

## Developing Reading Fluency: An Action Research\*

### Akıcı Okumayı Geliştirme: Bir Eylem Araştırması

Hayati Akyol<sup>1</sup>  Osman Gedik<sup>2</sup>  Cebrail Turna<sup>2</sup> 

<sup>1</sup> Prof. Dr., Gazi Üniversitesi, Gazi Eğitim Fakültesi, Ankara, Türkiye

<sup>2</sup> Dr. Öğr. Üyesi, Niğde Ömer Halisdemir Üniversitesi, Eğitim Fakültesi, Niğde, Türkiye

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##### \*Sorumlu Yazar

Osman Gedik

Niğde Ömer Halisdemir  
Üniversitesi, Eğitim Fakültesi,  
Temel Eğitim Bölümü, Sınıf  
Eğitimi Anabilim Dalı.

osmangedik0@gmail.com

**Abstract:** In this study, it was aimed to improve the reading fluency performance of a primary school 3rd grade student who has reading difficulties. This study was carried out in the spring semester of 2021 in the form of action research, one of the qualitative research methods. First of all, in order to determine the student's current reading performance, texts at his/her own grade level were read and the student's actual reading level and reading fluency problems were determined. In order to determine the reading fluency levels of the students, the Prosodic Reading Scale was used together with the Informal Reading Inventory. After determining the current reading performance of the student, a 7-week action plan was prepared and implemented, with two hours of lessons per week (three hours in the last week) and 15 lesson hours in total. Within the scope of the action plan, reading texts at grade levels appropriate to the current situation of the student were used. In order to improve the student's reading fluency performance, the fluent reading strategies specified in the related literature were examined and in this study, repeated reading, paired reading and word drill techniques were used. In addition, the parents of the student were interviewed at the end of the study and their opinions about their child's performance were obtained. As a result, it was seen that the strategies and techniques used had a positive effect on every component of reading fluency (accuracy, speed, prosody).

**Keywords:** Reading fluency, paired reading, word drill techniques, repeated reading, action research

**Öz:** Bu çalışmada okuma güçlüğü yaşayan bir ilkököl 3. sınıf öğrencisinin okuma akıcılığı performansının geliştirilmesi amaçlanmıştır. Çalışma 2021 yılı bahar yarıyılında, nitel araştırma yöntemlerinden eylem araştırması şeklinde yürütülmüştür. Öncelikle öğrencinin mevcut okuma performansını belirlemek için kendi sınıf seviyesinde metinler okutulmuş ve öğrencinin gerçek okuma düzeyi ile akıcı okuma sorunları belirlenmiştir. Öğrencinin okuma akıcılığı düzeylerini belirlemek için Yanlış Analiz Envanteri ile birlikte Prozodik Okuma Ölçeği kullanılmıştır. Öğrencinin mevcut okuma performansının tespitinden sonra haftada 2 ders saati (son hafta 3 saat) ve toplamda 15 ders saati olacak şekilde 7 haftalık eylem planı hazırlanmış ve uygulanmıştır. Eylem planı kapsamında öğrencinin mevcut durumuna uygun sınıf seviyelerinde okuma metinleri kullanılmıştır. Öğrencinin akıcı okuma performansını artırmak için ilgili alan yazında belirtilen akıcı okuma stratejileri incelenmiş ve bu çalışmada tekrarlı okuma, eşli okuma ve kelime tekrar tekniği kullanılmıştır. Ayrıca öğrencinin velisi ile de çalışma sonunda görüşme gerçekleştirilmiş ve çocuğunun performansı hakkında görüşleri alınmıştır. Sonuç olarak, bu çalışmada kullanılan strateji ve tekniklerin okuma akıcılığının her bileşenini (doğruluk-hız-prozodi) olumlu yönde etkilediği görülmüştür.

**Anahtar Kelimeler:** Akıcı okuma, eşli okuma, kelime tekrar tekniği, tekrarlı okuma, eylem çalışması

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## Introduction

Reading is a basic skill that affects an individual's life from the early stages to the end. In other words, reading is a skill that a person needs from childhood to death. Reading affects the students' performance in not only verbal lessons but also science courses. For example, Jordan, Kaplan, and Hanich (2002) stated that students who have problems in reading are also behind their peers in mathematics lessons. For this reason, difficulties in reading and reading comprehension negatively affect not only the course performance of students directly related to verbal reading, but also their general academic performance. The continuation of this situation, even if there is no disability, will cause low academic performance and consequently weakness in academic skills, negative learning experiences and loss of motivation. Reading problems and literacy-related problems that cannot be resolved in the early stages continue into adulthood, resulting in low levels of education, unskilled employment, and often unemployment (Maughan et al., 2020). For this reason, reading is one of the

most basic and important skills that all students are expected to acquire.

Reading, in its simplest form, is the process of making sense of written symbols (Gough & Tunmer, 1986). According to Akyol (2003), reading is seen as the process of constructing meaning in an organized environment, based on interaction between the author and the reader, in which prior knowledge is used, in accordance with an appropriate method and purpose.

As it can be understood from the definitions of reading, reading basically consists of two main steps: decoding and reading comprehension (Güldenoğlu et al., 2012; Turna & Güldenoğlu, 2019). These two specified steps develop and take place in a hierarchical order. However, it should be noted that the main purpose of reading is reading comprehension because every reading action that does not reach the meaning cannot go beyond pronunciation. More precisely, in order for a healthy reading process to function, the analysis must be done smoothly, and the meaning must be reached by reading the analyzed words fluently. From this point of view, fluency

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emerges as a component that acts as a bridge between decoding and understanding.

Reading fluency is defined as reading the words encountered in the text without difficulty, that is, with the least effort, with appropriate emphasis, intonation, and pauses at the speaking rate (Zutell & Rasinski, 1991). In another definition, fluent reading is defined as reading by paying attention to punctuation marks, emphasis and intonation, avoiding backtracking and word repetitions, avoiding spelling out and unnecessary postures, paying attention to meaning units, and performing as if speaking, (Akyol, 2010). In other words, fluency is the vocalization of the texts/symbols in the text with appropriate speed and accuracy with appropriate intonation (Speece & Ritchey, 2005). Reading fluency, which consists of three main components: speed, accuracy and prosody, is a prerequisite skill required for reading comprehension (Hudson et al., 2009; Klauda & Guthrie, 2008; Kuhn, et al., 2010; Rasinski & Samuels, 2011). With reading fluency, instead of giving meaning to the words in the text one by one, the whole text is processed and the way to reach the meaning is opened.

Reading speed is the number of correct words an individual reads in one minute. For this, the number of words read incorrectly is subtracted from the total number of words read in a minute, and thus the reading speed is determined by reaching the correct number of words read in one minute (Deeney, 2010). Reading speed can also be calculated by dividing the total number of correctly read words by the total reading time and then multiplying the division by 60 (Rasinski, 2010). Reading speed can increase through repeated readings (Keskin & Akyol, 2014). A slow reading speed prevents a healthy understanding of the relationships between word and word groups and therefore, between sentences. Reading accuracy is the correct reading/voicing of the words in the text. Reading accuracy is expressed as the percentage value obtained by multiplying the total number of correct words read in the text divided by the total number of words by 100 (Akyol et al., 2014, p. 10; Hudson et al., 2005; Rasinski, 2004). In other words, reading accuracy is the ratio of correctly read words to the total words. Accordingly, reading accuracy of 89% and below is considered as anxiety level, instructional level between 90-94% and above 95% as independent level (Rasinski & Hoffman, 2003). The inability to read the words in the text significantly affects both reading speed and comprehension, as it will cause them to be read again or the meaning to differ. Prosody, on the other hand, is expressed as the reading of the text in an appropriate tone with appropriate emphasis and pauses (Keskin & Akyol, 2014).

When the related literature is examined, it is seen that there is a positive relationship between fluency and reading comprehension (Baştuğ & Keskin, 2012; Björn et al., 2016; Çetinkaya et al., 2016; Kim, 2015; Klauda & Guthrie, 2008; Yıldız et al., 2014). In other words, students who have difficulties in fluency also have difficulties in reading comprehension. For this reason, in order for reading to reach its goal, first of all, if there are difficulties related to fluency, they should be eliminated. Otherwise, the student who reads very slowly, inaccurately and in an inappropriate tone will spend her cognitive processes and attention on vocalization, and it will be very difficult for him/her to reach the meaning. However, students with reading difficulties often make reading errors such as speed reading without attention, skipping words, adding, and repeating (Akyol & Kodan, 2016). Methods such as paired reading, repeated reading, structured fluent reading, choral reading, echo reading, and

word drill techniques are used to improve students' fluent reading (Keskin & Baştuğ, 2013).

In this study, repeated reading, paired reading and word drill techniques were used from fluent reading strategies. In the literature, it is seen that each strategy and technique has positive effects on reading fluency. However, the debate on which strategy or technique is more effective continues (Tobin & Hill, 2012). At this point, the issue of which strategy or strategies will contribute more to students gains importance. For this reason, an intervention program was created by selectin three of the strategies that were found to be effective in eliminating the reading problems of students with reading difficulties by researching the relevant literature. In this study, in order to improve reading fluency, it was deemed appropriate to use the repeated reading strategy, which has come to the fore in many studies (taking into account the student's situation). Related studies in the literature also indicate that the repeated reading strategy has positive effects on reading fluency and thus contributes positively to reading comprehension performance (Escarpio & Barbetta, 2016; Landa & Barbetta, 2014; Tam et al., 2006). Secondly, it was decided to use the paired reading strategy, which allows students to read texts at a higher level than their reading level (Vygotsy, 1978) and has positive contributions to reading fluency (Topping et al., 2012) and to students' reading motivation, self-esteem and teacher-student relationships (Monteire, 2013). Finally, the word drill technique (Berg & Lyke, 2012), which allows the learner to quickly analyze the words and correct the incorrect words, was chosen.

Repeated reading means having the reader read the same text more than once. The aim here is to enable the student to read the words in the text automatically without the need for decoding (Burns & Wagner, 2008). Thus, with the gaining of familiarity with the words in the text, a decrease in reading errors and an increase in reading speed are expected. Although there is no clear number of repetitions to be made, studies in the related literature are generally done three times or until the fluency criterion is met (Lee & Yoon, 2017; Musti-Rao et al., 2009). Repeated reading is accepted as one of the most effective methods in gaining reading fluency (O'Connor et al. 2007). Paired reading is simultaneous repetitions with a peer or an adult. At this point, the point to be noted is that the spouse should be a more competent reader than the reader. In this way, the act of reading is performed at the same time. The word drill technique, on the other hand, is the repetition of the words that students misread during reading. In this technique, the teacher makes the student read a text, and after reading, writes all the words that the student misread on a card. The teacher presents the words that the student misread as written on the cards one by one. The teacher reads the word and the student repeats the word. Each word that is read correctly is removed from the table. The teacher repeats the operations until the student correctly reads the words presented to him (Rosenberg, 1986).

In this study, it is aimed to increase reading fluency by eliminating the reading difficulties of a third grade student who has reading difficulties. Escarpio and Barbetta (2016) examined the effect of repeated reading on reading fluency in their study. As a result of the study, they concluded that repetitive reading is more effective on reading fluency than non-repetitive reading. Dotson-Shupe (2017) investigated the effect of repeated reading strategy on reading comprehension skills. As a result of the study conducted in the form of action research, they found that the repeated reading strategy improved reading comprehension skills. Kardaş-İşler and

Şahin (2016) examined the effectiveness of the paired reading strategy to overcome the reading difficulties of a primary school student with reading difficulties and found that the paired reading strategy improved the student's reading fluency. Erdoğan and Şenocak-Kasranoglu (2017) examined the effect of word drill technique on reading fluency in an action research study. As a result of the study, they found that the word drill technique made significant contributions to the reading fluency of students with reading difficulties. In this context, paired reading and repeated reading strategy and word drill technique were used to increase the student's reading fluency. For this purpose, answers to the following questions will be sought:

1. How was the current situation among the students' reading speed, accuracy, and reading fluency skills during the action plan process prepared and implemented for the elimination of reading difficulties and the development of reading fluency skills?
2. How has the student's reading speed improved during the action plan process prepared and implemented for the elimination of reading difficulties and the development of reading fluency skills?
3. How has the student's reading accuracy improved in the course of the action plan prepared and implemented for the elimination of reading difficulties and the development of reading fluency skills?
4. How did the student's reading prosody develop during the action plan process prepared and implemented for the elimination of reading difficulties and the development of reading fluency skills?
5. What are the students' views on the reading activities applied to develop reading fluency skills?
6. What are the views of the parents of the students about the reading activities applied to develop reading fluency skills?

## Method

### Research Model

This study was carried out using the action research model, which is one of the qualitative research methods. Action research focuses on development and improvement. Action research, which integrates research and actions that include different and multiple steps and have a flexible range of action (Somekh, 2006), instead of a single method/technique, is the definition of the problem, taking action/intervention to solve the problems, seeing how successful the interventions are, or it is a research model that includes retry processes (Gürgür, 2016; O'Brien, 2001).

This action research was planned and continued with the action research model designed by Whitehead and McNiff. According to Whitehead and McNiff (2006), this model is an internal circular design of the model by following the steps of determining the initial level, piloting the process to plan the process more controlled, reviewing the applications and revisiting the application to continue from where it left off. Then, the external circular design of the model was carried out with the steps of observe, reflect, act, evaluate, review and move in new directions. The action plan model is cyclically presented in Figure 1.

In this study, which aims to increase the reading fluency performance of a third grade student who has reading difficulties, firstly, a preliminary assessment was made to

determine the initial level and current performance. In the analysis made for the pre-assessment, the reading accuracy of the student was found to be the teaching level in the first grade text. In the preliminary evaluations, it was decided to conduct a pilot application with first-class texts in the meetings held with the validity committee in order to plan the action study and to clarify the initial level. In the pilot applications, each session was re-analyzed with the "review" step, and it was found that the first grade texts had an independent level according to the Informal Reading Inventory. The intervention program to be carried out was determined by holding repeated meetings of the validity committee and by examining the relevant literature, and an action plan was created with second-class texts within the framework of the last internal cyclical steps of the model, revisit and observe and reflect the external cyclical steps. During the action process, a total of seven weeks (three hours in the last week) and 15 hours of intervention program was applied with the student for two hours on two different days a week (Tuesday-Friday) and the "take the action" step was fulfilled. The "review" step was carried out by listening to the audio recordings of the texts read with the student in each session, and the changes in the student's reading fluency skills were reviewed in the process through tables and graphics, and the process development performance was presented in the findings of the research. In order to carry out the "move to new directions" step, which is the last step of the model, a process evaluation was made with semi-structured interview forms with both the student and the parent, and the action plan was finalized by making various recommendations and directions for the student to be successful in his academic life and in the development of reading skills after the action study.

### Characteristics of the Participant

Within the scope of the research, a pseudonym (Eren) was used in order to conceal the identity of the participant studied in order to develop reading fluency skills. Although Eren did not have any reported disability, it was determined that he did not have any mental disability as a result of the evaluations and observations made by two separate special education experts. However, as a result of the observations made, it was observed that he did not experience any language problems.

Eren, a third year primary school student, attends a public primary school. Eren's father works as a teacher at a public school and his mother works as an academic at a public university. Eren lives with his mother and father. His mother stated that Eren had difficulties in doing his homework and therefore, he did not like doing homework. It was stated that although he did not have an intellectual disability, his attention was quickly distracted while doing homework and during the study hours. During the studies, attention was paid to keep the door and window of the room closed in order not to distract the participant, and that there were no distractions on the table where the study was carried out.

Behavioral observations of his family were used. Although the participant is calm and harmonious, he has a very social personality. It has been observed that he initiates and maintains communication. Eren, who continued his third grade in a public school, completed his first and second grade education in a private primary school. During the interview with Eren, it was learned that he did not like his teacher at his former school and therefore did not do/fulfill his school assignments.

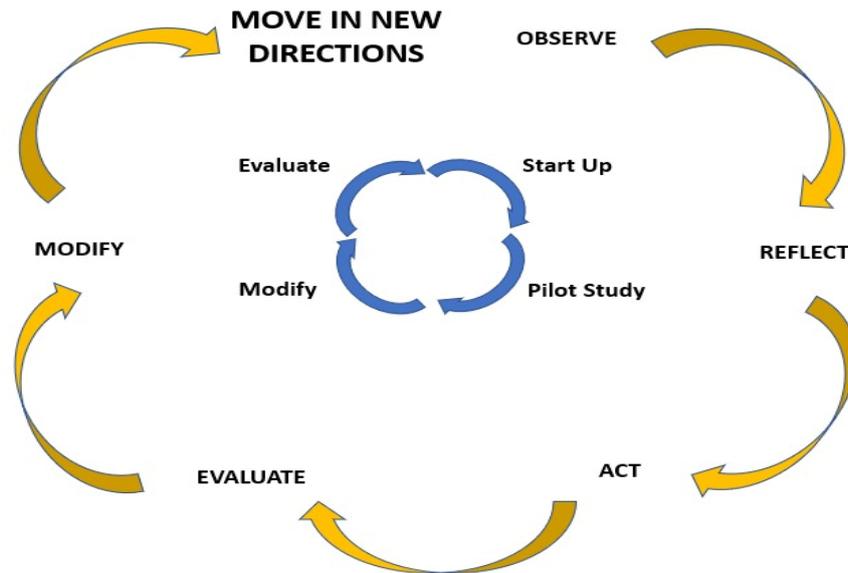


Figure 1. Action plan cycle

It has been observed that the participant has no deficiencies in pronouncing sounds and recognizing letters, but he makes mistakes in adding or subtracting sounds or syllables to the words he reads, misreading, and leaning too much towards the book during reading, so he cannot achieve the proper sitting position. In addition, it was determined that the participant made word recognition errors due to the fact that he read the texts very quickly.

### Study Environment

The study was generally carried out in an empty office at the university on weekdays when the participant was available (because the participant's mother was also an academic). Since the participant had come to the working environment with his mother many times before, he had no difficulties in getting used to the environment. There were a table and two chairs in the environment where the study would be conducted, and there was no object or material that would distract the student. Throughout the study process, a sensitive attitude was displayed towards the parents by being in frequent contact with their opinions, wishes and demands. It is thought that the communication with the parents has a positive contribution to the learning and teaching environment and process.

### Data Collection Tools

In this study titled "Developing Reading Fluency: An Action Research", the texts in the 1st, 2nd and 3rd Grade Turkish Textbooks presented to the students by the Ministry of National Education were used. In the study, voice recordings were taken (with the approval of the family) in order to better evaluate the reading performance of the student. Below are the tools used with their details:

1. *Reading Texts*: Texts in Turkish Textbooks prepared by the Ministry of National Education to determine the student's reading performance and apply them in teaching were used. At this stage, the student's parents were interviewed and attention was paid to select texts from the books that the student did not actively use as textbooks at school. In this way, it was assumed that the possibility of encountering the text before the student was eliminated. In addition, each selected text was shown to an academician, who is a field expert, before the session and his opinion was taken.

2. *Voice Records*: In order to evaluate the reading performance of the student participating in the study in each session, the reading performances were audio recorded. In this way, the student's reading speed, reading accuracy, mistakes, etc. are identified more clearly.

3. *The Informal Reading Inventory* (Akyol, 2016), which is one of the assessment tools including various dimensions to determine and evaluate the situation about reading, consists of a guide for word comprehension and percentage determination. The inventory consists of four parts: error types and symbols, word recognition level and percentage determination guide, question scale and comprehension levels table. Thus, it provides an opportunity to determine the level of vocabulary, types of errors and reading comprehension levels of the readers. With this inventory, three types of reading levels are determined.

**Independent Level**: It refers to the child's ability to read and understand materials appropriate to his/her level without the need for the help of a teacher or other adult.

**Instructional Level**: It refers to the child's ability to read and understand as desired with the support of a teacher or an adult.

**Frustration Level**: It refers to the level at which the child understands very little of what he reads and/or makes many reading mistakes.

In the Inventory, the level of word recognition is at least 99%; those with 90% or more comprehension level are defined as Independent Level, word recognition level between 91-99% and comprehension level between 51-89% are defined as Instructional level, word recognition level is defined as 90% and below, and readers with 50% and below comprehension level are defined as Frustration level.

4. *Prosodic Reading Scale*: In the study, the Prosodic Reading Scale developed by Keskin, Baştuğ, and Akyol (2013) was used to evaluate prosodic reading, which is a subcomponent of fluent reading skills. In the 5-point Likert-type scale consisting of 15 items, the lowest score for each item is 0, the highest score is 4, and the highest possible score is 60. In order for the prosodic reading to be considered successful, the total score must be 50% or more (over 30 points).

5. *Interview Forms*: In order to evaluate the reading process and to ensure social validity, semi-structured interview

questions were prepared by the researchers in order to make the interviews with both students and parents more systematic. The prepared questions were presented to three field experts and given their final form after the necessary arrangements were made with the feedback received. As a result, semi-structured interview forms consisting of three questions were created. In this context, the following questions were asked to the student:

1. What do you think about the reading process we conducted together?
2. I want you to remember the word drill cards and repeated reading lessons we performed. How did these studies that we did together affect your reading development?
3. Were these reading exercises we carried out fun? Would you like to continue the same reading studies with me in the coming days?

The following questions were asked to the student's mother:

1. What do you think about the reading process we carried out with your child?
2. How did the reading activities we carried out using word drill and repeated reading techniques affect your child's reading development?
3. How did these reading activities we carried out affect your child? Would you like your child to continue the same reading exercises with me in the coming days?

### Data Analysis

In this study, which aims to develop reading fluency skills, the data obtained from the voice recordings of each week related to the development of reading fluency skill were used in the process after determining the current situation with pre-applications and pilot applications in the analysis of the data. The Informal Reading Inventory was used to determine the participant's reading performance. Reading speed and accuracy were calculated with recorded sessions. In addition, the student's prosodic reading performance was also evaluated according to the Prosodic Reading Scale.

### Action Process and Applications

#### Determination of Reading Fluency Level

In order to determine Eren's current reading level, firstly, the texts suitable for his grade level were determined and used in the pre-assessment process. Determining the reading level took 2 lesson hours (80 minutes).

Eren, who was a third grader, was given a text called "Sabunun Öyküsü" from the Turkish Textbook of third graders and consists of 178 words. The reading time was recorded as three minutes 17 seconds (197 seconds). He made a reading error in 27 words in total. 24 of these errors were adding/removing sounds or syllables to the word, and three of them were skipping and passing errors. According to the Informal Reading Inventory, the reading accuracy was 79% and it was considered unsuccessful in word recognition because it was below 91%. In this case, the reading performance level of the student in the third grade text was at the level of frustration. The prosodic reading performance of the student was also evaluated with the voice recording. As a result, prosodic reading performance was also below 50%. For this reason, Eren was evaluated with another text at a lower class level.

Afterwards, Eren was given a text which is entitled "Efe Tiyatroya Gidiyor", and consisting of 118 words in the second grade Turkish Textbook. The reading time was recorded as one minute 40 seconds (100 seconds). He made a reading error in 12 words in total. 10 of these mistakes are adding/removing sounds or syllables to the word, two of them are skipping mistakes. According to the Informal Reading Inventory, the reading accuracy was 89% and it was considered unsuccessful because the word recognition level was below 90%. In this case, the student's reading level was at the level of Frustration. The prosodic reading performance of the student was also evaluated with the voice recording. As a result, prosodic reading performance was also below 50%. For this reason, Eren was evaluated with another text at a lower class level.

With the frustration level of the reading performance at the second grade level, he was asked to read a text at the first grade level, which is a subclass. In this context, the text called "Bay Yavaş" (Mr. Slow) consisting of 84 words in the first grade Turkish Textbook was read. The reading time was recorded as 1 minute 25 seconds (85 seconds). He made a reading error in seven words in total. Five of these errors were determined as adding/removing sounds or syllables to the word, and two as skipping errors. According to the Informal Reading Inventory, the reading accuracy was 92%, and the student's reading level was determined as successful at the instructional level, according to the success percentage between 90-99%. The prosodic reading performance of the student was also evaluated with the audio recording. As a result, the prosodic reading performance has also increased by 50%.

At the meetings held by the validity committee, it was decided to conduct a pilot study with Eren. By using the first grade level texts. Due to the shyness that Eren may experience in the working environment, a 4-hour pilot study was conducted with the participant. In this context, four different texts selected from the textbooks were read to the students at the first grade level. As a result of the evaluations carried out, it was understood that Eren's reading accuracy level was at the independent reading level and his prosodic reading was successful in the last two applications of the first grade texts. Therefore, it was decided to start the actual action practice with the second grade texts.

#### Action Plan for Reading Fluency and Elimination of Reading Errors

Although the participant, Eren, who was determined for the study, was a third grader, his reading level was found to be at the level of Frustration in the second grade in the pre-assessment study. It was seen that Eren made a lot of addition and subtraction errors while reading. It has been observed that he often has difficulty in recognizing words, adding sounds or syllables to words or removing them. In addition, he read without emphasis and intonation, and without paying attention to punctuation marks. As a result of the evaluations done with the Informal Reading Inventory, the following studies were carried out to eliminate the student's reading errors and to increase his reading fluency performance.

This study, which aims to increase reading fluency performance, was carried out as two lessons (80 minutes) per week (three lesson hours in the last week) to cover one lesson hour on Tuesdays and Fridays. In other words, the action plan was completed in seven weeks and 15 hours. In order to improve reading fluency, the relevant literature was examined and it was decided to use repeated reading, paired reading and word drill techniques to improve reading fluency.

In order to make Eren more ready for reading and to feel comfortable, it was ensured that he got used to the environment by chatting about the topics related to topics from his daily life. In order for Eren to trust and approach the researcher sincerely, the researcher introduced himself to Eren and had a little chat. In addition, the researcher tried to increase the motivation of the participant by saying that he would help the participant while reading, that he would not get angry when he made a mistake, that these studies did not have a note value and that they should be quite comfortable, and that they would read together with different techniques in order for their reading to be successful and to gain fluency. Before starting the next sessions, the researcher asked "How are you? How is school going? Has anything important happened to you since we talked?" By asking such questions, the student was relieved and the studies started in this way.

The practitioner and participant sat opposite each other around a table in an empty room. The practitioner said the participant "Now I will give you a text. I want you to read this text aloud in a normal speaking tone. You can start when you're ready." He gave the instruction and took one copy of the text to be read in front of the student and the other in front of him and started to work. The student's reading performance was simultaneously recorded with a voice recorder. While the

student was reading the text, the practitioner followed him and noted the words he read with difficulty or inaccuracy. Then, he created word cards related to the text by writing the words that the student read incorrectly or with difficulty on the pre-prepared word cards.

After the student finished reading the text, these word cards were read to the student. The practitioner provided assistance where the student could not read or had difficulty. If there were words that the student did not know the meaning of, their meanings were also explained. This activity continued until the student read each word fluently. After repeating the words with the word cards, the practitioner said to the student, "Now we will read the same text aloud with you at the same time. "If you're ready, let's get started." As in the first reading process, the practitioner followed the words that the student read incorrectly or with difficulty. If different words were detected from the first reading, they were added to the vocabulary cards after reading. After the second reading was finished, word repetitions were made through the word cards prepared with the student. Then, for the third and final time, he said to the student, "Now I want you to read the same text aloud once more. You can start when you're ready." instruction was given and the student was asked to read the text independently.



Figure 2. Example of created word cards



Figure 3. Examples of word cards created for the second time on misread words

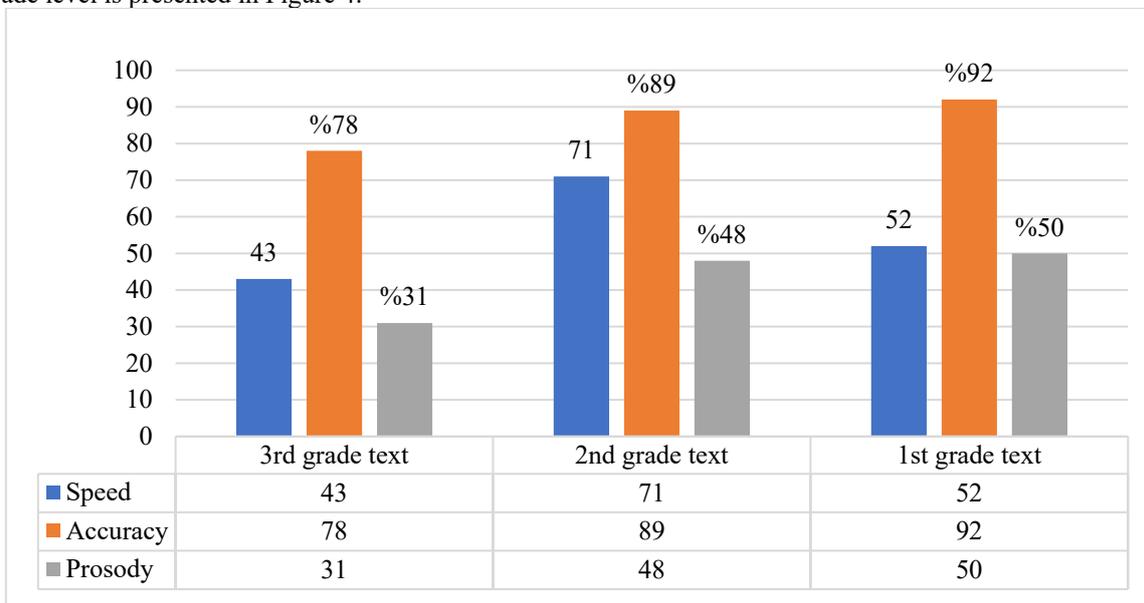
Thus, the text was read three times in total, and one of them was in pairs. Afterwards, before starting every other session, the word cards created in the previous session were read, and then The texts were started to be read. At the end of each session, verbal reinforcers such as “You were great again, Eren. You become more perfect in every lesson. Let's see. High five” and reinforcers like reading medal were given to increase the motivation of the student.

**Results**

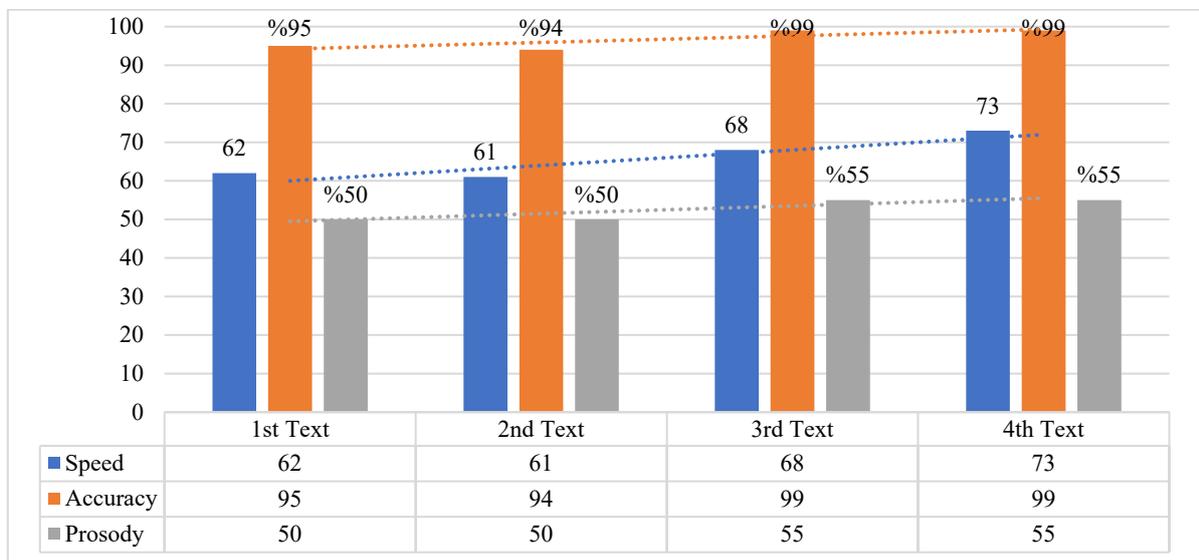
In this section, the effectiveness of the activities and techniques applied throughout the action plan to increase reading fluency performance is evaluated. The first question of the research was, "What is the current situation in the student's reading speed, reading accuracy and reading prosody skills, with the action plan prepared and implemented for the elimination of reading difficulties and the development of fluent reading skills?" The findings related to the question are presented in Figures 1 and 2. In order to reveal the current reading performance of the student, the texts were read starting from her own grade level. The student's reading performance at each grade level is presented in Figure 4.

As seen in Figure 4, it is seen that the student reads 48 correct words per minute in the text read at the 3rd grade level, his reading accuracy is 78%, and the prosodic reading level is below 50% (31%). According to the Informal Reading Inventory, the student's reading performance was at the level of frustration. For this reason, text reading was started at the second grade level, which is a subclass of the student. When we look at the text reading performance at the second grade level, it is seen that the student reads 71 words per minute correctly, has a reading accuracy of 89%, and has a prosodic reading performance of less than 50% (48%). In this case, since the second grade reading level of the student was at the level of frustration, the first grade text, which is a subclass, was made to be read. Accordingly, the first-grade student read 52 correct words per minute. In addition, the reading accuracy was 92% and the prosodic reading was 50%.

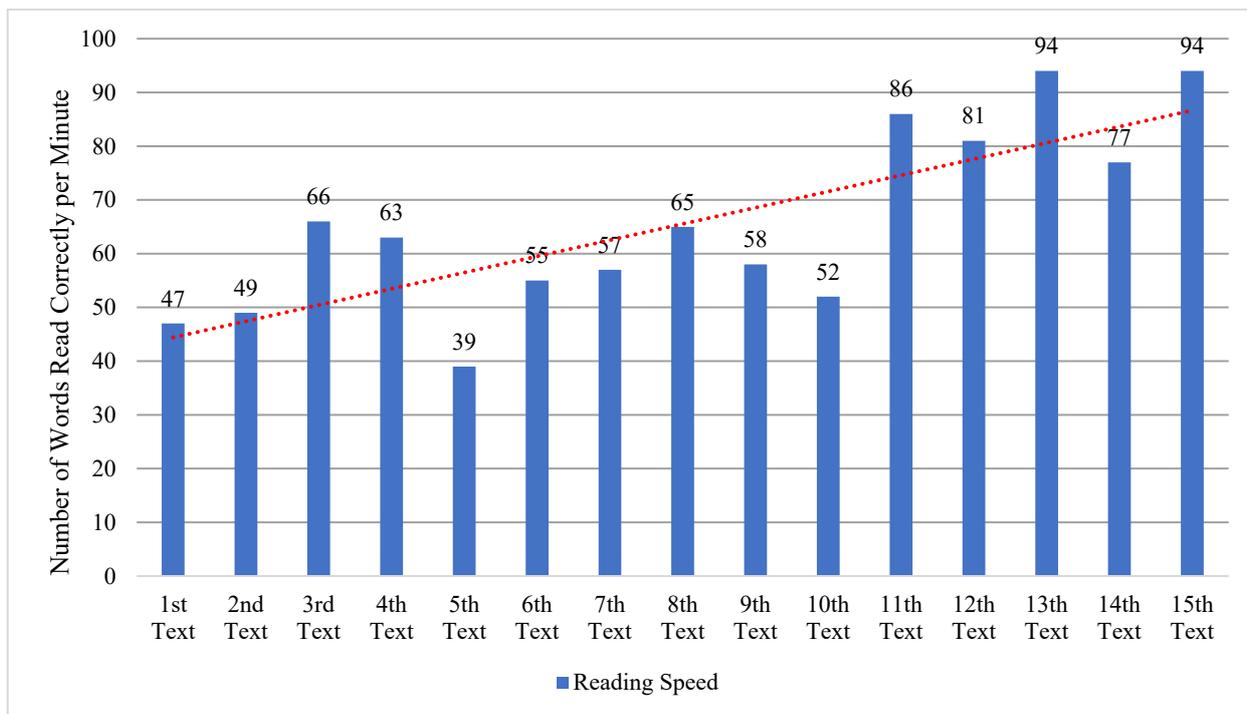
In the research, a pilot study was conducted to reveal the current situation of the student by reading four different texts at the first grade level. In Figure 5, the student's reading speed, accuracy and prosody of the four texts are presented.



**Figure 4.** Student's current reading performance



**Figure 5.** The level of reading fluency skills of the student in the pilot application with first grade texts



**Figure 6.** Student's reading speed development with the prepared and implemented action plan

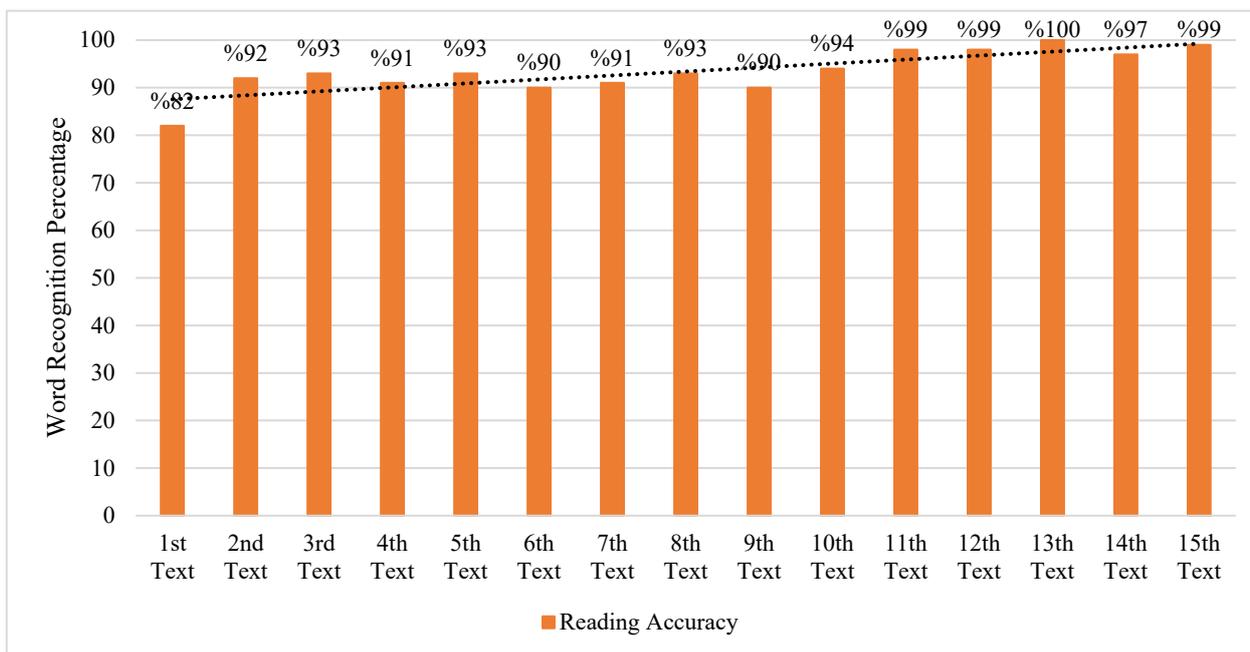
As seen in Figure 5, the correct number of words read by the student per minute is 62, 61, 68 and 73, respectively. The word recognition percentages obtained in each session were determined as 95%, 94%, 99% and 99%, respectively. According to the Incorrect Reading Inventory, the student's word recognition level in the first two texts was found to be at the level of instruction, while the last two texts were at the independent level. The reading prosody level was determined as 50%, 50%, 56% and 56%, respectively, and it was found to be prosodic as well. For this reason, the student's actual practice was continued with the second grade level texts.

The second question of the research is as follows: *"How has the student's reading speed improved in the process of the action plan prepared and implemented for the elimination of reading difficulties and the development of fluent reading*

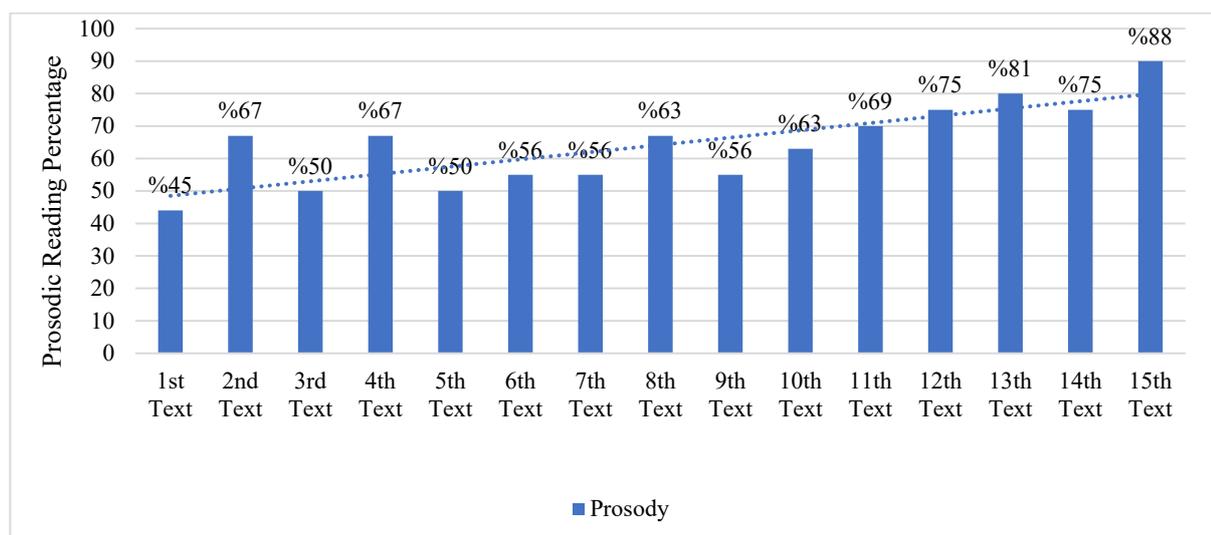
*skills?"* Findings related to each session are presented in Figure 6.

When Figure 6 is examined, it is seen that Eren's reading speed has increased in general from the first application to the last application, although there are occasional decreases. While reading 47 words per minute were read in the first session, it increased to 94 words in the last session. It is thought that these declines are due to the student's low mood or motivation that day. When we look at the graph in general, it is seen that the student's performance has increased significantly.

The third question of the research is as follows: *"How has the student's reading accuracy improved during the action plan process prepared and implemented to eliminate reading difficulties and develop fluent reading skills?"* The findings related to the question are presented in Figure 6.



**Figure 7.** The relationship between the implemented action plan and the student's reading accuracy



**Figure 8.** The development of the student's reading prosody with the implemented action plan

As seen in Figure 7, the student's reading accuracy in the first session is 82%. It is seen that the reading accuracy increased during the following sessions and reached 99% accuracy in four of the last five sessions.

The fourth question of the research is as follows: "How has the student's reading prosody developed during the action plan process prepared and implemented to eliminate reading difficulties and develop fluent reading skills?" The findings related to the question are presented in Figure 8.

According to Figure 8, it is seen that the prosodic reading of the student has improved significantly. Reading prosody, which was 44% in the first session, increased to 88% in the last session. In addition, after the first five sessions, it is seen that the prosodic reading of the student is consistently above 50% (successful).

The fifth question of the research is as follows: "What are the views of the student about the reading activities applied to develop reading fluency skills?" The three interview questions asked to the student and the student's answers are as follows:

"What do you think about the reading process we conducted together?"

"I was extremely happy with my reading activities. My reading accelerated because everyone says so. I loved it a lot. I loved you too. Because you speeded up my reading. You also gave me a reading medal because I came first."

I want you to remember the word cards and repeated reading lessons we performed. How did these studies that we did together affect the reading development?

"I liked the word card quiz the most. The number of cards was gradually decreasing, but I liked the card competitions the most. I sped up by reading it over and over. Because I finish my Turkish tests fast and I correctly answered all the questions in my test yesterday. My reading lessons increased (improved) my reading."

Were these reading exercises we carried out fun? Would you like to continue the same reading studies with me in the coming days?

"I had so much fun. Please don't let these lessons end. Because I just increased my reading speed. I love you very much, if it continues, I will be very happy."

When the answers given by the student to the interview questions are examined, it is seen that the student is aware of the increase in his reading speed. In this context, it is seen that he can finish Turkish tests faster and his reading accuracy

increases. In addition, that the student enjoys the applications very much is another point that draws attention.

The sixth and last question of the research, "What are the parents' views on the reading activities applied for the development of reading fluency skills?" The three interview questions asked to the parents and their answers are as follows:

What do you think about the reading process we carried out with your child?

"The reading practice you carried out differed from the normal book-reading work we did at home in two ways. The first is to improve my child's reading, to gain fluent reading skills, etc. I did not have any knowledge about the subject and I used to make the child read aloud by sitting next to him constantly, thinking that the more books he reads, the more he will improve. The other point was that I could choose books with smaller fonts to motivate him by showing that he could read books above his level. The fact that your application process is gradual, systematic and planned, and that you are working on more micro-texts, increased the motivation at the time of reading and also prevented the situations of withdrawal for later. At the same time, I can say that the visibility of concrete outputs in shorter time periods is a source of both participation in action work and willingness to other reading areas. The fact that my child's reading fluency skills did not develop in the first two years of his primary school education created a feeling of helplessness beyond sadness. I was bringing him together with quality works, and I was helping him choose and buy children's books from very important publishing houses around the country. I was doing regular reading hours. However, all this was not enough for him to read fluently, so he couldn't help me feel like a Hamster spinning in a circle. Therefore, it is difficult for me to describe the state of being able to read without any distress with just a feeling of happiness. More than that, I don't know how to express more."

How did the reading activities we carried out using word drill techniques and repeated reading affect your child's reading development?

"Our individual reading studies gave way to silent reading studies over time. Because when he read aloud, there could be anger or intimidation at the slightest hang-up. When we made repeated readings in shorter texts with your suggestion in aloud readings, he could now see where he

*made a mistake in the next reading, and his reading motivation increased as he accelerated on that text. I observed its most obvious effect in live lessons beyond our individual studies. Under normal circumstances, when it was his turn to read a question in live classes, he panicked and delayed answering the question, using technical failures as an excuse. However, as the work progressed, he began to read and answer the questions fluently in the lessons."*

How did these reading activities we carried out affect your child? Would you like your child to continue the same reading exercises with me in the coming days?

*Now, the most important thing to read is to read aloud, so he does not feel the anxiety he feels about attending the lesson. He himself is aware of this development, and at the end of the lesson or reading exercise, asks, "I read fast now, you realize that, don't you?". I can say that this also contributes to reading habits and reading comprehension studies. Now he can choose a book from his library and read that book. We, as parents, wish him to continue his reading studies, being aware of the positive contributions of this study."*

When the parents' views on the practice are examined, it is seen that the parents are aware of the increase in their child's reading performance. He stated that the systematic, planned and progress of the study at the student's level increased the motivation of the child and reduced the level of anxiety. She also stated that she was aware of the mistakes his child made while reading. The parent, who stated that another positive effect of the increase in his child's reading performance was during school lessons, observed that his child now reads fluently and answers the questions. In addition, it is seen that this situation guides the efforts of the parents regarding their child, increases their own motivation and as a result, they are happy with the development of their child.

### **Discussion, Conclusion and Recommendations**

In this study, it was aimed to increase the reading performance of a third grade student with reading difficulties by using reading fluency strategies. The reading level of the student was determined according to the Informal Reading Inventory, by initially reading the texts from the student's own grade level but shifting to reading the texts at the lower grade levels. As a result of the evaluations, it was seen that the student was below his own grade level. After the grade level was determined, an action plan was created and the study started with the second grade texts.

Due to difficulties in phonological skills and slow decoding, the majority of students will lag behind their peers in reading performance in the next school years (Zentall, 2014). This shows that students' reading fluency skills should be developed in the early period and reading difficulties should be eliminated. One of the most recommended strategies to overcome fluent reading difficulties is repeated reading (Gedik & Akyol, 2022; National Reading Panel, 2000; Therrien & Hughes, 2008; O'Connor et al., 2007). However, it will be more effective to use repeated reading together with other strategies and techniques, one of these other strategies is paired reading and the other is the word drill technique, which allows to correct errors during reading (Welsch, 2007). For this reason, the three strategies mentioned in this study were used together. In addition to the use of strategy, there are studies showing that giving positive feedback and reinforcement to students increases their performance and motivation

(Kostewicz & Kobina, 2011). For this reason, after each session, the student was given both positive feedback and reinforcement. Considering the findings of the study, the interviews with the student also support this finding.

The student's reading performance, which was at the instructional level in the first session, increased significantly with the sessions, but finally the free independent level was reached. It is seen that the strategies used have a significant effect on increasing the reading speed from 47 words per minute to 94 words per minute as a result of the as a result of teaching. It is thought that the student gains speed, especially with the repeated readings and the word drill technique. This is because with repeated readings, the words that were difficult to read at first became automatic both with the created word cards and by re-reading the text, and the reader was able to read the words fluently without the need for decoding. The word drill technique is one of the important techniques that help students with reading difficulties to read correctly due to the repetition of the wrong or unreadable words until they are read correctly with the help of the practitioner/teacher (Casey et al., 2003; Chafouleas et al., 2004). In this way, the student gains familiarity with the word and makes fewer mistakes because he repeats the words he has difficulty with frequently. The findings of the study also show that the student's reading accuracy and word recognition skills improve. Studies in the related literature also supported this view (Liu & Todd, 2016; Sağlam et al., 2020; Serrano & Huang, 2018; Strickland et al., 2013; Uzunkol, 2013; Yılmaz, 2008). For this reason, it is important to make frequent word repetitions with students who have problems in word recognition and decoding. For example, Erdoğan and Şenocak-Kasranoglu (2018) examined the effect of word drill technique on reading fluency and reading comprehension in their action study. According to the findings of the research, they concluded that the word drill technique increased reading fluency.

It is stated that the reading comprehension performance of the readers who read by paying attention to the necessary emphases and pauses while reading together with speed and accuracy in reading is higher (Rasinski et al., 2009). In this context, when we look at the findings on prosody, which is another component of reading fluency, it is seen that the participant received 50%, 50%, 55% and 55% scores respectively in the pilot applications made with the 1st grade texts and 44% in the last session from the 2nd grade texts that were started to be implemented. It is seen that it reaches 88% score. It is remarkable that the strategies and techniques used in the study improved the student's prosodic reading as well as speed and accuracy. It is thought that this situation is mostly due to paired reading studies although repetitive reading and word drill techniques are also effective. The reason for this is that in paired reading, the practitioner reads by paying attention to punctuation marks and emphases and becomes a model for the student simultaneously. Accordingly, the student has the opportunity to adjust his speed and emphasis according to the practitioner, who is a better reader than himself. According to Rasinski (2003), paired reading affects the student's/reader's adjustment of rhythm, regulating speed, and thus prosody all of which constitute the fluency. In addition, paired reading also contributes to the reader's motivation, enjoyment of reading, development of self-esteem and reading by paying attention to punctuation marks. (Monteiro, 2013; Zutell & Rasinski, 1991). Studies in the literature also show that paired reading improves reading performance (Topping et al., 2012; Yılmaz & Kadan, 2019).

Reading fluency is an important indicator of reading comprehension, and therefore fluent readers seem to have better reading comprehension performances (Bilge & Kalenderolu, 2022; Ciuffo et al., 2017; Rasinski et al., 2011; Yıldırım et al., 2017). In other words, there is a positive relationship between reading fluency and reading comprehension. Yıldırım et al. (2017) examined the effect of reading fluency on the reading comprehension performance of 4th-8th grade students and found positive relationships between fluency and reading comprehension at each grade level. In addition, it was found that contribution of fluency to comprehension performance varies between 14-35%. However, this predictive level increases in accordance with the grade level. In the light of these findings, although reading fluency is generally seen as an important skill to be acquired in primary school, its importance gradually increases in the following grade levels. For this reason, it is considered important to solve the difficulties/problems existing in reading fluency in the early period.

When all the findings are considered together, it can be concluded that paired reading, repeated reading and word drill techniques significantly affect each component of reading fluency. It is also seen that the student's reading motivation increases and he enjoys reading. The findings obtained from the interview with the student also show that the student enjoys the application process and is aware of the increased reading performance. In addition, it is seen from the interviews with the parents that the motivation of the student increased and the self-confidence of not only the student but also the parent himself increased. In the interview with the parent, it shows that the student/child is aware of his development and the level of anxiety has decreased. Similarly, Lee and Szczerbinski (2021) found in their study that after paired reading activities, parents' children read more and more types of books, their self-confidence increased, and they began to enjoy reading more.

In addition to all these, these strategies and techniques, which are very advantageous in terms of time and cost, can be carried out in almost any environment as individual and group studies. In addition, these and similar strategies and techniques should be used not only in the classroom environment, but also by families in the home environment, and the development of the child should be supported. In addition, this study was conducted with a single student with the three methods and techniques mentioned above. These points stand out as the limitations of the study. In future studies, it is recommended to conduct studies with more students using different methods and techniques.

#### Author Contributions

All authors took an equal part in all processes of the article. All authors have read and approved the final version of the study.

#### Ethical Declaration

The purposes and procedure of the current study were granted approval from the ethical committee of Niğde Ömer Halisdemir University. (Date: 28 January 2021; Session Number: E-86837521-050.99-15413).

#### Conflict of Interest

The authors declare that there is no conflict of interest with any institution or person within the scope of the study.

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