Effect of Colour Usage and Dialogue Reading Practices in Solving the Visual and Auditory Perception Problems of Students with Dyslexia

Murat Başar, Muhammet Sait Baran and Ahmet Göncü

Dyslexia is a specific learning disability in reading. It is the most prevalent learning disability. This study aims to reveal the effect of the use of colours, peer assessment and reading dialogues on the education of students with dyslexia. The study uses a technical collaborative action research method. Two male students diagnosed with dyslexia and studying in the second year of primary school were participants in the study. The study lasted for 12 weeks following the research plan. The students were required to read the chosen tales in Aesop's Tales aloud. After reading the stories, the students also read selected dialogues in the elementary school course books determined by the Ministry of National Education. Two letters by which the students got confused were marked in two different colours in the first text. The colouring gradually reduced in the new text. There was no colouring in the last text. Results show that the use of colours was effective in reducing the confusion of letters. The students corrected their mistakes mutually through the peer assessment method. The students liked the reading activity and made fewer reading errors compared to other texts.

KEYWORDS: Dyslexia, Use of Colours, Peer Assessment, Dialogue Reading

Murat Başar ✉
Professor, Department of Primary Education, Usak University, Turkey.
Email: murat.basar@usak.edu.tr. ORCID: https://orcid.org/0000-0001-6635-4563

Muhammet Sait Baran
Research Scholar, Department of Special Education, Anadolu University, Turkey.
Email: msb@anadolu.edu.tr. ORCID: https://orcid.org/0000-0002-3300-8311

Ahmet Göncü
Research Scholar, Department of Special Education, Usak University, Turkey.
Email: ahmet.goncu@usak.edu.tr. ORCID: https://orcid.org/0000-0003-1846-8122

Introduction

The students who have difficulty in reading, writing and academic achievement were observed during research-aimed visits to the schools. Those students were seen to be excluded by both the teachers and students. Ostracism aroused desperation in those students. It was revealed that some of them have difficulty in only reading or writing. However, some of them were found to experience problems in number operations and concentration. Some of the students were observed to undergo most of those problems whereas others experience all of them. The problems are referred to as 'learning disabilities'. IDEA (2004) defines a specific learning disability as "a disorder in one or more of the basic psychological processes involved in understanding or in using language, spoken or written, that may manifest itself in the imperfect ability to listen, think, speak, read, write, spell, or to do mathematical calculations". Snowling and Melby-Lervag (2016) suggested that visual and auditory perceptions are complicated. American Psychiatric Association (2013) defined a specific learning disorder as an ongoing disability to use school and learning skills despite necessary interventions. Learning disability comprises most of the individuals who need special education. Most of the individuals who need special education in America are comprised of the ones who experience learning disabilities (Melekoglu & Sak, 2017).

Failure in reading, writing and mathematics arose during early school age due to the students' problems in their visual and auditory perceptions. Academic underachievement leads to emotional burnout. It was found out as well that the students who experience learning disabilities were confused with the ones who have learning inabilities. Those students who sat alone at the back of the class were observed to be included in an isolated learning process apart from the rest of the class. The teachers' misconception of "learning disability" and "learning inability" causes them to show exclusionary attitudes towards them. Their misperception leads to inappropriate attitudes. Bek and Sen (2012) stated that negative attitudes toward students with learning disabilities induced emotional burnout. Basar and Goncu (2018) revealed the teachers' misconceptions concerning learning disabilities. TALIS report (OECD, 2010) asserts that the teachers fall behind in recognizing the students who need special education and developing appropriate activities for them. In this regard, it has been found that teachers' awareness relating to learning disabilities should be aroused and there is a need to develop in-class activities and applications in this area. As a result, it has been revealed that developing activities concerning each sub-type of learning disability is highly essential.

Review of Literature

The literature review has shown that learning disability has four sub-types as dyslexia, dysgraphia, dyscalculia, and hyperactivity. Dyslexia is a learning disability that impairs reading ability. Dysgraphia impacts handwriting and fine motor skills. Dyscalculia makes math difficult. Hyperactivity refers to a learning disability due to attention- deficit. Many studies have shown that dyslexia are the most common problem among learning disorders (Mcnulty, 2003; Norton et al., 2015). One of that research was carried out by Vaughn et al. (2003). It was determined in this study that the most common problem experienced by the students is reading. The students tend to jumble up letters or words or see the letters as if they were dancing. They might see some letters as backwards and upside downs as well. For this reason, they encounter problems while reading. In addition, there are other definitions and sub-dimensions of dyslexia. Sarac (2014) defined dyslexia as a learning disorder that affects one in five children regardless of culture, race, and socioeconomic status.

Dyslexia, as a neurodevelopmental disorder, is characterized by dysfluent reading and reading incomprehension. This problem is due to the failure in perceiving and uttering the words. Individuals with dyslexia see the letters as if they were dancing or have difficulty recognizing the letters. In this regard, the following errors have been found in those individuals: failure in whole word recognition, omission of syllables, guessing/confabulation, and repetition (Basar & Batur, 2018; Basar et al., 2014). Individuals with dyslexia have risks of language impairments due to phonological difficulties (Huettig et al., 2018) and limited reading abilities have repercussions on vocabulary development (Snowling et al., 2016)

Dyslexia is expressed within the scope of the statutory definition of specific learning disability by the adoption of Public Law 94-142 in the USA (Education of All Handicapped Children Act in 1975). According to the fifth edition of the Diagnostic and Statistical Manual of Mental Disorders (DSM-5), dyslexia is classified as "a special learning disorder, accounting for about 80% of special learning disabilities" (Marty & Segal, 2015). Dyslexia prevalence has been a useful criterion to compare and identify the disability whether the occurrence is under-or over-identified for policy and practice (Wagner et al., 2020). Recent studies have shown that prevalence estimates of dyslexia have varied. Predictors of dyslexia such as "deficiency in phonological processing" or "response to intervention" has generally normal distribution within the population as well as reading performance itself (Fletcher et al., 2019). Both school-age children in UK and Portuguese have shown approximately 5% prevalence rates of dyslexia (Barry et al., 2007; Vale et al., 2011). Similarly, in China, a study revealed that the prevalence rate of children with dyslexia was 5.4%, account-

ing for 8.4% in boys and 2.3% in girls (Lin et al., 2020). Other factors affecting the risk of dyslexia include genetic predisposition, family history of dyslexia and history of difficulty in spelling (Rao et al., 2017).

There are several studies concerning reading difficulties in the literature (Akyol & Kayabasi, 2018; Akyol & Sever, 2019; Basar et al., 2015; Bienkowski et al., 2012; Bouck et al., 2017; Firat & Kocak, 2018; Gottwald, 2014; Gurbuz, 2015; Jozwick & Douglas, 2017; Kaur et al., 2017; Kusdemir et al., 2018; Rack, 1994; Raskind, 2001; Sidekli, 2010; Snowling et al., 2016; Van Viersen et al., 2018, 2016). The purpose of all the studies is to indicate the students' status and develop activities to remove their reading disabilities. For this reason, it has been found that the problem was not investigated in-depth, and the previous studies simply determined the symptoms. This study focused on different solutions related to the problems detected. There are limited studies that aim to remove students' confusion and misperception of the letters or reveal the effectiveness of dialogue reading. According to previous studies, students with dyslexia have weak short-term memory (Rack, 1994). On the other hand, recent studies addressed the effect of colours usage on reading capabilities in children with dyslexia and the finding was controversial. For example, Denton and Meindl (2016) found that coloured overlays were ineffective and potentially detrimental to reading abilities. Despite the common use of colours, how they show their impacts is still unclear (Uccula et al., 2014). Bucci (2021) emphasized the problem which is the lack of standardization during the trials for the studies about the use of coloured filters during reading. On the contrary, Rello and Bigham (2017) suggested that warm background colours such as peach, orange and yellow have a significant impact on individuals with dyslexia and significantly improved their reading performance.

Examining reading errors represents a perspective for the development of reading strategies in children with dyslexia (Gupta & Jamal, 2006). Partial and literal errors were significantly more prevalent for children with dyslexia and associated language difficulties than those of typically developing children and children with non-verbal learning disabilities (Cardillo et al., 2017). Research about the effects of narrative therapy, storytelling and peer assessment on reading errors are also limited. Rahmani (2011) showed that one-hour sessions with narrative therapy by a counsellor and storytelling by children reduced 60% of the reading errors. Zoccolotti et al. (2005) found that vocal reaction times and errors of dyslexic children were much worse than those of peer control individuals. Pisheh et al. (2017) examined the effect of cooperative teaching on the development of reading skills among students with reading disorders. Both teacher and peer cooperation seemed to be effective in the development of reading skills (Lahti, 2020). On the other hand, Leseyane et al. (2018) revealed ill-treatments and lack of attention for dyslexic children by

peers and teachers in public schools. Therefore, opportunities should be given to children with dyslexia in different study groups and peer assessment may be encouraged to enhance reading comprehension.

An alternative solution to this problem is considered education since there is no medical treatment for dyslexia. The education period for such students should be when they are 7-8 years old which is known as the golden period (Salman et al., 2016). A study in which the activities are carried out to remove the reading and perception problem due to their visual and auditory perception in this period is needed. In this regard, this study aims to remove the students' learning difficulties which are based on their visual and auditory perceptions. The present study is multi-stimulant and activity based.

Purpose and Objectives of the Study

The purpose of the present study is to remove the students' learning difficulties resulting from their visual and auditory perception and to look for answers to the questions below:

1. How does the use of colours affect dyslexic students' reading comprehension and reading errors based on visual and auditory perception?

2. How does dialogue reading affect removing dyslexic students' reading errors?

3. How does peer assessment affect removing dyslexic students' reading errors?

Research Methodology

The present study is carried out to remove students' problems resulting from their visual and auditory perceptions. Action research, a qualitative research method, was employed in this study. Creswell (2013) noted that qualitative action research is carried out to find a solution to a problem in a classroom setting, develop students' learning level and support teachers' professional development. Technical collaborative action research which is supervised by a researcher and requires intense interaction was used in this study as well. The researcher intervenes in the problem within the scope of his/her specialty. The main purpose is to describe the process in such action research.

Study Group

This study was performed with two male students, who attended two different elementary schools in Usak, Turkey in the 2017-2018 academic year, their

parents and teachers. Both students were diagnosed with learning difficulties. The fact that the teachers are willing to collaborate, and the mothers are voluntary is the main reason for the study group to be chosen.

Characteristics of the Study Group

The students were in the second grade and could not complete the reading and writing process. They were able to recognize only the letter 'e'. Their names are coded as Osman and Murat because of ethical reasons. Both students attended different schools in the first grade. Their mothers were voluntary in the study as well. One of the students' parents was divorced, therefore, this student experienced several traumas. The mothers were university graduates and high-school graduates. According to Razon (1982), the emotional problems experienced by children affect the learning-teaching process.

The student Osman was confused about b-d, b-p and d-t letters. However, Murat felt confused about b-d, l-n and m-n letters. The colouring method was used for those letters. The method was used in oral reading and writing activities as well.

THE APPLICATION PROCESS

Introduction

The students' schools were visited by the researchers and activities were performed to become acquainted with the students and their parents. The task was to create a positive attitude towards the researchers. The parents and teachers were informed about the students' status. A plan was prepared together with the teachers and parents. The responsibilities, in the light of the plan, were reported to the teachers and parents. A weekly report about the students' development was prepared by the researchers at the end of the activities and applications. No one, except teachers, parents and researchers, was informed about the report. The students' names were coded. Thus, an environment that is based on mutual trust was established.

Application of the Activities

The activities were observed by the researchers without being noticed by the rest of the class. The activities were carried out by teachers with the support of researchers in resource education rooms at schools without interrupting educational activities. The study was planned to last for 8 weeks; however, it continued for 10 weeks because of students' traumas. The activities were

carried out by the parents at home, using the same colours for the same activities as well. Therefore, the parents were able to actively participate in teaching-learning process. The researchers investigated the activities and evaluated the process through one-hour visits to the schools every week to guide teachers and parents. The findings were evaluated by five elementary school teachers working with second grades. An attempt was made to help the Dyslexic students recover from learned helplessness through sports and art activities they were interested in, rewarding methods and interviews with psychological counselling and guidance experts. Razon (1982) stated that emotional problems impair an individual's learning centre. For this reason, students were observed to read stutteringly. The students who experienced learned helplessness may show inability and confine themselves to learning. The parents' adoption process was completed as well.

The activities were observed by the researchers without being noticed both by dyslexic students and by the rest of the class. The activities were carried out by teachers together with the researchers in resource education rooms at schools without interrupting educational activities. The parents participated in this process as well. The study was planned to last for 8 weeks; however, it continued for 10 weeks because of students' traumas. The activities were carried out by the parents at home, using the same colours for the same activities as well. Therefore, the parents were able to actively participate in the teaching-learning process. The researchers investigated the activities and evaluated the process through one-hour visits to the schools every week to guide teachers and parents. The problems and activities during the process were included in semi-structured forms. The findings were assessed by five elementary school class teachers working with second grades.

Colouring the Letters

The letters confused by dyslexic students were coloured in different colours. In the first text, b-d letters were coloured red and green. Echo, repeated and paired reading and reading with prosody strategies were applied, thereby developing visual and auditory perception. With the second text, the number of coloured letters was decreased. However, in the last text, no colouring was applied.

As seen from the Figure 1, the letter 'b' was coloured green and the letter 'd' was coloured red, thereby developing visual perception.

Reinforcement

Following b-d letters, the same activity was repeated for d-t, c-c, l-n and m-n letters. Each letter group was aimed to be properly comprehended by the stu-
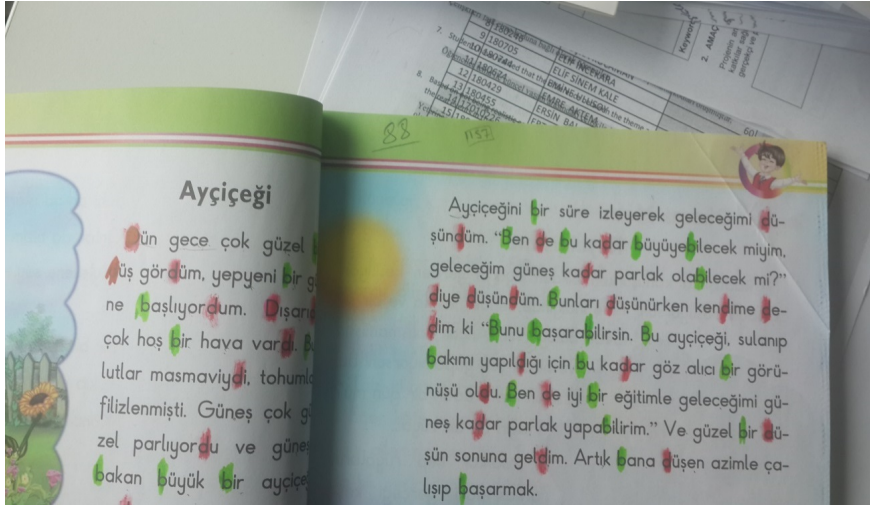
Figure 1. Use of Colours in the Text.

dents. The students were asked to read aloud. Echo, repeated and paired reading was carried out as a reinforcement tool. The students were first asked to perform echo reading in which the students listened to understand how to read the coloured letters in a word; then, they were asked to reread. Following echo reading, paired reading was carried out to help students with reading activities. The students read with their teachers or researchers at first. Then he/she was required to read the rest of the text by himself/herself. The teacher or researcher immediately corrected their reading mistakes. Then, repeated reading was performed by the students. They read some part of the text with their teachers or researchers; then, continued reading by themselves. The essential feedback was provided to the student. The reading activity lasted until the students gained fluent reading skills. It was aimed that the students had self-determination with these activities.

Concretization

The confused letters were concretized with daily life examples. For instance, the letter 'b' was consubstantiated with spring and concretized by using green. In addition, concretization was made by telling short stories related to the subject as follows: 'Mom wanted lemon from Lale. Lale gave three yellow lemons to her mom. Mom squeezed the lemons into the salad Lale had prepared.' In this short story, the letter 'l' was concretized with yellow. The student was expected to recognize the letter 'l' with the help of 'yellow' and 'lemon.'

Data Collection Tools

The texts in the study were taken from Turkish course books confirmed by the National Board of Education of the Ministry of Education. The fact that the books which were appropriate for their level were not encountered by the students was taken care of. The opinions of five teachers working with second grade and three experts in the elementary teacher education department were taken. Five texts confirmed by the experts were used as a data collection tool.

Evaluation activities were carried out to determine students' level of oral reading and reading comprehension. The students were first asked to read aloud the stories chosen from the book. The confused letters by the students were determined while they were reading. The student, coded as Osman, was observed to confuse b-d, b-p and d-t letters. However, the other student, Murat, confused b-d, l-n and m-n letters. In the activities colours such as green for –b, red for –d, pink for –p, orange for –t, blue for –m and reddish orange for –n letter was used. Additionally, the letter 'l' was concretized by using 'lemon' word. Reading comprehension skill was evaluated by a text taken from a Turkish course book for second grades. The texts were as follows; Reading Text 1: "Sunflower" (88 words and 157 syllables), Reading Text 2: "If Every Day Was a Feast" (103 words and 230 syllables), Reading Text 3: "Snowdrop" (106 words and 294 syllables), Reading Text 4: An example of letter (301 words and 752 syllables) and Reading Text 5: "Competition of the Rabbit and the Turtle" (341 words and 912 syllables). Those texts were read by students and recorded by researchers. Following the oral reading, the students were asked to answer the questions about the texts.

Data was collected through peer assessment as well. The students with dyslexia were paired with a student in their school, whose reading level is similar to theirs. One of the students determined the reading errors while the other was reading aloud. According to Temizkan (2009), peer assessment is a process carried out to help students gain certain behaviours and skills as well as an evaluation tool. For this reason, peer assessment may be regarded as an element of both assessment and evaluation and context of the teaching-learning process. The students should be instructed to study collaboratively and complement one another. Peer assessment can be performed by the whole class or a student as well. The students' evaluations were supported by the teachers and researchers who determined the errors which were not detected by the students.

Application Process

The activities were planned based on the approach of 'with student' instead of 'on-student.' Teachers carried out the activities to reduce reading difficulties

under the guidance of researchers. The activities include developing visual perception by colouring the confused letters, echoing, pairing and repeated reading and forming visual symbols at the beginning and end of calculations. The researchers showed how to perform those activities and teachers continued applying. The parents participated in the process as well. The activities carried out by teachers were repeated by parents at home. The possible situations to occur during the process were negotiated in advance and attempts were made to reduce the mistakes. The teachers conveyed the problems they encountered to the researchers. The researchers immediately investigated the problems and made an explanation to teachers and parents. The decision to pass on to the next step within the study was made by teachers and researchers. It was passed on to the next step if the student was believed to be ready.

Data Analysis

The activities were observed through semi-structured forms. If an additional situation occurred except the ones in the forms, it was evaluated by researchers, teachers and parents. The findings were presented to academicians from the related department. The ones confirmed by the academicians were included in the findings of the study.

The reading level was analysed by using 'Running Records' adapted by Akyol (2011) from Harris and Sipay (1990), Ekwall and Shanker (1988) and May (1986). There are three levels according to Running Records:

Independent Level: The level at which a student can read and comprehend without the help of a teacher or parents.

Instructional Level: The level at which student can read and comprehend with the help of teacher and parents.

Frustration Level: The level at which a student makes several reading errors and comprehends a very limited part of the text.

The reading errors made by students were determined based on the studies by Basar et al. (2016) and Basar et al. (2014). Reading comprehension questions were prepared according to Revised Bloom Taxonomy. The scoring is presented in Table 1.

The reading comprehension activity was carried out with five texts. The maximum point a student can obtain is 21 points from a single text as seen in Table 1. He/she is able to gain 105 points from five texts.

The Aesop Tales, included in 100 Essential Reading Application which was put into effect by the Ministry of Education, were selected for copy reading and dictation activities. The tales were as follows: The Cock and the Fox,

Table 1

The Points of the Reading Comprehension Questions.

Question Level	Question Point
'Knowledge' Level Questions	1 point
'Understanding' Level Questions	2 points
'Application' Level Questions	3 points
'Analysis' Level Questions	4 points
'Evaluation' Level Questions	5 points
'Generating' Level Questions	6 points

The Goatherd and the Goat, The Fox and the Drum, Two Hungry Dogs, The Lamp, The Fortune teller, The Wolf and the Shepherd, The Shepherd's Boy and the Wolf and Truth and the Traveller. Akyol (2013) suggested that low-level texts should be read by students who experience reading difficulties. The aforementioned tales were chosen for students to read since teachers stated that second-grade students were interested in tales. However, the following texts taken from a previous Turkish coursebook which the students cannot encounter and are advised by the National Board of Education of the Ministry of Education were used to carry out reading comprehension activities: Reading Text 1: Sunflower, Reading Text 2: If Every Day Was a Feast, Reading Text 3: Snowdrop, Reading Text 4: An example of letter, Reading Text 5: Competition of the Rabbit and the Turtle.

Findings of the Study

First Research Question

Within the scope of activities to remove the problems in visual and auditory perceptions of students who experience learning difficulties, the effectiveness of the use of colours and findings relating to reading comprehension are presented in Tables 2 and 3.

The activity was supported through the methods of echo, paired and repeated reading. The number of letters confused was decreased in the following texts. In Table 2, Osman was observed to confuse letters in 22 words whereas Murat was seen to confuse 24 words in the first reading text. In addition, Osman confused m-n letters in a word in a text named 'Competition of the Rabbit and the Turtle' whereas Murat had no reading errors resulting from letter confusion although no colouring was made for the letters. It has

been revealed that the use of colours is effective in removing students' inability in visual perception based on learning difficulty.

Table 2

Students' Reading Errors Situations Following Colouring Activity.

Student		Osman	Murat
Reading Text 1 "Sunflower"	The number of Words	88	88
	The number of Confused Words	22	24
Reading Text 2 "If Every Day Was a Feast"	The number of Words	103	103
	The number of Confused Words	16	18
Reading Text 3 "Snowdrop"	The number of Words	106	106
	The number of Confused Words	8	10
Reading Text 4 "An Example of Letter"	The number of Words	301	301
	The number of Confused Words	3	4
Reading Text 5 "Competition of the Rabbit and the Turtle"	The number of Words	341	341
	The number of Confused Words	1	-

According to Table 3, both Osman and Murat were observed to make several reading errors and have very limited reading comprehension, being at frustration level in the first and second texts. However, in the third and fourth texts, being at the instructional level, they were able to read at the desired level with the help of teachers and parents. In addition, the students were able to reach an independent level in which they do not need their teachers' or parents' help to read. Dialogue reading combined with echo, paired, repeated and informed reading have been observed to reduce reading errors and develop reading comprehension skills in students with dyslexia.

Second Research Question

The findings related to the effectiveness of dialogue reading in reducing students' reading errors are included in Table 4.

Table 3

Reading Comprehension Situations of the Students.

Student		Osman	Murat
Reading Text 1 "Sunflower"	Point	8	9
	Percentage Level	Frustration	Frustration
Reading Text 2 "If Every Day Was a Feast"	Point	14	13
	Percentage Level	Frustration	Frustration
Reading Text 3 "Snowdrop"	Point	16	16
	Percentage Level	Instructional	Instructional
Reading Text 4 An "Example of Letter"	Point	18	19
	Percentage Level	Instructional	Instructional
Reading Text 5 "Competition of the Rabbit and the Turtle"	Point	20	21
	Percentage Level	Independent	Independent

Table 4

The Effectiveness of Dialogue Reading on Reducing Reading Errors.

Student		Osman	Murat
Reading Text 1 "Sunflower"	The number of the Words	88	88
	The number of Misread-words	26	28
Reading Text 2 "If Every Day Was a Feast"	The number of the Words	103	103
	The number of Misread-words	8	6
Reading Text 3 "Snowdrop"	The number of the Words	106	106
	The number of Misread-words	21	19

Table 4 continued

Reading Text 4 An "Example of Letter"	The number of the Words	301	301
	The number of Misread-words	6	6
Reading Text 5 "Competition of the Rabbit and the Turtle"	The number of the Words	341	341
	The number of Misread-words	5	4

The effect of dialogue reading on reducing the reading errors of students with dyslexia is presented in Table 4. Three out of the five texts given to the students include dialogues. It was revealed that there were fewer reading errors in the texts including dialogues although they have more letters compared to the texts which do not include dialogues. Students were seen to make more omission, adding and confabulation errors in the texts that do not include dialogues. It was observed that students with dyslexia make fewer reading errors in texts containing dialogue.

Third Research Question

The findings related to the effectiveness of peer assessment in reducing students' reading errors are presented in Table 5.

Peer assessment is a method to evaluate the reading errors of dyslexic students. As seen in Table 5, Murat determined 18 reading errors of Osman and Osman determined 19 reading errors of Murat in the 'Sunflower' text. In addition, teachers identified 4 reading errors from Osman and 5 reading errors from Murat as well. The errors were listed and given to the students. The students were asked to reread. It was observed in a previous study that the longer the duration of reading was, the error rate increased. For this reason, the students were not asked to read more than twice a day. The reading activity was performed as paragraphs. Students' reading errors in the first paragraph were corrected, and then the second paragraph was read. Both Osman and Murat made no reading errors in the third repeat. In 'If Every Day Was a Feast' text, no reading errors were observed in the second repeat. The students were interested since it was a dialogue text. Similarly, the number of reading errors was dramatically decreased in the second repeat in an example of Letter. Therefore, the text was not asked to be read in the third repeat; the errors were immediately corrected. Since the students made a few reading errors while reading 'Competition of the Rabbit and the Turtle' reading text for the first time, the errors were corrected, and the text was not reread. Dyslexic students corrected their reading errors while determining those of his/her friends.

Table 5

The Effectiveness of Peer Assessment on Reducing Reading Errors.

Student		Osman	Murat
Reading Text 1 " Sunflower"	The number of the Words	88	88
	The number of Peer Correction	22	24
Reading Text 2 " If Every Day Was a Feast"	The number of the Words	103	103
	The number of Peer Correction	16	18
Reading Text 3 "Snowdrop"	The number of the Words	106	106
	The number of Peer Correction	8	10
Reading Text 4 An Example of Letter	The number of the Words	301	301
	The number of Peer Correction	3	4
Reading Text 5 "Competition of the Rabbit and the Turtle"	The number of the Words	341	341
	The number of Peer Correction	1	-

Discussion and Conclusions

Teachers and researchers coloured –d letter green, correlating it with 'spring' and –d letter pink in the first text as seen in Table 1, thereby developing students' visual perception. All –b and –d letters in the first text were coloured. The methods of echo-paired and repeated reading were carried out for students to comprehend the confusing letters in the present study in which the individualized reading program was based on inclusive education and an individualized educational model. The student's reading comprehension level was revealed to change from frustration to independent level. In addition, it was observed that the number of coloured letters decreased in the following texts. In 'Competition of the Rabbit and the Turtle' reading text in which there were no coloured letters, Osman confused the letters in a word although Murat

did not make any reading errors based on letter confusion. However, there are other studies available supporting the findings of this study. Akyol and Sever (2019) indicated that using the methods of echo, paired, repeated reading and reading with prosody helped the students experiencing reading difficulties develop self-confidence although their reading level was at a frustration level. Akyol and Kayabasi (2018) observed that supporting an individualized reading program with 'Paired and Repeated Reading' reduced the students' reading and reading comprehension errors. Gurbuz (2015) suggested that the 'Six-minute Solution' method is effective in reducing students' reading errors. Those types of reading supporting the study have been observed to help students grasp the phonological structure of language. Saksida et al. (2016) concluded that the students who did not understand the phonological structure of language failed in reading comprehension. Dyslexic students were revealed to comprehend the phonological structure of language through different types of reading. Supporting the activities with different types of reading has been indicated to help dyslexic students perceive the letters and develop reading and reading comprehension skills. In addition, the use of colours together with reading activities to reduce students' inability in visual perception due to dyslexia have been observed to transfer information from short-term to long-term memory and affect the reading comprehension level.

Students were revealed to be more willing to read the dialogue texts and to make fewer reading errors. The number of reading errors decreased as of the first text although the following texts consisted of more letters. It has been concluded that reading dialogue texts aloud is effective in dyslexic students. There has been no study as yet which investigates the effect of dialogue reading on elementary school and other students. However, studies have been carried out to investigate the effect of dialogue or interactive reading during the pre-school period. There have been studies as well which suggest that dialogue reading contributes to 48- 60 months- old babies' language development, raises awareness in terms of the phonological structure of language and enriches vocabulary lexicon (Opel et al., 2009; Reese et al., 2010; Tetik & Erdogan, 2017). As a result, dialogue reading has been suggested to be used in dyslexic students' education since it supports students to comprehend the phonological structure of language and draws students' attention.

Peer assessment is a method used to evaluate the reading errors of students with dyslexia. The students with dyslexia were able to correct both their own and friends' errors through the peer assessment method. It has been concluded that peer assessment is effective in reducing reading errors. The study by Gurbuz (2015) supports the findings of this study. Gurbuz (2015) investigated the effect of the Six-minute solution method which also included peer assessment on fluent reading and reading comprehension. Gurbuz (2015) suggested that peer assessment developed students' fluent reading and reading comprehen-

sion skills.

The use of colours method is effective in reducing the level of letter confusion by dyslexic students due to their inability to visual and auditory perceptions. Dyslexic students should be supported with the methods of echo, paired and repeated reading to recognize the letters and comprehend the numbers and number operations. The activities may be carried out on digital media as well to appeal to multiple senses. Dialogue reading has been determined to be effective in reducing reading errors of dyslexic students. For this reason, dialogue reading should be included in in the education of dyslexic students. The peer assessment method has also been determined to be effective in reading errors resulting from reading difficulty. Peer assessment activity should be included in the education of students with dyslexia. Different activities that appeal to more than one sense should be done in the education of students with dyslexia.

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