. Researchers use the term SLD by adding the term “specific” to the concept of learning disorders to draw attention to the differences in the term which is sometimes confused with intellectual disabilities (Öztürk, 2002). Students with SLD, who form a heterogeneous group with varying characteristics experience a lack of academic achievement and have problems especially in reading, mathematics, written expression, language and speaking skills, memory, social and emotional areas, motivation and perceptual problems and may display other disorders such as attention deficit (Çakiroğlu, 2017).

Students are diagnosed with SLD through medical diagnosis and educational evaluation processes. A clinical assessment is conducted by the department of children and adolescent mental health and diseases based on the information received from teachers and family members about the learning problems experienced by the child. Intelligence tests are administered followed by the test batteries related to SLD and after the medical assessment, educational evaluation and diagnosis processes are carried out by a guidance and research center. An Individualized Education Plan (IEP) is prepared for the child with SLD after the educational assessment completed (Karaca, Tirit-Karaca, Çalış, & Yiğit, 2018).

Today, SLD is diagnosed according to the Diagnostic and Statistical Manual of Mental Disorders-Fifth Edition (DSM-5) medical diagnosis classification system of the American Psychiatric Association. According to this diagnosis system, there are three main classifications as impairment in reading skills, impairment in written expression and impairment in mathematics. DSM-5 Specific Learning Disorder Diagnostic Criteria are as follows; inaccurate or slow reading or reading with too much effort, difficulty in reading comprehension, difficulties in spelling or writing letters, difficulties in written expression, difficulties in number perception, number facts or calculation, difficulties with mathematical reasoning (Şen-Kösem & Bakacak, 2018). Since 42% of all 5.7 million students diagnosed with special education needs receive this diagnosis in the United States of America (USA), SLD is considered as a common disorder. While the statistical data on SLD is limited in Turkey, the ratio of students with SLD to all students with special needs is 3% (Çakiroğlu, 2017). It is known that students with SLD have the most difficulty in reading (85%) (Çakiroğlu, 2017; U.S Department of Education, 2014).

Dyslexia, the most common reading disability, is based on the inadequacy of the phonological processes of the language, which makes it harder to read and spell. 80% of students with SLD have problems with reading fluency and reading comprehension. Reading requires decoding the words and understanding what is read. Students need to use the prosodic features in reading. The ultimate goal of reading is to understand what is read. In regards to reading texts, students should be assessed for the criteria of accuracy, automaticity, prosody and reading comprehension and receive support in this direction (Baydık, 2015). Reading has five basic components: phonological awareness, phonics, vocabulary, fluency and comprehension. Various strategies and methods can be used for students with SLD to support reading fluency such as, repeated reading, peer assisted teaching, mutual teaching, to support reading comprehension such as, increasing the processing speed, strategy training, understanding the main idea, and to improve basic reading skills such as, phonological awareness training, programmed reading training, multi-sensory reading method, neurological effect method and Gass analysis (Balıkçı, 2017). Difficulties in reading are the most problematic area in SLD and there are difficulties in decoding and/or reading comprehension. In general, letters-syllables are confused, the endings of words are made up, the places of letters/syllables are changed, sounds are confused and

it is difficult to understand what is read for these students. In addition, students with SLD have difficulty in phonics (Karaca et al., 2018).

The programs developed and used for students with SLD for reading, reading comprehension, and reading fluency have been investigated and evaluated in the national literature. The studies on the reading comprehension skills of students with SLD were investigated and concluded that studies on the reading comprehension skills of students with SLD are rather limited; the majority of these studies compared reading comprehension skills of students with and without SLD; the studies were mostly conducted with third, fourth, sixth and eighth grade students; the majority of these studies was designed with a single-subject research design or correlational model and there were significant differences between the groups in intrinsic motivation, prior knowledge, reading speed, strategy use and phonological skills (Pürsün & Sarı, 2019). Another study evaluated the relationship between verbal problem solving and reading comprehension skills of students with and without SLD and concluded that reading comprehension was a predictor of verbal problem solving, and compared to students with typical development, students with SLD received lower scores in reading comprehension, completed tasks in longer time and solved fewer questions correct (Altındağ-Kumaş, Delimehmet-Dada, & Yıkış, 2019). Scientific articles, master's theses, specialization theses in medicine and doctoral theses published during the period of 1972-2017 were examined in the study titled "Review of studies on specific learning disabilities in Turkey". According to the study results, the number of studies in the field increased in the last 10 years, studies were mainly focused on the assessment and support of reading skills since the individuals with SLD experienced the most problems in reading and these studies were mostly carried out with primary school students. It was also reported that scientific information regarding SLD is still very limited although the studies conducted in Turkey have significantly increased in the last 10 years (Görgün & Melekoğlu, 2019). The study titled "The relationship between vocabulary and reading comprehension skills of students with learning disabilities and with typical development" concluded that students with SLD performed lower than their typically developing peers in vocabulary and reading comprehension skills (Delimehmet-Dada & Ergül, 2020). In their study, Gersten, Fuchs, Williams, and Baker (2001) evaluated intervention research on the reading comprehension skills of individuals with SLD in the last 20 years. According to this study, there is an increase in socially mediated instruction; there is a need to teach multiple strategies to improve comprehension. Robinson, Meisinger and Joyner (2019) evaluated the effect of reading oral and silently on the reading comprehension skills of individuals with SLD (N=77) attending primary school in their study. According to the results of the research, it was determined that the students who read oral understood better than the students who read silently and their reading comprehension improved across the years. Khasawneh and Al-Rub (2020) revealed the effect of visual word composition teacher technique on improving reading comprehension skills of individuals with SLD (N=104). According to the results of the research, a significant positive difference was determined in the reading comprehension skills of the students who were taught visual word composition technique in the experimental and control groups. Berkeley, Scruggs and Mastropieri (2010), in the study conducted for of individuals with SLD between 1995 and 2006, evaluated the studies on reading comprehension teaching as a meta-analysis; although it was lower than previous meta-analysis results, it was concluded that reading comprehension intervention programs were generally very effective. In the light of the aforementioned information, this study aimed to develop the content of the reading comprehension program to be used with second, third and fourth grade students with SLD.

The Rationale for this Program

Reading comprehension is one of the most important components of reading skills. Individuals with SLD have problems in reading and therefore they need to be supported in regards to reading skills in general and reading comprehension skills in particular. However, the methods, strategies and programs aimed at improving reading comprehension skills for individuals with SLD in Turkey are rather limited. Hence, this program was developed, implemented and evaluated to meet this need in Turkey. It is believed that the program developed in the framework of this study will help improve the reading comprehension skills of primary school students with SLD and it will contribute

to the national literature in this direction. The program can be used in individual support education activities in resource rooms in schools and in special education and rehabilitation centers.

METHOD

Context and Research Design

Research permission was obtained from Eskişehir Provincial Directorate of National Education and ethical compliance certificate was received from the Social and Human Sciences Scientific Research and Publication Ethics Committee of Eskişehir Osmangazi University. Qualitative research method was used in this study. When quantitative measures and statistical analyzes are not suitable for the existing problem, qualitative research is preferred to explore the problem and issue at hand, to understand the context in which the participants addressed the problem and to understand it in more depth (Bal, 2016; Croswell, 2013). Phenomenological design, one of the qualitative research methods, was used in this study. In phenomenology, the perceptions and understandings of a small number of participants are questioned and their experiences are examined in depth. In addition, observation, written and visual materials can be used as support data (Ersoy, 2017).

Research Instruments and Procedures

A program dedicated to support the reading comprehension skills of students with SLD was aimed to be developed after the following stages: program design, the philosophy of the program, the educational philosophy of the program, the program development model, the rationale of the program, the needs analysis and evaluation, observation, administration of the measurement tool, literature review, review of the existing programs, examination of the SLD support education program. In program development processes, first of all, it is necessary to identify the design of the program to be developed. Subject-centered program design and process design, which are widely used designs in educational environments, were used as program development design models since they were found to be suitable for the program (Demirel, 2017). This program was developed in accordance with subject-centered program designs in which the students are taught how they learn best to improve their reading comprehension skills. The program was based on idealism and realism as a philosophy and educational philosophy of the program was based on perennialism and essentialism.

“Demirel Curriculum Development Model in Education” (DEPGEM) developed by Demirel (1992) in Turkey, which corresponds to the Taba-Tyler Model, was adopted as the program development model. The stages of DEPGEM program development are as follows: Planning, preparation/development, testing and evaluation, implementation, and sustainability (Demirel, 2017). While this model is more suitable for general education programs, it is used in special education as well. The program developed in the framework of this study aimed to develop reading comprehension skills of the students with SLD by teaching them pre-reading strategies, reading strategies and post-reading strategies. In curriculum development, first of all, the need for the curriculum should be identified and whether the program goals meet these needs should be clarified (Demirel, 2017). The first stage in the development of training programs is the identification and analysis of the need. Interviews, knowledge tests, brainstorming, workshop technique, Delphi technique, observations, questionnaires/scales and document analysis techniques are used while performing the needs analysis (Adıgüzel, 2016).

In this context the following tasks were conducted: observations (conducted with students with SLD and with typically developing peers), administration of the measurement tool (Oral Reading Skills and Comprehension Test-II [SOBAT[®]-II] (Melekoğlu, Erden ve Çakıroğlu). for students with SLD to identify their reading comprehension levels in order to demonstrate the need, literature review (relevant national and international literature review and analysis), examination of existing programs (examination and evaluation of programs related to reading comprehension in general education, examining and evaluating reading comprehension activities in the support education programs for

individuals with SLD) and semi-structured interviews (one pilot interview, and with five teachers working with students with SLD).

PARTICIPANTS

In phenomenological research, participants can be determined by criterion sampling technique, one of the purposeful sampling techniques, if the number of people with experience on the examined issue is high (Creswell, 2007; Ersoy, 2017). The criteria for the individuals who were interviewed in the framework of this study were identified as follows: to be actively teaching at primary school and to be working with a primary school student with SLD at the time of the study. Participants were selected from among teachers who worked in public schools or special education and rehabilitation centers. 14 students with SLD were observed in the special education and rehabilitation center and eight students with typical developmental patterns were observed in their classrooms at the public school. The measurement tool was administered to students with SLD.

Teacher Interviews

Interview questions were developed in line with the sources and studies in the literature to conduct the semi-structured interviews with the participating teachers. Interview questions were sent to five experts with doctoral degrees and qualitative research experience. According to the expert evaluation form, the questions were arranged and finalized. The interview questions were then sent to five experts who had doctorate degrees and qualitative research experience to seek expert opinion. Based on the feedback received from the expert assessment, the questions were reviewed and finalized. In order to check the clarity of the questions and to minimize possible problems in the upcoming interviews, a pilot interview was conducted with a teacher who had a bachelor's degree in the field of special education and was still actively teaching. At the end of the pilot interview, it was determined that the questions were understandable and covered the subject. Then, semi-structured interviews were conducted with five teachers. Before the interviews, teachers filled the interview contract and examined the interview guide. What was said in the interviews was noted and also recorded with a voice recorder.

Data Analysis

Following the semi-structured interviews; audio recordings for each teacher were transcribed. A coding key was created for the interview by establishing categories under each question item. Interview records were analyzed according to this coding key. Based on the interview coding key, the researchers marked it consensus when they had the same opinion and marked it as disagreement when they had different opinions. "In qualitative research, the opinions of researchers and experts are compared for the reliability of the data collected by the interview method and the reliability of research is calculated with the following formula: $\text{Agreement}/(\text{Consensus}+\text{Disagreement}) \times 100$ (Miles & Huberman, 1994). The mean reliability was calculated as 93.18% in this study. In order to ensure confidentiality, the teachers were given code names as Teacher 1, Teacher 2... etc. The collected data were analyzed by descriptive analysis. For student observation, the answers provided by the students to the reading comprehension questions were recorded. Reading passages were categorized according to the grade level in the current primary school program.

RESULTS

This section presents the findings in regards to teacher interviews, examinations of existing primary school programs, examination of SLD support program, observation results, administering the measurement tool, literature review, development of the teacher's guide and student workbook process, and program's goals and behaviors. Semi-structured interview results were analyzed through descriptive analysis and the answers to the questions were presented as frequencies. In addition, teachers were quoted by using their code names.

Table 1: Themes, Sub-Themes and Frequencies Obtained from Teacher Interviews

Themes	Sub-themes	Frequency
Characteristics of students with SLD according to teachers	Difficulty in reading	3
	Difficulty in writing	3
	Lack of self-confidence	2
	Mistakes in reading fluency	2
	Difficulty in reading comprehension	2
	Difficulty in mathematics	2
	Learned helplessness	2
Courses/subjects that students with SLD need support in	Turkish	5
	Mathematics	4
	Reading Comprehension	3
	Reading	3
	Writing	2
Status of experiencing problems and the types of problems experienced in reading comprehension activities	Yes, there are problems	4
	Problems in answering five WS and one H questions	3
	Inaccurate or erroneous reading	1
	Problems in orally transmitting what is read	1
	Problems about getting the time and place	1
Suggestions for the reading comprehension problems	Teaching appropriate strategies	2
	Extensive reading	2
	Using audio-visual elements	1
Suggestions for program content, method, duration, setting and assessment to improve reading comprehension skills	Individual assessment	5
	20-30 minutes of implementation	5
	Audio-visual elements	3
	Having a low number of students during activities	3
	Computer	2
	Story/word cards	2
	Audio recording	2
	Standard measurement tools	2
Suggestions for pre-reading strategies, during-reading strategies and post-reading strategies	Asking questions about the visuals	4
	Underlining the important parts	4
	Arousing curiosity	4
	Getting students' attention	3
	Estimation/prediction	3
	Adjusting reading speed	3
	Using prior knowledge	2
	Summarizing	2
	Repeated reading	2
		2

When they were asked what they knew in regards to the characteristics of students with SLD, teachers stated that students with SLD had difficulties in reading (f=3), had difficulties in writing (f=3), lacked self-confidence (f=2), made mistakes in reading fluency (f=2) and had difficulties in reading comprehension (f=2). T2 expressed the following: “*We encounter such learning disorders when the person’s intelligence is normal or above normal, but cannot get the desired output from training. There are different types of SLD, such as difficulties in reading and writing, difficulties in mathematics. In regards to reading, I know that there are problems such as skipping syllables, adding letters, getting confused in the spelling of b, d, p, getting confused about days, seasons and measuring time, getting confused in regards to directions, feelings of dislike of mathematical symbols, difficulty in reading comprehension or reading with too much effort, boredom in reading activities or not wanting to read at all*”. When asked what kind of training they received about teaching the students with SLD, teachers stated that they received in-service training provided by the Ministry of National Education (f=2), they took courses at the university (f=2) and they attended seminars and congresses (f=2). T3 expressed the following opinion: “*I received training on inclusive education via the in-service training provided by the National Education. Apart from this, inclusive education was*

included among our courses at the university; there was a section on inclusion in the guidance courses we took”.

When asked what they know about teaching students with SLD, teachers stated that special learning environments should be created for students (f=3), education should be structured according to the student’s ability (f=2) and these students should receive support from special education classes, resource rooms and special education and rehabilitation centers (f=2). T2 expressed the following opinion: *“I know that special learning environments should be created for their education, they should be supported with visual and auditory elements but first of all, it is necessary to discover how they learn”*. When asked about the courses/subjects that students with SLD needed support in, teachers cited Turkish classes (f=5), mathematics classes (f=4), reading comprehension activities (f=3) and reading activities (f=3). T4 expressed the following opinion: *“They experience the most difficulties in reading, Turkish and mathematics during primary school. I have observed that, among regular classes, they have the most difficulty in English when their reading and writing abilities reach a certain level”*.

When asked about their expectations from individuals with SLD; the teachers stated that they expected their students to achieve at their own grade levels (f=1), expected their students to have confidence about achieving good results (f=1) and expected the families of their students to reduce their pressure on students about failure (f=). T4 expressed the following opinion: *“Actually, the expectations from these individuals and their families are somewhat common. They are pushed to their limits. Well, I believe that the student can progress a little more if there is less pressure. In short, the expectations of teachers working in regular National Education schools are that these student progress at their own grade levels”*. When asked about the status of experiencing problems during reading comprehension activities and the types of problems experienced, teachers responded that they experienced problems (f=4) and they mostly experienced problems in answering five WS and one H questions (f=3). T2 expressed the following opinion: *“There are great difficulties in reading comprehension. When a teacher has a student read in the classroom, it becomes a bit of an annoyance because the student gets stuck on words too much”*. T4 expressed the following opinion: *“When fluent reading is somehow achieved, the student then may experience problems in conveying the text or making sense of the text. Especially verbally transmitting what is read is one of the biggest problems that I observe. In addition, when I ask five WS and one H questions about the text, the student cannot answer all of them when the text is read just once”*.

When asked about the characteristics of students who usually had problems with reading comprehension; teachers answered that they could not read written materials such as books (f=3), they were shy, passive, introverted (f=3) and they did not like to read (f=2). T1 expressed the following opinion: *“My student doesn't like to read. S/he doesn't read many books”*. T2 expressed the following opinion: *“The most important characteristic is that they do not read books, there is a prejudice against books, against all written materials even. When it comes to reading, these students are shying, withdrawn and refuse to be active”*. When asked about the reading comprehension levels of individuals with SLD, teachers stated that they understood what they read at a level of 30%-40% (f=2), they understood what they read at a level of 50%-60% (f=1) or it varied from student to student (f=1). T1 expressed the following opinion: *“It actually changes from student to student”*. T4 expressed the following opinion: *“So, when I think of the students I teach, I have observed problems with reading comprehension in almost all of them. When we express this as a percentage, they can understand a text at 30% to 40% level in one reading”*.

When asked about the general problems encountered in the reading comprehension skills in individuals with SLD, teachers said that they had problems in vocabulary and meaning (f=3) and they made errors in reading (f=1). T2 expressed the following opinion: *“In general, they experience difficulties in understanding and making sense of words, they skip syllables, add letters, also they confuse letters b, d, p; they add letters”*. T4 expressed the following opinion: *“They have difficulty in distinguishing the main elements of the text, in finding where the points to pay attention are located in the text. Because of this, they have comprehension problems.”* When asked how long teachers

experienced these problem/problems, they cited the following: starting from the first grade (f=1), starting from the second grade (f=1) and for a long time (f=1). T3 expressed the following opinion: *“I mean, I have been observing the student’s condition since the second grade, that is, since the age of seven or eight”*. T4 expressed the following opinion: *“They have been facing this problem since they started training. It is going on for quite some time”*.

When asked about the courses in which the students with SLD usually experienced problems, the teachers cited the Turkish classes (f=5) and the mathematics classes (f=4). T2 expressed the following opinion: *“One of them is struggling with math, especially has difficulties in measuring and reading the time. The other has difficulties in reading comprehension and Turkish lessons”*. T4 expressed the following opinion: *“Turkish, mathematics and English. Yes, these are the three courses in particular where my student has the biggest problem”*. When asked how often problems occurred; teachers provided the following answers: often (f=2) and sometimes (f=2). T2 expressed the following opinion: *“I have encountered this problem in all of the lessons so far.”* T5 expressed the following opinion: *“When everything is going well with our students, the next week comes, and it is like we are back to beginning, so my answer is sometimes (T5)”*.

When asked how the problems related to reading comprehension skills of individuals with SLD could be solved, the teachers cited teaching the students to make sense of the text with the appropriate strategy (f=2) and by reading a lot (f=2). T3 expressed the following opinion: *“I think individual support is a must. When it is detected sooner, different methods can be applied.”*. T4 expressed the following opinion: *“We can solve these problems by choosing reading passages suitable for the level of the student and teaching them to make sense of the text with the appropriate strategy. (T4)”*. When asked why a program should be developed for individuals with SLD, teachers replied that there was a need (f=2) and there was no existing programs (f=2). T3 expressed the following opinion: *“First of all, there is such a need. Even when preparing the IEP, I cannot find anything for my student’s level”*. T5 expressed the following opinion: *“I believe that there is not sufficient material and we sometimes get stuck and do not know what to do”*.

When asked what the reading comprehension skills development program to improve of individuals with SLD should include, the teachers opted for visual elements (f=2), interesting materials (f=1) and suitable fonts for children’s levels (f=1). T1 expressed the following opinion: *“They love contemporary things, the program should include texts that they find interesting, they won’t be bored with and that will attract their attention. They do not like the Keloğlan of our anymore, they think of different things. The font is better for these children, the same with the pictures”*. T3 expressed the following opinion: *“Let me give you an example from my own student, the activities should not include much writing. Instead, there may be activities where he can express himself verbally in different ways”*. When they were asked about the tools, materials/methods that could be used in the program to be developed teachers cited visual and auditory items (f=3), computer (f=2), story, word cards (f=2) and audio recording (f=2). T3 expressed the following opinion: *“I think there should be something he can actively participate in such as visual, auditory, materials”*. T4 expressed the following opinion: *“For example, I really like the voice recorder. Sometimes I have the children listen to the story they read. They realize their own mistakes and I think they understand better when they have verbal feedback from what they read. I think the use of concept networks and story maps are effective as methods”*.

When asked about the setting that should be prepared for the individual with SLD, the teachers answered that the number of students should be low (f=3), that the setting should not distract students’ attention (f=3) and that the setting should be supported with visual materials (f=2). T3 expressed the following opinion: *“The class size should not be too crowded, it should definitely be technologically supported, too, but depending on the child’s special learning disability maybe too much visual materials and the presence of different materials in the classroom can be distracting.”* T4 expressed the following opinion: *“It is generally observed that students with SLD have attention deficit problems as well. Educational settings need to be free of arousing stimuli, that is, all stimuli should be completely based on education. Appropriate light, suitable table, suitable chair are all very*

important in terms of not tiring the eyes and an environment with materials that will attract the attention of the child provides higher motivation for learning. A class can be organized with appropriate prizes, games". When asked about the proper duration for the implementation of the developed program and the duration of a teaching session, teachers opted for 20-30 minutes (f=5) and stated that the duration depended on the student's case (f=3). T1 expressed the following opinion: *"Such students....we can't actually teach for 40 minutes even with our regular students. The lesson should be 20-25 minutes in total"*. T2 expressed the following opinion: *"I think the duration of a teaching session should not exceed 20 minutes. How long it takes depends on the student's progress and the path we take"*.

When asked about their ideas on measurement and evaluation after the implementation of the program that would be developed; teachers answered that measurement and evaluation should be done with individual assessment (f=5), with charts (f=2) and with standard tools (f=2). T2 expressed the following opinion: *"Assessment and evaluation should be process-oriented. For example, I am teaching a subject and I see that he has achieved very good things in the process, but the result is wrong. Now, if I focus on the result there, I think that it will put too much stress on that child so I put for the self-evaluation form"*. T4 expressed the following opinion: *"Of course, it would be great to develop a standard tool, but if a standard tool is not available, similar tools used in teaching can be used in evaluation later on"*. Teachers were asked whether they believed that the program would be beneficial when it was developed. Teachers said yes, they believed it (f=4) and yes, but only if it was prepared accurately (f=1). T2 expressed the following opinion: *"I believe it, of course. I do not think that any program for which so much work is done will be bad."* T2 expressed the following opinion: *"If this happens correctly, if it is prepared right, of course, I believe it"*.

When asked about what sort of pre-reading activities should be implemented to improve reading comprehension skills, teachers stated that questions should be asked about the visuals (f=4), student curiosity should be aroused (f=3) and it should be ensured that students pay attention (f=3). T1 expressed the following opinion: *"Their curiosity can be aroused and they can be curious, different pictures can be used to get their attention, pre-reading activity can start with pictures, titles can be used as a starting point, students can skim and scan the text, students can be allowed to act out their predictions about the text or teacher can give prompts to get attention such as hmmm, let's do something like this and, let's see if it will go on with the text"*. T4 expressed the following opinion: *"Well, current topics that will attract the attention of children can be selected. First of all, there should be a visual in the text, students should comment on this visual and then they should review the text in general; review the title, review the bold parts in the text, if any. The important elements of the text can be written in bold; the main character, the event, the venue, the time. I think these will provide more permanent and fluent learning"*.

When asked about what sort of during-reading activities should be implemented to improve reading comprehension skills, the teachers cited highlighting the important parts in the text (f=4), predictions (f=3), adjusting the reading speed (f=2) and using prior knowledge (f=2). T1 expressed the following opinion: *"They love predictions. Reading speed should be adjusted, I mean, if they have trouble reading, they may be a little slow. They like highlighting important parts. We do that in class with highlighters, they like it. I can also add mental imagery"*. T4 expressed the following opinion: *"Using prior knowledge can be beneficial in the following manner: They can make predictions. The reading speed of the child can be determined via assessment at the beginning and texts can be selected not to exceed a certain time to read. I think the use of highlighters is effective. At first, the teacher can model how to highlight the important parts in the text"*.

When asked about what sort of post-reading activities should be implemented to improve reading comprehension skills, the teachers cited summarizing (f=2) and repeated reading (f=2). T3 expressed the following opinion: *"Asking the student to tell you briefly what he remembers is more effective than all questions. For example, you can ask the student to change the title of the text. After reading the text, the student adds his own interpretation, at least. You can ask question such as -what do you think the title should be? Or which character do you think you liked the best?-"*. T4 expressed

the following opinion: “I usually have them reread the text. Before the repeated reading, I ask them about what they have understood from the text the characters in the text... Sometimes I summarize the text briefly myself. I think both are effective”. When asked if they had any other comments to add, the teachers stated that they thought family support was important (f=2), they wanted the program that would be developed disseminated across Turkey (f=1) and urged that students should be taught internal motivation about reading (f=1). T1 expressed the following opinion: “I think family is very important for these students.” T4 expressed the following opinion: “I think valuable teachers like you should develop programs. I recommend this program to be used as a standard across Turkey. If we follow a certain systematic, we can really avoid the problems experienced by all students. I want this program to be standardized and disseminated.”

Examination of Existing Primary School Programs

First of all, reading, reading comprehension goals and reading passages developed for the individuals with typical development at primary school level were examined. There are seven goals related to comprehension in the first grade, 10 goals in the second grade, 18 goals in the third grade and 25 goals in the fourth grade. After students learn how to read texts or poems, they are expected to answer comprehension questions (to talk about what, how much, which, how, why, and why). In addition, there are activities about selecting a new title suitable for the reading text or poem, finding the subject and main idea of the text and talking about what they would do if they were the characters in the text.

Table 2: Types and Numbers of Primary School Level Reading Passages

	Expository Texts	Narrative Texts	Poetry
1 st grade	1	7	4
2 nd grade	7	7	4
3 rd grade	8	7	4
4 th grade	9	8	4

Examination of SLD Support Education Program

Learning Disability Support Education Program was accepted with the decision of the Ministry of National Education, Board of Education (dated 26.12.2018 and numbered 287). The program consists of learning readiness (300 class hours), literacy (250 class hours) and mathematics (200 class hours) modules. The literacy module includes the goals related to reading comprehension (such as establishing a cause-effect relationship with the text, establishing a cause-effect relationship between events).

The program states that visual and auditory stimuli should be used in reading comprehension and that learning largely depends on reading comprehension. It is stated in the program that reading has three dimensions as cognitive dimension, affective dimension and behavioral dimension and deficiency or inadequacy in any of these dimensions will negatively affect reading. Hence, the individual will be unable to fully and correctly comprehend what is read. Currently, this support education program is implemented in special education and rehabilitation centers to students with SLD. The support education program provides detailed information about the program modules, implementation periods, goals and reading and reading comprehension activities included in the program. However, there is no information about which method and material will be used in implementing the program.

Observations

A total of 14 students who were diagnosed with SLD and who were given reading comprehension activities within the scope of individual support education program were observed. Participating students ranged from eight to 14 years old. The students read a reading passage and

answered the reading comprehension questions, which usually consisted of five questions below the text. Out of a total of 79 questions, they answered 54 questions correctly (68% of correct answers) and answered 25 questions incorrectly. In addition, eight students with typical developmental patterns were observed in grade-appropriate reading comprehension activities. Out of a total of 40 questions, they answered 39 questions correctly (the correct answer rate was 98%) and answered one question incorrectly.

Administering the Measurement Tool

Within the scope of measurement tool administration; SOBAT-II was administered to two primary school students with SLD. Reading aloud score of the first student whose chronological age was 9 years and 11 months was (SOP)=79 and in general it was found that the student's reading fluency and reading comprehension levels were significantly lower than his/her peers. Reading aloud score of the second student whose chronological age was 9 years and 11 months was (SOP)=61 and in general, it was concluded that the student's reading fluency and reading comprehension levels were significantly lower than his/her peers.

Literature Review

In the framework of this study, national and international literature on the reading comprehension skills of students with SLD was examined. As a result of the review; eight national articles were found on reading comprehension skills of typically developing students; three national theses and 17 articles and 14 international articles were found on the reading comprehension skills of students with SLD and three theses and four articles were found on the reading comprehension skills of students with and without SLD. Accordingly, while the national literature includes limited number of studies on the reading comprehension skills of students with SLD, the international literature, especially in the United States, has studies (intervention program, efficacy studies, meta-analysis, experimental, single-subject, etc.) aimed at improving the reading comprehension skills of students with SLD. The analysis of these studies demonstrated that reading comprehension skills were found to be important for academic development, especially repeated reading and visual comprehension strategies were widely used and there were positive developments in students' reading comprehension skills when different intervention programs were used.

Observations were conducted, the measurement tool was administered, literature was reviewed, existing programs were investigated and interviews were held with teachers within the scope of needs analysis. This needs assessment revealed the need for a program to support the reading comprehension skills of individuals with SLD. Studies show that individuals with SLD have difficulties in reading comprehension and although current curriculums target the development of reading comprehension skills for individuals with SLD, the programs which provide adequate guidance to teachers on how to teach these skills are very limited. The international literature shows that the programs for reading comprehension are used effectively for individuals with SLD, but the programs specifically targeting reading comprehension skills are limited in Turkey. Teacher interviews demonstrated the need for such programs which would be highly beneficial for teachers. Based on the needs analysis (including the identification and evaluation of the needs in this field), it was decided to develop a program to improve the reading comprehension skills of students with SLD. In this direction, a teacher's guide, a student workbook and an implementation guide were developed. After the development of the program, an efficacy study is planned to be conducted with students with SLD.

Development of the Teacher's Guide

The guide includes the contents, objectives, benefits of the program, information on how to use the guide, outline, schedules, programming, organization of sessions, information on how to use the student workbook and implementation of teaching sessions. In addition, there are sample training practices regarding the implementation of the program.

Development of the Student Workbook

Primarily, reading comprehension strategies were used in this program prepared for the development of reading comprehension skills. The student workbook consists of 60 narrative and expository reading passages for the second, third and fourth grade levels: 10 second grade, 10 third grade and 10 fourth grade narrative reading passages and 10 second grade, 10 third grade and 10 fourth grade expository reading passages. The levels of reading passages were calculated according to the formula for Readability Value for Turkish (Ateşman, 1997). The student workbook includes the contents section, reading passages which are color coded for each grade level, reading comprehension questions and a dictionary. The page borders are yellow, orange and blue for the second grade reading passages, the third grade reading passages and the fourth grade readings passages, respectively, to facilitate implementation.

Goals and Behaviors

Program philosophy, education philosophy and program design were taken into consideration while the targets were identified. Bloom's Taxonomy was used in identifying the targets. The progressive goal writing approach was based on Bloom's tiered classification approach. In this approach, priority is identified (cognitive, affective and psychomotor) first and then the level related to the specific domain is determined. Targets and behaviors related to the level are identified and listed (Demirel, 2017). This program consists of a total of 13 goals and 33 behaviors. The behaviors that will be acquired by the students in the program are identified as domain, level and target. The identified targets are included in the implementation guide (Domain: Cognitive, Level: Comprehension, Goal: S/he tells the things to be considered about reading comprehension. Behaviours; s/he tells what to do before reading in order to understand the piece to be read. S/he tells what to do during reading in order to understand the piece to be read. S/he tells what to do after reading in order to understand the piece to be read).

DISCUSSION, CONCLUSION, RECOMMENDATIONS

Especially the reading skill is the most common problem in SLD. Reading comprehension skill is one of the most important components of reading skill. Semi-structured interviews were conducted with teachers and analyzed descriptively in this study to develop a program to improve reading comprehension skills of primary school students with SLD. Reading comprehension activities of students with and without SLD were observed. In addition, the reading comprehension acquisitions included in the primary school curriculum and the SLD support education program were examined in detail.

Teachers reported that students with SLD have difficulties in reading, writing and reading comprehension; they lack self-confidence and they experience problems in reading fluency. According to teachers, students with SLD need to be educated in special learning settings, they need the highest level of support in Turkish, mathematics and reading comprehension activities. Teachers voiced their desire for their students to be able to learn at their own grade levels and they expect them to be confident in themselves. The need for a reading comprehension program with interesting visual and auditory and content was expressed by the participating teachers and according to teachers, reading comprehension activities should be organized in an environment where the number of students is low, the duration of the activity should be between 20-30 minutes, pre-reading, during reading and post-reading strategies should be used and the students should be evaluated individually.

Based on the examination of the existing primary school programs, it was observed that there are expository and narrative texts and poems at every grade level with various goals for reading comprehension skills. The examination of the SLD support education program demonstrated the existence of two goals related to reading comprehension without any specification as to content or method. Students with and without SLD were observed in reading comprehension activities and it was found that students with typical developmental patterns had 98% accuracy in reading comprehension

questions, while this rate was 68% for the students with SLD. The measurement tool was administered to two students with SLD and it was concluded that their reading fluency and reading comprehension skills were lower compared to their peers.

The relevant literature points to findings parallel to the research findings in this study. Observation of the students with typical development and students with SLD in this study showed that students with typical developmental patterns provided accurate answers at higher rates in reading comprehension activities. Similarly, it was concluded that students with SLD scored lower than students with typical development (Pürsün & Sarı, 2019). In the interviews held with the teachers, it was concluded that the students had difficulties in vocabulary and reading comprehension. Similarly, it was reported that students with SLD performed lower than their normally developing peers in vocabulary and reading comprehension skills (Delimehmet-Dada & Ergül, 2020). The studies conducted to improve the reading and reading comprehension skills of students with SLD (Akyol & Ketencioğlu-Kayabaşı, 2018; Berkeley, Scruggs & Mastropieri; Dağ, 2010; Duran & Sezgin, 2012; Gersten, Fuchs, Williams, & Baker, 2001; Khasawneh & Al-Rub, 2020; Özer-Sanal, 2020) found that the interventions applied to students seemed to be beneficial. In addition, when the international literature is examined, intervention programs applied to students with special learning difficulties are very effective in improving students' reading comprehension skills (Berkeley, Scruggs & Mastropieri, 2010), similar to the studies, which are limited in Turkey and the program developed within the scope of this research is effective in students with SLD is thought to be. It is believed that the reading comprehension support program developed within the scope of this research will contribute to students' reading comprehension skills.

This study is limited to five teachers who were interviewed, two students to whom the assessment tool was implemented, 14 students with SLD and eight typically developing students who were observed during reading comprehension activities. Although there has been an increase in recent years in the number of studies conducted with the students with SLD in Turkey, supportive education programs which can be implemented at different levels of education to improve reading, writing and math skills of students with SLD are limited. The studies on reading are more prominent in the literature and it is believed that it would be beneficial in future studies to focus on writing and mathematics as well. The program developed within the scope of this research was prepared as a print material. Further studies can be planned to adjust the format of the program to be used with tablets, computers, etc. and to study its efficacy.

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