RESEARCH ARTICLE



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The Effect of Web-Supported Accurate and Fast Reading Development Program on The Reading Skills of Primary School Students

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ABSTRACT

The main purpose of this research is to examine the effect of the Web-Supported Accurate and Speed Reading Development Program (ASRDP), developed by the researchers. For this purpose, "Experimental Model with Pretest - Posttest Control Group" was used in the research. The study group of the research consists of 2nd grade students (n=40) studying at Atatürk Primary School in the Çaldıran district of Van province in the first semester of the 2021-2022 academic year. Experimental (n=20) and control (n=20) groups were chosen within the scope of the research. ASRDP, developed with Web-supported content developed by the researchers, was applied to the experimental group along with the activities in the Turkish curriculum. The prepared program was implemented for 6 weeks, with 5 lesson hours per week. The program prepared within the scope of the research was supported by a website (rumeysahoca.com). The data of the study were collected through reading speed measurements, correct reading level measurements and "Reading Skills Scale". While collecting the data, two different types of texts were prepared as informative and narrative texts. The t-test was conducted to determine whether there was a difference between pre and post-tests. As a result of the research, a significant difference was found between the experimental and control groups in favor of the experimental group. In this respect, it is seen that the ASRDP has a positive effect on reading skills. The prepared site has been designed as a platform suitable for the use of students in this age group and open to development. In future studies, the effect of the program on reading skills can be tested at different grade levels.

Keywords: Correct reading, Reading skill, Reading, Reading speed, Web-based program.

Introduction

The developments in science and technology have affected every aspect of life and have caused changes in social structures. This change has brought along different characteristics that individuals should have for the progress of societies. Güneş (2007) stated that the main purpose of many countries in today's information age is to raise individuals who have problem-solving skills, can understand what they read, are inclined to research and think. However, it can be thought that individuals with these characteristics will contribute to the development of society. On the basis of this development lies a qualified literacy education.

The most common way of reaching and transferring information from past to present is reading and writing. According to Çelenk (2003), the individual must have acquired the skills of reading and writing in order to have the desired level of knowledge and at the same time transfer this knowledge to his environment. The foundations of these two skills are laid in the primary school period. These skills are tried to be developed in all the courses that the individual will take from primary school to high school. According to MEB (2019), the first literacy process has a very important function in the development of mental skills such as thinking, reading comprehension, criticizing, connecting different information, and analyzing, as well as providing reading and writing skills.

Considering that these skills are the most important skills to be possessed today, the importance of primary literacy education is better understood.

Among these two skills, Guthrie (1997) defined reading as a skill as well as an interaction of one's social and conceptual world. Clay (1991), on the other hand, states that reading is a problem-solving and comprehension activity that increases in strength and flexibility as you practice. Reading skill includes many mental skills. It is one of the most basic skills necessary for an individual to follow science and technology and to fulfill the requirements of the age. According to Yılmaz (2018), the underlying problems of underdeveloped societies are not

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reading and not giving importance to education. In the same direction, Altıntaş (2015) shows reading skill as a source of individual and social development. Because it is not possible for individuals to make sense of social events, to think about these events and to look for solutions before their reading and writing skills are developed (Kutlu, 2004). For this reason, gaining and developing this skill is one of the primary goals of the education and training process. There are two projects where we can see the level of reading skills of students in Turkey and around the world.

Within the scope of the "Progress in International Reading Literacy Study (PIRLS)" it is tried to reveal the reading comprehension skills and reading habits of primary school fourth grade students. In addition, collecting student, administrator, parent, teacher-based data and determining the factors affecting reading skills are other purposes of this project. When the results of "PIRLS 2001" are examined, it is seen that the success of the students in Turkey is low among the thirty-five countries participating in the project. Turkey participated in this project in 2001, but did not participate in 2006, 2011 and 2016. Our country has participated in this project again in 2021, but the results have not been announced yet.

Another international assessment system is the "Programme for International Student Assessment (PISA)". According to 2018 PISA results, Turkey ranks 40th among 79 countries in reading skills. Countries score between 340 and 550 in this area. The average score of 79 countries is 453. Turkey ranked 40th among the participating countries with a score of 466 above the average in the field of reading skills (MEB, 2019). Although it has a score above the average, it is seen that the reading skills of the students in our country are not at a sufficient level. For this reason, studies that can improve reading skills should be carried out. The Web Supported Accurate and Speed Reading Development Program, prepared within the scope of the research, aims to improve students' reading skills. In other parts of the research, the program will be stated as ASRDP.

In order to improve reading skills, studies should be carried out to improve reading speed and correct reading level. While gaining reading skills, reading errors may occur due to some deficiencies that the child may experience in the process. Since reading errors prevent the student from reading quickly and accurately, they cause problems such as not being able to read fluently and not understanding what they read. Students who focus on the correct reading of the word while reading have difficulty in understanding what they are reading. In order for readers to direct their attention towards understanding, their reading must be correct and at a certain speed (Baştuğ & Keskin, 2012).

Making reading mistakes can change the attitude towards reading and make it harder for reading to become a habit. It can reduce the motivation of the readers and cause them to lose their interest in reading. Readers with low reading speed

cannot understand the message intended to be given in the text because they have difficulty in understanding what they read, and reading becomes unpleasant for them. In this direction, reading at the right speed and reducing reading errors are the issues that should be given priority while developing reading skills. At the same time, the materials to be used in this process are very important. Especially with the technological developments experienced, many different tools have started to be used in the field of education. These tools have important duties in increasing the quality of education. Because, unlike traditional methods, the emergence of tools that appeal to many sense organs with technology facilitates educational activities (Yanpar, 2006).

Creating a learning environment in which activities that appeal to more than one sensory organ are made during the literacy teaching process increases permanence and flexibility in teaching (Yıldız, 2010). Primary school students may have difficulty in understanding abstract operations and concepts because they are in the concrete operational stage. Therefore, it is very important to support literacy education with a computer-based education program to ensure permanence. These programs contribute to the concretization of abstract letters for students with visuals and different exercises. It helps the student to establish the connection between letters, syllables, words and sentences in the reading and writing process. It is also very effective because it offers activities that meet the needs of both advanced readers and students with reading difficulties (Van Daal & Reitsma, 2000). Studies conducted in this direction show that using educational technologies in the literacy teaching process leads to positive results (Bay, 2009; Orhan, 2007; Şahin, 2019; Yalçın, 2006; Yıldız, 2009). For this reason, ASRDP consists of activities designed to reduce reading errors and increase reading speed. At the same time, considering the positive effects of technological tools in the teaching environment, the program was supported by a web software. The aim of this study is to investigate the effect of Accurate and Speed Reading Development Program supported by a Web-based educational software on primary school students' reading skills. Within the scope of the main purpose of the research, answers to the following sub-problems were sought:

- Does the ASRDP have a significant effect on reading speed in informative texts?
- 2. Does the ASRDP have a significant effect on reading speed in narrative texts?
- 3. Does the ASRDP have a significant effect on the level of correct reading in informative texts?
- 4. Does the ASRDP have a significant effect on the level of correct reading in narrative texts?
- 5. Does the ASRDP have a significant effect on the reading skill level of primary school students?

METHOD

Research Design

In this study, the effect of Web-assisted Accurate and Speed Reading Development Program (ASRDP) on primary school students' reading skills was investigated according to quantitative design. According to Herman, Sibarani and Pardede (2020), quantitative refers to describe variables, to examine relationships among variables and to determine cause-and effect interactions between variables. The model of the research is the Experimental Model. "Experimental models are research models in which data to be observed directly under the control of the researcher are produced in order to determine cause-effect relationships" (Karasar, 2015). The most effective means of "testing a prediction is deliberately to manipulate the independent variable and then to observe the consequential changes in the dependent variable" (Miller, 2005). It was tested whether the independent variables (activities within the ASRDP, the activities in the primary school Turkish curriculum) were effective on the dependent variable (reading skill).

In the pretest-posttest control group model, there are two groups, the experimental and the control group, which were created with unbiased assignments (Büyüköztürk, Çakmak, Akgün, Karadeniz, & Demirel, 2019). Within the scope of the research, 243 students from the 2nd grade students studying at Atatürk Primary School in the Çaldıran district of Van province were included in the pre-test. In the pretest results, criteria were determined according to the variables considered in the research. These criteria are the student's low level of correct reading, speed reading and reading skills. Students who met these criteria and volunteered in the study were taken into account. The students obtained after the criteria formed the experimental and control groups with unbiased assignment. In addition to the program applied in the Turkish lesson, the program prepared within the scope of this study was applied to the experimental group. The Turkish lesson program was applied to the control group. The groups were given a pre-test before the experimental application and a post-test after the application. The figural representation of this pattern is as follows in Figure 1.

Study Group

The study group (n=40) of the research consists of 2nd grade students (n=243) studying at Atatürk Primary School in the

Groups	Pre-Test	Treatment	Post-Test
Experimental Group	X1	E	X2
Control Group	Y1	C	Y2
1 .			_

Note:

X1 & X2 = Pre and Post test in experimental class

Y1 & Y2 = Pre and Post test in control class

E = Treatment using speed reading

C = Treatment using conventional method

Fig. 1: Research Design

Çaldıran district of Van province in the 2021-2022 academic year. Experimental (n=20) and control (n=20) groups were chosen from 281 students, within the scope of the research were selected by unbiased assignment. In the process of forming the groups, the reading speed and correct reading levels of the 2nd grade students at the school were determined, among these students, students who were far below and above the average and students who received inclusive education and were subjected to an individual education plan were not included in the group. As a result, one experimental and one control group were selected as study groups by drawing lots from the remaining 40 students.

It is seen that the socio-economic status of the students in the study group in which Table 1 is examined is not good enough. In addition, it is seen that the educational status of the parents is low. This situation makes it difficult to follow up the students' use of the Web site and whether they use the speed reading techniques they have learned correctly during their home reading.

Data Collection Tools

From the beginning of the study, the reading skill and the development of this skill have been studied. While these

Table 1: Demographic Information

Groups	f	%
Cont.	20	50
Exp.	20	50
Gender		
Female	25	62.5
Male	15	37.5
Attended to Pre-school		
Yes	30	75
No	10	25
Edu. Status of Mother		
Illiterate	11	27.5
Primary-Sch	16	40
Middle-Sch.	13	32.5
High-Sch.	-	0
Uni.	-	0
Edu. Status of Father		
Illiterate	3	7.5
Primary-Sch	17	42.5
Middle-Sch.	13	32.5
High-Sch.	7	17.5
Uni.	-	0
Economic situation of the family		
Low	15	37.5
Medium	25	62.5

studies were being carried out, resources were scanned from libraries, the internet and the thesis catalogs of YÖK. At the end of this search, many domestic and foreign sources such as articles, theses and books were reached. In these sources, the issues related to the study were determined and evaluated in the shaping of the study.

The data, which are thought to serve the purpose of the research, were collected through two different types of reading texts prepared by the researcher from different sources and the "Reading Skills Scale" prepared by Obalar (2009) for the measurement of reading speed and correct reading. In order to reach the demographic information of the students, the "Personal Information Form" prepared by the researcher was used. With the website created within the scope of the research, the development of students' reading skills was examined, but the data here were not included in the analysis because they could not benefit from the website of each student at the same rate due to the economic situation of the students.

Reading Speed Measurement. In this study, the "correct number of words" read in one minute was accepted as the reading speed. Evaluating only the number of correctly read words of the student whose reading speed is measured also prevents the student from misreading knowingly or unknowingly by trying to read a lot of words. In order to evaluate the reading speed, the calculation method of "Total number of words read - error made = number of words read correctly" was used. This method, whose validity and reliability is accepted, is known as a program-based measurement approach and is accepted as a strong indicator of aloud-fluent reading (Keskin, 2012). In this method, the text suitable for the student's level is read aloud to the student for one minute and the audio readings are recorded with video. At the end of a minute, the words read are counted, the misread words are determined, and the number of words read correctly is found by subtracting the misread words from the total number of words read (Akyol, 2014; Baştuğ, 2012; Keskin, 2012).

Determining Correct Reading Level. The basis of correct reading is reading aloud, recording the reading and determining the total number of words read and reading errors by listening to the recorded reading. The number of wrongly read words is subtracted from the total number of words read and the number of words read correctly is found. Since correct reading is expressed as "percentage of correct reading", the number of words read correctly is divided by the total number of words and the result is multiplied by 100 so that the correct reading percentage of the students is found. The percentage of correct reading is formulated as "Number of words read correctly / Total number of words read X 100 = percentage of correct reading". Correct reading percentage of students; It allows them to be divided into three different levels: free level, education level and anxiety level (Baştuğ, 2012; Keskin, 2012).

Preparation of Application Texts. One of the important points to be considered in the selection of the text is the principle of being suitable for the child. While the text is being created or selected from the previously created texts, the student's mental and biological development, wishes, and the social environment he/she is in should be taken into consideration (Karakuş, 2007). For this reason, teachers and researchers who want to measure the reading speed and correct reading level of students will use different types of texts instead of a single text as a measurement tool, which will make the measurement healthier. Because the student's success in one text type may vary in another text type. According to Coşkun (2002), there are main points to be considered regarding the selected texts in measuring reading success. Like the type of text read, the vocabulary used in the text, the length of the words, the structural qualities used in the expression and some physical qualities (line length, letter size and size, font, etc.) also affect the reading speed and comprehension level of the reader.In this direction, the following method was followed in the selection of text: Considering that students' interests and habits in reading different types of texts may differ, it has been concluded that measuring their reading speed and correct reading level on only one type of text may yield misleading results. For this reason, two different types of text were prepared for the measurement of reading speed and correct reading level in the study. In this direction, an informative reading text and a narrative reading text, which are thought to be appropriate for the level of the students, were selected.

The selected texts for the collection of research data. The "Development of the Wheel" section of the "Invention of the Wheel" text in the Primary School 2nd Grade Turkish textbook written by Anna CLAYBOURNE and translated into our language by Gizem ŞAKAR was chosen as the informative text. In the type of narrative text, the text "Lion and Mouse", which is also included in the "Anadolu Masalları" set prepared by the MEB, was chosen. The narrative text consists of 146 words and the informative text consists of 123 words. The points to be considered in the selection of the texts are as follows:

- 1. There are texts that students have not encountered before,
- 2. Students should be on subjects that may be of interest to them.
- 3. It should be suitable for the level of the students in terms of age group and readiness,
- Attention was paid to ensure that the texts were of sufficient length to measure the reading speed of the students.

Reading Skill Scale. The "Reading Skills Scale" developed by Obalar (2009) considering the 2005 Primary Education Turkish Lesson Curriculum and Guide was prepared to measure the reading skills of the students at the end of the first literacy education given. The scale consists of 18 items in the form of a 5-point Likert scale. The reliability study of this scale was tested by Obalar (2009) by making the following applications: First of all, the scale was filled by two different evaluators. Pearson product moment correlation coefficient was used to determine the agreement between the evaluations. The correlation between these evaluations was found to be .73 and significant at the .001 level. Then, the Cronbach Alpha reliability coefficients were calculated. The Cronbach Alpha value calculated on the scores of the I. evaluator was .953; II. The Cronbach Alpha value calculated on the evaluator's scores was found to be .968. These values show that the "Reading Skills Scale" is reliable. The item-remaining values of the items in the reading skill scale vary between .386 and .888, the item-total values vary between .495 and .902, and all of the items are significant at the .001 level. In addition, item discrimination values are significant at the .001 level for all items.

ASRDP Website. Internet is an indispensable part of our daily life. Along with the developing technology, many internet technologies have emerged to meet the needs of individuals. This technology also affects the field of education. Technology-supported learning environments offer the opportunity to learn without time and place constraints, making technology integration in education compulsory. For this reason, the activities of the Accurate and Speed Reading Development Program prepared by the researcher are supported by a website.

In the research, first of all, literature review and interviews with expert teachers were made in order to determine the content and design of the website. Articles, books and websites about first literacy, speed reading, correct reading, reading skills were examined. The researcher completed the Speed Reading Training course in order to better learn and apply speed reading techniques. While determining the content, attention was paid to ensure that it was suitable for the development level of the students, was interesting and served the purpose of the research. As a result of the examinations, a draft was prepared and this draft was presented to 3 computer teachers and 3 classroom teachers. The website was designed as a result of the feedback received.

The content of the website consists of videos, games and event pages. In the domestic and foreign sources examined within the scope of the research, it has been seen that the most important learning method for students in the primary school period is games. For this reason, 4 games were prepared for the website created. While choosing the games, the games on the websites related to reading were examined. The content of the games is aimed to eliminate reading errors, strengthen attention, and improve reading speed. There are 4 games named Balon Patlatma, Hafiza, Eşleştirme, Balık. After the games are played, the correct and incorrect numbers or the number of trials are displayed on the screen. This situation is important in terms of following the development of the student.

While selecting the videos, videos containing speed reading techniques and strengthening attention were found and added to the site. In connection with the videos, activity papers prepared by the researcher for students are also available on the site. Thanks to the membership section created at the entrance of the site, each student can log in to the site with a user name and a password they have determined. After logging in, each student's personal page is opened and they can access the desired activity from here. At the same time, each student can make changes in the design of their personal page.

Thanks to the SystemLog section in the website content, the researcher sees which students visit the site and how long they spend on the site. This section has been prepared in order to comment on the use and effect of the site.

Data Collection

In this study, which was conducted to determine the effect of the Correct and Speed Reading Development Program on the reading skills of primary school second grade students, the program prepared with web-supported content was applied to the experimental group students for 6 weeks, 5 hours a week. The activities prepared with web-supported content organized by the researcher were associated with the achievements in the Turkish lesson curriculum, and were prepared by taking into account the skills and achievements aimed to be gained by the students in the 2019 Turkish lesson curriculum of the Ministry of National Education. The suitability of the activities in the prepared program to the grade level was decided by taking the opinions of 3 classroom teachers.

After the preparation of the texts, measurements were made primarily to determine the reading speed and correct reading levels. In order to determine their reading speed, students were taken to an empty classroom one by one. This is to prevent other students from becoming familiar with the text while reading aloud. Afterwards, it was explained what the students were asked to do. The texts were read in the company of a researcher and a teacher on different days. While the texts were being read, a timer was kept and the readings were audio recorded so that the formulas could be applied. Afterwards, the formulas described in the "Measurement of Reading Speed" and "Determination of Correct Reading Levels" were applied by the researcher and a teacher.

As a result of the pre-test applications, the experimental and control groups were determined. The researcher and 1 classroom teacher filled in the "Reading Skills Scale" separately for each student, according to the behaviors of the determined students while reading both texts. Then, the scales filled in by the researcher and the teacher were compared and the averages of the scores were taken.

In the next step, the ASRDP prepared within the scope of the research was started to be applied to the experimental group. No action was taken by the researcher for the class determined as the control group. During this period, the control group students studied the reading, listening and free reading texts in the Turkish textbooks in parallel with the lesson plans and achievements without any additional work with their classroom teachers. Except for the activities included in the textbooks, no special method, technique, strategy or activity that would improve fluent reading skills was applied to the control group students by their classroom teachers.

The application was made in 30 hours. During the implementation, care was taken that the students of the experimental and control groups did not interact with each other in relation to the program. In the experimental groups, the practice was continued for five days a week, one lesson per day, and continued for six weeks. During the ASRDP implementation process, firstly, the students were informed about the program and the website prepared within the scope of the research. The importance of reading and the concepts of correct reading and speed reading are mentioned. Activities related to the expansion of the active visual field, the expansion of the active grasping area of the eye, the increase of the perception speed of the mind, the development of word recognition skills, and the strengthening of attention were carried out. Daily lesson plans, activity pages and website contents prepared by the researcher were used for teaching. Membership has been created for all students in the experimental groups and their usernames have been distributed on the website. At the same time, parents were informed about the program considering the age group of the students. Information about the website and its content is given and the importance of using it is explained. Activity pages and nursery rhymes, poems and short text booklets were distributed to each student. Students were asked to do these activities at home as well. During the trainings, the motivation of the students was tried to be kept at a high level with verbal reinforcements. At the end of the 6-week period, posttests were applied and the measurement results were recorded.

Data Analysis

The data gathered from the investigation was analyzed using the SPSS package application. In beginning, the normality test was run over the discrepancies between the pretest-posttest findings collected within the scope of the research in order to decide which statistical data analysis types would be employed in the data analysis. The Shapiro-Wilk, skewness, and kurtosis coefficients, as well as the values produced by dividing skewness and kurtosis values by their standard errors, were investigated in this study to see if the data had a normal distribution. The tested values were found to be in the normal distribution (p<.05). Since the data were in accordance with the normal distribution, t-test was used for the difference analysis of the paired groups, which is one of the parametric tests.

FINDINGS

The findings regarding the data obtained in this part of the study are presented in sub-headings. The sub-problems created within the scope of the study are given in order and the findings for each sub-title are presented in order.

Findings on the Informative Texts Reading Speed

The first sub-problem of the research is "Does the Accurate and Speed Reading Development Program have an effect on reading speed in informative texts?". Findings on this problem is given below.

When looking at Table 2, it can be noted that the experimental group's pretest reading speed averages were ($\bar{x} = 8.55$), while the control group's averages were ($\bar{x} = 8.85$) in the informative text type. The students in the control group read faster on average than the students in the experimental group. It can be seen that the mean of both groups rose when the posttest and pretest scores of the informative text type are compared. It can be noticed that the experimental group's posttest reading speed average ($\bar{x} = 28.70$) is greater than the control group's average reading speed ($\bar{x} = 18.15$). The t-test was used to determine if the difference between the means of both groups is significant, and the findings are shown in the table below.

Table 3 shows that the difference between the experimental group's pretest-posttest average reading speed in the informative text type ($\bar{x}=20.15$) is greater than the control group's pretest-posttest average reading speed ($\bar{x}=9.30$). According to the results of the group analysis, there is a statistically significant difference in reading speed between the groups in favor of the experimental group (p< .05).

Findings on the Narrative Text Reading Speed

The second sub-problem of the study is "Does the Accurate and Speed Reading Development Program have an effect on reading speed in narrative texts?" is in the form.

Table 2: Results on Pretest-Posttest Mean Reading Speed Data of Informative Text Type

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Tests	Groups	n	\bar{x}	sd
Pretest	Exp. Group	20	8.55	7.07
	Con. Group	20	8.85	8.02
Posttest	Exp. Group	20	28.70	14.50
	Con. Group	20	18.15	13.35

Table 3: T-test Results of Independent Groups on Experimental and Control Groups Informational Text Type Reading Speed Data

Groups	n	\bar{x}	sd	df	t	p
Exp. Group	20	20.15	9.73	20	4 120	000
Con. Group	20	9.30	6.59	38	4,128	.000

Table 4 shows that the students in the experimental group had a pretest reading speed of (\bar{x} = 9.95) in the narrative text type, whereas the students in the control group had a pretest reading speed of (\bar{x} = 13.60). The averages of the pupils in the control group are greater than the averages of the other group, as can be observed. The averages of both groups' posttest scores in the narrative text type are also greater than the initial test. The experimental group's posttest reading speed average (\bar{x} = 49.90) was greater than the control group's average reading speed (\bar{x} = 31.40) as a result of the ASRDP application. The t-test findings of the difference between the two groups' scores are as follows, based on the results of the two groups.

Table 5 shows that the difference between the experimental group's pretest-posttest average reading speed in the narrative text type (\bar{x} = 39.95) is greater than the control group's pretest-posttest average reading speed (\bar{x} = 17.80). According to the test findings, there was a statistically significant difference between the groups in terms of reading speed in favor of the experimental group (p< .05).

Findings on Informative Text Correct Reading

The next sub-problem of the study is "Does the Accurate and Speed Reading Improvement Program have an effect on the level of correct reading in informative texts?" is in the form.

Table 6 shows that the pre-test accurate reading levels of the students in the experimental group in the informative text type are ($\bar{x} = 73.53$) and the students in the control group are ($\bar{x} = 70.72$). Students in the experimental group have a higher average accurate reading level than students in the control group. In the instructive text type, the posttest averages of accurate reading levels attained by both groups are greater than the pretest averages. The experimental group's average posttest correct reading levels acquired as a consequence of the ASRDP application ($\bar{x} = 91.20$) were higher than the control group's average correct reading level ($\bar{x} = 81.60$). The t-test was used to see if the difference between the groups'

Table 4: Results of Narrative Text Speed

Tests	Groups	n	\bar{x}	sd
Pretest	Exp. Group	20	9.95	8.97
	Con. Group	20	13.60	9.54
Posttest	Exp. Group	20	49.90	24.02
	Con. Group	20	31.40	14.73

Table 5: Independent Groups T-Test Results Regarding the Experimental and Control Groups Narrative Text Type Reading Speed Data

Groups	n	\bar{x}	sd	df	t	p
Exp. Group	20	39.95	18.70	20	5.022	000
Con. Group	20	17.80	6.13	38	5.033	.000

means was significant, and the findings are presented in Table 7.

When looking at Table 7, the difference between the experimental group's pretest-posttest average correct reading levels in the informative text type (\bar{x} = 17.66) is larger than the difference between the control group's pretest-posttest average correct reading levels (\bar{x} = 10.82). According to the t-test results, there is a statistically significant difference in accurate reading level between the experimental and control groups in favor of the experimental group (p<.05).

Findings on Narrative Text Correct Reading

The fourth sub-problem of the research is "Does the Accurate and Speed Reading Development Program have an effect on the level of correct reading in narrative texts?". The results can be seen below.

Table 8 shows that the students in the experimental group in the narrative text type have a pre-test correct reading level of ($\bar{x}=61.12$), whereas the students in the control group have a pre-test correct reading level of ($\bar{x}=65.74$). Students in the control group had greater average correct reading levels than students in the experimental group. In the narrative text type, the posttest averages of correct reading levels acquired by both groups are greater than the pretest averages. The experimental group's average posttest correct reading levels ($\bar{x}=92.18$) were higher than the control group's average correct reading level ($\bar{x}=85.19$) as a result of the ASRDP application. The t-test was used to see if the difference between the averages of the groups was significant, and the findings are shown in Table 9.

When looking at Table 9, the difference between the experimental group's pretest-posttest average correct reading levels in the narrative text type ($\bar{x} = 31.04$) is larger than the difference between the control group's pretest-posttest average correct reading levels ($\bar{x} = 19.43$). According to the t-test results, there is a statistically significant difference in accurate reading level between the experimental and control groups in favor of the experimental group (p<.05).

Table 6: Results of Informative Text Type Pretest-Posttest Average Accurate Reading Levels Data

Tests	Groups	n	\bar{x}	sd
Pretest	Exp. Group	20	73.53	10.09
	Con. Group	20	70.72	12.81
Posttest	Exp. Group	20	91.20	6.54
	Con. Group	20	81.60	9.55

Table 7: Test Results of Independent Groups on Data of Experimental and Control Groups Informative Text Type Correct Reading Levels

Groups	n	\bar{x}	sd	df	t	p
Exp. Group	20	17.66	7.20	20	3.366	002
Con. Group	20	10.82	5.53	38	3.300	.002

Findings on Reading Skills

The fifth sub-problem of the research is "Does the Accurate and Speed Reading Development Program have an effect on the reading skill levels of primary school students?". The results can be seen as follow:

When looking at Table 10, it can be observed that the average of the experimental group's pretest reading skills scores is ($\bar{x}=49.75$), whereas the control group's average is ($\bar{x}=50.80$). The kids in the control group had greater average reading skills than the students in the experimental group. The posttest averages of both groups' reading abilities are greater than the pretest averages, as can be shown. The experimental group's average posttest reading skills scores ($\bar{x}=75.25$) were higher than the control group's average reading skills scores ($\bar{x}=57.56$) as a result of the ASRDP application. The t-test was used to see if the difference between the averages of the groups was significant, and the findings are shown in Table 11.

Table 11 shows that the difference between the experimental group's pretest-posttest average reading skill scores (\bar{x} = 25.50) is greater than the difference between the control group's pretest-posttest average reading skill scores (\bar{x} = 6.75). According to the t-test results, there is a statistically significant

Table 8: Results of the Pretest-Posttest Mean Accurate Reading Levels of Narrative Text Type Data

Tests	Groups	n	\bar{x}	sd
Pretest	Exp. Group	20	61.12	20.58
	Con. Group	20	65.74	20.75
Posttest	Exp. Group	20	92.18	7.49
	Con. Group	20	85.19	11.60

Table 9: T-Test Results of Independent Groups on Data of Experimental and Control Groups Narrative Text Type Correct Reading Levels

Groups	n	\bar{x}	sd	df	t	p	
Exp. Group	20	31.04	16.38	38	2.520	.016	
Con. Group	20	19.43	12.35	36	2.530	.010	.010

Table 10: Results of Experimental and Control Group Reading Skills Scale Scores Pretest-Posttest Mean Data

Tests	Groups	n	\bar{x}	sd
Pretest	Exp. Group	20	49.75	10.27
	Con. Group	20	50.80	10.90
Posttest	Exp. Group	20	75.25	6.63
	Con. Group	20	57.56	14.30

Table 11: Independent Groups T-Test Results Regarding the Data of the Experimental and Control Group Reading Skills Scale

Groups	n	\bar{x}	sd	df	t	p
Exp. Group	20	25.50	6.32	20	9.683	000
Con. Group	20	6.75	5.92	38	9.083	.000

difference in reading skill scores between the experimental and control groups in favor of the experimental group (p<.05). It is seen that the students in the experimental group showed better improvement in reading skills than the students in the control group. In this case, it can be said that ASRDP is effective on reading skills.

Discussion

According to the research, the program's primary influence on reading speed was found. The influence of ASRDP on the reading speed of 2nd grade primary school pupils in the informative text type was found after the applications. The changes in the students' results were found to be significant in the process. First, the two means of groups' reading speeds were showed significant differences. The students in the experimental group had a faster average reading speed than the students in the control group after the application, according to the statistics. When the posttest overall reading speed of both groups is compared, it can be observed that the experimental group's posttest average reading speed is higher than the control group. According to the findings, the difference between the experimental group's pretest-posttest average reading speed is greater than the difference between the control group's pretest-posttest mean reading speed, and there is a significant difference between the two groups.

It may be concluded that the speed reading activities presented in the context of ASRDP were successful in establishing a considerable difference between the two groups. When the literature is analyzed, it is discovered that speed reading approaches boost reading speed in informative text types, according to Mergen (2019)'s study with primary school second grade pupils. This outcome backs up the findings made within the scope of the study. Similarly, when the studies of Chung and Nation (2006), Rizkoh, Ohoiwutun and Thamrin (2014) and Wahyudi (2018) were examined, it was concluded that speed reading techniques were effective on reading speed. Parallel to these results, Dedebali (2008), Bozan (2012), Kaçar (2015), Soysal (2015), Kurudayıoğlu and Soysal (2015), Yalçın, Çeltik, and Altınok (2017) studied speed reading techniques and reading comprehension. indicated that it had a positive effect on.

Within the scope of the research, the effect of the program on reading speed in narrative texts was examined. For this purpose, pre-measurement and post-measurement were made to the experimental and control group students. Statistical operations were performed on the data obtained from these measurements. The pretest and posttest mean reading speeds of the two groups were calculated. As a result, the students in the control group had a faster average reading speed than the students in the experimental group. When the posttest average reading speed of both groups is compared, it can be observed that the experimental group's posttest average reading speed is

higher than the control group. The groups' pretest and posttest mean scores were compared to see if there was a significant difference. According to the findings, the difference between the experimental group's pretest-posttest average reading speed is greater than the difference between the control group's pretest-posttest mean reading speed, and there is a significant difference between the two groups.

In this direction, it is seen that ASRDP is effective on reading speed in both text types. Dowhower (1991), Kuruoğlu and Şen (2018), Peksoy (2018) stated in their research that the repeated reading strategy is effective on reading speed. At the same time, in the studies of Chang (2010), Armağan (2017) and Shimono (2018) in different countries and on different age groups, they concluded that the timed reading method increases the reading speed. In this direction, it can be thought that among the factors of the increase in reading speed are the repeated reading strategy and timed reading activities, which are considered within the scope of ASRDP.

Another variable of the research is the correct reading level. In order to determine the effect of ASRDP on the level of correct reading in informative texts, pre-test and post-measurement were made to the students in the experimental and control groups. Statistical operations were performed on the data obtained from these measurements. Pretest-posttest mean correct reading levels of the two groups were calculated. According to the data obtained, the pretest average correct reading levels of the students in the experimental group were higher than the students in the control group. The posttest average correct reading levels of both groups are higher than the pretest correct reading levels. This result is expected as both groups do reading exercises. The experimental group's posttest average correct reading level, on the other hand, is higher than the control group's posttest average correct reading level. The t-test was used to evaluate whether or not the difference is significant. The difference between the experimental group's pretest-posttest average correct reading levels is higher than the difference between the control group's pretest-posttest average correct reading levels, indicating a significant difference between the two groups.

The experimental group's posttest average correct reading level, on the other hand, is higher than the control group's posttest average correct reading level. The t-test was used to evaluate whether or not the difference is significant. The difference between the experimental group's pretest-posttest average correct reading levels is higher than the difference between the control group's pretest-posttest average correct reading levels, indicating a significant difference between the two groups. The t-test was used to evaluate whether or not the difference is significant. The difference between the experimental group's pretest-posttest average correct reading levels is higher than the difference between the control group's pretest-posttest average correct reading levels, indicating a significant difference between the two groups. When the

research findings are examined, it is seen that ASRDP has an effect on the level of correct reading. Yılmaz (2006), Kaman and Şahin (2013), Pircioğlu (2016) concluded in their study that the repeated reading strategy is effective on reducing reading errors. For this reason, it can be said that activities related to similar words, letter mixing and repeated reading strategy in ASRDP are effective in increasing the level of correct reading.

At the same time, it can be thought that the studies carried out to reduce reading errors have a positive effect on reading speed. When the results of the research are examined, it is seen that while the correct reading level increases in both groups, the reading speed also increases. Similarly, Tazebay (1995) states in his research that reading errors reduce the reading speed.

Finally, the "Reading Skills Scale" was filled out for each of the students in the experimental and control groups before and after the application to examine the effect of ASRDP on reading skills. The score each student received as a consequence of the scale was computed. The average scores of the experimental and control groups of students were computed. As a result, the average pretest scores of the control group students on the applied scale are higher than the average pretest scores of the experimental group students. When the posttest mean scores from the scale are analyzed, it is clear that the experimental group's posttest average reading skill scores are greater than the control group's average scores. The difference in the experimental group's pretest-posttest mean reading ability scores was larger than that of the control group, according to the results of the t test, which was used to assess if the difference between the two groups was significant. The difference between the two groups was found to be statistically significant.

When the literature was examined, it was concluded that the studies carried out to increase reading speed improved reading skills. Mahriza (2016), in her study with 11th grade students, concluded that increasing the reading speed improves reading skills. Yunus (2016) aimed to improve students' reading skills with speed reading techniques in his research. During the process of the change in students' reading skills, notes were taken by the teacher, and reading tests were given to the students before and after the application. As a result of the research, it was observed that there was an increase in the reading skills of the students. Anuyahong (2016) and Manurung (2018) stated in their study with university students that speed reading training is effective on reading skills. When these studies conducted in different countries and on different age groups are examined, it is seen that applications including speed reading techniques have a positive effect on reading skills. These results show parallelism with the results obtained from the research.

Supporting the program prepared within the scope of the research with a web software can also be effective in the development of reading skills in a short time. Studies show that technological tools are effective in the education process. In the research conducted by Segers and Verhoeven (2002), it was concluded that the computer teaching method was effective. Moraru, Stoica, and Popescu (2011) state that the use of technology in learning environments will make the learning process more efficient and effective. Similarly, Abdullah (2018) stated in his research that web-based education is effective on reading speed. Akkaş (2021), on the other hand, applied speed reading education with distance education and states that this education is effective on reading speed.

When the results are examined, it is seen that ASRDP increases reading speed and correct reading level and has a positive effect on reading skills.

SUGGESTION

The purpose of this study was to see how the Accurate and Speed Reading Development Program affected reading abilities. The following proposals for future studies, researchers, and practitioners are based on the experiences gained during the study process and the findings collected as a consequence of the research:

- The increase in both the reading speed and the correct reading level of the students at the end of the application process is considered important not only for the Turkish course but also for other courses. For this reason, it is thought that creating a suitable environment for the use of these skills gained through practice in other lessons will improve these skills.
- 2. The prepared program was implemented for 6 weeks. However, the duration of the program can be extended with the activities to be added in order to create a reading awareness in the student and to acquire good reading habits permanently.
- 3. In this research; The research data were collected using reading speed, accurate reading levels and scale. Quantitative data were obtained with these tools. In a similar study, observations and interviews can be made to obtain the opinions of students and teachers about the program, and the study can be supported with qualitative data.
- 4. The effect of the skills developed within the scope of the program on reading comprehension can be investigated.
- 5. The program has been prepared considering the development level of primary school students. In a similar study, the effect of the program on reading skills can be tested on different age groups with different activities to be added.
- 6. In future studies, students from regions with different socioeconomic variables can be studied.
- The developed program can be easily applied by classroom teachers in the first literacy period. It is currently recommended to be used both in the teaching and development of first literacy.

- 8. It is thought that this program, which has an infrastructure that parents can easily apply at home, will provide great support to students in first literacy.
- It is thought that this program, which can be effective
 in achieving the goals set by the MEB in terms of initial
 literacy, will both contribute to the process and accelerate
 the process.

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