

# The impact of the reading engagement model on the 6<sup>th</sup> graders' reading comprehension achievement

Gülşah Mete

Department of Turkish Education, Educational Sciences Institute, Karamanoğlu Mehmetbey University, Turkey.

Accepted 17 July, 2020

---

## ABSTRACT

Reading is a cognitive process in which the mind works with the sensory organs to decode and interpret the symbols, and the achievement in this process is assessed through the reading comprehension skills. Reading comprehension skills have a pivotal role both in individuals' educational lives and personal development. The studies indicate that individuals who do not comprehend what they have read or have not improved their comprehension skills experience failures in every period of their lives compared to the others. Therefore, this study focusing on a model to develop reading comprehension skills is quite crucial. Aiming to examine the impact of the Reading Engagement Model on the 6<sup>th</sup> graders' reading comprehension achievement and engagement in reading, the study adopted the Pretest-Posttest Control-Group design. 62 students at the 6<sup>th</sup> grade participated in the control and experimental groups. In the experimental group, 36 class hours of implementations focusing on the Reading Engagement Model were carried out and the reading comprehension strategies as Cooperative Discussion and Questioning Strategy, Note-taking Strategy, and Cloze Technique were taught. In the control group, the activities in the coursebook were implemented as defined in the current curriculum. At the beginning and end of the 6-week implementations, to measure the reading comprehension achievement, the Reading Comprehension Achievement Test, and to evaluate their reading engagement levels, the Reading Engagement Index were applied to the groups as pretests and posttests. The SPSS program was utilized for the test analyses. Accordingly, the experimental group implemented the Reading Engagement Model indicated a significant difference relative to the control group. Hence, in the experimental group, the students' reading comprehension achievements and reading engagement levels increased relatively. Concerning the results of the study, some implications have been reflected.

**Keywords:** Reading comprehension, reading engagement, reading engagement model, teaching reading.

E-mail: gulsahmete@kmu.edu.tr.

---

## INTRODUCTION

Reading (skill) is defined as the recognition of letters and symbols composing a written text, and it is the analysis or vocalization of them (Turkish Dictionary, 2005). Akyol (2005) states reading is a process of structuring meaning, in which the background knowledge is used, and it is developed in a regular environment based on effective communication between the writer and the reader with a certain aim and method. On the other hand, Demirel (2000) stresses that reading is the transformation of the text into meaningful sounds and the comprehension of the writer's intended message. Overall, reading can be defined as a mental process in which the visual symbols

are interpreted.

Guthrie and Wigfield (2000 as cited in Mete, 2016) state the students who engage in reading with high motivation and read by using strategies have a good level of comprehension and achievement. According to Trowler (2010), students' engagement is the interaction between time, effort, and other related resources and it intends not only to optimize the students' experiences but also to enhance learning outcomes and development of the students. More broadly, Guthrie and his colleagues describe students engaged in reading as knowledgeable in cognitive and motivational processes, and socially

interactive (Guthrie et al., 1996; Guthrie and Wigfield, 2000; Guthrie et al., 2004; Baker et al., 2000). The students who engaged in reading:

- have intrinsic motivations.
- read for reaching their own goals.
- enjoy reading for their own benefits.
- read for pleasure and knowledge.
- achieve to read fluently.
- are eager to read.
- rely on their reading skills.

- are knowledgeable to use various strategies.
- use their background knowledge actively to comprehend a new text.
- share their attitudes towards reading socially (Guthrie et al., 2004).

Proposed by Guthrie and Wigfield (2000) the Reading Engagement Model is unique to reading skill education. The model forming the basis of reading education has been depicted in Figure 1 adapted into Turkish by Yıldız (2010).

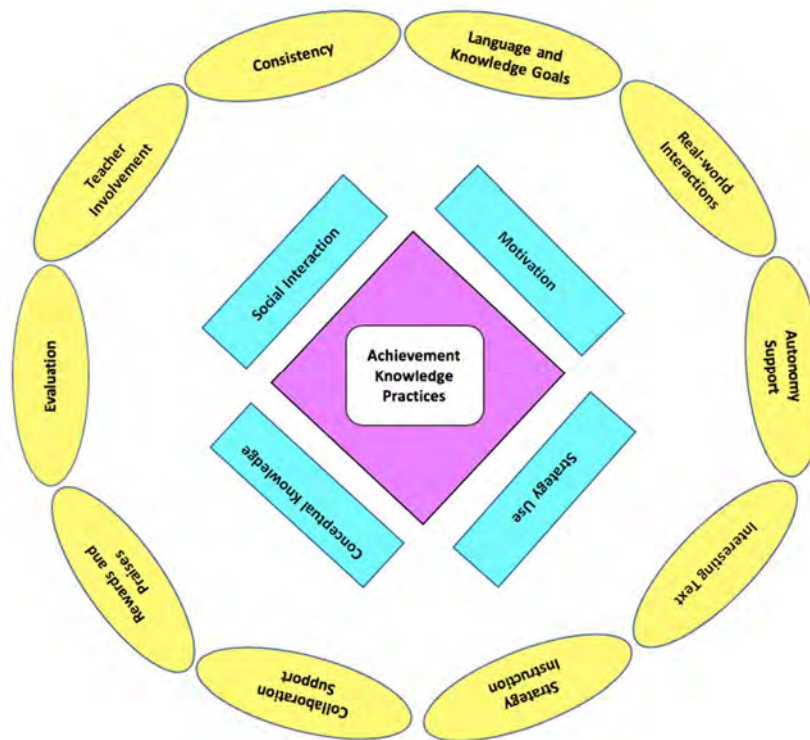


Figure 1. Reading Engagement Model.

The activities related to achievement, knowledge, and practices are centrally situated in Figure 1. Four sides of the center display the processes enhancing the reading engagement. Accordingly, four main factors ensuring to reach the reading engagement are motivation, strategy use, conceptual knowledge, and social interactions, of which motivation refers to possessing intrinsic and extrinsic motivations to achieve reading. Particularly the students having an intrinsic motivation have a high level of reading engagement and comprehension competence. Strategy in the model indicates the use of cognitive strategies while reading. Correspondingly, knowing about reading strategies and applying them in pre-, while-, and post-reading processes increase the engagement as well. Conceptual knowledge refers to using reading as

well as the background knowledge to gain knowledge during reading. Lastly, social interaction points out the interaction between other students and teachers in reading and writing activities. Sharing the knowledge and experiences gained through reading increase the permanence of them (Guthrie, 2004). To sum up, those factors ensuring reading engagement enhance the interpretation of the text better and the interaction between the writer and the reader.

In the Reading Engagement Model, it is crucial to use reading strategies. In this study, three comprehension strategies were administered to the students in the experimental group, of which is Cooperative Discussion and Questioning (Coop-Dis-Q). Developed by Lane Roy Gauthier (2001), Coop-Dis-Q is applied in five steps as

follows:

**1. Create Groups:** In this step, teacher creates heterogeneous and homogeneous groups suitable for the objectives of the lesson. On the other hand, it should be considered both individuals' needs and goals and the group's collective needs and goals while creating the groups.

**2. Prepare a Set of Questions:** Teacher formulates questions appropriate for the objectives of the lesson to be able to assess students' comprehension of reading. Reflecting significant elements in reading material and representing all of the cognitive processes involved in comprehension should be regarded in the preparation of the questions.

**3. Groups Discuss the Story and Divide Questions:** Teacher assembles the groups to initiate the discussion on the reading material they have read. During the discussion, teacher guides students by providing needed feedback. When the discussion has ended, the questions written on one sheet of paper are delivered to the students. Then, the groups are divided into triads and the questions are shared by being perused.

**4. Triads Discuss, Answer, and Add Questions:** Triads discuss the questions to find answers. One student representing each group is appointed to answer. In the meantime, other students might note down the answers and express their opinions about the answers. Also, teacher should encourage students to add new questions to the ones on the papers.

**5. Triads Present and Discuss Their Answers:** In the last step, groups of six are created by rejoining the triads. Teacher asks these two groups to present their answers and also encourages other students to offer alternative responses. In this step, it is expected that an appropriate setting for a discussion should be established and teacher should participate actively. After all the questions have been answered, and the discussion is over, critical points are reviewed, and the achievement of the activity is assessed together with students (Top, 2014).

Another strategy implemented according to the Reading Engagement Model in the experimental group is the strategy of note-taking. Note-taking can be defined as organizing the knowledge, abbreviating the knowledge by identifying the critical points, and writing down the knowledge by adding the background knowledge and interpretations. Students using effective note-taking strategy write with their styles by differentiating essential parts from inessentials in a topic. To employ the note-taking strategy, the steps below are usually followed:

1. Teacher presents reading material/ text by using direct instruction method.
2. During the presentation, teacher asks questions to students when needed.
3. These questions are answered by students firstly, then

teacher answers.

4. Students are encouraged to build on a cause and effect relation in the presented subject as well as to find the significant points.

5. Students write down the narration of the reading material/text in a well-organized way.

6. Students are asked for adding keywords or statements to what they have written, and additional time is provided for it.

7. Students' note papers are collected at the end of the class and assessed according to their note-taking strategy employment.

8. In the following class, feedbacks on their note-taking strategies from the previous class are given before handling a new subject (Çetingöz and Açıköz, 2009).

Drawing on the Reading Engagement Model, the third strategy applied in the experimental group is the Cloze Technique in which the sentences forming the text or words in a paragraph are omitted to leave blanks, and the reader guesses the missing word to complete the blank by using the context. This strategy is widely used in group activities. Students determine the possible words to complete the blanks by discussing them in the groups, and they present them to their teacher (James, 2004; Westwood, 1997). Moreover, in this strategy, syllables, words, and phrases might be deleted, and students deduce those missing parts from the context of the text through reading and scanning it. Thus, students who peruse the text and search for the clues develop self-esteem as well as reading comprehension skills when they achieve to make the correct predictions (Booth, 1998; James, 2004). Apart from it, the cloze technique is the procedure which enables to assess students' reading comprehension skills (Şahindokuyucu, 2006).

### Problem statement

As one of the comprehension skills, reading is the skill that an individual uses and develops throughout his/her lifetime. The studies indicate that individuals who do not comprehend what they have read or have not improved their comprehension skills experience failures in every period of their lives compared to the others. Since the acquisition of reading skill begins in school, teachers have great responsibilities to ensure reading skill and comprehension. At this point, teachers should get to know their students, identify the contents appropriate to the objectives, use the best cognitive strategy to teach the contents, and deliver praises and rewards effectively. On the other hand, students of those teachers should actively and sufficiently participate in classes. Apparently, it is the motivation to ensure the students' efficient participation to develop their reading and reading comprehension skills. Reading motivation comprises values for reading, aims and beliefs (Logan and

Medford, 2011). Hence, there is a need for activities to increase the reading motivation not only at schools but also in social and family environments outside of the schools (Çifçi, 2006). Students' reading motivation once boosts, their achievement level of comprehending what they have read also increases. Therefore, in this study, the Reading Engagement Model has been employed in order to improve the students' reading comprehension achievements. Students highly engaged in reading are also motivated intrinsically and comprehend the text better by using more strategies during reading (Guthrie and Wigfield, 2000, as cited in Yıldız, 2010). Accordingly, students engaged in reading, who are also aware of the cognitive and language processes, are the ones having a high level of reading comprehension and reading motivation. The international studies have proved the achievement of this model in the growth of reading comprehension achievement and proficiency. Therefore, this model is highly recommended for the teachers desiring to see this success in their students (Guthrie et al., 2001, Yıldız, 2010).

### Significance of the study

Focusing on the Reading Engagement Model, this study has great attributions in terms of its success in the improvement of comprehension skills as well as the reading skill, which students need in every period of their lives. The Reading Engagement Model is the model that proposes reading strategies and enhances students to use those strategies efficiently. In the development of reading skill, motivation has a pivotal role. The studies indicate that students with reading motivation have a significant level of engagement in reading, and also their comprehension competence has increased consequently. Hence, it is considered to study this model which will enable to boost students' reading motivation. Furthermore, regarding a study in the knowledge base, it has remarkable contributions as it distinctively improves students' reading motivation.

### Aims of the study

This study aims to understand how the Reading Engagement Model affects 6<sup>th</sup> graders' reading comprehension achievement and their engagement in reading in the Turkish course. Therefore, the following questions are raised:

1. By implementing the Reading Engagement Model to the experimental group and current curriculum to the control group, is there a significant difference between the mean scores of the groups on the pretests of reading comprehension achievement test (RCAT)?
2. By implementing the Reading Engagement Model to

the experimental group and current curriculum to the control group, is there a significant difference between the mean scores of the groups on the pretests of reading engagement index (REI)?

3. By implementing the Reading Engagement Model to the experimental group, is there a statistically significant difference between the mean scores of the experimental group on the pretest and posttest of RCAT?

4. By implementing the Reading Engagement Model to the experimental group, is there a statistically significant difference between the mean scores of the experimental group on the pretest and posttest of REI?

5. By implementing the current curriculum to the control group, is there a statistically significant difference between the mean scores of the control group on the pretest and posttest of RCAT?

6. By implementing the current curriculum to the control group, is there a statistically significant difference between the mean scores of the control group on the pretest and posttest of REI?

7. By implementing the Reading Engagement Model to the experimental group and current curriculum to the control group, is there a significant difference between the mean scores of the groups on the posttests of RCAT?

8. By implementing the Reading Engagement Model to the experimental group and current curriculum to the control group, is there a significant difference between the mean scores of the groups on the posttests of REI?

9. Is there a relationship between the students' reading comprehension achievements and their level of reading engagements in the experimental group?

## METHODOLOGY

This section details the methodology of the study, population, and sample, data instruments, the implementation of the research, data analysis, findings, results, and discussions as well as the implications.

### Method

The experimental design of the study is Pretest-Posttest Control-Group Design. Participations are allocated under control and experimental groups, and in the control and experimental groups, a measurement on the dependent variable is carried out before and after the experiment (Karasar, 2007). In order to investigate the effect of the independent variable on the dependent variable, an experimental intervention is given to the experimental group, but there is no intervention or administration to the control group (Büyükoztürk, 2011). In the study, the Reading Engagement Model is the independent variable, and the dependent variables are the students' reading comprehension achievements and reading engagement levels.

**Population and samples**

The population of the study is the 6<sup>th</sup> graders of secondary school in the academic years of 2016 and 2017. The sample size of the study included 62 students of 6<sup>th</sup> grades, of which 31 students assigned to each group (experimental and control). In a secondary school

selected through convenience sampling method, one class was allocated as the experimental group according to their pretest scores, and the other class having a closer score to that class on the pretest was included in the control group. The participant students' frequencies in relation with the groups and genders have been displayed in Table 1.

**Table 1.** The frequency of the samples in relation with the groups and gender.

Group	Gender	n	%
Experimental group	Girls	19	61.30
	Boys	12	38.70
Control group	Girls	13	41.93
	Boys	18	58.07
Total	Girls	32	51.61
	Boys	30	48.39

**Instruments**

In the study, two data collection tools were administered. In order to investigate the students' reading comprehension achievements, developed by Ađın Haykır (2012), the 6<sup>th</sup> Grades Reading Comprehension Achievement Test including 20 multiple-choice questions was employed. For scoring the results of this test, these steps were followed: If the student has skipped a question or marked an incorrect option, it is scored as 0. On the other hand, if the student has chosen the correct answer, it is scored as 5. The highest score to get from this test is 100. To examine the students' reading engagement levels, Reading Engagement Index (Yıldız, 2010) was used. In this scale, the lowest score to be obtained is 8 and the highest one is 40.

In order to check the reliability of the data collection tools, Cronbach Alfa values were calculated. Accordingly, the value for Reading Comprehension Achievement Test is 0.78 ( $\alpha = 0,780$ ) and for the Reading Engagement Index, it is 0.70 ( $\alpha = 0.700$ ). When the values of

Cronbach Alpha are between 0.60 and 0.80, that scale is considered reliable (Büyüköztürk, 2011). Therefore, the scales used in the study are reliable.

Apart from the scales, the students' tasks were gathered as supporting data. Since the first week of the implementation, the students in the experimental group had been requested to do different kinds of tasks. The activities to support their reading and comprehension skills such as reading and introducing different kinds of materials according to their interests, introducing a book, preparing a classroom or school board on reading, preparing a brochure and motto, organizing a classroom bookcase were done.

Throughout the study, three comprehension strategies were administered to the students. The lesson plans were designed according to the basic principles and stages of reading comprehension strategies as Cooperative Discussion and Questioning Strategy, Note-taking Strategy, and Cloze Technique. Regarding the aim of the study, stories, poetry, and informative texts were used. Table 2 presents these texts and their features.

**Table 2.** Texts and their features.

Name of the text	Type	Strategy
Dünyadaki İklimler	Article	Note-Taking Strategy
Yerçekimsiz Yaşam	Essay	Note-Taking Strategy
Kışla İlkyaz	Fable	Cooperative Discussion and Questioning Strategy
Doğayı Ađlatmayın	Story	Cooperative Discussion and Questioning Strategy
Özür	Poem	Cloze Technique
Yağmur	Poem	Cloze Technique

The texts were supported with visuals and pictures, and they were delivered to the students together with the

activity papers planned according to the reading comprehension strategies. The activity papers designed

by the researcher were modified and took their final shapes owing to the expert opinions. Moreover, to provide the scope validity, a table of specifications was prepared in the construction of the comprehension questions about the texts. In the preparation of the table, the objectives in reading comprehension skills in the Turkish Teaching Curriculum and the revised Bloom's Taxonomy were considered. The table prepared by the researcher took its final shape after expert opinions were requested. During the implementation process, both the oral and written feedbacks were delivered to the students.

### Implementation of the research

The implementation process was carried out by the researcher and it took 6 weeks and 36 class hours. In the control group, the Turkish course was done through the lesson plans prepared according to the current Turkish Teaching Curriculum and by utilizing the Turkish coursebook.

In the experimental group, the implementation and activities were designed and held according to the Reading Engagement Model. These implementations and activities are explained as follows:

Learning and knowledge goals are the first aspect of the model. Accordingly, gaining knowledge is more important than giving the right answers to the questions. When teachers convey this aspect to students, students develop self-esteem and they study more on the challenging topics. In the experimental group, the implementations according to the Reading Engagement Model were carried out by the researcher. The researcher informed the students about the activities and tasks to be done before the implementation, and she motivated them by emphasizing particularly the importance of learning the subject. Drawing on the model, utilizing only the coursebooks, and doing the question exercises in the coursebooks, cause learning not to occur at desired levels (Yıldız, 2010). Therefore, the texts in the form of the story, essay, article, fable and poetry, and different kinds of comprehension strategies such as Cooperative Discussion and Questioning Strategy, Note-taking Strategy, and Cloze Technique as well as the questions including all the cognitive stages were used in the study.

The model's second aspect is real-world interactions. The implementation process supported by the real-world experiences enhances students to peruse the text and increase their comprehension levels (Guthrie and Wigfield, 2000: 411). Regarding the real-world experiences both in the choice of the texts and preparation of the activities, the researcher got the students involved in the process.

As a third aspect, the model proposes autonomy support. Teachers should guide students to make

choices on the instructional materials in order to achieve the learning objectives (Guthrie and Wigfield, 2000: 411). Accordingly, the students in the experimental group were given the chance of making choices on the issues such as the reading material, doing reading silently or aloud, attending various reading activities, etc. Four class hours weekly were dedicated to the instructions on strategies, and for two extra hours, the practices such as reading freely, introducing a reading material (a book or a magazine, etc.), preparing a brochure, a school or a classroom board and an activity related with the topic of the week were done. The students decided on the books that they would introduce, and they read any kind of text that they wanted. Furthermore, the volunteer students organized the classroom bookcase by supplying books.

Using interesting texts is the fourth aspect of the model. The texts used in the implementation process were supplied from the coursebook designed according to the Turkish Teaching Curriculum. Those texts were used owing to the expert opinions. It was regarded that texts were not only the narrative texts that the students could easily link their real-world experiences but also the informative texts including interesting and original topics. In the hours dedicated to reading freely, the students were encouraged to utilize the books from the bookcase that they had organized.

The model's fifth aspect is strategy instruction. Teaching strategy comprises the instruction practices enabling students to learn from the text and also teaching explicitly or implicitly (Guthrie and Wigfield, 2000: 413). Three comprehension strategies as Cooperative Discussion and Questioning Strategy, Note-taking Strategy, and Cloze Technique are taught explicitly in the experimental group. There are the studies (James, 2004; Westwood, 1997; Booth, 1998; Şahindokuyucu, 2006; Top, 2014; Çetingöz and Açıkgöz, 2009) indicating that those strategies improve reading comprehension levels. Therefore, these strategies were used in the study. In strategy instruction, the texts in the form of narration, poetry, and informative texts were utilized. Since teaching and practicing a strategy takes time, it is highly recommended to provide a long-term implementation in the model. In this study, the implementation process took 6 weeks and 36 class hours, and strategy teaching took 3 weeks. One strategy was taught each week by using the texts in narration, informational form, and poetry. In the following three weeks, the students applied the strategies they learned to the activity papers. The researcher utilized peer support, mini-group discussions, and personal feedbacks in strategy instruction. Moreover, she provided support, guidance, and correction throughout the students' implementations. She explained the unclear parts of the strategies again when needed. Apart from it, she shared the correct implementation with its reasons with the whole class.

Collaboration is the sixth aspect of the model. Initially, the researcher explained that all the students would

attend to all the activities and tasks, and she would request supports from the successful ones when needed. The students consented willingly to attend to both data collection and classes. Furthermore, the researcher added Cooperative Discussion and Questioning Strategy to the implementation process considering this aspect, and also, she created heterogeneous groups in the application of this strategy. Hence, it was facilitated that they could contribute to each other's learning and recognize the importance of collaboration. Organizing a classroom book case by supplying books voluntarily, making collaboration in the preparation of the classroom board and brochures, exchanging materials also served the purpose of this aspect.

Praises and rewards are another aspect of the model. At this point, the researcher delivered the needed feedbacks to the students during the implementation process. The fact that the students were informed about their improvement and betterment throughout the process increased their motivation and willingness. Also, they realized that they could achieve. In the meantime, the other teachers having classes with the group were informed about the student's improvements as well. The other teachers' positive reactions made the students feel proud of their tasks. Similarly, writing the name of the most successful group on the board during the group works and the felicitations offered by the researcher and the peers motivated the students as well. Also, the little rewards supplied from time to time by the researcher not only made the students happy but also increased their self-efficacy perceptions.

The model's eighth aspect is the evaluation. According to the model, the evaluation activities should be both objective and standard (the standard tests) and student-centered and reflecting individuals' works (portfolios) (Guthrie and Wigfield, 2000: 415). In this study, in order to assess the application process, qualitative and quantitative data resources were utilized.

The model's ninth aspect is teacher involvement. The researcher was the Turkish teacher of the class as well. As she aimed to both eliminate the difficulties that the students faced in reading comprehension and to resolve them, she administered this model to her class. Furthermore, she explained the rationale of the study to the students. Thus, the students were content with this explanation and mentioned how their teacher cared about them. Apart from it, the students were motivated owing to the autonomy support and actively and voluntarily participated in the activities.

Consistency of teaching process is the last aspect of the model. The higher the consistency is, the higher the level of the students' engagement in reading is (Guthrie and Wigfield, 2000: 416). The consistency and coherence were ensured during the 6-week implementation process, and a classroom setting and activities were designed according to the Reading Engagement Model. At the end of the process, the students' reading comprehension achievements and engagement in reading have

increased.

### Data analysis

In the data analysis, the SPSS program was employed. Initially, it was analyzed whether the scores of the control and experimental group followed a normal distribution or not. In order to observe it, the kurtosis and skewness values of the tests and also the Shapiro-Wilk test results were measured. Accordingly, it is concluded that all the data seem to satisfy the assumption of the normality. Furthermore, the p-value of the Levene-F test ( $p < 0.05$ ) indicates that the variances across the groups are equal. Therefore, the independent samples t-test from the parametric tests was conducted. According to the data analyses, there was no significant difference between the mean scores of the students on the pretests of Reading Comprehension Achievement Test (pre-RCAT) and Reading Engagement Index (pre-REI). In order to observe any significant difference between the posttest mean scores of Reading Comprehension Achievement Test (post-RCAT) and the posttest mean scores of Reading Engagement Index (post-REI) at the end of the implementation, once again, the independent samples t-test was conducted. Lastly, to determine the significant difference between the mean scores of each group on the pretests and posttests of RCAT and REI, paired-samples t-test was employed.

### Findings

The findings of the study are only available from the data of the Reading Comprehension Achievement Test and Reading Engagement Index. To determine the normal distribution of the data, the values of kurtosis and skewness, as well as the normality test of Shapiro-Wilk were measured. The analyses indicate that the data follows a normal distribution since the value of skewness is between  $\pm 1$ . On the other hand, the test of Shapiro-Wilk was conducted as the sample size of the study is smaller than 50. It is recommended by the experts that the measurement of the normality test should be employed to each group separately (Büyüköztürk, 2011). Tables 3 and 4 display the kurtosis and skewness values and also Shapiro-Wilk test results of Reading Comprehension Achievement Test and Reading Engagement Index.

As it is displayed in Tables 3 and 4, it is concluded that the data satisfy the assumption of normal distribution since the kurtosis and skewness values of Pre-RCAT and Post-RCAT are between  $\pm 1$  in the experimental group's data. Moreover, the Shapiro-Wilk normality test results of the experimental group indicate that there is no significant difference in the normality of the data distribution.

Similarly, as the control group's RCAT and Post-RCAT

**Table 3.** Descriptive statistics of pretest RCAT and posttest RCAT.

Groups	Dependent variable	n	$\bar{X}$	Ss	Kurtosis	Skewness	Shapiro-Wilk
Experimental group	Pre-RCAT	31	52.09	20.9	0.125	-0.449	0.542
	Post-RCAT	31	57.90	18.7	-0.752	0.533	0.023
Control group	Pre-RCAT	31	56.77	14.3	-0.970	0.856	0.13
	Post-RCAT	31	56.93	15.8	-0.113	-0.123	0.440

**Table 4.** Descriptive statistics of pretest REI and posttest REI.

Groups	Dependent variable	n	$\bar{X}$	Ss	Kurtosis	Skewness	Shapiro-Wilk
Experimental group	Pre-REI	31	17.41	5.09	0.431	-0.525	0.096
	Post-REI	31	32.03	7.20	-0.167	-0.90	0.012
Control group	Pre-REI	31	16.06	4.35	0.916	0.384	0.029
	Post-REI	31	18.38	4.57	0.519	-0.091	0.017

kurtosis and skewness values are between  $\pm 1$ , it is determined that the assumption of normal distribution is satisfied. Also, the Shapiro-Wilk normality test results indicate that there is no significant difference in the normality of the data distribution. To sum up, these analyses show that the data follow a normal distribution and parametric tests can be conducted for further analyses.

### Findings on RQ1 and RQ2

Since the data of Pre-RCAT and Post-RCAT in the control and experimental groups satisfy the assumption of normal distribution, the Independent Samples t-test from the parametric tests was conducted. The RCAT and REI as ordinal scales, being employed both in the control and experimental groups, the normal distributions of the data and bivariate independent variables (control and experimental groups) indicate that the assumptions for the Independent Samples t-test are satisfied. Apart from it, the equality of the variance for each group is needed. In order to determine the equality of the variance, the Levene-F test is employed. When the p-value of this test is greater than 0.50 ( $p > 0.05$ ), the assumption of the variance equality is valid (Büyüköztürk, 2011). Accordingly, the Levene-F p-value of the pretest RCAT ( $F=3.823$ ,  $p=.309$ ;  $p > .05$ ) shows that variances are equal, and likewise, according to the Levene-F p-value of the Pretest REI ( $F=0.642$   $p=.265$ ;  $p > .05$ ), the variances are equal. Consequently, to conduct the Independent Samples t-test in the study, the assumptions are made. The Independent Samples T-test Results are presented in Tables 5 and 6.

There is no significant difference between the scores of the pretest of RCAT and the pretest of REI according to the t-test analyses ( $p > 0.05$ ), which gives the conclusion

that two groups have similar levels of reading comprehension achievement and reading engagement in the pretests.

### Findings on RQ3

In order to determine the significant difference between the mean scores of the experimental group on the pretest RCAT and the posttest RCAT, paired-samples t-test was conducted, and the related results of the group is displayed in Table 7.

Regarding Table 7, there is a significant difference between the mean scores of the experimental group on the pretest RCAT and the posttest RCAT ( $p < 0.05$ ). Therefore, it is concluded that the Reading Engagement Model has relatively increased the students' reading comprehension achievements.

### Findings on RQ4

To determine the significant difference between the mean scores of the experimental group on the Pre-REI and the Post-REI, paired-samples t-test was conducted, and the related results of the group is displayed in Table 8.

According to Table 8, there is a significant difference between the mean scores of the experimental group on the pretest REI and the posttest REI ( $p < 0.05$ ). Therefore, it is concluded that the Reading Engagement Model has increased the students' reading engagement levels.

### Findings on RQ5

In order to determine the significant difference between



**Table 5.** Independent samples t-test results of the groups on the pretest RCAT.

Group	n	$\bar{X}$	Ss	sd	t	p
Control group	31	56.77	14.34	60	1.025	.309
Experimental group	31	52.09	20.96			

**Table 6.** Independent samples t-test results of the groups on the pretest REI.

Group	n	$\bar{X}$	Ss	sd	t	p
Control group	31	16.06	4.35	60	-1.126	.265
Experimental group	31	17.41	5.09			

**Table 7.** Paired-samples t-test results of the experimental group on the pretest RCAT and the posttest RCAT.

Test (RCAT)	n	$\bar{X}$	Ss	Sd	t	p
Pretest	31	52.09	20.96	30	-2.65	.013
Posttest	31	57.90	18.74			

**Table 8.** Paired-samples t-test results of the experimental group on the pretest REI and the posttest REI.

Test (REI)	n	$\bar{X}$	Ss	Sd	t	p
Pretest	31	17.41	5.09	30	-16.94	.000
Posttest	31	32.03	7.20			

the mean scores of the control group on the pretest RCAT and the posttest RCAT, paired-samples t-test was employed, and the related results of the control group are presented in Table 9.

Table 9 indicates that there is no significant difference between the mean score of the control group on the Pretest RCAT and the Posttest RCAT ( $p > 0.05$ ). Hence, it can be concluded that the students' reading comprehension achievements in the control group have not significantly changed after the current curriculum implementation.

**Findings on RQ6**

To analyze the significant difference between the mean scores of the control group on the Pretest REI and the Posttest REI, paired-samples t-test was conducted, and the related results of the group are displayed in Table 10.

According to Table 10, there is no significant difference between the mean scores of the control group on the Pre-test REI and the Post-test REI ( $p > 0.05$ ). Therefore, it is assumed that the students' reading engagement levels have not changed in the control group after the current curriculum implementation.

**Findings on RQ7**

In order to observe the significant difference between the

mean scores of two groups (control and experimental) on the Posttests RCAT, the Independent Samples t-Test was employed. The obtained results are presented in Table 11.

Regarding the Independent Samples t-Test results, there is a significant difference between the groups' Post-RCAT mean scores ( $p < 0.05$ ). Hence, it implies the experimental group applied the Reading Engagement Model shows a significant difference relative to the control group.

**Findings on RQ8**

In order to determine the significant difference between the mean scores of two groups (control and experimental) on Post-test REI, the Independent Samples t-Test was conducted. The results of this test are displayed in Table 12.

The Independent Samples t-Test results indicate that there is a significant difference between the mean scores of the control and experimental groups on the post-test REI ( $p < 0.05$ ). The experimental group significantly showed a difference relative to the control group. To measure the effect size of this difference, eta-squared was computed. It is stated that 0.01 refers to a small effect size, 0.06 means a medium-size effect, and 0.14 refers to a larger effect size (Büyüköztürk, 2011). The value of the eta squared in the analyses of the study is

**Table 9.** Paired-samples t-test results of the control group on the pretest RCAT and the posttest RCAT.

Test (RCAT)	n	$\bar{X}$	Ss	Sd	t	p
Pretest	31	56.77	14.34	30	-0.69	.945
Posttest	31	56.93	15.89			

**Table 10.** Paired-samples t-test results of the control group on the pre-test REI and the post-test REI.

Test (REI)	n	$\bar{X}$	Ss	Sd	t	p
Pretest	31	16.06	4.35	30	-4.767	.854
Posttest	31	18.38	4.57			

**Table 11.** Independent samples t-test results of two groups on the posttests RCAT.

Group	n	$\bar{X}$	Ss	Sd	t	p
Control group	31	56.93	15.89	60	-.219	.000
Experimental group	31	57.90	18.74			

**Table 12.** Independent samples t-test results of post-REI for two groups.

Group	n	$\bar{X}$	Ss	Sd	t	p
Control group	31	16.06	4.35	60	-2.049	.04
Experimental group	31	18.38	4.57			

0.0666. Accordingly, the effect size of the Reading Engagement Model on the scores of posttest REI is medium.

### Findings on RQ9

To determine the relationship between the students' reading comprehension achievements and their reading

engagement levels, the Pearson correlation analysis was utilized. The findings on this analysis are presented in Table 13.

Regarding Table 13, there is a high, positive, and meaningful correlation between reading comprehension achievements and reading engagement levels ( $r = .771$ ;  $p < 0.01$ ). Consequently, it implies that reading comprehension can affect reading engagement in a positive way.

**Table 13.** Correlation between reading comprehension achievements and reading engagement levels.

Variables	N	r	p
Reading Comprehension – Reading Engagement Index	31	0.771	0.000*

\* $p < 0.01$ .

## RESULTS AND DISCUSSION

In this study, it was aimed to examine the impacts of the Reading Engagement Model on the improvement of the 6<sup>th</sup> graders' reading comprehension achievement and reading engagement levels.

At the end of the implementation designed according to the Reading Engagement Model, an assessment was carried out by analyzing the scores of the students on the

Reading Comprehension Achievement test (RCAT) and Reading Engagement Index (REI). A significant difference between the scores on the pretest RCAT and the pretest REI was not obtained. Accordingly, there is no significant difference between the students in the control and experimental group.

However, the scores of the experimental group on the posttest RCAT showed a significant difference relative to the control group. The students' reading comprehension

achievements in the control group being implemented the activities according to the current curriculum did not change. On the other hand, after having implemented the Reading Engagement Model in the experimental group, it was found out that there was a significant difference between the scores of the students on the pretest RCAT and posttest RCAT. Therefore, it is concluded that the Reading Engagement Model has a remarkable effect on the students reading comprehension achievements.

It was found out that the students' scores on posttest REI indicated significantly a difference in the experimental group relative to the control group. Nonetheless, the students' reading engagement levels in the control groups implemented the current curriculum activities did not display any change. Additionally, it was obtained that there was a significant difference between the scores of the students on pretest and posttest on REI in the experimental group the model implemented. Therefore, there is a positive impact of the Reading Engagement Model on the students' reading engagement levels. The studies on reading and motivation demonstrate a strong and positive relationship of the reading engagement with higher achievements in the reading comprehension and engagement in reading over a long time (Connor et al., 2009; Klauda and Guthrie, 2015; Mete, 2016). The main purpose of reading instruction is to ensure students acquire a high level of recognition. What's crucial for a teacher is how to ensure this recognition. As stated in the study, the Reading Engagement Model serves this ultimate goal.

The association between reading achievement and reading engagement in the experimental group is another issue examined in the study. Accordingly, it was found out that there is a high positive correlation between reading comprehension and engagement in reading. Hence, it can be concluded that reading comprehension influences reading engagement in a positive way. Motivation and engagement can influence the growth of reading comprehension since motivated students usually desire to comprehend the content of the text in-depth and for this purpose, they structure knowledge deeply. As motivated students read frequently with these cognitive purposes, they gain reading comprehension proficiency (Guthrie et al., 1999; Mete, 2016). Also, Carini et al., (2006) conclude that there are associations between the students' engagement in reading with the core skills such as critical thinking and problem-solving.

### Limitations of the study

This study was carried out with the participation of 62 6<sup>th</sup> graders during the six weeks and 36 class hours in the academic years of 2016 and 2017. Furthermore, the study is limited to the activities implemented in the Reading Engagement Model and the current curriculum and the data instruments as the reading comprehension achievement test and reading engagement index.

### Implications

Concerning the results of this study, the implications have been reflected as follows:

Various activities both at schools and in the family environment can be implemented to improve the students' comprehension proficiencies, and engagements in reading. The coursebooks for Turkish lessons might be designed by utilizing the methods, strategies and models developed to increase reading comprehension competence and reading engagements. Teachers might include the students in the learning process while developing the objectives. The curriculums supporting student autonomy and real-life interactions might be designed. The classroom settings encouraging collaboration and social interactions may be organized. During the teaching process, the rewards should be delivered to support the students' efforts and observed growth in a natural way. The teaching materials should be prepared concerning the students' interests and levels. Lastly, Turkish lessons might be designed regarding the Reading Engagement Model.

### REFERENCES

- Ağın Haykır, H. (2012).** İlköğretim 6, 7 ve 8. Sınıf öğrencilerinin okuduğunu anlama becerisi ile yazılı anlatım becerisi arasındaki ilişki, (Yayımlanmamış Yüksek Lisans Tezi), Ahi Evran Üniversitesi Sosyal Bilimler Enstitüsü, Kırşehir.
- Akyol, H. (2005).** Türkçe ilköğretim yazma öğretimi. Ankara: Gündüz Eğitim ve Yayıncılık.
- Baker, L., Dreher, M. J., and Guthrie, J. T. (2000).** Engaging young readers: Promoting achievement and motivation. New York: Guilford Press.
- Booth, D. (1998).** Guiding the reading process. Portland Maine: Stenhouse Publishers.
- Büyükköztürk, Ş. (2011).** Sosyal bilimler için veri analizi el kitabı. (13. baskı). Ankara: Pegem Akademi Yayınları.
- Carini, R., Kuh, G., and Klein, S. (2006).** Student engagement and student learning: Testing the linkages. *Research in Higher Education*, 47(1): 1–32.
- Çetingöz, D., and Açıkgöz, K. (2009).** Not Alma Stratejisinin Öğretiminin Tarih Başarısı ve Hatırda Tutma Üzerindeki Etkileri, Kuram ve Uygulamada Eğitim Yönetimi 2009, Cilt 15, Sayı 60: 577-600.
- Çiğci, M. (2006).** Türkçe Öğretiminin Sorunları, G. Gülsevin ve E. Boz. (Ed.), *Türkçenin çağdaş sorunları* (78-134), Gazi Kitabevi, Ankara.
- Connor, C. M., Jakobsons, L. J., Crowe, E. C., and Meadows, J. G. (2009).** Instruction, student engagement, and reading skill growth in Reading First classrooms. *The Elementary School Journal*, 109(3): 221.
- Demirel Ö. (2000).** Türkçe öğretimi. Ankara: Pegem A Yayıncılık.
- Gauthier, L. R. (2001).** Coop-Dis-Q. A Reading Comprehension Strategy. *Intervention in School and Clinic*, 36(4): 217-220.
- Guthrie, J. T., (2004).** Teaching for literacy engagement. *Journal of Literacy Research*, 36: 1-29.
- Guthrie, J. T., and Wigfield, A. (2000).** Engagement and motivation in reading. In M. L. Kamil, P. B. Mosenthal, P. D. Pearson, R. Barr (Eds.), *Handbook of reading research* (3rd ed., pp. 403-422). New York: Longman.
- Guthrie, J. T., McGough, K., Bennett, L., and Rice, M. E. (1996).** Concept-oriented reading instruction: An integrated curriculum to develop motivations and strategies for reading. In L. Baker, P. Afflerbach, and D. Reinking (Eds.), *Developing engaged readers in school and home communities* (p. 165–190). Mahwah, N.J: Lawrence Erlbaum Associates.

- Guthrie, J. T., Schafer, W. D., and Huang, C. W. (2001).** Benefits of opportunity to read and balanced instruction on the NAEP. *Journal of Educational Research*, 94: 145-162.
- Guthrie, J. T., Wigfield, A., and Perencevich, K. E. (2004).** Motivating reading comprehension: Concept-oriented reading instruction. Mahwah, NJ: Erlbaum.
- Guthrie, J. T., Wigfield, A., Barbosa, P., Perencevich, K. C., Taboada, A., Davis, M. H., Scaffidi, N. and Tonks, S. (2004).** Increasing reading comprehension and engagement through concept-oriented reading instruction. *Journal of Educational Psychology*, 96(3): 403-423.
- Guthrie, J. T., Wigfield, A., Metsala, J. L., and Cox, K. E. (1999).** Motivational and cognitive predictors of text comprehension and reading amount. *Scientific Studies of Reading*, 3: 231-256.
- James, W. (2004).** Special education and social development. New Delhi: Anmol Publications PVT. LTD.
- Karasar, N. (2007).** Bilimsel araştırma yöntemi. Ankara: Nobel Yayın Dağıtım.
- Klauda, S. and Guthrie, J. (2015).** Comparing relations of motivation, engagement, and achievement among struggling and advanced adolescent readers. *Read Write*, 28, 239-269.
- Logan, S., and Medford, E. (2011).** Gender differences in the strength of association between motivation, competency beliefs and reading skill. *Educational Research*, 53: 85-94.
- Mete, G. (2016).** Okumaya adanmışlık modeli ile 8. sınıf öğrencilerinin okuduğunu anlama düzeyleri ve okuma motivasyonlarının geliştirilmesi, (Yayımlanmamış Doktora Tezi), İnönü Üniversitesi Eğitim Bilimleri Enstitüsü, Malatya.
- Şahindokuyucu, A. (2006).** A study of cloze and multiple-choice tests for measuring reading comprehension of preparatory students, (Yayımlanmamış yüksek lisans tezi), Abant İzzet Baysal Üniversitesi, Bolu.
- Top, M. B. (2014).** İşbirlikli tartışma sorgulama (İTS) stratejisinin ilkököl 4. sınıf öğrencilerinin okuduğunu anlama başarılarına etkisi, (Yayımlanmamış Yüksek Lisans Tezi), Mustafa Kemal Üniversitesi, Sosyal Bilimler Enstitüsü, Hatay.
- Trowler, V. (2010).** Student engagement literature review. The Higher Education Academy. [https://www.heacademy.ac.uk/system/files/StudentEngagementLiteratureReview\\_1.pdf](https://www.heacademy.ac.uk/system/files/StudentEngagementLiteratureReview_1.pdf).
- Westwood, P. (1997).** Commonsense methods for children with special educational needs (3rd ed.). London and New York: Routledge Falmer.
- Yıldız, M. (2010).** İlköğretim 5. sınıf öğrencilerinin okuduğunu anlama, okuma motivasyonu ve okuma alışkanlıkları arasındaki ilişki, (Yayımlanmamış Doktora Tezi), Gazi Üniversitesi Eğitim Bilimleri Enstitüsü, Ankara.

---

**Citation:** Mete, G. (2020). The impact of the reading engagement model on the 6<sup>th</sup> graders' reading comprehension achievement. *African Educational Research Journal*, 8(3): 499-510.

---