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The Effect of Peritextual Reading on Primary School Students' Reading Comprehension Skills

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ABSTRACT

The main purpose of this study is to examine the effect of peritextual reading on primary school students' reading comprehension skills. The quantitative research method was used in the study. The research design was designed as a quasi-experimental study. Research data were obtained by the random sampling method. The study group of the research consists of 102 fourth-grade students studying in 2 different state schools in Turkey. The data obtained from the research were analyzed using the SPSS 22 program. Before starting the analysis of the data, normality tests were performed. Man-Whitney U Test and Independent Sample t-Test were used in the analysis of the data. As a result of the analyses, the posttest mean scores of the experimental group students were higher than the posttest mean scores of the control group students. As a result, peritextual reading proves to be effective in improving students' reading comprehension skills.

Keywords: Peritext, peritextual reading, reading comprehension.

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Introduction

Some children's first experience with reading occurs before they start school when caregivers around them read to them (Sparks, Patton and Murdoch, 2014). In this way, children who have an effective early reading experience gain a rich vocabulary, effective verbal communication skills, and eventually many cognitive skills necessary for independent reading (Cunningham and Zibulsky, 2011). Thus, the reader's knowledge of lexical meaning and vocabulary usage contributes to the ability of generating a meaning (Akyol, 2013). In primary school, reading skill turns into the ability to reveal meaning by converting visual codes into pronunciations and corresponding pronunciations to known words (Price and Mechelli, 2005).

Reading is a very complex, dynamic, and versatile process (Grabe, 2009; Jiang, 2017; Koda, 2005; Nassaji, 2003; Plaut, 2005; Urquhart and Weir, 2013). Reading is an intricate skill that emerges from the combination of attention, memory, perceptual processes, and comprehension processes (Kern, 1989). Because of these characteristic features, it is very difficult to define reading (Akyol, 2005). The act of reading as an intellectual activity is the task of understanding the code of a written text or the codes of a graphically expressed work (Akbayır, 2003). Reading is the process of constructing, interpreting, and thinking about the literary language in a way that creates meaning (Anderseon, Hibert, Scot and Wilkinson, 1985; Harris and Sipay, 1990; Perfetti, 1986). Reading is the ability of the reader to make sense of the human mind by communicating with the author and other environmental factors (Yılar, 2015).

Today, reading skill has an important function in developing some mental abilities (thinking, understanding, sequencing, relating, classification, analysis, synthesis, evaluation, etc.) (MEB, 2018). The child's interest in literacy activities is an important factor contributing to their language and early literacy development (Roberts, Jurgens and Burchinal, 2005). However, in the 21st century, the field of reading skills has changed and expanded, especially depending on technological changes and developments. Now, people should develop an objective and critical perspective on events and phenomena, together with their reading skills, and offer solutions to both personal and social problems. One of the most effective ways to gain an objective and critical perspective is through reading (Tanju, 2010).

There are a lot of resources available for reading. These include books, magazines, audio-visual texts, digital publications, etc. When all these sources are examined, it is understood that the only element of reading is not written texts, and many elements are included in the sources apart from the text. Elements such as front and back covers, preface, contents, author information, pictures, title, and the publisher may be ranked among these elements. The common feature of all these elements is that they are found around the text and are related to the text. In general terms, written text is referred as 'the body' of a book. However, some elements are outside of this body and take place before the text, after the text or in the margins of the text (Higonnet, 1990). All these elements in a book other than the printed text are called peritexts (the elements surrounding the text) of that text (Genette, 1997; Sipe, 1998).

In our world, the understanding of education aims not to transfer the knowledge by the educator, but to reach it by the learner (Akkoyunlu, 2002). While it contains important information that will help readers to guess about the peritextual features, text type, character, and frame of the books (Martinez, Stier and Falcon, 2016), it also contributes to the reader's access to the details and depths of the information. Thus, the reader goes to the background of the text, and makes a creative and critical reading by looking at the text both from inside and outside.

In children's picture books, there is a close relationship between text and pictures. The picture elements in the books interact with the text to create an artistic whole (Lambert, 2010). Pictures are not only the elements that complete the text, but also the elements that support the reader's pre-reading. The reader guesses the events' characters, place, time, and fiction through the pictures. Thus, the reader establishes a link between the picture and the text. If this connection is established at a meaningful and interrelated level, it can positively affect the reader's sense of enjoying the text and whether to continue reading the book. In other words, the pictures associated with the texts contribute to the reader's ability to generate ideas and make comments about the book. A good book that will help the individual read, comment on the book, and create meaning is possible with the author, illustrator, and designer (Ateş, 2013). Such collaborative work is seen in the peritextual factors of the book (Genette, 1997; Higonnet, 1990; Wolfenbarger and Sipe, 2017).

Now, the texts that students encounter in or out of school are presented in a structure that is quite complex and includes many elements outside the text. The task of teachers is to develop strategies that will encourage students to harmonize with the nature of this complex structure surrounding the text (Youngs and Serafini, 2011). One of these strategies that teachers can develop is 'peritextual reading'. Peritextual reading is the reading of the elements surrounding the text, which are physically in the same environment as the book, before the text.

Although peritextual reading is a widely used concept in international literature, there is no equivalent term used in Turkish yet (Ateş, 2013). However, there are many studies on visual reading, which is a part of peritextual reading, in the national literature (Baş and Kardaş, 2014; Göçer and Tabak, 2012; Sarıkaya, 2017; Tüzel, 2010). Peritextual reading is accessing and evaluating the content of the text and thus understanding the text by using the elements surrounding the body of work and mediating the content of the work for the reader (Gross and Latham, 2017). Martinez, Stier, and Falcon (2016) recommended that teachers first carefully examine the peritextual features of storybooks and read them aloud so that students can create meaning and catch clues about the story.

It has also been revealed by many studies that peritextual reading is for students; It helps them to read and make sense between texts, to think critically, to make connections between the outside world and the story, to decide whether to read the story or not, to gain a rich and satisfying reading experience, to read interactively with the text, and to create an interface between the text and the reader (Ateş, 2013; Coifman, 2013; Genette, 1997; Gros and Latham, 2017; Rockenberger, 2014). For this reason, students' acquisition of peritextual reading skills can improve their reading comprehension skills by supporting both intertextual reading and critical reading skills. Therefore, the main purpose of the study is to examine the effect of peritextual reading on primary school students' reading comprehension skills. For this purpose, the answer to the following question will be sought.

'Does peritextual reading have a significant effect on students' reading comprehension skills?'

Method

Research Model

A quantitative research method was used in this study in which the effect of peritextual reading on reading comprehension skills of primary school students was examined. The research design was structured as quasi-experimental research to reveal the cause-effect relationship. Quantitative research is the numerical expression of observations and manipulation of variables to explain the phenomenon that occurs depending on the observations and to make calculations. (Sukamolson, 2007). For this reason, data are expressed statistically with numbers and analyzes are made on numbers. Quantitative research should be accurate, valid, and unbiased (Zyphur and Pierides, 2017).

In the study, the subjects were chosen from the available groups, while the experimental and control groups were determined randomly. For this reason, the research design was designed as a quasi-experimental study. Quasi-expermental study is a research method that includes pretest, intervention, and posttest (Costantini et al., 2017).

Study Group

One of the first decisions to be made for the study group in research is to decide whether to reach the entire universe or be a part of it (Cohen et al. 2021). In this study, in which the effect of peritextual reading will be examined, it is thought that it is not possible to reach the entire universe and perform the study in terms of cost, time and accessibility. Thus, it was decided to research with smaller study groups, which were educated in the city center of Tokat and determined using the sampling method. The most important rule in determining the study group in a study is randomness (Karasar, 2014). An impartial sampling process is also essential (Squartini, Mastrandrea and Garlaschelli, 2015). However, in quasi-experimental studies, study groups can be determined by matching according to their specific characteristics, rather than randomly assigned (Büyüköztürk et al. 2014). The study group of this research, which was designed as a quasi-experimental study, was formed from available groups randomly assigned to the experimental and control groups.

The study group of the research consisted of 6 different classrooms and a total of 120 students studying in two primary schools in Tokat, Türkiye in the 2020-2021 academic year. However, 4 of these students were not included in the study because they were inclusion students and 14 of them did not participate in the collection of pre-test data. Thus, the study group consisted of 102 students in total. The experimental and control groups were randomly assigned. Table 1 shows the number of the students in groups in the schools that forms the study group of the research.

Table 1. Number of students in the study

Working group	**Female**		**Male**		**Total**	
	N	**%**	**N**	**%**	**N**	**%**
Control G.	16	15.7	34	33.3	50	49.0
Experimental G.	27	26.5	25	24.5	52	51.0
Total	43	42.2	59	57.8	102	100

Data Collection Tool

Research has been defined as a systematic study (Burns, 1997) or investigation in which data is collected, analyzed, and interpreted to understand, describe, predict, control, or strengthen educational or psychological phenomena (Mertens, 2005). In quantitative research, experiments, tests, and scales are generally used as data collection techniques (Mackenzie and Knipe, 2006In this study, the tests prepared by the researcher were used with a quantitative research method. While collecting the pre-test data of the research, schools adopted distance education and teacher had to teach online because of the Covid-19 pandemic. Therefore, the pre-test data of the study were obtained through remote connection with students - online course participation. For this, the tests were transferred to the electronic environment via Google Forms and the students were asked to answer them by sharing them in their online lessons.

One of the important indicators of reading skill is 'reading comprehension. There are several approaches regarding the determination of reading comprehension level (Yıldız, 2010). In this study, which will examine the effect of peritextual reading on reading comprehension, the text-based test method was preferred. In the text-based test method, two different text types, informative and narrative, are used (Güneş, 2009). In this study, it was decided to use 'TUBITAK Popular Science Books', which contain both text types, in line with the opinions of the researcher and two experts, using the text conformity form below. In addition, in line with the common opinions of researchers and experts and terms of validity and reliability, it was decided to apply different texts and reading comprehension tests to the students in the pre-test and post-test.

For the texts to be used to determine the reading comprehension levels of the students who will participate in the study, the researcher made a literature review and determined 10 texts. These texts were examined by the researcher and 2 experts in the field, and evaluations were made with the text conformity form. As a result of the evaluations, the texts to be used in determining the reading comprehension levels of the students are presented in Table 2.

Table 2. Texts used for the reading comprehension test

Test	**Text Name**	**Author**	**Illustrated by**	**Translator**
Pretest	Ali's Square Foot *	Nat Gabriel	Ron Fritz	Tuba Rabia Öngün
Final test	Slow Kaan **	Lucille Recht Penner	Gioia Fiammenghi	Tuba Rabia Öngün

**Gabriel, 2018, **Penner, 2017*

Data Collection Tool

Regarding the reading comprehension tests developed by the researcher, two experts in the field were evaluated and their opinions were taken to ensure content validity. In line with the opinions received, it was decided to use different reading texts and achievement tests in the pre-test and post-test. For each reading comprehension test, 30 questions were created, a consensus was reached to reduce it to 25 questions in line with expert opinions, and the content validity index was calculated as 1. The correct answers given by the students in the tests were evaluated as 1 (one) point, and the wrong answers as 0 (zero) points. While the highest score that can be obtained from the tests is 25, the lowest score is 0 (zero).

KR-20 reliability analyzes were conducted for the reliability of Reading Comprehension Test 1. The KR-20 coefficient was found to be .80 for the Reading Comprehension Test-1 and .82 for the Reading Comprehension Test-2. With this result, it can be said that the reliability of the tests is quite high. In addition, discrimination indexes were also examined to prove the reliability of the tests. When the literature is evaluated based on the item discrimination index, if the discrimination score is 0.19 or less, 'the question is too weak and should be removed from the test', if it is between 0.20-0.29, 'it needs to be corrected and developed', 0.30-0.38 It is stated that between 0,39 means 'quite good but still can be improved', and 0,40 and above means 'very good substance' (Hasançebi, Terzi and Küçük, 2020).

The discrimination index of 23 questions for test 1 is over .40, and the discrimination index of 2 questions is between .30-.39. For test 2, the discrimination index of 3 items is between .30-.39, and the discrimination index of 22 items is over .40. With this result, it can be said that the test items are highly distinctive, and their reliability is high.

Data Collection

Necessary legal permissions were obtained for the research before the implementations and the implementation phase of the experimental study initiated. In the research process, first of all, the 'Reading Comprehension Test-1' pre-test implementations were applied to the experimental and control groups. After the pre-tests were applied, the students in the control group routinely continued their reading activities in the education process without any manipulation. The peritextual reading practice was carried out to the experimental group of students for four weeks (2 days a week, 8 days in total) and sixteen lesson hours.

In the 1st, 2rd,3th and 4th weeks of the peritextual reading practice by the researcher, the experimental group students were given a theoretical explanation of the peritextual elements and then practices on how the elements could be read in the books. In the first and sixth weeks, pre-test and post-test data were collected. The post-test data were collected after peritextual reading of the text named Yavaş Kaan for the experimental group. For the control group, the post-test data were collected after reading the text named Yavaş Kaan with the traditional silent reading method. The stages of peritextual reading performed with the experimental group students are shown in Figure 1.

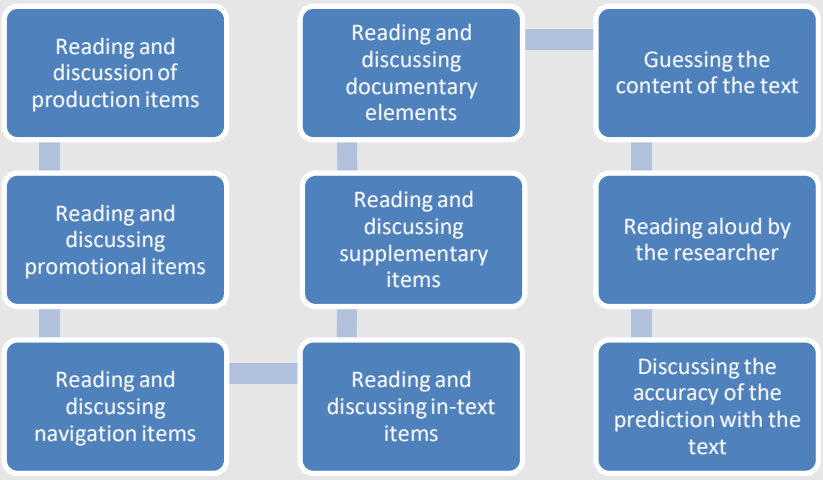

Figure 1. Peritextual Reading Stages

When Figure 1 is examined, it is seen that peritextual reading was done with the students before the Reading Comprehension Test-2 data were collected, and the peritextual elements were examined and discussed with the students while reading. Finally, the text was read aloud by the researcher and the relationship between the students' predictions about the text based on the peritextual elements and the text was checked.

Data Analyses

Quantitative research encompasses a set of methods involved in the systematic investigation of social phenomena using statistical or numerical data. Therefore, quantitative research involves measurement and assumes that the phenomenon under study can be measured. Quantitative research aims to collect data using measurement, analyze these data for trends and relationships, and validate the measurements (Watson, 2015). In this study, in which the effect of peritextual reading on reading comprehension skills of primary school students was examined, the data were analyzed and evaluated by the quantitative research methodology. SPSS 22.0 program was used for the analysis of the data in the research and the effects of the independent variable on the dependent variable were analyzed in terms of cause-effect relationships. The results of the analysis are included in the findings section of the research.

Most statistics assume the existence of a normal distribution curve and test whether the data fit the normal distribution to determine the statistical choice (Cohen et al. 2021). In this study, before the analysis, it was checked whether the data showed a normal distribution. Regarding normality, the data were analyzed with skewness, kurtosis values, mode, median, Box Plot, Q-Q Plot and histogram plots. In the analyses, normal distribution tests were performed and analyzed with the data collected from experimental and control groups. After the distribution tests, the homogeneity of the variances was tested, and decisions were made regarding the tests to be applied.

It is seen that two different data analysis tests were used in the study. These are the Dependent Sample t-Test for normally distributed data and the Man Whitney U test for non-normally distributed data. Effect size is given more importance than statistical significance in the international literature (Cohen et al., 2021). Therefore, the effect sizes of significant relationships were also examined in the analyses. The widely used calculation method developed by Cohen was used to calculate the effect size. If Cohen's d value is less than 0.2, it can be expressed as a 'weak' effect, 0.5 as a 'moderate' effect, and a greater than 0.8 as a 'strong' effect (Kilic, 2014).

Validity and Reliability

It is stated in studies that threats to validity and reliability cannot be eliminated, but can be mitigated (Cohen et al., 2021). In this study, studies that can minimize the threating factors for validity and reliability are included in line with the quantitative research method.

Validity refers to the correct measurement of what is intended to be measured in the research (Moskal & Leydenes, 2000). To ensure the validity of the research, the appropriate work schedule was determined, the most appropriate research method was preferred, the valid tools were used to collect the data required for the research, similar environments and standards were determined for both the experimental and control groups during data collection, the most appropriate research method was used to represent the universe and the most suitable for the research. The right study group was determined, the objectives of the measurement tools, their usage areas and the explanations of the scales were explained in detail to increase the motivation

of the study group during data collection, the researcher accepted all kinds of results that may arise during the study process and showed an attitude away from prejudices.

Reliability is about the measurement tool's consistently giving accurate results (Cafiero et al. 2014). Concepts expressing reliability are 'sensitivity' and 'determination' (Büyüköztürk et al. 2014). Reliability can be achieved by eliminating the errors that may occur by chance in the measurement results (Turgut, 1990). Reliability, which is related to the degree of precision and accuracy of measurement tools, has three types: stability, equivalence, and internal consistency (Cohen et al. 2021). To ensure reliability and stability, a suitable period was determined between the pre-test and post-test together with the expert opinions.

Reliability as equivalence is related to the equivalent of a data collection tool or the same tool giving similar results in different applications (Cohen et al. 2021). In this study, no statistically significant difference was found between the pre-test and post-test data results applied for the non-manipulated control group. In this respect, it can be stated that the measurement tools give similar results and ensure their reliability. In addition, there was no statistically significant difference in the pre-test results of the experimental and control group students. This was a sign that both student levels were close to each other and that the scale gave consistent results without being manipulated.

The third type of reliability determined in quantitative research is the internal consistency coefficient. The most commonly used internal consistency index is the Kuder-Richardson 20 formula (KR-20) and the alpha coefficient (Andrich, 1982) for items scored in pairs. When calculating the internal consistency coefficient, if the test is used and the data set is scored as '0-1', the KR-20 coefficient is used, and the Cronbach Alpha coefficient is used in the data sets obtained by the grading method. In this study, the reliability of the tests was calculated with the KR-20.

It is seen that the KR-20 coefficient for the Reading Comprehension Test-1 is .80, and the KR-20 reliability coefficient value for the Reading Comprehension Test 2 is .82. According to these results, it can be said that the internal consistency coefficients of the tests used in this study, in which the effect of peritextual reading on reading comprehension skills of primary school students, were investigated, had high reliability.

Ethics committee approval process

The research was carried out with the approval of Ataturk University Ethics Commission dated 21/08/2020 and numbered 11.

Results

In this section, findings on the effect of peritextual reading on primary school students' reading comprehension skills are included. While examining the findings, the pre-test and post-test data were explained separately. In the first stage, descriptive results of the data obtained from the pre-test and post-test were given. In the second stage, skewness - kurtosis values, mode, median, Box Plot, Q-Q Plot and histogram graphs were examined to see if the data showed a normal distribution. In the third stage, whether the pretest and posttest scores make a significant difference between the experimental and control groups and the differences between the pretest and posttest scores of the experimental group students were examined. The effect sizes were also examined in the results that differed significantly.

Findings Obtained from Pre-Tests

In the study, the reading comprehension achievements of the experimental and control groups were measured and analyzed. Assumptions were checked regarding which test would be used to examine the statistical relationship between the groups. The Kolmogorov-Smirnov test, skewness, kurtosis, mode, and median values for the reading comprehension test are presented in Table 3.

Table 3. Normality values of pre-test data

Group	N	$\bar{X}$	Kolmogorov-Smirnov	Skewness	Kurtosis	Mod	Median
Experimental	52	18,6	.008	-.573	-.017	19	19
Control	50	17,9	.000	-.630	-1,079		

When Table 3 is examined, it is seen that the Kolmogorov-Smirnov test results are statistically significant, and the data are not normally distributed. In addition, it was determined that the kurtosis coefficients were not between +1 and -1 for the control group. However, the mode and median values were equal. The distribution status of the pre-test data was also examined with Q-Q Plot, Box Plot and Histogram graphics.

When normality tests are examined, it can be stated that the scores obtained from the pre-test data show a normal distribution for the experimental group, but not for the control group. When the data on normality is examined as a whole, it can be interpreted that the pre-test data do not show a normal distribution. Therefore, the relationship between the pre-test results of students' reading comprehension skills was analyzed with the Many Whitney U Test.

To determine whether there is a statistical difference between the pre-test scores of the students in the experimental and control groups, the Many Whitney U Test was applied, and the test results are shown in Table 4.

Table 4. Difference between pre-test mean scores of the groups

Variable	Group	N	Rank Average	Rank Sum	U	Z	p
Pretest score	Experiment G.	52	49,37	2567,00	1189,0	-.745	.456
	Control G.	50	53,72	2686,00			

When Table 4 is examined, there is no statistically significant difference between the mean rank of the pre-test scores of the experimental group students' reading comprehension skills (49.37) and the mean rank of the pre-test scores of the reading comprehension skills of the control group students (53.72) according to the Man Whitney U Test [U= 1189, p>.05].

Findings from Post-Tests

In the study, the achievements of the experimental and control groups in the posttests were measured and analyzed. Assumptions were checked as to which test would be used to compare the group scores statistically. The Kolmogorov-Smirnov test, which is the normal distribution test for

the reading comprehension test, skewness and kurtosis values, mode, and median values are presented in Table 5.

Table 5. Normality values of post-test data

Group	N	$\bar{X}$	Kolmogorov-Smirnov	Skewness	Kurtosis	ss	Mod	Median
Experiment	52	22,15	.014	-.471	-.052	1.84	21	21
Control	50	17,68	.001	-.363	-1,257	5,38		

When Table 5 is examined, the post-test data of the experimental and control group students do not show a normal distribution according to the Kolmogorov-Smirnov test ($p<.05$). While it was observed that the skewness and kurtosis coefficients of the data were between +1 and -1 for the experimental group, it was determined that they were between +1 and -1 for the control group students. The mode and median values of the total score averages were equal. The distribution of the posttest data was also examined with Q-Q Plot, Box Plot, and histogram graphs.

When the analyzes on normality are evaluated holistically, it can be said that the reading comprehension skills post-test data show a normal distribution for the experimental group, but not for the control group. Therefore, it was decided to apply the Man Whitney U Test in the analysis of the relationship between the groups in the post-test data, and the Dependent Sample t-Test in the analysis of the relationship between the in-group pre-test and post-test scores of the experimental group students.

To determine whether there is a statistical difference between the post-test scores of the students in the experimental and control groups, the Man Whitney U Test was applied, and the test results are shown in Table 6.

Table 6. Man-Whitney u test results for comparing the post-test scores of experimental group students and control group students

Variable	Group	N	Rank Average	Rank Sum	U	Z	p	Cohen (d)
Final Test Score	Experiment G.	52	63,30	3291,50	686,5	-4,133	.000	1,11
	Control G.	50	39,23	1961,50				

When Table 6 is examined, a statistically significant difference was found between the mean rank of the post-test scores of the experimental group students (63.30) and the mean rank (39.23) of the control group students' post-test scores according to the Man Whitney U Test results [$U=686.5$, $p<.05$]. It is seen that this difference is in favor of the experimental group of students. The effect size of the post-test results of the experimental and control groups was calculated as $d=1.11$. With this result, it was determined that the effect size on reading comprehension skills was quite high between the experimental and control groups ($d>.08$).

In the study, dependent sample t-test analysis was performed to determine whether there was a difference between the pre-test and post-test mean scores of the experimental group. The data obtained as a result of the analysis are presented in Table 7.

Table 7. Difference between pre-test and post-test mean scores of experimental group students

Group	Variable	N	X̄	ss	t	sd	p	Cohen (d)
Experiment Grubu	Pretest	52	18,63	2,96	-7,344	51	.000	1,018
	Final Test	52	22,15	1,84				

When Table 7 is examined, a statistically significant difference was found between the pre-test mean score ($\bar{X}$=18.63) and the post-test mean score ($\bar{X}$=22.15) according to the dependent sample t-test results of the experimental group students [$t_{(51)}$ =-7.344, p<.05]. It was seen that this difference was in favor of the post-test mean scores of the experimental group students. The effect size of the pre-test and post-test scores of the experimental group students was found to be d=1.018. With this result, it was determined that the effect size between the pretest and posttest average scores of the experimental group students was quite high (d>0.8).

Discussion, Conclusion and Suggestions

In this part of the study, which examines the effect of peritextual reading on reading comprehension skills of primary school students, the results of the research are included. In addition, the research findings were associated with the existing literature and a comprehensive discussion was revealed.

As a result of the research, it was determined that peritextual reading significantly improved the reading comprehension skills of the students. As a result of the analysis, the scores of the students in the experimental group who were given peritextual reading were found to be statistically significantly higher than the scores of the students in the control group, in which the current reading activities were performed. Thus, it has been determined that the reading comprehension skills of the students who practice the peritextual reading before reading the textual content of a book are at a higher level than the students who read the text directly without doing the peritextual reading.

Reviewing the literature, it can be stated that peritextual reading is a part of a relatively new field of study. Therefore, when the literature was reviewed, no study could be found on the effect of peritextual reading on students' reading comprehension achievement. With peritextual reading, the reader learns how to evaluate information and resources (Witte et al., 2019), improves basic reading skills (Thomas et al., 2007), and increases their book reading experience (Serafini, 2012). In addition, peritextual reading enables readers to read and make meaning between texts, to think critically, to make connections between the outside world and the story, to make students decide whether to read the story or not, to gain a rich and satisfying reading experience, to read interactively with the text, and to interact between the text and the reader. It helps children to create an interface and to be interested in the book by separating them from the written text of the book (Ateş, 2013; Coifman, 2013; Genette, 1997; Gök et al., 2021; Gros and Latham, 2017; Rockenberger, 2014).

When children do not pay attention to the peritextual elements while reading, a disconnection occurs between the meaning of the contextual text and the subject (Bair, 2019). Peritextual features, which establish a relationship between the text and the subject and offer ideas about the content such as solving puzzles, help the reader to create in-depth meanings. It also stimulates the reader's sense of curiosity. By making peritextual reading, readers who relate and

interpret the peritext elements and the text have a powerful and intense reading experience (Sipe and Brightman, 2005). Peritextual reading, which helps to establish a strong interaction between the text and the reader and helps the reader to guess the content of the text, helps the reader to better understand the text and make sense of it. Thus, peritextual reading also improves the reader's reading comprehension skills.

There are many studies in the literature on improving students' reading comprehension skills. In his study, Salllabas (2008) found the relationship between reading attitude and reading comprehension skill to be below, while the relationship between academic achievement and reading success was moderate. Çelenk (2003) found that the school-family cooperation and the reading comprehension success of the students who received educational support from their parents were higher. With cooperative learning, even if students will just hear some basic concepts related to the text, they will attribute some meanings to the concepts and establish relationships between concepts with basic skills such as reasoning, brainstorming, and thinking aloud. Peritextual reading provides the opportunity to interact between teacher-student, student-student, to ensure that the subject is understandable and to create mutual reading support. In this case, a collaborative reading activity emerges. In addition, students who demonstrate high-level thinking skills by establishing intertextual relationships for the connection and connection between peritextual elements will also guess the content of the text. Thus, students will increase their reading comprehension success by getting support from the thinking styles of both the teacher and other students.

Erden and Çelik (2019) found that there is a significant relationship between reading comprehension skills and visual perception and vocabulary. The relationship between reading comprehension and vocabulary is quite strong and completely clear (Baumann and Kameenui, 1991; Paul & O'Rourke, 1988; Stanovich, 1986). The exact reasons for the relationship seem largely mutual, although not fully understood (Gersten et al., 2001). In other words, vocabulary contributes to reading comprehension (Stanovich, 1986) and develops through reading experiences (Cunningham & Stanovich, 1998). This relationship applies to readers of all levels. The vocabulary of poor readers is strongly related to the amount of reading they do (Cunningham and Stanovich, 1998). Peritextual reading will improve students' vocabulary by presenting a different reading strategy, helping the reader to guess the content by discussing the text, providing creative and critical thinking skills, adding comments/discussions for different words by the teacher and other students. Thus, the reading comprehension success/skill of the students who develop the vocabulary of the text or establish the relationships between the words will also improve.

Interpreting and discussing pictures, drawings and photographs associated with texts are important parts of peritextual reading. From this aspect, visual reading is the sub-dimension of peritextual reading. There are many studies in the literature examining the relationship between visual reading and reading comprehension success. Baş and Kardaş (2014) found a positive and significant relationship between students' visual reading skills and their reading comprehension skills. In this study, one of the reasons why peritextual reading improves students' reading comprehension success may be visual reading, which is an element of peritextual reading, and interpretation of textual visuals.

Yılmaz (2008) states that students attending primary school in Turkey have poor reading comprehension success and that teachers should develop strategies that will increase students' reading experience. One of these strategies was demonstrated by this study (peritextual reading). By performing peritextual reading in their classrooms, teachers will apply a functional reading

strategy and increase students' reading comprehension success. Moreover, Ateş et al. (2020) found that teachers did not reach the desired level in visual reading and their visual reading proficiency was low. As a result of acquiring the habit of peritextual reading, teachers will both eliminate the deficiencies in this field and develop visual reading activities as usual. Thus, students will establish a link between the visual and the text and will activate their creative and critical thinking skills.

This study, which examines the effect of peritextual reading on primary school students' reading comprehension skills; The method used in the research was limited to the study group and the tests used in data collection. Therefore, some suggestions have been developed for future research. These:

1. A similar study can be done for students and/or adults in the older age group,

2. The research can be done with students from different socio-cultural backgrounds and the results can be compared with the results of this study.

3. Peritextual reading level determination scale can be developed and its relationship with different variables can be examined.

4. With this research, it is evident that peritextual reading improves reading comprehension skills. Therefore, in order to improve students' reading comprehension skills, 'peritextual reading' activities for students should be carried out by preschool and classroom teachers.

Write the contribution of each author and conflict statement

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References

Akbayır, S. (2003). *Cümle ve metin bilgisi.* Deniz Kültür Yayınları.

Akkoyunlu, B. (2002). Öğretmenlerin internet kullanımı ve bu konudaki öğretmen görüşleri. *Hacettepe Üniversitesi Eğitim Fakültesi Dergisi, 22*(22), 1-8.

Akyol, H. (2005). *Türkçe ilkokuma yazma öğretimi.* Pegem A Yayınları.

Akyol, H. (2013). *Türkçe ilkokuma yazma öğretimi* (13. Baskı). Pegem Akademi Yayınları.

Anderseon, R. C., Hibert, E. H., Scot, J. A. & Wilkinson, A. G. (1985). Becoming *a nation of readers: The report of the comission on reading.* The nasional İnstitute Education, *U. S. Department of Education.* D.C.

Andrich, D. (1982). An index of person separation in latent trait theory, the traditional KR. 20 index, and the Guttman scale response pattern. *Education Research and Perspectives, 9*(1), 95-104.

Ateş, M., Sur, E., & Çelik, H. (2020). Türkçe Öğretmenlerinin Görsel Okumayla İlgili Görüşlerinin Değerlendirilmesi. *Eğitim Kuram ve Uygulama Araştırmaları Dergisi*, *6* (1), 1-15.

Ateş, S. (2013). İlkokulda bireysel okumadan metinlerarası okumaya: Resim kitaplarını okuma ilkokulda peritextual okumadan metinler arası okumaya resimli hikâye kitap okuma süreci. *İnsan Bilimleri Dergisi, 10* (1), 1567-1585.

Bair, A. (2019). Literacy engagement through peritextual analysis. *The Catholic Library World, 90*(1), 68-69.

Baş, Ö., & Kardaş, N. (2014). İlköğretim öğrencilerinin görsel okuma becerisi ile okuduğunu anlama becerisi arasındaki ilişkinin incelenmesi. *Uşak Üniversitesi Sosyal Bilimler Dergisi, 7*(1), 230-243.

Baumann, J. F., & Kameenui, E. J. (1991). *Research on vocabulary instruction: Ode to Voltaire.* In J. Flood, D. Lapp, & J. R. Squire (Eds.), Handbook of research on teaching the English language arts (pp. 604-632). Merrill/Prentice Hall.

Burns, R.B. (1997). *Introduction to research methods.* (3. Baskı) Longman.

Büyüköztürk, Ş., Çalmak, E. K., Akgün, Ö. E., Karadeniz, Ş., & Demirel, F. (2014). *Bilimsel araştırma yöntemleri* (18.Baskı). Pegem Akademi.

Cafiero, C., Quiñonez, H. R. M., Ballard, T. J., & Kepple, A. W. (2014). Validity and reliability of food security measures. *Annals of the New York Academy of Sciences, 1331*(1), 230-248.

Çelenk, S. (2003). Okul aile işbirliği ile okuduğunu anlama başarısı arasındaki ilişki. *Hacettepe Üniversitesi Eğitim Fakültesi Dergisi, 24*(24).

Ceyhan, S. (2019). Ekileşimli *sesli okumanın öğrencilerin okuduğunu anlama, okuma motivasyonu ve akıcı okumalarına etkisi* (Tez No.604419) [Doktora tezi, Gazi Üniversitesi-Ankara]. Yükseköğretim Kurulu Ulusal Tez Merkezi.

Cohen, L., Manion, L. & Morrison, K. (2021). *Eğitimde araştırma yöntemleri.* (E. Dinç, K. Kıroğlu, Çev.). Pegem Akademi

Coifman, R. C. (2013). Giving texts meaning through paratexts: Reading and interpreting endpapers. *School Library Monthly, 30*(3), 21–23.

Costantini, A., De Paola, F., Ceschi, A., Sartori, R., Meneghini, A. M., & Fabio, A. D. (2017). Work engagement and psychological capital in the italian public administration: A new resource-based intervention programme. *SA Journal of Industrial Psychology, 4*, 1-11.

Cunningham, A. E., & Stanovich, K. E. (1998). What reading does for the mind. *American Educator, 22*, 8-17.

Cunningham, A. E., & Zibulsky, J. (2011). Tell me a story: Examining the benefits of shared reading. *Handbook of Early Literacy Research, 3*, 396-411.

Erden, G., & Çelik, C. (2019). Sesli Okuma Becerisi ve Okuduğunu Anlama Testinin Psikometrik Özelliklerinin İncelenmesi: Geçerlik ve Güvenirlik Çalışması. *Nesne Psikoloji Dergisi, 7*(14), 1-18.

Gabriel, N. (2018). *Ali'nin ayak sesleri.* (Çev.Tuba Rabia Ongün). TÜBİTAK Popüler Bilim Kitapları.

Genette, G. 1997. *Palimpsest: literature in the second degree.* Newman, C. & Doubinsky. C. (trans.). University of Nebraska Press.

Gersten, R., Fuchs, L. S., Williams, J. P., & Baker, S. (2001). Teaching reading comprehension strategies to students with learning disabilities: A review of research. *Review of Educational Research, 71*(2), 279-320.

Göçer, A., & Tabak, G. (2012). İlköğretim 5. sınıf Türkçe öğrenci çalışma kitaplarının görsel okuma etkinlikleri bağlamında incelenmesi. *İlköğretim Online, 11*(3), 790-799.

Gök, B., Temizyürek, F., Baş, Ö., & Sirem, Ö. (2021). Feridun Oral'ın çocuk kitaplarının metinsel özellikleri ve metin okunabilirlik düzeyleri. *Türk Eğitim Dergisi, 10* (2), 125-138.

Grabe, W. (2009). *Reading in a second language: Moving from theory to practice.* Cambridge University Press.

Gross, M., & Latham, D. (2017). The peritextual literacy framework: Using the functions of peritext to support critical thinking. *Library & Information Science Research, 39*(2), 116-123.

Güneş, F. (2009). *Hızlı okuma ve anlamı yapılandırma*. Nobel Yayın Dağıtım.

Harris, A. J. & Sipay, E. R. (1990). How to teach reading: Acompetency-based program. Longman.

Hasançebi, B., Terzi, Y., & Küçük, Z. (2020). Madde güçlük indeksi ve madde ayırt edicilik indeksine dayalı çeldirici analizi. *Gümüşhane Üniversitesi Fen Bilimleri Enstitüsü Dergisi, 10*(1), 224-240.

Higonnet, M. (1990). The playground of peritext. *Children's Literature Association Quarterly, 15*, 47-49.

Jiang, X. (2017). Lower-level processing skills in English-as-a-Second-Language reading comprehension: Possible influence of first language orthography. *Studies in English Language Teaching, 5*(3), 448-465.

Karasar, N. (2014). *Bilimsel araştırma yöntemi* (27.Baskı). Nobel.

Kern, R. G. (1989). Second Language Reading Strategy Instruction: Its Effects on Comprehension and Word Inference Ability. *The Modern Language Journal, 73*, 135-149.

Koda, K. (2005). *Insights into second language reading: A cross-linguistic approach.* Cambridge University Press.

Lambert, M. (2010). *The whole book approach to evaluating and using the picture book as an art form.* http://www.carlemuseum.org/downloads/Whole_Book_ Approach.pdf.

Mackenzie, N., & Knipe, S. (2006). Research dilemmas: Paradigms, methods and methodology. *Issues in educational research, 16*(2), 193-205.

Martinez, M., Stier, C., & Falcon, L. (2016). Judging a book by its cover: An investigation of peritextual features in Caldecott award books. *Children's Literature in Education, 47*(3), 225-241.

Mertens, D.M. (2005). *Research methods in education and psychology: Integrating diversity with quantitative and qualitative approaches* (2nd ed.). Sage.

Milli Eğitim Bakanlığı. (2018). *Türkçe dersi öğretim programı.* MEB.

Moskal, B. M., & Leydens, J. A. (2000). Scoring rubric development: Validity and reliability. *Practical Assessment, Research, and Evaluation, 7*(1), 10.

Nassaji, H. (2003). Higher–level and lower–level text processing skills in advanced ESL reading comprehension. *The Modern Language Journal, 87*(2), 261-276.

Paul, P. V., & O'Rourke, J. P. (1988). Multimeaning words and reading comprehension: Implications for special education students. *Remedial and Special Education, 9*(3), 42-51.

Penner, L. R. (2017). *Yavaş Kaan* (Öngün, T., Çev.). TÜBİTAK Popüler Bilim Kitapları.

Perfetti, C. A. (1986). Continuities in reading acquisiton, reading skill and reading disabilty. *Remedial and Spesial Education, 7*, 11-21.

Plaut, D. C. (2005). *Connectionist approaches to reading*. In M. J. Snowling, & C. Hulme (Eds.). The science of reading: A handbook (pp. 24-38). Blackwell Publishing.

Price, C. J. & Mechelli, A. (2005). Reading and reading disturbance. *Current Opinion in Neurobiology, 15*(2), 231-238.

Roberts, J., Jurgens, J., & Burchinal, M. (2005). *The role of home literacy practices in preschool children's language and emergent literacy skills. Journal of Speech, Language, and Hearing Research, 48*(2), 345-59.

Rockenberger, A. (2014). *Video game framings. In N.* Desrochers, & D. Apollon (Eds.), Examining paratextual theory and its applications in digital culture (252–286). IGI Global.

Sallabas, M. E. (2008). İlköğretim 8 sınıf öğrencilerinin okumaya yönelik tutumları ve okuduğunu anlama becerileri arasındaki ilişki. *İnönü Üniversitesi Eğitim Fakültesi Dergisi, 9*(16), 141-155.

Sarıkaya, B. (2017). Türkçe öğretiminde görsel okuma. *Anemon Muş Alparslan Üniversitesi Sosyal Bilimler Dergisi, 5*(3), 779-796.

Serafini, F. (2012). Interpreting visual ımages and design elements of contemporary picturebooks. *Connecticut Reading Association Journal,* 1, 3-8.

Sipe, L. R. (1998). Learning the language of picture books. *Journal of Children's Literature, 24*(2), 66–75.

Sipe, L. R., & Brightman, A. (2005). Young children's visual meaning-making during readalouds of Picture storybooks. *National Reading Conference Yearbook, 54*, 349-361.

Sparks, R. L., Patton, J. & Murdoch, A. (2014). Early reading success and its relationship to reading achievement and reading volume: replication of '10 years later'. *Reading and Writing, 27*(1), 189-211.

Squartini, T., Mastrandrea, R., & Garlaschelli, D. (2015). Unbiased sampling of network ensembles. *New Journal of Physics, 17*(2), 1-18.

Stanovich, K. E. (1986). *Cognitive processes and the reading problems of learningdisabled children: Evaluating the assumption of specificity.* In J. K. Torgesen & B. Y. L. Wong (Eds.), Psychological and educational perspectives on LD (pp. 87-131). Academic Press.

Sukamolson, S. (2007). Fundamentals of quantitative research. *Language Institute Chulalongkorn University, 1*, 2-3.

Tanju, E. H. (2010). Çocularada kitap okuma alışkanlığına genel bir bakış. *Aile ve Toplum, 11*(6), 30-39.

Thomas, S., Joseph, C., Laccetti, J., Mason, B., Mills, S., Perril, S., & Pullinger, K. (2007). Transliteracy: crossing divides. *First Monday, 12*(12), 1-2.

Turgut, M. F. (1990). *Eğitimde ölçme ve değerlendirme metotları* (7.Baskı). Saydam Matbaası.

Tüzel, A. G. M. S. (2010). Görsel okuryazarlık. *Türklük Bilimi Araştırmaları, 27*, 691-705.

Urquhart, A. H., & Weir, C. J. (2013). *Reading in a second language: Process, product and practice (2nd ed.).* Routledge.

Watson, R. (2015). Quantitative research. *Nursing standard: official newspaper of the Royal College of Nursing, 29*(31), 44-48 . https://doi.org/10.7748/ns.29.31.44.e8681

Wikipedia. (2021). *Nicel araştırma yöntemi.* https://tr.wikipedia.org/wiki/Kantitatif_ara%C5%9Ft%C4%B1rma_y%C3%B6ntemi

Witte, S., Latham, D., & Gross, M. (2019). *Literacy engagement through peritextual analysis.* Ala Editions.

Wolfenbarger, D, C., & Sipe, L. (2007). A unique visual and literary art form: Recent research on picturebooks. *GSE Publications, 32*, 273-280.

Yılar, Ö. (2015). *İlkokuma ve yazma öğretimi.* Ö.Yılar (Ed.), *Okuma* içinde (ss.53-74). Pegem Akademi.

Yıldız, M. (2010). *İlköğretim 5. sınıf öğrencilerinin okuduğunu anlama, okuma motivasyonu ve okuma alışkanlıkları arasındaki ilişki* (Tez No.279666) [Master's thesis, Uşak University-Uşak]. National Thesis Center of the Council of Higher Education.

Yılmaz, M. (2008). Türkçede okuduğunu anlama becerilerini geliştirme yolları. *Mustafa Kemal Üniversitesi Sosyal Bilimler Enstitüsü Dergisi, 5*(9), 131-139.

Youngs, S., & Serafini, F. (2011). Comprehension strategies for reading historical fiction picturebooks. *The Reading Teacher, 65*(2), 115-124.

Zyphur, M. J., & Pierides, D. C. (2017). Is quantitative research ethical? tools for ethically practicing, evaluating, and using quantitative research: JBE JBE. *Journal of Business Ethics, 143*(1), 1-16.