

## **The Effect of KWL Reading Strategy in Elementary School 4<sup>th</sup> Grade Students on Reading Comprehension**

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### **Abstract**

In this study, it is aimed to determine the effect of Turkish instruction conducted with the KWL (KWL is a strategy). The approximate acronym stands for "What I Know," "What I Want to Know," and "What I Learned." Many students and teachers also use it as a reading comprehension aid) strategy on the reading comprehension skill levels of primary school 4th grade students. In the research, pre-test-post-test control group half experimental design was used. The mixed method including quantitative and qualitative research methods was used in the study. The study group of the research consists of 40 students studying in a primary school in Sarıkamış district of Kars province, Turkey. The treatment dimension of the research took 6 weeks. As a result of the research, a significant difference was found in favor of the experimental group in terms of posttest scores. In addition, a difference was found in the experimental group in terms of first and post test scores, but not a difference in the control group. In addition, in line with the findings obtained from other data collection tools, it was found that the KWL strategy increased students' interest and motivation; It was determined that the students expressed positive opinions about using the strategy.

**Keywords:** The KWL strategy, Reading comprehension, Turkish instruction, Fourth grade.

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## **Introduction**

Today, information is constantly developing and changing in line with scientific and technological developments. For this reason, reading is the most basic way to get up-to-date and reliable information. Grabe and Stoller (2011) define reading as “the event of understanding a written content and explaining information correctly”. According to Karatay (2007, p.9) reading, words, visual elements such as graphics, pictures and shapes are perceived through the sensory organs and associated with preliminary information is a cognitive activity. Pang and others, (2010, p.6) states that “reading is about understanding written texts. It is a complex activity that involves both perception and thought. Reading consists of two related processes: word recognition and comprehension. Richards and Schmidt (2010), on the other hand, refer to “reading as the process of understanding the content of a written text”, while Hoover and Gough (1990) state that reading consists of two elements: “receiving the message of the text” and “grasping the text”. According to Anılan (2004, p.91), “reading is a process of social activity in terms of both physiological and mental, environmental conditions”. Based on these definitions, reading can be expressed as a mental and complex process of creating meaning that occurs as a result of the mutual interaction of physiological and cognitive processes. Another basic skill that needs to be acquired in addition to reading is the ability to understand. This skill gives students the ability to see the problems, events, and differences they will face in their lives. The main goal at the end of reading is to provide understanding.

In the process of understanding, the individual deduces new meanings from the text he/she reads with the help of his/her prior knowledge and experience (Çiftçi, 2007, p.62). According to Temizkan (2008, p.132) the understanding, is to reach a judgment by comparing the information obtained from the subject being read with the preliminary knowledge and experience. It is to understand what the text wants to say. Güneş (2003, p.26) defined understanding as “correctly perceiving and interpreting what is meant to be transmitted in the text”.

Reading and understanding are not only involved in the educational process, but also in all aspects of life. Reading comprehension skills, which have a strong relationship with academic success, need to be developed from the first years of teaching (Yılmaz, 2011, ; Anılan, 2004).

The Turkish course is of great importance in gaining basic language skills to students. In this context, gaining reading and comprehension skills is realized through Turkish lessons in primary schools (Belet & Yaşar, 2007). Besides reading skills, reading comprehension skills are also extremely important. According to Güneş (2004, p.59), it consists of “understanding what you read, thinking about the meaning of the text, researching the reasons, making conclusions and evaluating; It is a multidimensional

process that includes mental activities such as analysis, selection, decision making, interpretation, translation, analysis-synthesis and evaluation.”. It can be said that individuals who understand their reading well use a number of strategies and develop themselves. These strategies serve as a problem-solving function for good readers (Moreillon, 2007, p.10). Pilonieta, on the other hand, expressed reading comprehension strategies as cognitive tools that increase students’ academic success (cited in. Karasakaloğlu, 2012, p.1922).

Reading comprehension strategies are generally classified as strategies used before reading, during reading, after reading, or throughout the reading process. Susar Kırmızı (2006) classifies reading comprehension strategies as, (1) stages of reading process (review, question extraction, etc.), (2) strategies during reading (building relationships, taking notes, etc.) and (3) post-reading strategies (summarization, evaluation, etc.). Yılmaz (2008) classifies the strategies for reading comprehension as (1) strategies used before reading (expectation creation, schema creation, reading strategy as if you were teaching someone else, etc.), (2) strategies used during reading (underlining, taking notes on the edge of the text, following the thought, not the words, etc.), (3) strategies used after reading (repeating, meaning, summarizing strategy, etc.) and strategies used throughout the reading process (strategic note-taking, SQ4R, multi-pass strategy, mutual teaching strategy, collaborative discussion inquiry strategy etc.). The KWL strategy is a strategy that covers the whole reading process. KWL is one of the most popular approaches that teachers use to evaluate the student's subject knowledge regarding descriptive texts (Ogle, 1986, cited in. Schumm, 2006, p.266). This strategy reveals students' prior knowledge/introductory behavior and knowledge of a new topic (Hill, et al., 1998). However, the stages of KWL allow students to remember their previous knowledge, develop strategies for asking questions on their own, read to answer questions, and research topics at an advanced level (Jared & Jared, 1997). According to Daniel (2011), using the KWL strategy in teaching will promote active learning and academic achievement, improve learning, and students will work collaboratively to complete a KWL scheme.

The KWL Strategy is a reading comprehension strategy developed by Ogle (1986), in which students determine what they know, what information they want to learn later, and finally establish a relationship between their prior knowledge and the information they have learned, and define new information. The KWL strategy was adapted to Turkish by Yazıcı (2006) as “What I Know-What I Want to Know-What I Learned”.

The implementation of the KWL strategy is as follows. Before starting the activities with the KWL strategy, a table with three columns is prepared (Epeçan, 2009, p.217). The steps of the KWL strategy are as follows: A form is distributed to the students to fill in the relevant parts of the subject to be covered. This form is divided into three parts:

“what do I know? what do I want to learn?, what have I learned?”. The first part of the strategy, What do I know? In this section, the teacher asks the students what they know about the topic and write it in the first part of the form. In Academic Success Center (2019) what to do in the first, second and third columns of the KWL reading strategy is stated as follows.

Column 1	Column 2	Column 3
Know	What to know	Learned
Before reading, assess and record what you know.	Set a purpose for your reading. What do you want to learn from the text? As you read, maintain focus on your purpose.	After reading, reflect, note and review what you learned from your reading.

**In column 1**, write down what you know about the text’s topic. What have you read, heard, or experienced that is related to the topic? What is the context? Who is the author? When was the text written? Who published it?

**In column 2**, continue your pre-reading work, noting what you want to know after reading the text. What do you want to know? What you write in this column could refer to your personal goals; in academic reading, however, it will more likely have to do with what you need to learn from the reading for your class.

Preview the text, observing title, prefatory material, headings and subheadings, and any charts, pictures, or other visuals. Compile a list of questions based on what you’ve determined you want to know to focus your reading

**In column 3**, answer and record the answers to questions you posed before you began reading. Write down the main ideas from the text, as well as what you found surprising, controversial or hard to understand. Compare what you’ve written in the “learned column to what you wrote in the “want-to-know” column. Have you accomplished what you set out to accomplish in your reading? Consider ways in which what you learned helps you understand ideas or concepts being explored in your class (Academic Success Center, 2019).

The main purpose is to embed background information with schema theory. Schema theory organizes human memory and provides students with the opportunity to remind old experiences (Taylor, Harris, & Pearson, 1986, cited in Jared & Jared, 1997, p.26). In the second column the student lists what he wants to learn about the text. Students begin to develop various questions around the topic. During the listing process, as a result of the increase in students' desire to learn, they can find answers to their own questions and analyze information better (Ogle, 1986, cited in Jared & Jared, 1997, p.26). Third what have I learned? In the section, the student lists what he has learned from the text. In other words, what do I want to learn? He evaluates that he has not found the answers he seeks to

the questions listed in his column. Thanks to this strategy, he combines his own knowledge with the knowledge he has just learned. This combination allows students to better organize and develop their thinking on the given topic. (Jared & Jared, 1997). With the strategy applied in this way, it can make the teaching-learning process more enjoyable and attractive (Rezqi, 2013).

**Purpose of the Research:** The aim of this study is to examine the effect of Turkish lesson conducted with the KWL (Know-Want-Learn) strategy on the reading comprehension skill levels of primary school 4th grade students. In this context, the hypothesis of the study is: KWL strategy have an effect on reading comprehension skills of primary school fourth grade students.

**Sub-problems:** During this research process, answers to the following questions were sought:

1. Does teaching with the KWL strategy in the classroom Turkish lesson have an impact on the reading comprehension ability of Primary School fourth graders?
  - 1.1. Is there a significant difference between the KWL strategy and the pre-test and post-test reading comprehension scores of the experimental group in which the instruction was given?
  - 1.2. Is there a significant difference between the pre-test and post-test reading comprehension scores of the KWL strategy and the non-teaching control group?
  - 1.3. Is there a significant difference between the post-test reading comprehension scores (achievement levels) of the experimental group in which the instruction was carried out with the KWL strategy and the control group that was not taught with the KWL strategy?
2. What are the opinions of the experimental group student's views on the KWL strategy?

## Method

**Model of research:** It was a mixed method study, in which quantitative and qualitative research methods are used. In the quantitative dimension of the research; experimental design was used to find the cause and effect relationship between the dependent and the independent variable and to determine whether the independent variable had an effect on the dependent variable. Experimental research is a scientific approach to research, where one or more independent variables are manipulated and applied to one or more dependent variables to measure their effect on the latter. The effect of the independent variable on the dependent variable is usually observed and recorded over some time, to aid researchers in drawing a reasonable conclusion regarding the relationship between these 2 variable types.

In the study, while the students' reading comprehension test scores were the dependent variable; the independent variable is the teaching based on the KWL strategy applied to the experimental group and the current program applied to the control group, which doesn't teach based on the KWL reading strategy.

**Working group/participants:** In the research, a total of 40 students studying in the fourth grade at Gazipaşa Primary School in the Sarıkamış district of Kars province in the second semester of 2019-2020.

In order to equalize the students in the two groups in terms of level, personal information forms were applied and the first semester Turkish course grade averages were examined. It was seen in the pre-test results that the average scores of the reading comprehension test of the students in these two groups, which are close to each other, are also equivalent. Later, one group was determined as the experimental group and the other as the control group by lot.

**Data collection tools:** Research data; It was collected with "Reading Comprehension Test", "Semi-structured Interview Form", "Researcher Diary" and "Observation Form". These tools are described below.

**Reading comprehension test:** Within the scope of the research, a reading comprehension test was developed to determine the students' reading comprehension levels. The questions prepared for the reading comprehension test were prepared based on the related gains specified in the primary school Turkish Course Curriculum. While preparing the reading comprehension test, 8 acquisitions related to informative texts and that are measurable were determined.

The informative text in the reading comprehension test (Edison is Making an Electric Light Bulb) was chosen from the 4th grade textbooks accepted by the Ministry of Education and the Education Board, according to expert opinions. According to the text Edison is Making an Electric Bulb, the reading comprehension test, which was created by the researchers according to the principles of simple and in-depth comprehension (Akyol, 2016, p.100), was presented to expert opinions, and as a result of the suggested changes, the test consisted of 16 questions. The draft test was administered as a pilot to 60 4th grade students in another primary school (Kars-Sarıkamış), which has similarities with the students at the school where the research will be conducted. Within the scope of the collected data, the item difficulty and discrimination index was calculated. As a result of the item analysis, 3 questions were directly removed from the test; Item discrimination indices of items no 3, 5, 7 and 10 were lower than 0.20; Accordingly, items 3, 5 and 7 were corrected. Due to the fact that the item difficulty indexes of the items 3 and 5 were below 0.20 and the item difficulty index of the 7th item was above 0.81, corrections were made

in these items. After the item analysis, the test was presented to the expert opinion again, it was decided to exclude the item numbered 10 from the test, and thus the test was reduced to 12 items. The scoring rubric developed by Akyol (2016, p.100) was used for scoring the achievement test. The highest score that can be obtained from the test is 16 and the lowest score is 0. The test was presented to seven experts in the field of elementary education and Turkish education for validity, and the Kuder Richardson (KR-21) Cronbach  $\alpha$  formula was used for reliability and the alpha value was 0.72.

**Semi-structured interview form:** Semi-structured interviews were conducted in order to determine the views of the experimental group students regarding the application in the study. In semi-structured interviews, the questions to be asked are prepared beforehand by the researcher, but the researcher can direct the interview process (Türnüklü, 2000, p.547). During the interviews, in order to prevent data loss, voice recording was made and written consent was obtained from the parents of the students. The researcher provided the necessary information about the interview to each participant before starting the interviews, and the interviews were conducted online with each student in the experimental group due to the Covid-19 outbreak. The interviews lasted between 7 and 12 minutes, with an average of 8 minutes.

**Researcher diary:** Researcher diary; It includes observations, comments, explanations, in short, individual notes covering the research process. The researcher kept a diary during the six-week implementation period. The researcher reflected all the positive and negative experiences and observations, thoughts and hypotheses he gained during the application process in the diary. The diaries written by the researcher were used to support the research findings.

**Observation:** The observation technique was used to determine the behaviors exhibited during the teaching process regarding the KWL strategy in the primary school 4th grade Turkish lesson. Observation is a technique used to examine behaviors in a particular environment in detail, and is more suitable for collecting data on non-verbal behaviors than screening, experimentation, and document research (Bailey, 1987. cited in Balcı, 2009). The observation was carried out by the classroom teacher for 6 weeks and 24 lesson hours through the observation form.

**Data collection and analysis:** Since the mixed research method are used in the study, both quantitative and qualitative data were collected. Before the experimental implementation with the KWL Strategy, a 3-week and 12-hour pilot application was carried out in order to have preliminary information about the possible problems that may be encountered in the real application and what to do. In the pilot study, a preliminary evaluation was made about whether the texts used in teaching KWL reading strategy in the experimental group and the content and materials prepared according to these texts were suitable for the grade level and whether there would be any problems in the application.

In the pilot study, as positive results were obtained regarding the above-mentioned questions, the main experimental application was started. At this stage, activities were carried out to meet the students in the experimental group in the first two weeks. Student information was confirmed by interviewing the class teacher.

In order to determine the readiness of the students in the experimental and control groups, the reading comprehension achievement test was applied as a pre-test. After the pre-test applied, Turkish lessons in the experimental group were started using the KWL technique. The lessons were conducted by the researcher in the experimental group and by the class's own teacher in the control group. During the research process, it was assumed that the researcher and the teacher, who carried out the applications in both the experimental group and the control group, were impartial and were equal in terms of experience, instructional skills and teacher education. In this context, the researcher used 4 hours per week for 6 weeks and 24 lessons in experimental group. In the first two weeks, the researcher tried to make students comprehend the technique as a model in the use of the KWL technique. The researcher followed the following sequence in the application of the KWL strategy in the experimental group (Anılan & Sayar, 2020; Sayar, 2020):

1. The researcher distributes the text and KWL Charts to students.
2. The researcher draws the table consisting of 3 columns on the board. Column 1 writes What I Know (K), Column 2 as What I Want to Learn (W), and Column 3 as What I Learned (L).
3. Using the brainstorming technique to find out what the students know about the text, the teacher writes what they say in the "What I Know (K)" column on the board. Students also write in the "K" column of their KWL Charts.
4. The students are asked what information they want to learn about the text and their answers are written in the (W) column. Students also write in the "W" column of their KWL Charts.
5. The students read the text carefully.
6. The teacher asks the students to think about what they have learned about the text. Write what the students say in the relevant column on the board. Students write what they have learned in the column "What I have learned" (L).
7. The teacher talks about possible answers to questions that students want to learn but cannot find answers to. Asks students for their opinions. Trying to find the answer. If there are still unanswered questions, they are asked to write in the column what they have learned by doing research.



In the control group, no intervention was made to the teaching of the Turkish lesson. The lessons in the control group were conducted within the framework of routine practices in accordance with the student course and workbook. This could be called traditional practice.

While the application process was continuing, the researcher was observed by the teacher of the class. This situation continued throughout the treatment process. In addition, the researcher created the research diary during the application process. After the treatment process was completed, a post-test was applied to the experimental and control groups, and interviews were made with the experimental group students to get their views and opinions about the KWL application.

The quantitative data in the study were obtained through the “Reading Comprehension Test” applied to the experimental and control groups as a pre-test and a post-test. First, the pretest and posttest success scores of the experimental and control groups were calculated and normality tests were examined to examine whether the scores showed a normal distribution. When the number of participants is less than 29, Shapiro Wilks test is used, and when it is more, the Kolmogorov-Smirnov test is used (Kalaycı, 2008, p.13; Green & Salkind, 2007). For this reason, Kolmogorov-Smirnov test was used to determine whether the scores were normally distributed. As the data showed normal distribution, the t-test was used to compare the mean scores of the experimental and control groups (Carroll & Schneider, 1985; Erceg-Hurn & Mirosevich, 2008).

Qualitative data in the study consisted of experimental group student interviews, researcher's diaries and observation forms, and descriptive analysis was used in analysis. Descriptive analysis is the specific thematicization, arrangement, interpretation of data, and direct quotations (Yıldırım & Şimşek, 2016, p.239; Braun & Clarke, 2006, p.79). In this context, interview questions were accepted as themes and relevant codes were placed under the relevant theme. In order to present the opinions about the application process effectively; Direct quotations were made from student interviews, researcher diaries and observation notes.

## **Findings**

In this part of the research, the findings obtained based on the sub-problems of the research are included. In this context, first the findings for the quantitative dimension of the research and then the findings for the qualitative dimension are presented.

**Findings Regarding the Quantitative Dimension of the Research:** In this section, findings regarding the quantitative dimension of the research are included. In order to determine which statistical test to use in the analysis of the data obtained from the research, it was determined whether the scores of the experimental and control groups from the

measurement tools showed a normal distribution. According to Büyüköztürk (2007, p.42), Shapiro-Wilk test is used when the group size is less than 50 while examining the normality distribution. According to this explanation, the Shapiro-Wilk test was used to determine whether the scores showed normal distribution (Shapiro & Wilk, 1965). In addition, Kolmogorov-Smirnov test was also applied (Lilliefors, 1967). Whether the test scores of the experimental and control group students belonging to the "Reading Comprehension Test" show normal distribution was tested and the results are shown in Table 1.

Table 1

*Shapiro-Wilk and Kolmogorov-Smirnov Test Normality Values an of Pre-Test and Post-Test Scores of Experimental and Control Groups*

		Kolmogorov-Smirnov			Shaphiro-Wilk		
		Statistics	Sd	p	Statistics	Sd	p
Experimental group	Pre Test	.129	20	.200	.980	20	.935
	Post test	.120	20	.200	.971	20	.782
Control group	Pre Test	.107	20	.200	.950	20	.360
	Post Test	.126	20	.200	.955	20	.452

When Table 1 is examined, it is observed that the scores obtained from the measurement tools of the pre-test and post-test show a normal distribution ( $p > 0.05$ ).

### **Findings regarding the first sub-problem**

In the first sub-problem, "Does teaching with the KWL strategy in primary school 4th grade Turkish lesson have an effect on primary school fourth grade students' reading comprehension skills?" The findings regarding the question are included. In this context, findings regarding the pre-test, post-test and achievement (post-test, pre-test score difference) scores of the experimental and control groups are presented.

***Findings regarding the pre-test scores of the reading comprehension test:*** In order to determine whether there is a significant difference between the reading comprehension pre-test scores, experimental group students and control group students' reading comprehension levels regarding informative text structures, the results obtained by the t-test for independent samples are given in Table 2 below.

Table 2

*Findings Regarding the Pre-Test Scores of the Reading Comprehension Test*

		N	$\bar{X}$	S	Sd	t	p
PreTest	Experimental group	20	12.40	4.54	38	1.28	0.208*
	Control group	20	10.40	5.30			

\*  $p > 0,05$

When Table 2 is examined, it is seen that the results are very close to each other according to the pre-test mean scores of the experimental and control groups (experiment group  $\bar{X}$ 12.40 and control group  $\bar{X}$ 10.40). Statistically, a significant difference was not found between the experimental group students and the control group students in their reading comprehension levels regarding the informative text structure in the pre-test results before the application ( $t(38)$  1, 28;  $p > 0.05$ ). This means that the experimental and control group students are equivalent to each other in terms of reading comprehension. In other words, the experimental and control groups are equivalent to each other before the experiment.

**Findings regarding the post-test scores of the reading comprehension test:** Whether there is a significant difference between experimental group students and control group students' posttest reading comprehension levels regarding the informative text structures measured after the application was tested with the t-test for independent samples and the findings obtained are given in Table 3.

Table 3

*Independent Sample t Test Results Post-Test Scores of the Reading Comprehension*

	Group	N	$\bar{X}$	S	sd	t	p
Post Test	Experimental group	20	19.20	2.60			
	Control group	20	11.15	5.17	28	6.21	0,000*

\* $p < 0,05$

When examined Table 3, it is seen that the experimental group students' reading comprehension posttest levels ( $\bar{X}$ 19.20) regarding the informative text structures measured after the application are higher than the control group students ( $\bar{X}$ 11.15). As a result of the t-test that tested whether this difference was statistically significant or not, it was seen that there was a significant difference in favor of the experimental group ( $t(28)$  6, 21;  $p < 0.05$ ).

**Findings Regarding Reading Comprehension Test Achievement Level Scores:** Whether there is a significant difference between the achievement (post-test, pre-test score difference) levels in the reading comprehension test of the experimental group and control group students participating in the application was tested with the t-test for independent samples and the findings are shown in Table 3. Accordingly, the difference between the posttest ( $\bar{X}$ 19.20) and pretest ( $\bar{X}$ 11.15) scores of the experimental group was  $19,20 - 11,15 = 8,05$ . Again, the difference between the posttest ( $\bar{X}$ 11,15) and pretest ( $\bar{X}$ 10,40) scores of the control group was  $11,15 - 10,40 = 0,75$ .

Table 4  
*Findings Related to Reading Comprehension Test Achievement Level Scores*

	Group	n	$\bar{X}$	S	sd	t	P
Achievement Level	Experimental group	20	6.80	4.38			
	Control group	20	0.75	1.97	26	5.62	0.000*

\* $p < 0.05$

When Table 4 is examined, it is seen that experimental group students' level of achievement (difference in post-test, pre-test scores) regarding the reading comprehension test measured after the application ( $\bar{X}$ 6.80) is higher than that of control group students ( $\bar{X}$ 0.75). It was observed that this difference between the experimental and control groups was statistically significant in favor of the experimental group ( $p < 0.05$ ).

### Findings Regarding the Qualitative Dimension of the Research

**Findings regarding the second sub-problem:** The second sub-problem of the research, "What are the experimental group students' opinions about the teaching of the KWL strategy?". The answer to the question was explained based on the descriptive analysis technique. The findings regarding the data obtained from the semi-structured interviews with the experimental group students, independent observation and the diaries kept by the researcher during the application process are presented below.

**Thoughts on the KWL strategy:** In order to determine the opinions of the students in the experimental group regarding the teaching processes in which the KWL strategy is applied, the students: "What would you like to say about the KWL Strategy?" The question was asked. Students' opinions about the courses in which the KWL Strategy is applied are grouped under three sub-themes as shown in Figure 1, and these sub-themes are given below:



Figure 1. *Students' Opinions on the Courses in which KWL Strategy is Applied*

When the opinions of the students in the experimental group in which the KWL Strategy was applied were examined, it was seen that the students in the experimental group understood better (n10) as a requirement of the technique, and emphasized that the application was fun (n5) and informative (n5). Some of the statements of the participants reflecting their views on this subject are as follows:

St1: *"It was very fun and informative. All three steps were fun and beautiful. That's why it seemed so beautiful to me."*

St5: *"He taught us a lot. At first, we were asking the teacher before doing everything. Then we started doing it ourselves."*

St16: *"I liked these activities very much. It has K, W and L steps in it. They are very nice. The KWL strategy made me love Turkish lessons and became more successful. The lessons went very well."*

While the opinions of the students about the KWL strategy are reflected in their expressions in this way, it is seen that the same situation is reflected in the researcher diaries as follows:

Res.:... *Students are not familiar with the steps of the KWL strategy anyway. I think they didn't have any difficulty in executing the steps ... (Researcher's diary) 14.02.2020*

Res.:... *The students express their sorrow as it is the last week and state that they have made a very enjoyable practice.... (Researcher's diary) 13.03.2020*

Res.:... *I can say that the texts containing more daily life topics attract more attention of the students. ... (Researcher's diary) 05.03.2020*

In the light of these findings, it is possible to say that the students generally have positive thoughts about the KWL strategy. In this way, the students stated that they understood the texts they read better, they had fun and the activities were informative.

**Challenges with the KWL strategy:** In order to determine the opinions of the students in the experimental group regarding the teaching processes in which the KWL strategy was applied, the students: "Did you encounter any difficulties while applying this technique? If so, what are these? " The question was asked. The difficulties faced by the students in the KWL strategy are grouped under three sub-themes as seen in Figure 2.

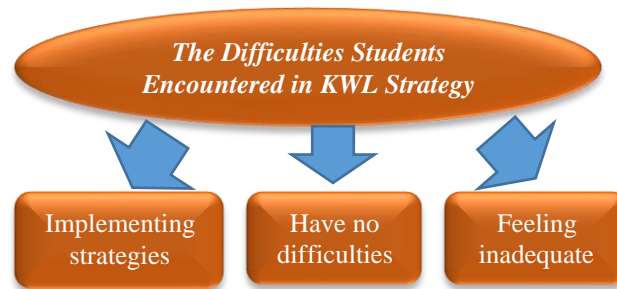


Figure 2. *The Difficulties Students Encountered in Courses that Used KWL*

The students in the experimental group in which the KWL strategy was applied stated that the more than half of the students had difficulty in applying the strategies (n11), some of them did not feel competent (n4), while some other students stated that they had no They stated that they did not experience any difficulties (n5). Some of the statements of the participants on this subject are as follows.

St1: *“I had difficulty applying the steps at first. Then as I learned, I was not so hard at first as much as later.”*

St6: *“Sometimes I had trouble commenting on the steps.”*

St12: *“I did not have any difficulties.”*

It is seen that this situation is reflected in the researcher's diaries and observation notes:

Res.: *...As it was the first week, the students had a little difficulty in recognizing and applying the steps... (Researcher's diary) 07.02.2020*

Ob.: *...they asked how the KWL Strategy would be and when it would be done. Then they examined the papers handed to them with curiosity... (Observation) 07.02.2020*

Ob.: *...Some students think that typing a few questions in the L-level is sufficient ... there are students who have trouble producing questions... (Observation) 28.02.2020*

All of the students (n 20) stated that they would like to use this technique in other lessons as well. Some of the expressions of the participants on this subject are as follows:

St4: *“I would definitely like it because working with this technique is both fun and instructive.”*

St9: *“I would like it especially in Turkish lesson because the technique enabled me to be successful in Turkish lesson and to better understand what I read.”*

St15: *“Yes I would. Because when I read the texts in this way, I can better visualize the events in my head.”*

**The gains achieved with the KWL strategy:** In the experimental group regarding the teaching processes in which the KWL strategy is applied. In order to determine students' views, the students: *“What did you gain by learning informative texts in this way?”*. The question was asked. The thoughts of the students about the achievements they have achieved are grouped under four sub-themes as seen in Figure 3.

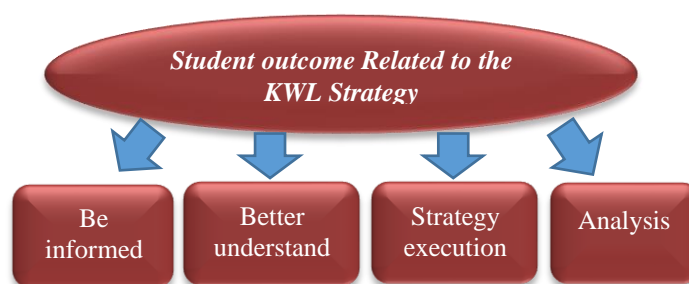


Figure 3. *Students' Opinions on Acquisitions Regarding KWL Strategy*

When the opinions of the students in the experimental group in which the KWL Strategy was applied were examined about what the students gained in the Turkish lessons where the KWL Strategy was applied, it was found that most of the students learned many things they did not know (n10), understood better (n5), learned to apply the strategy (n3) and after learning the use of the KWL strategy, they stated that they gained the ability to analyze better (n2). Some of the expressions of the participants on this subject are as follows:

St9: *“I learned more about those issues. It gave me the opportunity to compare what I know and what I learned on that subject.”*

St13: *“The Turkish lessons we taught together were very informative. I learned many things I did not know and had the opportunity to compare with what I knew.”*

St17: *“It made me understand better. That's why I started to be more successful in Turkish lessons.”*

St8: *“With the KWL Strategy, I started to better understand what I read.”*

The reflection of this situation on the researcher's diaries and observation notes is as follows:

Res.: *Today is our last week. Students can skillfully apply the steps and the KWL method...(Researcher's diary) 13.03.2020*

Ob: *...Students come up with more creative and original thoughts. It is checked whether the students have completed each step. The papers filled out by the students regarding the KWL levels table are collected and the lesson is concluded...(Observation) 13.03.2020*

Ob.: *...I find them successful in applying the KWL rungs. They apply the steps more accurately and quickly...(Observation) 21.02.2020*

Res.: *...Students fill in what they learned in the L level in line with their questions...After the teacher has individually written what has been learned in the L level, he creates an L-table for the whole class on the board and tries to determine which subject the students are interested in...(Researcher's diary) 05.03.2020*

Res.: *...Students can memorize and draw the steps of the KWL method...(Researcher's diary) 12.03.2020*

Ob: *...The teacher asks the students questions such as "What do you want to learn?", "What is the purpose of reading the text?", "Why does this text concern you?" enabled them to create a list of questions...(Observation) 27.02.2020*

Ob: *...The teacher tried to brainstorm what the students knew about the subject of the text in step K...(Observation) 28.02.2020*

Res.: *...By the teacher to the students "What do you want to learn?", "What is your purpose in reading the text?", "Why does this text interest you?" By asking questions such as, students are made to prepare a list of questions...(Researcher's diary) 27.02.2020*

Res.: *...In the L level, the students asked various and imaginative questions about what they wanted to learn...(Researcher's diary) 27.02.2020*

When the responses of the students to the question of "whether they want to continue reading the informative texts they encounter from now on", another question asked to the experimental group students, it was seen that all of the students (n20) stated that they wanted to continue reading the texts in this way.

St4: *"I would definitely like to continue because working with this technique is both fun and instructive."*

St9: *"I would like it because there are so many texts that I don't know yet and that I expect to read. I think that if I learn these texts the way our teacher showed us, I can understand them more easily."*

St15: *"Because when I read the texts in this way, I can better visualize the events in my head."*

St17: *"I want. Because the texts I read like this stay in my mind more."*



It can be said that the opinions of the experimental group students regarding the KWL strategy are generally positive. In most of the answers, it was stated that the application was fun, useful and instructive and it was seen that they wanted the application to continue and applied in other lessons.

In the above statements, it was stated that the use of KWL strategy in reading comprehension education attracted the attention and attention of the students. In both the observation notes and the researcher diaries, it was stated that the students learned the informative texts by having fun with the KWL Strategy. As can be seen in the statements above; When using the KWL strategy, students; they attended the lesson willingly, they were not bored with the lesson, they had fun in the lesson and thus their motivation was high; It is stated in the diaries and observation notes kept by the researcher. In addition, it was stated that some students had difficulties in recognizing and applying the steps in the first weeks, it was an enjoyable learning process, and the teacher tried to form prior knowledge because the students did not have prior knowledge in some texts. It is understood that the students are eagerly awaiting the lessons taught with KWL and have been able to apply the correct strategy skillfully in the last weeks.

### **Conclusion and Discussion**

At the end of the study, there was no significant difference between the pre-test mean scores of the students in the classroom in which the KWL strategy was used in the primary school 4th grade Turkish lesson, but the experimental group's post-test and achievement score averages were higher than the mean scores of the students in the class where the current program was applied. The difference was determined as a result of the treatment exposed to experimental group. At the end of the research, a significant difference was found between the mean scores of the students in the 4th grade Turkish lesson in primary school where the KWL strategy was used and the class in which the current program was applied. It shows that the students in the experimental group understood the informative texts better than the control group. The use of the KWL strategy taught to primary school fourth grade students caused a significant difference between the experimental group students' reading comprehension pre-test and post-test scores. Accordingly, the KWL strategy significantly increased the reading comprehension post-test scores of the experimental group. It was understood that the routine procedures applied in the control group did not cause a significant change in the pre-test and post-test scores of the students.

When the post-test mean scores of the experimental group in which the KWL strategy was applied and the control group with routine practice were compared, it was observed that there was a significant difference in favor of the experimental group.

Students found the use of KWL strategy fun, useful and usable/applicable as a result of interview. It was observed that the experimental group students understood what they read better and did not have difficulty determining the main idea of the text in Turkish lessons conducted according to the KWL strategy. In addition, the students are eager, enthusiastic and happy in the lessons where the KWL strategy is used, the lessons are fun and informative, the students look forward to the lessons in the next week, they overcome these difficulties even though they have difficulties in the first weeks and some steps of the strategy, and they can use the strategy skillfully in the last weeks. It was concluded that they wanted it to continue.

According to the results of these studies, it was observed that there was a difference between the teaching using the KWL strategy and the teaching performed according to the practices envisaged by the normal program, and the student achievement was higher in the experimental group where the KWL strategy was applied. In all the studies conducted, it was found that the KWL strategy was effective in increasing the success of reading comprehension (Berber, 2016; Eker, 2015; Hana & Faridi, 2015; Kaya, 2006; Kusumaningrum & Widiyanto 2018; Lismayanti, 2014; Maulida & Gani, 2016; Rahayuningsih & Wulandari, 2014; Ria and Ilma, 2017; Shaye, 2002; Sinambela, Manik & Pangaribuan, 2015; Siribunnam & Tayraukham, 2009; Tok & Sarı, 2007; Tokgöz, 2019; Usman, Fata & Pratiwi, 2018; Yazıcı, 2006; Zouhor et al., 2017).

At the end of the study, it was concluded that there was a statistically significant difference between the use of the KWL strategy in the primary school 4<sup>th</sup> grade Turkish lesson and the current Turkish curriculum applications. This result shows that the KWL strategy is more effective than the current Turkish course curriculum applications on students' success in reading informative texts. This result coincides with the result that Batmaz (2017) obtained as a result of his study, that there is a positive highly significant relationship between the level of using reading comprehension strategies of primary school fourth grade students and their reading comprehension achievement levels. However, one of the reading comprehension strategies in the research named "The Effect of Teaching Reading Comprehension Strategies to Primary School 7<sup>th</sup> Grade Students on Reading Comprehension Success" conducted by Özyılmaz (2010); It differs from the results of the research, which revealed that the strategies of guessing, asking questions, summarizing, clarifying, visualizing, connecting and what I know-what I want to learn-what I learned (KWL) did not have a significant effect on the success of seventh grade students in reading comprehension.

In terms of the qualitative results of the study, it was understood that the students had positive opinions about the KWL Strategy, they found the strategy fun and instructive as a result of the researcher diaries, observations, and interviews with the students. This

result is similar to the results of the previous research. Gauthier (2001) stated that the course activities they did in line with the ITS increased the students' interest in the course and their reading comprehension level. Jared and Jared (1997) found that this strategy motivates students to learn more and behave more freely within their areas of interest compared to the current method, and students' responsibility for their own learning increases. McLaughlin (1994) stated that the KWL improves the organizational skills of students, simplifies science learning, takes place as an encouraging strategy aimed at students' understanding of what they read, and its benefits in evaluation and planning. At the same time, the KWL strategy increases students' reading comprehension success, attracts students' interest. In their research results, Rahayuningsih and Wulandari (2014) stated that the KWL technique positively affected the students' interest and motivation in the lesson, and it created interaction in the classroom and increased attention in the learning-teaching process.

### **Suggestions**

In the light of the research results, the following recommendations have been made:

1. It is beneficial to apply the KWL strategy in primary school Turkish lessons. In this context, the KWL strategy and application should be used by classroom teachers.
2. It should be ensured that the KWL strategy is used in teaching informative texts in primary schools.
3. In this study the KWL strategy, which is taught, includes 6 sessions, a total of 24 hours. This practice can be studied in more depth by spreading over a longer time.
4. In this study, the KWL strategy was used in the Turkish lesson. The use of the KWL strategy in other languages and in different courses can be explored.

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