The Mediating Role of Reading Attitude in the Relationship between Elementary School Students' Reading Engagement and Reading Comprehension Skills

İlkokul Öğrencilerinin Okumaya Adanmışlıkları ile Okuduğunu Anlama Becerileri Arasındaki İlişkide Okuma Tutumunun Aracılık Rolü

Emine SUR* [iD]   Emre ÜNAL** [iD]

ABSTRACT: This study aimed to examine the effect of reading attitude and reading engagement on reading skills success and the mediating role of reading attitude in the relationship between reading engagement and reading comprehension skills. The data for this research was collected in the spring of 2021. The "Reading Success Scale," "Reading Engagement Scale," and "Reading Attitude Scale" were applied to 491 students from the Central Anatolia region in Turkey. The TAP and IBM SPSS 24 software were used to analyze data obtained from the scales used in the study, while the macro mediation test Process 3.5.3 developed by Hayes (2018) was used to measure the mediators in the study. A mediating role model was established in the study to evaluate the hypotheses. The study revealed that reading engagement affects reading comprehension significantly and positively; reading attitude does not have a significant effect on reading comprehension; reading engagement affects reading attitude significantly and positively; and that, in the absence of reading attitude, reading engagement has a positive and significant effect on reading success The study further revealed that engagement in reading accounts for approximately 21% of the variation in reading attitude. In conclusion, the study suggests further exploration of the roles played by different variables in mediating the relationship between reading engagement and reading comprehension success.

Keywords: Reading, Reading attitude, reading comprehension, reading engagement, primary school.

ÖZ: Bu araştırmada okuma tutumunun ve okumaya adanmışlığın okuma başarısına etkisi ve okuma tutumunun okumaya adanmışlık ile okuduğunu anlama becerisi arasındaki ilişkide üstlendiği aracılık rolünü incelemek amaçlanmaktadır. Türkiye'nin Orta Anadolu Bölgesi'ndeki dokuz ilkokuldan 491 öğrenciye "Okuma Başarısı Ölçeği", "Okumaya Adanmışlık Ölçeği" ve "Okuma Tutumu Ölçeği" uygulanmıştır. Çalışmada kullanılan ölçeklerden elde edilen verilerin analizinde TAP programı, IBM SPSS 24 programı ve araştırmalarda aracı değişkenlerin etkisinin ölçümü için Hayes (2018) tarafından geliştirilen Process 3.5.3 adlı makro aracılık testi kullanılmıştır. Araştırmada hipotezlerin test edilmesi amacıyla aracılık rolü modeli kurulmuş ve sonuçta okumaya adanmışlığın, okuduğunu anlamayı anlamlı düzeyde ve olumlu yönde etkilediği; okuma tutumunun okuduğunu anlama üzerinde anlamlı bir etkisinin olmadığı; okumaya adanmışlığın, okuma tutumunu anlamlı düzeyde ve olumlu yönde etkilediği; okuma tutumunun olmadığı durumda okumaya adanmışlığın, okuma başarısı üzerinde olumlu yönde ve anlamlı bir etkisinin olduğu görülmüştür. Araştırma sonunda bundan sonraki çalışmalarda okumaya adanmışlık ile okuduğunu anlama başarısı arasındaki ilişkiye aracılık eden farklı değişkenlerin rolünün incelenmesi tavsiye edilmiştir.

Anahtar kelimeler: Okuma tutumu, okuduğunu anlama, okumaya adanmışlık, ilkokul.

---

* *Corresponding Author*: Dr., Ministry of National Education, Konya, Türkiye, eminesur30@gmail.com, https://orcid.org/0000-0002-6594-8885

** Prof. Dr., Niğde Ömer Halisdemir University, Niğde, Türkiye, emreunal@ohu.edu.tr, https://orcid.org/0000-0002-1213-3965

Reading is an ability that is essential not only in order to comprehend a text, but also for children to thrive in their education, complete their academic and personal development in the future, and cope with the problems in their social life (Ateş, 2017; Chotitham & Wongwanich, 2014; Troy & Carol, 2011). When the acquisition of reading skills begins, the capability of students to access knowledge and interpret that information correctly is only possible through proficient reading skills. This process is critical for acquiring a reading habit (Zhao et al., 2019). Reading is a variable that affects the success of individuals in their academic and social lives. Nevertheless, numerous children and adolescents show restricted interest in reading activities Organisation for Economic Co-operation and Development (OECD, 2017); 40% of surveyed students from fifty countries report they have "little" or "less" interest in reading classes International Research on Development in Reading Skills (PIRLS, 2016). According to the National Center for Education Statistics (2003), almost 40% of children in the fourth grade lack basic reading skills. Students with poor reading skills tend to drop out of school Jimerson et al.,(2000), show signs of depression (Maughan et al., 2003), and have behavioral problems (Clarke et al., 2008). Although the cognitive dimension of reading is the point of focus in studies to understand the reading difficulties of students, recent studies have also demonstrated that the emotional dimension affects reading success to a great extent (Sur & Ateş, 2022); emotions are among the essential causes of success or failure with reading.

Reading engagement (De Naeghel et al., 2012; Esmer, 2019; Wantchekon & Kim, 2019) and reading attitude (Susar Kırmızı, 2011; Wahyuni B & Yuyu, 2020) facilitate students' development of reading skills and conceptual knowledge, acquisition of reading habits, use of cognitive strategies, and play an important role in predicting student scores from reading tests (Uyar Aydın & Balkan, 2022). Studies have shown that participation in reading activities significantly contributes to the betterment of students' reading comprehension skills, especially starting from the final year of elementary school and the following years (Guthrie & Klauda, 2015; Klauda & Guthrie, 2015). Engagement is a concept that has enjoyed increasing popularity in educational and developmental psychology and has been vigorously researched and studied by specialists, especially in the last decade. An engagement is the time and effort spent and persistence shown to achieve the desired goals (Barber & Klauda, 2020). Reading engagement is sparing time for reading activities, using strategies effectively, and trying to correctly understand what is being read (Guthrie et al., 1998; Son, Baroody & Opatz, 2023). According to this perspective, readers with high engagement are both internally motivated and use reading strategies successfully, whereas readers with less interest are less motivated and use fewer strategies to understand the topic.

When Appleton et al. (2008) reviewed the definitions of engagement, they concluded that almost all definitions included behavioral, and most definitions included emotional components; however, very few definitions included the academic or cognitive components. Researchers, adopting a two-layered model generally argue that engagement is comprised of emotional and behavioral dimensions (Wantchekon & Kim, 2019). However, new research links engagement with the cognitive dimension, arguing that skills and strategies should be effectively applied, carefully monitored, and checked when reading. Reading engagement is explained by a triple structure that adds a

cognitive size to emotional and behavioral sizes (Barber & Klauda, 2019; Johnson & Blair, 2003).

Cognitive engagement refers to knowing how and when to use high-level strategies to reach deeper levels of meaning. The cognitive dimension of reading engagement requires readers to make strategic choices in terms of reading and use conditional information to determine how and when to employ reading comprehension strategies. Behavioral engagement includes taking part in / being part of reading activities and all observable actions or performances. Emotional participation requires readers to be interested in and attach value to reading, to believe in themselves as readers, and to love reading skills (Barber & Klauda, 2020; Zhao et al., 2019). Reading engagement is an overarching framework subsuming the spectrum of personal beliefs and cognitive and behavioral practices (Whitaker, 2009).

Although engagement has cognitive, behavioral, and affective dimensions, some studies on reading highlight the affective dimension of engagement and associate engagement with "reading for pleasure" (Smith et al., 2012). Emotional engagement covers emotional reactions that occur while reading a text, such as motivation, interest, the megrims, bliss, sorrow, and worry. From this aspect, reading engagement is a concept closely related to reading attitude.

An attitude, organized by experience, is a mental and neural state that requires responding to a certain object positively or negatively (Fishbein & Ajzen, 1975). Attitude, which enables us to see things in a negative or positive light, has a complex structure with cognitive, affective, and behavioral components (Eagly & Chaiken, 1998; Sukarni, 2019). The cognitive component refers to all opinions and beliefs one has about an object, while the emotional component refers to emotional reactions, and the behavioral component refers to how we react to an object or a situation. Reading attitude is a concept referring to all emotions, tendencies, or predispositions to reading (Akhmetova et al., 2022; McKenna et al., 2012; Petscher, 2010), and affective perceptions about reading (Murtafi'ah & Putro, 2019). Reading attitude is a mental status accompanied by feelings about reading, leading a student to embrace or avoid the act of reading. Opinions, beliefs, and values about reading constitute the cognitive dimension of reading, while emotions about reading constitute its emotional dimension, and behavioral planning about reading constitutes its behavioral dimension.

Attitudes affect a person's intention or desire to behave or act in a particular way. Attitudes and intentions form the basis of behavior (Ajzen & Fishbein, 2005). Positive attitudes toward reading facilitate the act of reading, giving one more motivation to read actively. Therefore, attitude, which forms the basis of active reading /long reading, is closely related to engagement. Engagement refers to trying, sparing time, showing perseverance to achieve the desired end, and participating in reading activities (Guthrie et al., 2012). Attitude is a fundamental factor for behavioral engagement, which is associated with the observable act of reading. Attitude affects behavioral engagement and vice versa. Children without reading engagement lack interest in reading, even if they possess the ability to read; consequently, they tend to avoid reading altogether (Ng & Bartlett, 2017). According to McKenna's Reading Attitude Developmental Model (1994), reading attitude develops over time due to three factors: clubby beliefs, individual beliefs, and reading experiences. Clubby beliefs and reading experiences that form attitudes are closely related to the extent of engagement.

Therefore, it suggests that increasing reading engagement can positively affect reading attitude, and improving reading attitude can also positively affect reading engagement.

Reading attitude not only enables more reading but also positively affects the utilization of reading strategies. It is evident that individuals who like reading will read more, and reading more will positively influence the use of reading strategies. In her study, Susar Kırmızı (2011) concluded that 44% of the variance in my reading comprehension strategy use was explained by reading attitude. Based on research, it is plausible to argue that the most important factor affecting the use of strategies is the reading attitude. Attitude has both a positive effect on the use of strategy and facilitates cognitive engagement that requires using the correct strategy at the correct time when reading.

This study explores the connection between 4th-grade students' reading attitude, level of reading engagement, and reading comprehension skills. Despite assertions in the literature by many specialists regarding the close relationship between attitude and engagement, PISA regards attitude as a mere component encompassed within the scope of engagement (Brozo et al., 2007). No study has been found in the literature that detects a relationship between attitude towards reading and dedication to reading and reveals the extent of the relationship between the two variables. While it is acknowledged in the literature that a relationship exists between reading attitude and reading dedication, no study disclosing the extent of this relationship has been identified. Additionally, no study has been found in the literature that determines the mediating role of reading attitude in the relationship between reading commitment and reading comprehension. This research is important for the literature as it determines the effect of commitment to reading on reading attitude, the effect of reading attitude on reading comprehension, and the relationship between reading attitude, commitment to reading, and reading comprehension. Accordingly, the below hypotheses were evaluated:

1- Reading engagement is a significant predictor of reading attitude.

2- Reading engagement is a significant predictor of reading comprehension.

3- Reading attitude is a significant predictor of reading comprehension.

4- Reading attitude has an intermediating role in the relationship between reading engagement and reading comprehension.

Method

Model of the Research

This research was designed in a descriptive survey model because it was aimed to determine the mediating role of reading attitude in the relationship between 4th-grade students' commitment to reading and their understanding of what they read. The descriptive survey model is one of the most common quantitative research methods used to summarize the characteristics of individuals, groups, or physical environments (Büyüköztürk et al., 2012). In other words, in quantitative research, it refers to numerically revealing opinions about the general universe through a sample selected from a universe (Creswell, 2013).

Study Group

The participants were 4th-grade classroom students from nine different schools in the center of a province in the Central Anatolia region of Turkey willing to complete data collection tools. Schools were selected from the city center to ensure no big differences exist between respondents regarding lifestyle and economic opportunities. 4th-grade students were selected because compulsory education in Turkey involves test-based measurement and evaluation from fourth grade to 12th grade, and no such measurement and evaluation method is applied in the first three grades. Considering the fully completed data collection tools, data was collected from a total of 491 students. Some demographic information of the participants is provided in Table 1.

Table 1

Distribution of the Sample

		n	%
	1st College	57	11.6
	2nd College	60	12.2
	3rd College	37	7.5
	4th College	78	15.9
Schools	5th College	36	7.3
	6th College	47	9.6
	7th College	49	10.0
	8th College	102	20.8
	9th College	25	5.1
	Female	247	50.3
Gender	Male	244	49.7
	Total	491	100.0

As seen in Table 1, data was collected from 8 different schools within the scope of this research. 57 students from the first school (11.6%), 60 students from the second school (12.2%), 37 students from the third school (7.5%), 78 students from the fourth school (15.9%), 36 students from the fifth school (7.3%), 36 students from the sixth school (7.3%). 47 students (9.6%), 49 students (10%) from the seventh school, 102 students (20.8%) from the eighth school, and 25 students (5.1%) from the ninth school participated in the research. The number of female students participating in the research is 247, the number of male students is 244, and the total number of students is 491. The highest number of participants were from the eighth school, while the lowest number were from the ninth school. This was considered normal as the number of students at the schools varied. The numbers of participants from other schools are close to each other. While the distribution of participants by gender is also close to each other.

Collection of Data

The data was collected in Spring 2021. Permission for the use of the data collection tools was obtained by email for the Reading Comprehension Scale developed by Whitaker (2009), Reading Attitude Scale by Mckenna and Kear (1990) and

translated into Turkish by Çakıroğlu and Palancı (2015), and the Reading Comprehension Test for Fourth Grade Students improved by Yılmaz (2020). Subsequently, an application was made to the Ethics Committee of XXX University, and an approval with the decision number XXX was received. Upon the approval of the ethics committee, an application was made to the Regional Office of National Education in the respective province, where data was to be collected for permission to collect data from schools, and permission was granted with a letter dated 05.04.2021 and numbered XXX. However, as there was no face-to-face education for most of the spring semester owing to the pandemic, the process was postponed. The data collection process was restarted after the announcement that the schools were only partially open for face-to-face education (two days a week in two groups, with student numbers reduced by half). The researchers visited the schools for which permission for the study was received, and meetings were held with principals and 4th-grade teachers. After receiving the permission of students' parents through teachers, the scales were applied. The survey, which was originally planned to include 10 schools and approximately 1200 students, was downsized owing to the pandemic, with data collected from nine schools and 491 students. No funds or grants were used in conducting this study.

Data Collection Tools

The Reading Comprehension Test developed by Yılmaz (2020) for 4th-grade students consists of four texts and 20 items, 18 of which are multiple-choice questions, and two of which require short answers. The lowest score on the scale is 0 (when none of the questions are answered correctly), and the highest is 100 (when all questions are answered correctly). In the study, item difficulty was determined to range between 0.61 and 0.73, and item discrimination to range between 0.26 and 0.56, with the reliability coefficient (KR-20) set at 0.84.

TAP (Test Analysis Program- version 19.1.4) was used to analyze items for the reading comprehension test. According to data obtained from the TAP, the average hardship of the test was 0.75, and the average item discrimination index was 0.43. The credibility of the test (KR-20) was 0.84. Based on the evidence, it was finalized that the average difficulty grade of the test was "very easy," the item discrimination index was "very good," and the reliability coefficient was "high". No problematic items were detected during the one-by-one examination of the items and choices.

The Reading Engagement Scale Whitaker (2009) developed is a five-point Likert-type scale. The score spectrum of the scale ranges from 1 to 5, corresponding to the following statements, respectively: "Not at all like me," "Not much like me," "Can't decide," "Kind of like me," and "A lot like me!" The scale contains 40 items. The highest value that can be obtained from the scale is 200, and the lowest value is 40. A three-factor structure was obtained in the factor analysis performed on the scale, and the total variance was 53.31%. The reliability (Cronbach's Alpha) coefficients of the factors in the scale were 0.87, 0.77, and 0.65, respectively.

To demonstrate the validity and credibility of the scale for this study, exploratory factor analysis, confirmatory factor analysis, and analyses to reveal internal consistency coefficients were performed. In the exploratory factor analysis, after the items that were not included in any factor or that were included in multiple factors were excluded, analyses were performed on the remaining 11 items. According to the

findings, the total variance explained by the Reading Engagement Scale, which has a two-factor structure, was 47.83%. In both factors, factor loading values ranged between 0.59 and 0.77. The reliability level of the scale (Cronbach's Alpha) was 0.75, while the reliability level of each factor (Cronbach's Alpha) was 0.71 and 0.78, respectively. It was decided to perform a confirmatory factor analysis according to the findings acquired and, consequently, the exploratory factor analysis.

As a result of the confirmatory factor analysis, each item had significance at a level of p<0.01 in its own factor, and the standardized regression weights of the items ranged from 0.44 to 0.75. The kindness of fit indices formed as a result of the confirmatory factor analysis showed the following values: X^2/df= 1.58, SRMR= 0.034, GFI= 0.977, AGFI= 0.96, CFI= 0.98, NFI= 0.947, RMSEA= 0.034. These values are within the range of best-fit values (Hu & Bentler, 1999; Kline, 2011).

The "Reading Attitude Scale" improved by McKenna and Kear (1990) and translated into Turkish by Çakıroğlu and Palancı (2009) is a four-point Likert-type scale. Each item contains four facial expressions by Garfield with values of 4, 3, 2, and 1 appointed to them, meaning very happy, slightly happy, slightly upset, and very upset, respectively. The scale contains 20 items. The highest value that can be obtained from the scale is 80, and the lowest value is 20. A two-factor structure was achieved in the factor analysis performed on the Turkish version of the scale, and the total variance was 55.26%. The credibility coefficient (Cronbach's Alpha) of the scale was 0.84. In the confirmatory factor analysis performed for the Turkish version of the scale, the following worths were found: X^2/df= 2.81, RMSEA= 0.004, AGFI= 0.91, CFI= 0.94.

As with the other scales, exploratory factor analysis, confirmatory factor analysis, and analyses to reveal internal consistency coefficients were performed to demonstrate the validity and reliability of the scale. In the exploratory factor analysis, after the items that were not included in any factor or that were included in multiple factors were excluded, analyses were performed on the remaining 19 items. According to the findings, the total variance explained by the reading attitude scale, which has a three-factor structure, was 49.83%. In both factors, factor loading values ranged between 0.59 and 0.77. The general reliability level of the scale (Cronbach's Alpha) was 0.89, while the reliability level of each factor (Cronbach's Alpha) was 0.81, 0.77 and 0.73, respectively. In light of the obtained findings, it was decided to conduct a confirmatory factor analysis, subsequently concluding the exploratory factor analysis.

As a result of the confirmatory factor analysis, it was concluded that each item had significance at a level of p<0.01 in its own factor and that the standardized regression weights of the items ranged from 0.47 to 0.72. In the goodness of fit indices formed as a result of the confirmatory factor analysis, the following values were obtained: X^2/df= 1.85, SRMR= 0.036, GFI= 0.952, AGFI= 0.936, CFI= 0.96, NFI= 0.920, RMSEA= 0.042. Of these values, AGFI and NFI are acceptable fit values, while the others are good fit values (Hu & Bentler, 1999; Jöreskög & Sörbom, 1993; Kline, 2011).

TAP and IBM SPSS 24 software were used to analyze the data obtained from the scales, while the macro mediation test Process 3.5.3 developed by Hayes (2018) was downloaded (http://processmacro.org/download.html, 10.06.2021) and used to measure the impact of mediating variables in the study.

Results

Table 2 contains the correlation matrix and descriptive statistics regarding the data obtained and shows a plus, moderate, and significant relationship between reading understanding and reading engagement. There is a low, positive, and significant relationship between reading comprehension and reading attitude and a positive, moderate, and important relationship between reading engagement and reading attitude. In light of data obtained from data collection tools, all scales show a significant relationship with each other.

Table 2

Correlation Matrix and Descriptive Statistics for Study Measures

	1	2	3
1- Reading Comprehension	---	.323**	.098*
2- Reading Engagement	.323**	----	.458**
3- Reading Attitude	.098*	.458**	---
M	75.19	4.37	3.43
SD	19.50	.62	.43

Note. M = mean; *SD* = standard deviation **$p \leq .05$. ***$p \leq .01$.

A mediation role model was established to evaluate the hypotheses set forth (Figure 1). Figure 1 shows that reading engagement affects reading attitude significantly and positively (b=0.657, %95 CI [0.5436, 0.7704], t=11.385, p<0.001). Reading engagement accounts for approximately 21% of the variation in reading attitude ($R2 = 0.2095$). The first hypothesis was verified based on this finding.

It is seen that reading engagement affects reading comprehension significantly and positively (b=11.085, %95 CI [8.1016, 14.0692], t=7.2998, p<0.001). The second hypothesis was accepted based on this finding.
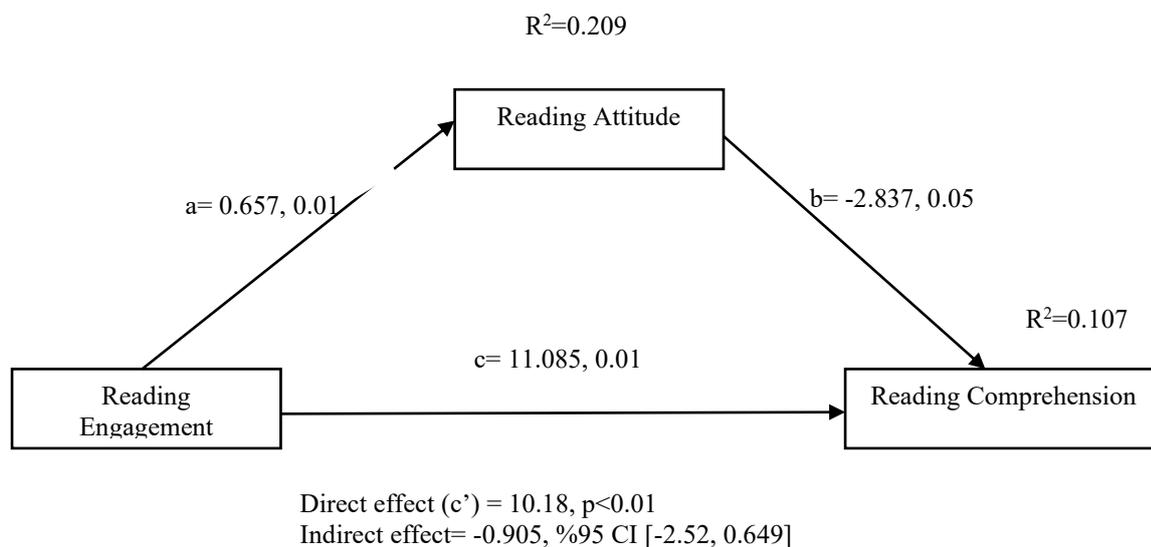
In contrast, reading attitude did not exhibit a significant effect on reading comprehension (b=-2.8366, %95 CI [-7.1195, 1.4463], t=-1.3013, p>0.05). Reading attitude and reading engagement account for approximately 11% of the variation in reading attitude ($R2 = 0.1071$). The third hypothesis was rejected based on this finding.

Considering the total effect model, it is seen that in the absence of reading attitude, reading engagement has a positive and significant effect on reading success (b=-10.18, %95 CI [7.53, 12.84], t=7.54, p<0.001). Whether reading engagement has an indirect effect through reading attitude was determined in accordance with the reliance intervals acquired by the Bootstrap method. In accordance with this, it was determined that the indirect effect of reading attitude on reading comprehension is important; therefore, reading attitude mediates the relationship between reading engagement and reading comprehension (b=-0.905, %95 BCA CI [-2.52, 0.6490]). The adjusted bias and the accelerated reliance interval values (BCA CI) through the Bootstrap analysis do not cover the 0 (zero) value. The exact normalized effect size of the mediatorship effect (K2) is -0.03, and the partially standardized effect size is -0.05. Interpretation of the effect size follows guidelines wherein if K2 = 0.01, the effect is considered low, if K2 =

0.09, it is considered medium, and if K2 = 0.25, it is considered high (Preacher and Kelly, 2011). The exact standardized impact dimension of effect is -0.03, which can be said to have an impact size close to that of the low value. The fourth hypothesis was accepted based on this finding.

Figure 1

The Mediating Role of Reading Engagement in the Relationship Between Reading Attitude and Reading Comprehension

R^2=0.209

Reading Attitude

a= 0.657, 0.01

b= -2.837, 0.05

R^2=0.107

c= 11.085, 0.01

Reading Engagement

Reading Comprehension

Direct effect (c') = 10.18, p<0.01
Indirect effect= -0.905, %95 CI [-2.52, 0.649]

Note: Non-standardized beta coefficients were reported. R^2 values show the reported variance.

Conclusion, Discussion, Suggestions

The relationship between elementary college learners' reading attitude and reading understanding success and reading engagement and reading comprehension success has been investigated in a vast number of studies (Campbell et al., 1997; Guthrie et al., 2012). Similarly, the relationship between reading motivation and reading engagement was established in previous studies (Unrau & Quirk, 2014). However, although there are only a few studies investigating the relationship between reading attitude and participation (Jeffery, 2017), no research has been found that detects the relationship between reading attitude and reading dedication. In spite of the fact that there is much research examining students' reading attitudes, the mediator role of reading attitude in the relation between reading engagement and reading comprehension skills is a subject that has not yet been studied. In this study, the mediating part of reading attitude in the relationship between reading engagement and reading comprehension skills has been established to complete a space in the literature.

In the first research hypothesis, it was assumed that reading engagement is an important predictor of reading attitude. The mediating role model established to test the hypothesis has shown that reading engagement affects reading attitude significantly and positively. Reading engagement accounts for approximately 21% of the variation in reading attitude. When the literature was examined, no research could be found on the extent to which commitment to reading affects the change in reading attitude.

Engagement, which has cognitive, affective, and behavioral dimensions, is a concept related to reading attitude. The affective dimension of engagement involves affective reagents an individual has while reading, such as worry, bliss, sorrow, boredom, and sadness. Meanwhile, reading attitude is defined as the sum of emotions that lead the student to have a desire to read or prevent reading.

In accordance with reading engagement, reading motivation and attitude lead to the act of reading, which brings academic success. Thus, when students set themselves a reading goal, attach value to reading, and trust in themselves as readers, they fully and intentionally participate in reading activities. Coherent and active participation in reading, in return, assistant individualistic create the cognitive duration required to understand what they read. It is more likely for students who like the shared experience of reading, believe that reading is significant, and know the pleasure of reading to put in the time and effort needed to understand texts fully (Guthrie & Wigfield, 2000). While reading attitude affects reading engagement positively, reading engagement accounts for a significant part (21%) of the change in reading attitude.

In the second research hypothesis, it was accepted that reading commitment was a significant predictor of reading comprehension. The mediating role model established to test the hypothesis has shown that reading engagement affects reading comprehension skills success significantly and positively. Reading engagement accounts for 11% of the modification in reading dexterity success. A review of the literature shows studies with similar findings regarding the effect of reading engagement on reading success. In his study, Esmer (2019) established that reading engagement is the strongest predictor of reading skills in informative texts, and Stratus (2007) found that reading engagement is a significant predictor of reading achievement. According to a research study involving students across the age spectrum of 13 to 17, those with a higher level of reading engagement demonstrated more advanced reading success compared to students with lower grades of reading engagement. Guthrie and Wigfield (2000), in their study, found that 13-year-old students with high reading engagement had higher reading achievements than 17-year-old students with low reading engagement. Both studies in the literature and this study demonstrate that reading engagement is a significant prophet of reading skills. When students set themselves a reading goal, attach value to reading, and trust in themselves as readers, they fully and more intentionally participate in reading activities. The cognitive dimension of engagement, which is a three-dimensional structure, requires the reader to use strategies in the reading process; the behavioral dimension requires them to spare time for reading; and the affective dimension requires them to love reading. Sparing time for reading, using the necessary strategies in the reading process, and loving reading increase reading skills success. According to PISA findings, engagement is a critical component of reading skills success. The fact that good readers are more inclined to read ensures the development of vocabulary and comprehension skills. On the other hand, it is seen that there is a continuous decrease in the skill levels of weak readers who avoid reading (Brozo et al., 2007). There is a strong correlation between reading engagement and reading success.

In the third research hypothesis, it was accepted that reading attitude is an important prophet of reading understanding success. The mediating role model established to evaluate the hypothesis demonstrates that reading attitude does not have a

significant impact on reading comprehension. This result obtained at the end of the work led to the rejection of the research hypothesis. In the fourth research hypothesis, reading attitude was deemed to have an intervening role in the relationship between reading engagement and reading comprehension. According to the mediating role model established to evaluate the hypothesis, the remote impact of reading attitude on reading comprehension is important, and reading attitude intervenes in the relation between reading engagement and reading comprehension. The results obtained under the third and fourth hypotheses of the study are consistent with and support each other. Because reading attitude does not directly affect reading comprehension skills, it affects it indirectly by mediating the relationship between reading dedication and reading comprehension.

A large number of studies show that reading attitude affects reading success positively and that the relation between the two factors is positive. In their studies, McKenna et al. (1995) and Donaldson (2010) found that students with high reading comprehension scores have high reading attitudes, whereas students with low reading comprehension scores have low reading attitudes (Agustiani, 2017). This study's finding that reading attitude is not an important predictor of reading comprehension success runs counter to what has been reported by other studies.

According to the model of Ajzen and Fishbein (2005), attitudes do not affect the reading success of an individual directly, but they affect the intent or want to perform an attitude or an activity. Ainley (2006) examined the effect of emotions such as the megrims and happiness on readers' reading behavior and concluded that emotions mediate reading behavior. Researchers theorized that attitude affects students' motivation and subsequent success by increasing the time they spend on reading (McKenna et al., 1995). Therefore, it can be suggested that reading attitude is not a variable that has a direct effect on reading success. Consequently, how one feels about reading does not go far enough to increase reading success on its own when not supported by other factors. A student with a positive attitude toward reading can expect higher reading scores, sparing more time and effort for reading. A more positive reading attitude translates into more time and effort spent understanding what is being read. This goes to show how reading attitude has a mediating role between reading engagement and reading skills success. The reading engagement of students affects their reading comprehension levels positively, whereas their reading attitude does not have an important effect on their reading skill levels. However, reading engagement has an important effect on reading attitude. When the mediating role is examined, it is seen that increasing reading attitude will have a low-level positive effect on reading success by affecting reading dedication. It is possible to say that giving more importance to reading dedication than reading attitude will have a greater impact on reading comprehension.

"Reading Commitment Scale" is a scale whose validity and reliability have been confirmed through an application on fourth grade students studying in nine different schools, but more research is needed to confirm its validity and reliability at the national level. The sample level of the current study was selected from 4th-grade students. Choosing the sample group for future research from fifth, sixth, seventh, and eighth-grade students will enable the reading dedication levels of students in different age groups to be determined and compared with each other. Quantitative research method

was used in the current research. In future studies, it is possible to examine students' reading commitment levels with research models using qualitative, mixed methods. In this study, the mediating role of reading attitude in the relationship between reading dedication and reading comprehension was examined. In future studies, the role of different variables that may mediate the relationship between reading commitment and reading attitude can be examined.

Statement of Responsibility

Both researchers contributed equally to the introduction, method, findings, and conclusion sections of the study.

Conflicts of Interest

There is no conflict of interest to disclose.

Author Bios:

Emine SUR: She graduated from Erciyes University, Department of Turkish Language Education between 2005-2009. She started to work as a Turkish teacher at Karaman / Ayrancı Berendi Primary School in 2009. In 2010, she was appointed as a Turkish Teacher to Konya / Eregli Zübeyde İşeri Secondary School. Between 2010-2012, he graduated from Ömer Halis Demir University, Department of Turkish Education, with his thesis titled "The Opinions of Secondary School Teachers and Students on Media Literacy". He graduated from Necmettin Erbakan University Ahmet Keleşoğlu Faculty of Educationin 2020 with his thesis named "Examination of the Relationship Between Critical and Creative Thinking Skills and Comprehension Skills of Secondary School Students". I worked at Mehmet Bayır Imam Hatip Secondary School between 2018-2022. I am currently working in the Private Office of Konya/Ereğli District Directorate of National Education. She continues to do research and work in the field of Turkish education

Emre ÜNAL: He completed his undergraduate education at Nigde University between 1995-1999. Faculty of Education / Department Of Basic Education / Class Teacher. Then between 1999-2001 Nigde University He completed his master's degree in the Institute of Educational Sciences/Educational Programs And Teaching with the thesis "The effect of school's physical and social competences on academic and social success". Gazi University between 2002 2007 He graduated from the Institute Of Educational Sciences/Class Education Phd program with the thesis "The effect of intertextual reading on reading comprehension". Between 2002-2006, research assistant at Gazi University/Gazi Education Faculty/Fundamental Education/Class Education Department, Between 2007-2013 Niğde Ömer Halisdemir University/ Education Faculty/Fundamental Education Department, 2013 Department Of Education/Phd. Between 2019, he worked as an associate professor at Nigde Omer Halisdemir University / Faculty Of Education / Department Of Basic Education / Classroom Education. Since 2019, he has been working as a professor at Nigde Omer Halisdemir University / Faculty Of Education / Department Of Basic Education / Classroom Education.

References

Agustiani, I, W. D. (2017). The correlation between students' reading attitude and their reading comprehension achievement. *English Community Journal*, *1*(2), 75–85.

Ainley, M. (2006). Connecting with learning: motivation, affect, and cognition in interest processes. *Educational Psychology Review, 18,* 391–405. https://doi.org/10.1007/s10648-006-9033-0

Ajzen, I. & Fishbein, M. (2005). The influence of attitudes on behavior. Dolores Albarracin, Blair T. Johnson and Mark P. Zanna (Ed.). *The handbook of attitudes* (pp.173–221). Mahwah: Lawrence Erlbaum Associates.

Akhmetova, A., Imambayeva, G. & Csapo, B. (2022). A study of reading attitude and reading achievement among young learners in middle school. *Heliyon, 8,* 1-11.

Alexander, J. E. & Filler, R.C. (1976). *Attitude and reading.* DE: International Reading Association.

Appleton, J. J., Chrıstenso, S. L., & Furlong, M. J. (2008). Student engagement wıth school: crıtıcal conceptual and methodological issues of the construct. *Psychology in the Schools, 45*(5), 369–386.

Ateş, M. (2017). Examining the relationship between secondary school students' reading comprehension levels and their academic achievement. *International Journal of Educational Sciences, 4*(12), 306–317.

Barber, A. T. & Klauda, S. L. (2020). How reading motivation and engagement enable reading achievement: policy ımplications. *Policy Insights from the Behavioral and Brain Sciences, 7*(1), 27–34.

Brozo, W. G., Shiel, G. & Topping, K. (2007). Engagement in reading: Lessons learned from three PISA countries. *Journal of Adolescent and Adult Literacy, 51*(4), 304–315.

Büyüköztürk, Ş., Çakmak, E. K., Akgün, Ö. E., Karadeniz, Ş., & Demirel, F. (2012). Scientific research methods. Pegem Academy.

Campbell, J. R., Voelkl, K. E. & Donahue, P. L. (1997). *NAEP 1996 trends in academic progress (NCES Publication No. 97985).* DC: U.S. Department of Education.

Chotitham, S. & Wongwanich, S. (2014). The reading attitude measurement for enhancing elementary school students' achievement. *Procedia - Social and Behavioral Sciences*, *116*, 3213–3217.

Clarke, A. T., Power, T. J., Blomhoffman, J., Dwyer, J. F., Kelleher & Novak, (2008). Kindergarten reading engagement. *Journal of Applied School Psychology*, *20*(1), 131–144.

Conradi, K., Jang, B. G., Bryant, C., Craft, A. & McKenna, M. C. (2013). Measuring adolescents' attitudes toward reading: a classroom survey. *Journal of Adolescent and Adult Literacy, 56*(7), 565–576.

Creswell, J. W. (2017). *Introduction to mixed method research* (Trans. M. Sözbilir). Ankara: Pegem Academy.

Çakıroğlu, O. & Palancı, M. (2015). Reading attitude scale: The reliability and validity study. *International Journal of Human Sciences, 12*(1), 1144–1156.

De Naeghel, J., Van Keer, H., Vansteenkiste, M., & Rosseel, Y. (2012). The relation between elementary students' recreational and academic reading motivation, reading frequency, engagement, and comprehension: A self-determination theory perspective. *Journal of Educational Psychology, 104*(4), 1006.

Eagly, A. H. & Chaiken, S. (1998). Attitude structure and function. In D. Gilbert, S. T. Fiske & G. Lindsey (Ed.). *Handbook of social psychology* (pp. 269–322). New York: McGraw-Hill.

Esmer, B. (2019). *Relationship between reading comprehension and fluent reading, reader self-perception, commitment to reading and reader response* [Published PhD thesis]. Gazi University Institute of Educational Sciences.

Fishbein, M. & Ajzen, I. (1975). *Belief attitude, intention, and behavior. an introduction to theory and research.* Reading, MA: Addison-Wesley

Guthrie, J. T., & Klauda, S. L. (2015). Engagement and motivational processes in reading. In P. Afflerbach (Ed.). *Handbook of individual differences in reading: Reader, text, and context* (pp. 41–53). Taylor & Francis: Routledge.

Guthrie, J. T., Van Meter, P., Hancock, G., Alao, S., Anderson, E., & McCann, A. (1998). Does concept-oriented reading instruction increase strategy use and conceptual learning from text. *Journal of Educational Psychology*, *90,* 261– 278.

Guthrie, J. T. & Wigfield, A. (2000). Engagement and motivation in reading. In M. L. Kamil, P. B. Mosenthal, P. D. Pearson, and R. Barr (Ed.), *Handbook of reading research,* (pp. 403–422). United State: Lawrence Erlbaum Associates Publishers.

Guthrie, J. T., Wigfield, A., Barbosa, P., Perencevich, K. C., Taboada, A., Davis, M. H. (2004). Increasing reading comprehension and engagement through concept-oriented reading instruction. *Journal of Educational Psychology*, *96,* 403–423.

Guthrie, J. T., Wigfield, A., & You, W. (2012). Instructional contexts for engagement and achievement in reading. In S. L. Christensen, A. L. Reschly, and C. Wylie (Ed.). *Handbook of research on student engagement* (pp. 601–634). Germany: Springer Science.

Hasançebi, B., Terzi, Y. & Küçük, Z. (2020). Distractor analysis based on item difficulty index and item discrimination index. *Gumushane University Journal of Science Institute, 10*(1), 224–240.

Hayes, A. F. (2018). *Introduction to mediation, moderation, and conditional process analysis: A regression-based approach. (1. Edition).* New York: Guilford publications.

Hu, L. T. & Bentler, P. M. (1999). Cutoff criteria for fit indexes in covariance structure analysis: Conventional criteria versus new alternatives. *Structural Equation Modeling: A Multidisciplinary Journal,* 6(1), 1–55.

Jeffery, M. M. (2017). *The relation between student engagement and reading attitude in an online high school learning environment* [Unpublished PhD thesis].Submitted to the School of Education of Aurora University

Jimerson, S., Egeland, B., Stroufe, L. A. & Carlson, B. (2000). A prospective longitudinal study of high school dropouts: Examining multiple predictors across development. *Journal of School Psychology*, *38,* 525–549.

Johnson, D. & Blair, A. (2003). The importance and use of student self-selected literature to reading engagement in an elementary reading curriculum. *Reading Horizons: A Journal of Literacy and Language Arts, 43*(3), 182–202.

Jöreskög, K. G. & Sörbom, D. (1993). *LISREL 8: Structural equation modeling with the SIMPLIS command language.* Scientific Software International.

Klauda, S. L. & Guthrie, J. T. (2015). Comparing relations of motivation, engagement, and achievement among struggling and advanced adolescent readers. *Read and Writing, 28,* 239–269.

Kline, R. B. (2011). *Principles and practice of structural equation modeling*. New York: Guilford Press.

Kush, J. C., Watkins, M. W. & Brookhart, S. M. (2005). The temporal-interactive influence of reading achievement and reading attitude. *Educational Research and Evaluation*, *11,* 29–44.

Maughan, B., Rowe, R., Loeber, R. & Stouthamer-Loeber, M. (2003). Reading problems and depressed mod. *Journal of Abnormal Child Psychology, 31*(2), 219-29.

McKenna, M., & Kear, D. (1990). Measuring attitude toward reading: A new tool for teachers. *Reading Teacher, 43,* 626–639.

McKenna, M. C., Conradi, K., Lawrence, C., Jang, B. G., & Meyer, J. P. (2012). Reading attitudes of middle school students: results of a U.S. survey. *Reading Research Quarterly, 47*(3), 283–306.

McKenna, M. C. (1994). Toward a model of reading attitude acquisition. In E.H. Cramer and M. Castle (Ed.). *Fostering the life-long love of reading: The affective domain in reading education* (pp. 18–40). DE: International Reading Association.

McKenna, M. C., Kear, D. J. & Ellworth, R. A. (1995). Children's attitudes toward reading: A national survey. *Reading Research Quarterly, 30,* 934–956.

Mullis, I. V. S., Martin, M. O., Foy, P. & Hooper, M. (2017). PIRLS 2016 international results in reading. Retrieved from http://timssandpirls.bc.edu/pirls2016/international-results/

Murtafi'ah, B. & Putro, N. H. P. S. (2019). A latent profile analysis of santri's reading attitude and reading motivation. *KnE Social Sciences 3*(10), 388–399.

Ng, C. & Bartlett, B. (2017). Improving reading and reading engagement: an international focus. Clarence Ng Brendan Bartlett (Eds.). *Improving reading and reading engagement in the 21st century* (pp. 3–16). Springer Nature Singapore Pte Ltd.

OECD (2017). PISA 2015 Results (Volume III): Students' Well-Being, PISA, OECD Publishing. https://doi. org/10.1787/9789264273856-en.

Petscher, Y. (2010). A meta-analysis of the relationship between student attitudes toward reading and achievement in reading. *Journal of Research in Reading, 33*(4), 335–355. https://doi.org/10.1111/j.1467-9817.2009.01418.x

Preacher, K. J. & Kelly, K. (2011). Effect size measures for mediation models: Quantitative strategies for communicating indirect effects. *Psychological Methods*, *16*, 93–115.

Son, S. C., Baroody, A. E. & Opatz, M. O. (2023). Measuring preschool children's engagement behaviors during classroom shared reading: Construct and concurrent validity of the shared reading engagement rating scale. *Early Childhood Research Quarterly, 64,* 47-60.

Smith, J. K., Smith, L. F., Gilmore, A. & Jameson, M. (2012). Students' selfperception of reading ability, enjoyment of reading and reading achievement. *Learning and Individual Differences, 22*(2), 202–206.

Stratus, L. P. (2007). *Adolescent reading engagement: predictors of eighth grade reading achievement on the 2007 NAEP with an examination of gender and ethnicity differences* [Unpublished PhD thesis]. Claremont University, United States.

Sur, E. & Ateş, M. (2022). A systematic review regarding the impact of affective factors on reading success. *International Online Journal of Education and Teaching (IOJET), 9*(4). 1480-1512.

Susar Kırmızı, F. (2011). The relationship between reading comprehension strategies and reading attitudes. *Education 3-13, 39*(3), 289–303. https://doi.org/10.1080/03004270903514320

Sukarni, S. (2019). Reading attitude and ıts influence on students' reading comprehension. *Edukasi Jurnal Pendidikan dan Pengajaran, 6*(1), 193–20.

Troy, J. & Carol, B. (2011). Reading engagement :a comparison between e-books and traditional print books in an elementary classroom. *International Journal of Instruction, 2*(4), 5–22.

Unrau, N. J. & Quirk, M. (2014). Reading motivation and reading engagement: clarifying commingled conceptions. *Reading Psychology, 35*(3), 260–284.

Uyar Aydın, C. & Balkan, S. (2022). İlkokul 4. sınıf öğrencilerinin okuma sıklığı ile eleştirel okuma becerileri arasındaki ilişki. *SDU International Journal of Educational Studies, 9*(1), 29-41 . https://doi.org/10.33710/sduijes.1083726

Wahyuni B, A. & Yuyu (2020). The effect of reading attitude toward students' reading comprehension at the eighth grade of SMP Negeri 2 Baubau. *English Education Journal (E2J), 6*(2), 51-57.

Wantchekon, K. & Kim, J. S. (2019). Exploring heterogeneity in the relationship between reading engagement and reading comprehension by achievement level. *Reading and Writing Quarterly, 35*(6), 539–555.

Whitaker, S. K. (2009). *Development and validation of the reading engagement survey* [Unpublished master thesis]. University of Kentucky, United States.

Wigfield, A., Guthrie, J. T., Perencevich, K. C., Taboada, A., Klauda, S. L., McRae, A. & Barbosa, P. (2008). Role of reading engagement in mediating effects of reading comprehension instruction on reading outcomes. *Psychology in the Schools, 45,* 432–445.

Yılmaz, H. (2020). *Examination of the relationship between the fluent reading level of primary school 4th grade students and their success in reading comprehension and non-routine problem solving* [Unpublished master thesis]. Kırıkkale University, Kırıkkale.

Zhang, W. J. & Xin, T. (2012). A cross-culture comparison study of the impact of reading engagement on reading literacy: Based on PISA 2009 [Chinese]. *Psychological Development and Education, 28,* 175–183.

Zhao, W., Song, Y., Zhao, Q. & Zhang, R. (2019) The effect of teacher support on primary school students' reading engagement: the mediating role of reading interest and Chinese academic self-concept. *Educational Psychology*, *39*(2), 236–253.