



www.ijoneses.net

The Associations between Metacognitive Reading Strategies and Critical Reading Self-Efficacy: Mediation of Reading Motivation

Kayhan Bozgun 
Adıyaman University, Turkey

Fatih Can 
Amasya University, Turkey

To cite this article:

Bozgun, K., & Can, F. (2023). The associations between metacognitive reading strategies and critical reading self-efficacy: Mediation of reading motivation. *International Journal on Social and Education Sciences (IJonSES)*, 5(1), 51-65. <https://doi.org/10.46328/ijoneses.383>

International Journal on Social and Education Sciences (IJonSES) is a peer-reviewed scholarly online journal. This article may be used for research, teaching, and private study purposes. Authors alone are responsible for the contents of their articles. The journal owns the copyright of the articles. The publisher shall not be liable for any loss, actions, claims, proceedings, demand, or costs or damages whatsoever or howsoever caused arising directly or indirectly in connection with or arising out of the use of the research material. All authors are requested to disclose any actual or potential conflict of interest including any financial, personal or other relationships with other people or organizations regarding the submitted work.



This work is licensed under a Creative Commons Attribution-NonCommercial-ShareAlike 4.0 International License.

The Associations between Metacognitive Reading Strategies and Critical Reading Self-Efficacy: Mediation of Reading Motivation

Kayhan Bozgun, Fatih Can

Article Info

Article History

Received:

27 April 2022

Accepted:

14 November 2022

Keywords

Metacognitive reading

Critical reading

Reading motivation

Mediation analysis

Abstract

The aim of this study is to test the mediation of reading motivation between preservice teachers' metacognitive reading strategies and critical reading self-efficacy. For this purpose, a sample of 482 preservice teachers studying at the education faculty of a state university located in a city center in the Central Black Sea Region in the spring semester of the 2019-2020 academic year. Participants were determined by convenience sampling method. Self-efficacy Perception Questionnaire about Critical Reading Skills, Metacognitive Reading Strategies Scale and Adult Reading Motivation Inventory were used as data collection tools. In the analysis of the data, mediation analysis was performed with the Pearson Product-Moment correlation analysis using the Jamovi software. In the findings obtained, it was found that there were positive and highly significant relationships between dependent, independent and mediator variables. Metacognitive reading strategies were found to be significant predictors of reading motivation and critical reading self-efficacy. In addition, reading motivation was found to be a significant predictor of critical reading self-efficacy. According to the findings of the mediation analysis carried out as a result of provided these assumptions, it has been revealed that reading motivations have a partial mediating role between preservice teachers' metacognitive reading strategies and critical reading self-efficacy. In conclusion, reading motivation explains some of the relationship between metacognitive and critical reading.

Introduction

According to the constructivist approach, reading is a process in which prior knowledge and information in the text are integrated and re-interpreted. This process consists of various processes of the eye, sound and brain such as seeing, vocalizing, understanding, structuring in the mind (Gunes, 2014). With reading, the individual can contribute to his horizon and creative side by improving his vocabulary. In this respect, gaining meaning skills through reading emerges as an important element in an individual's life and educational processes. In this sense, it is very important for teachers to develop their skills of constructing meaning through reading and to enable them to gain these skills to their students (Akyol, 2011).

Reading skill, besides affecting all other language skills, is also effective in the success of the individual in his

lifetime and education life. Reading is a process that includes mental processes as it is directly related to understanding. Therefore, it can be said that the reading motivation, which will be realized with the formation of interest and curiosity in achieving success in reading, will be effective in directing the individual to reading and in the success of the reading process (Turkben, 2020). In this context, motivation is also an effective factor in the tendency towards reading (Yildiz & Akyol, 2011).

Reading motivation is related to the development of reading skills as well as gaining reading habits. For this reason, directing students to read meaningfully and correctly by their teachers after learning to read will also positively affect students' comprehension and expression skills (Saracli Celik & Karasakaloglu, 2021). Students who have reading comprehension problems have a lack of motivation also. For this reason, it can be argued that reading activities carried out by teachers in providing motivation for reading can also increase reading motivation (Celikturk Sezgin & Akyol, 2018). In this context, reading motivation can be effective in displaying a positive attitude towards reading and in training on reading (Kennedy & Chinokul, 2020).

Metacognitive reading strategies emerge as an important element in making reading meaningful, in the positive realization of reading and learning, and in the success of reading. Metacognitive reading strategies facilitate understanding and are also effective in planning learning. It can be said that metacognitive reading strategies are an element that can be used by teachers in making sense of what students read and planning reading and learning (Ahmadi et al., 2013). In this sense, metacognitive strategies come to the fore in determining and executing the processes to be followed in the comprehension process, as well as being effective in making sense of reading and achieving the targeted success. At the same time, it can be said that metacognitive strategies affect students' understanding and learning processes positively (Firat & Kocak, 2019; Güner, & Erbay, 2021; Hwang et al., 2021). Therefore, metacognition can be effective in maximizing and controlling learning by planning learning (Jou, 2015) and provides advantages to the individual in meaningful reading (Daguay-James & Bulusan, 2020).

Metacognitive reading strategies are a prominent factor in the education process. The first step of students' learning is the process of reading and making sense of what they read. The healthier these processes are, the more successful they will be. In this sense, it is important that metacognitive reading strategies have a positive effect on learning processes. In addition, metacognitive reading strategies have a positive effect on the success of reading comprehension, as they enable reading to be performed consciously and with awareness. In this respect, it is a very important issue for teachers to include metacognitive reading strategies in the teaching process (Thongwichit & Buripakdi, 2021). Therefore, it is a significant point to be considered in terms of education that teachers should know metacognitive reading strategies before starting their professional life and teach these strategies to their students when they perform their profession in the future. Because reading is one of the most efficient method of learning, it is an issue that needs to be emphasized by using metacognitive strategies (Cetinkaya Edizer & Ozbilgin, 2019).

Reading, a skill acquired in childhood and needed in all periods of life, is generally intertwined with other language skills (Aydin, 2020). Today, it is possible to reach many reading resources for the development of reading skill, which is so important. Nowadays, the possibilities of accessing information are expanding and more

information can be accessed more easily. It is also important to use this information obtained in this direction correctly and to reach new information. Therefore, critical reading skills come to the fore to use the readings more efficiently, to make judgments on what is read and to make a judgment (Cam Aktas, 2015).

“Critical reading is the efforts of individuals to find the better, the more beautiful, the more truth by filtering what they read and what they have learned through reading through their own knowledge and experience; and activities to produce better, more beautiful, more accurate mind products with what they have learned from what they have read.” (Cifci, 2006). At the same time, critical reading skills come to the fore in terms of enabling the formation of scientific and critical thinking skills. Therefore, acquiring critical reading skills is important as it provides the way for the growth of inquiring, curious and thinking individuals (Gunes & Gunes, 2014).

Critical reading is an effective skill in determining the purpose of the writing, making evaluations, finding logical inferences, and looking deeply at what is told with a critical essence (Ozensoy, 2011). Critical reading, which is an important skill, is closely related to the acquisition of a critical perspective. In this context, the role of teachers in students' gaining critical skills is quite large. For students to develop critical reading skills and have a critical perspective, first of all, the teacher must have this act. For this reason, the teacher should have sufficient knowledge and teaching competencies to enable students to gain a critical perspective (Karabay, 2013). In this context, it can be said that equipping the teachers with these competencies before starting their professional life will provide great advantages for the teacher to be more efficient and effective.

Significance and Purpose of the Study

Reading skills are one of the important language skills in personal and academic development. Considering that the attitudes and motivation towards reading increase as they read, it is necessary for teachers to adapt to the rapid changes occurring today and to benefit from reading skills in teaching their students effectively. Preservice teachers should also improve themselves by reading frequently during their university education and when they start their profession. From this point of view, preservice teachers who perform reading according to processes such as planning, monitoring, controlling, and evaluation use a kind of metacognitive reading strategies. In addition, in the 21st century, which is the information age, reading every piece of information without questioning and believing that information can lead to wrong and incorrect learning. In fact, preservice teacher may cause misconceptions by transferring the knowledge he has learned to the students when they start the profession. In this respect, preservice teachers who read critically and believe that they have this skill will act selectively and attentively while reading. In this study, the relationship between preservice teachers' metacognitive reading strategies and critical reading self-efficacy was examined. It was also tested whether reading motivation mediated this relationship. The research is thought to be important in terms of introducing a new model and looking at preservice teachers' reading skills from a wider perspective.

When the literature about the study was examined, similar studies were not found. Baki (2019) investigated the effects of preservice Turkish teachers' metacognitive reading strategies on reading motivation. Sahin (2019) examined the relationship between preservice Turkish teachers' critical reading self-efficacy perceptions and their

reading motivations. Karasakaloglu et al. (2012a) examined the metacognitive reading strategies, critical thinking attitudes, motivational-cognitive and metacognitive competencies of preservice Turkish teachers. Ulu (2019) examined the relationships between preservice teachers' attitudes towards reading and their reading habits, awareness of metacognitive reading strategies and critical thinking dispositions.

In addition, Yildiz et al. (2013) adapted the Adult Reading Motivation Inventory into Turkish; Kurnaz (2019) also developed the Reading Intrinsic Motivation Scale. There are studies examining preservice teachers' critical reading perceptions and levels (Aybek & Aslan, 2015; Bagci, 2019; Cam Aktas, 2016; Kaplan, 2021; Karasakaloglu et al., 2012b; Maltepe, 2016; Ulu et al., 2017); reading motivation (Baba Ozturk & Aydogmus, 2021; Basara Baydilek et al., 2018; Gecgel et al., 2020; Savaskan & Ozdemir, 2017; Soyucok & Balantekin, 2021), and metacognitive reading strategies (Babacan, 2012; Demir, 2022; Emre, 2019; Kana, 2015; Ozdemir, 2018; Ozden, 2018; Uyar et al., 2012). However, no study was found in which all three variables were used together. Based on this reasoning, this study aims to determine the mediating role of reading motivation in the relationship between preservice teachers' metacognitive reading strategies and critical reading self-efficacy. The hypothesis model and research hypotheses created within the scope of the research are given below.

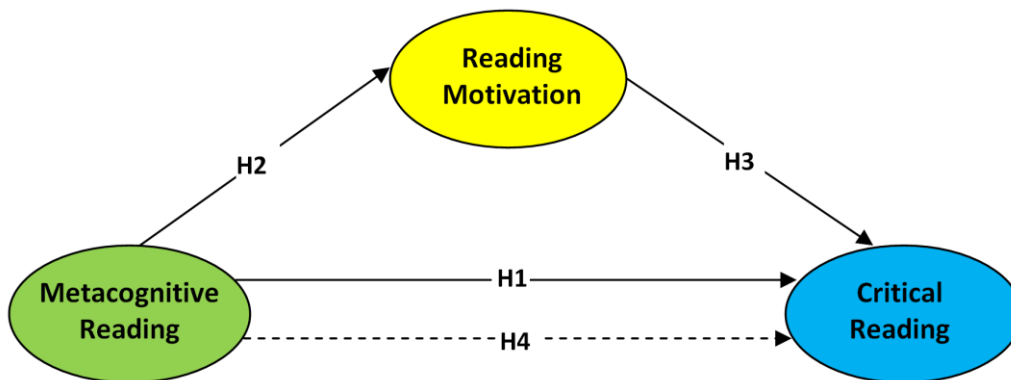


Figure 1. Hypothesized Model for the Research

As seen in Fig. 1, while metacognition reading is independent variable, the critical reading is the dependent variable. Reading motivation is the mediating variable on this relationship. For this hypothesis model, the following sub-questions were tested:

- H.1. Does metacognition reading predicts the critical reading?
- H.2. Does metacognition reading predicts the reading motivation?
- H.3. Does reading motivation predicts the critical reading?
- H.4. Does metacognition reading predict the critical reading with the mediating effect of reading motivation?

Method

Research Design

This research was carried out using the correlational research design, one of the quantitative research methods. This design allows the researcher to be described as it is, without any effect on the existing situation. This design

is used when it is desired to obtain information about the degree, direction, and level of the relationship between two or more variables (Creswell, 2020; Fraenkel et al., 2012). In this study, this design was used because the mediating role of reading motivation in the relationship between critical reading, which is the dependent variable, and metacognitive reading, which is the predictor variable, was examined.

Participants and Sampling

The participants of the research consist of preservice teachers studying in different departments of the education faculty of the university located in a city center in the Central Black Sea Region of Turkey in the spring semester of the 2019-2020 academic year. In this context, 482 preservice teachers determined by convenient sampling method took part in the study. Of the prospective teachers, 368 (76.3%) are female and 114 (23.7%) are male students. The average age of the students is 20.69 and is distributed between the ages of 18-31 (SD = 1.80).

Data Collection Procedure and Instruments

This study was carried out in accordance with ethical rules, adhering to the permissions obtained from the Social Sciences Ethics Committee of Amasya University in Turkey. Data were collected in the fall semester of 2019-2020. The students were informed about the possible risks and benefits, the purpose of the study and ethical rules. A paper and pencil survey was used to test the suitability of data collection tools on the different sample. To prevent missing data and ensure the trueness of the answers, the forms were distributed to the preservice teachers who wanted to participate in the study voluntarily. The application time approximately took 20-30 minutes.

Personal Information Form: A personal information form was used to collect demographic information such as gender and age of preservice teachers.

The Self-Efficacy Perception Questionnaire on Critical Reading Skills is developed by Kucukoglu (2008) and aims to measure preservice teachers' level of self-efficacy perceptions along with their critical reading skills. Analysis of the measurement tool was carried out using the data of 227 preservice teachers from different universities. The measurement tool, whose draft form consisted of 33 items, consisted of 25 items in line with expert opinions after the pilot study. Examples of some sub-dimensions of critical reading skill are "introduction, development, separating the conclusion parts", "interpreting the read text", "analyzing skill", and "understanding skill". The scale uses a 5-point Likert scale (from 5–Strongly agree to 1–Strongly disagree). A total score is obtained for the answers given to the scale statements. While the Cronbach's alpha reliability coefficient of the scale was determined as .85; for this study it was calculated as .94.

Metacognitive Reading Strategies Questionnaire: The scale developed by Taraban et al. (2004) was adapted into Turkish by Cogmen and Saracaloglu (2010). It is used to determine the level of use of metacognitive strategies by university students while studying or reading about the course. The scale has two sub-dimensions, analytical strategies and pragmatic strategies. There are a total of 22 items in the scale, and a 5-point Likert scale (from 5–Strongly agree to 1–Strongly disagree) is used for answering. For construct validity, factor analysis was performed

with data collected from 726 university students. As a result of Explanatory Factor Analysis (EFA), Kaiser-Meyer-Olkin (KMO) value was found to be high at the level of .80 and Bartlett's test was found to be significant. The total variance explained was 32.96%, and the factor loads were distributed between .31 and .85. While the Cronbach's alpha reliability coefficient of the scale was determined as .81 in the original study, it was calculated as .87 for this study.

Adult Reading Motivation Inventory: It was developed by Schutte and Malouff (2007) to determine and measure adults' reading motivation. Yildiz et al. (2013) made the adaptation of the scale into Turkish. The sub-dimensions of the scale, which consists of four factors and 19 items, are named as self, competence, recognition and other. Confirmatory Factor Analysis (CFA) was tested for the construct validity of the scale. As a result of CFA, the fit indices were found to be at an acceptable level ($\chi^2/df = 2.50$, RMR = .055, CFI = .86, AGFI = .83, GFI = .87, RMSEA = .077). According to these values, construct validity was ensured and it was stated that scale was a valid measurement tool. While the Cronbach alpha internal consistency coefficient calculated for the reliability analysis was determined as .86; it was found to be .92 for this study. Test-retest analysis was applied and it was determined that there was a significant relationship between the two applications.

Data Analysis

The data of this study was first coded in Excel and the data set was analysed using Jamovi 1.6.23 software. Before performing the mediation test, the accuracy, normality, and suitability of the data for analysis should be tested (Hair et al., 2014; Tabachnick & Fidell, 2014). Normality tests in Jamovi software were examined with the Shapiro-Wilk test and skewness- kurtosis coefficients (see Table 1). It was observed that the data were in the near-normal range. In addition, the minimum-maximum values and averages of the variables were tested using descriptive statistics for the accuracy of the data. It was found that no missing values and no extreme values were found in the data set .

In testing the relational data analysis, Pearson Product-Moment correlation analysis was applied to determine whether there is a multicollinearity problem and correlation adequacy between the mean scores of the variables to be included in the analysis. When the correlations between the variables were examined, it was seen that all the relationships were below 0.80 (between 0.61 and 0.65) and it was determined that there was no multicollinearity problem (Tabachnick & Fidell, 2014). Regression analyses were used to test the predictiveness of the variables and R^2 was obtained for the mediator variables.

In the second stage, the mediation of reading motivation in the relationship between metacognitive reading strategies and critical reading self-efficacy was tested. Baron and Kenny's (1986) assumptions were taken into account in order to understand the type of the mediation, that is, to determine whether it is a partial or full mediator. As a result of the mediation analysis performed with the Jamovi software, z estimates for direct and indirect effects were obtained. In addition, the statistical significance of the mediation model and bootstrap analyses were applied with a 95% confidence interval using the same software. 10000 bootstrap samples were used for mediation analysis in the study. The analyses were performed at a .05 level of significance.

Results

Associational Results

Table 1 shows the results of Pearson's Product-Moment correlation analysis performed to determine the relationships between variables, and the results of mean, standard deviation values, and skewness-kurtosis coefficients. A high level of positive and significant correlation was found between metacognitive reading strategies and reading motivation ($r(482) = 0.61, p < .001$). A highly positive and significant correlation was found between critical reading self-efficacy and metacognitive reading strategies ($r(482) = 0.68, p < .001$). Finally, it was determined that there was a high and positive significant relationship ($r(482) = 0.65, p < .001$) between critical reading self-efficacy and reading motivation. It has been determined that there is a high level of relationship according to findings of the correlation analysis (Field, 2013). When the levels of the variables are examined, the mean scores of preservice teachers' metacognitive reading strategies ($M = 90.20, Sd = 16.40$), reading motivation ($M = 63.70, Sd = 14.00$) and critical reading self-efficacy ($M = 94.80, Sd = 15.70$) are all above medium. After these results, mediation tests were started.

To test the mediation effect, four basic conditions must be met (Baron & Kenny, 1986):

1. Independent variable X must predict the dependent variable Y.
2. Independent variable X should predict mediator variable Z.
3. The mediator variable Z should predict the Y when controlling for the effect of X.
4. When the effects of the Z on the X and Y variables are controlled, it is expected that the correlation coefficient between the X variable and the Y variable will decrease (partial mediation) or the relationship will be meaningless (full mediation).

Table 1. Pearson's Product-Moment Correlations Among the Study Variables

	1	2	3
1. Metacognitive Reading			
2. Reading Motivation	0.61***		
3. Critical Reading	0.68***	0.65***	
<i>M</i>	90.20	63.70	94.80
<i>SD</i>	16.40	14.00	15.70
Skewness	-0.07	-0.27	-0.20
Kurtosis	-0.13	-0.04	0.19

Note: *** $p < .001$.

According to the results of the regression analysis revealed when the mediator role was tested, it was found that metacognitive reading strategies significantly predicted critical reading self-efficacy ($R^2 = .47$). Metacognitive reading strategies were found to significantly predicted reading motivation ($R^2 = .37$). In addition, when the effect of metacognitive reading strategies was controlled, it was found that the mediating variable reading motivation predicted critical reading self-efficacy ($R^2 = .56$). In conclusion, the first three of the mediation assumptions were confirmed. To test the fourth hypothesis, the mediating role of reading motivation in the relationship between

metacognitive reading strategies and critical reading self-efficacy was analyzed and the findings were given in Figure 2 and Table 2.

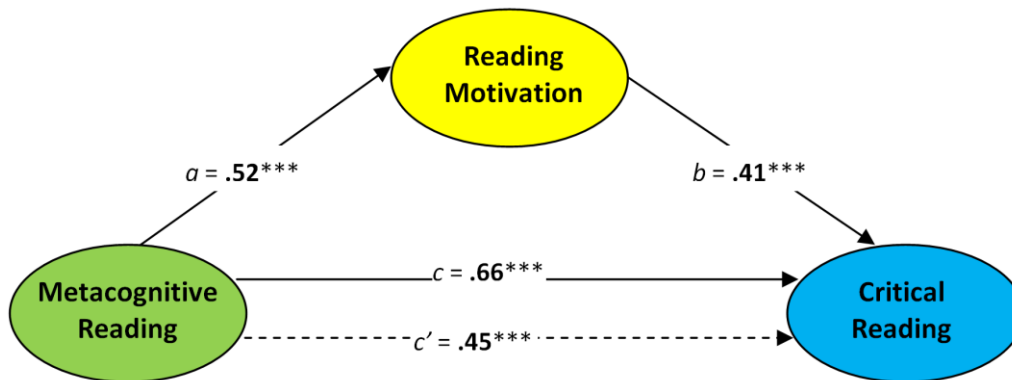


Figure 2. The Mediation Model of the Research

Table 2. Results of Mediation Analyses

	<i>B</i>	<i>SE</i>	<i>z</i> -value	<i>p</i>	95% Confidence Interval	
					Lower	Upper
<i>Components</i>						
Metacognitive reading → motivation	0.52	0.03	15.43	0.001***	0.45	0.58
motivation → critical reading	0.41	0.05	8.20	0.001***	0.31	0.51
<i>Direct effects</i>						
Metacognitive reading → critical reading	0.45	0.04	11.18	0.001***	0.37	0.52
<i>Indirect effects</i>						
Metacognitive reading → motivation → critical reading	0.21	0.03	8.30	0.001***	0.16	0.28
<i>Total effects</i>						
Metacognitive reading → critical reading	0.66	0.03	20.61	0.001***	0.59	0.73

Notes. Unstandardized estimates reported in mediation analyses. Indirect effect confidence intervals and standard errors are based on 10,000 bootstrap samples. *** $p < .001$.

According to Figure 2, it is seen that the overall effect of metacognitive reading strategies on critical reading self-efficacy ($c = 0.66$, $SE = 0.03$, $z = 20.61$, $p < .001$) was significant. The direct effect of metacognitive reading strategies on the reading motivation ($a = 0.52$, $SE = 0.03$, $z = 15.43$, $p < .001$) was significant. The direct effect of reading motivation on critical reading self-efficacy ($b = 0.41$, $SE = 0.05$, $z = 8.20$, $p < .001$) was significant. The correlation between metacognitive reading strategies and critical reading self-efficacy decreased ($c' = 0.45$, $SE = 0.04$, $z = 11.18$, $p < .001$) and was found to be statistically significant after the mediating variable were included in the model. These all findings revealed that reading motivation partially mediated the relationship between preservice teachers' metacognitive reading strategies and critical reading self-efficacy. With these results, all of the mediation assumptions (Baron & Kenny, 1986) were met. Bootstrapping was used with 10000 replications and examined the significance of indirect effects. According to the findings in Table 2, which were obtained based

on the 95% confidence interval (CI); a was between 0.45 and 0.58; b was between 0.31 and 0.51, c was between 0.59 and 0.73, and c' was between 0.37 and 0.52. All these values were statistically significant.

Discussion

This research was carried out in correlational research design, in which the mediation of reading motivations in the relationship between preservice teachers' metacognitive reading strategies and critical reading self-efficacy was examined. Reading skill is an important language skill in terms of academic success, personal development and linguistic development during student and university periods. In this respect, the results of this study, which deals with the variables of preservice teachers' reading skills, are important for teachers who are also effective in their students' reading skills in their professional lives. In the light of this importance, metacognitive reading strategies was used as predictor, reading motivation as mediator, and critical reading self-efficacy as predicted variable. There are four research hypotheses regarding the relationship of these three variables. The findings regarding the research hypotheses were interpreted in this section and compared with the relevant literature.

According to the results of the correlation analysis, which were examined before the mediation tests were applied, it was found that there was a high level of positive and significant relationship between preservice teachers' metacognitive reading strategies, critical reading self-efficacy and reading motivation. In addition, the relationship between their reading motivation and critical reading self-efficacy was found to be positive, high and significant. According to this result, it can be said that as preservice teachers' use of metacognitive reading strategies and their critical reading self-efficacy increase, their reading motivation also increases. Karasakaloglu et al. (2012a), on the other hand, determined that the habit of reading books is effective on the attitude of critical thinking. Ulu (2019) also determined that the mediating role of the awareness of metacognitive reading strategies is effective on the critical thinking disposition of the attitude towards reading habit.

In the study, a significant relationship was found between preservice teachers' reading motivations and their critical reading self-efficacy. Self-efficacy is a motivational area because belief in ability and desire to succeed are related. In this context, it is an expected result that there is a significant relationship between self-efficacy and motivation. Similar results were obtained in the study conducted by Sahin (2019). In his study, Karasakaloglu (2012b) determined that preservice teachers' perceptions of efficacy regarding critical reading were low. In reaching this result, it can be argued that preservice teachers do not have sufficient knowledge and skills in critical reading.

In the studies carried out to examine the perception of critical reading self-efficacy in the literature, it was concluded that preservice teachers' critical reading self-efficacy perceptions are high (Aybek & Aslan, 2015; Cam Aktas, 2016; Eskimen, 2018). There are also studies that determined that preservice teachers' critical reading skills are at a moderate level (Karabay et al., 2015; Maltepe, 2016). All these results show that there is a significant relationship between the variables in the hypothesis model and can be used in the mediation test.

The first hypothesis for mediation analyses is that metacognitive reading strategies, which are the independent

variable, predict critical reading self-efficacy, which is the dependent variable. In this situation where there was no mediating variable, it was found that there was a direct effect of .66 between the two variables. Accordingly, the first hypothesis of the study was confirmed. This result shows that the correct and effective use of metacognitive reading strategies will affect critical reading self-efficacy in relation to reading success in general. The ability of an individual with critical reading skills to use their metacognitive skills effectively and correctly in making sense of reading is a theoretical indicator of the relationship between metacognitive reading and critical reading (Karasakaloglu et al., 2012b).

The second hypothesis of the study is that the independent variable, metacognitive reading strategies, significantly predicts the mediating variable, reading motivation. This hypothesis was confirmed and it was understood that metacognitive reading strategy was a significant predictor of reading motivation. Similarly, Akbabaoglu and Yildiz Duban (2021) determined that there is a positive and significant relationship between preservice teachers' metacognitive reading strategies, reading motivations and reading habits. Meanwhile, Baki (2019) concluded that preservice teachers' metacognitive reading strategies are an important predictor of increasing motivation. Ozturk and Aydogmus (2021), on the other hand, determined that there is a positive significant relationship between preservice teachers' reading motivation and their use of metacognitive strategies. Senturk and Gocer (2019) also found that they are generally highly motivated towards reading. Urun Karahan (2015) stated that preservice teachers' motivation for reading is at a good level.

The third hypothesis of the study is that preservice teachers' reading motivation scores significantly predict their critical reading self-efficacy scores. This hypothesis was also confirmed, and it was found that reading motivation had a positive and significant predictive role in critical reading self-efficacy. Similarly, Can and Bicer (2021) revealed that reading habit is an important predictor of critical reading skills. Similarly, in his study, Bagci (2019) determined that reading habits positively affect critical reading self-efficacy perceptions. Kosem (2019) also determined that there is a significant relationship between preservice teachers' reading attitude and critical reading self-efficacy perception levels. Kucukoglu (2008), on the other hand, determined that preservice teachers consider themselves sufficient in critical reading.

The final hypothesis of the study is that reading motivation plays a mediating role in the relationship between preservice teachers' metacognitive reading strategies and critical reading self-efficacy. When the mediating variable is added to the model, the decrease in the relationship between the independent and dependent variables indicates that there is partial mediation. In other words, the fact that preservice teachers' metacognitive reading strategies increase and increase of their critical reading self-efficacy depends on their reading motivation. In addition, the decrease in the relationship between metacognitive reading strategy and critical reading self-efficacy from .66 to .45 is another indicator of partial mediation. As a result of the validated mediator model, as the metacognitive reading strategies of the preservice teachers increase, their motivation also increases and it can be said that this increase also leads to an increase in their critical reading self-efficacy. Baki (2019) stated that preservice teachers' metacognitive reading strategies are a significant predictor of their reading motivation; and the fact that Can and Bicer (2021) stated that reading habit is a significant predictor of critical reading skills reveals that this mediator model is theoretically validated in practice and its function.

Conclusion and Recommendations

As a result, in this study, the relationship between three different variables related to preservice teachers' reading skills was discussed. Considering that preservice teachers are role models for their students when they start their profession, it is an undeniable fact that they have important responsibilities in the development of their students' reading skills. In this respect, preservice teachers should also use reading skills frequently for their academic and personal development. The fact that metacognitive reading strategies are a significant predictor of both reading motivation and critical reading self-efficacy requires researchers to conduct more studies on this subject in the future.

In addition, it is important to increase the number of metacognitive reading-oriented studies in education programs. The fact that reading motivation has a mediating role between the two variables shows that it is a variable that should be taken into account by researchers who will study in the fields of critical reading self-efficacy and metacognitive reading. Since the individual should have reading motivation from primary school to every period of adulthood, teachers and families should be informed and educated about this issue.

It can be ensured that the research is carried out by making comparisons with preservice teachers studying at different universities and different departments of education faculties, and by providing a better comparison of the results, solutions can be produced to eliminate the differences. In addition, when the literature on the subject is examined, it is seen that more quantitative studies have been carried out. In order to increase the depth of the subject discussed, it can be supported by qualitative studies. By increasing the number of lessons and course hours for reading in the curriculum of education faculties, which fulfill an important function in educating the teachers of the future, both an advantage can be gained in teacher training and the way for preservice teachers to gain better reading skills in their professional lives can be opened.

References

- Ahmadi, M. R., Ismail, H. N., & Abdullah, M. K. K. (2013). The importance of metacognitive reading strategy awareness in reading comprehension. *English Language Teaching*, 6(10), 235-244.
- Akbabaoglu, M., & Yildiz Duban, N. (2020). Pre-service classroom teachers' metacognitive reading strategies, reading motivations and attitudes towards reading habits. *International Journal of Turkish Literature Culture Education*, 9(4), 1720-1740.
- Akyol, H. (2011). *Türkçe öğretim yöntemleri*. Pegem Akademi.
- Aybek, B., & Aslan, S. (2015). Investigation of prospective teachers' critical reading self efficacy in terms of different variables. *International Journal of Turkish Literature Culture Education*, 4(4), 1672-1683.
- Aydin, B. (2020). Investigation of graduate thesis on critical reading in Turkey. *RumeliDE Journal of Language and Literature Studies*, 18, 76-87.
- Babacan, T. (2012). *Searching the correlation between metacognitive reading strategies and multiple intelligences of primary school teachers candidates* (Master's thesis). Cumhuriyet University.
- Baba Ozturk, M., & Aydogmus, M. (2021). Relational assessment of metacognitive reading strategies and reading

- motivation. *International Journal of Progressive Education*, 17(1), 357-375.
- Bagci, H. (2019). An investigation of Turkish language and literature teacher candidates' critical reading self-efficacy (The case of Mehmet Akif Ersoy University). *Advances in Language and Literary Studies*, 10(4), 14-20.
- Baki, Y. (2019). The role of grade level and gender on reading motivation of Metacognitive reading strategies of prospective Turkish teachers. *Marmara University Atatürk Education Faculty Journal of Educational Sciences*, 50, 15-42.
- Baron, R. M., & Kenny, D. A. (1986). The moderator–mediator variable distinction in social psychological research: Conceptual, strategic, and statistical considerations. *Journal of Personality and Social Psychology*, 51(6), 1173–1182. <https://doi.org/10.1037//0022-3514.51.6.1173>
- Basara Baydilek, N., Altay, B., & Saracaloglu, A. S. (2018). Determination of the variables that predict the metacognitive learning strategies of the students of the preschool, guidance and psychological counseling, and art programs. *Kastamonu Education Journal*, 26(3), 707-720.
- Can, F., & Bicer, N. (2021). An examination of relationship between preservice teachers' reading habits and critical reading skills. *Journal of Language and Linguistic Studies*, 17(1), 615-627.
- Creswell, J. W. (2020). *Research design: Qualitative, quantitative, and mixed methods approaches* (5th ed.). SAGE.
- Cam Aktas, B. (2015). An evaluation of researches done on critical reading in Turkey. *Journal of Academic Studies*, 17(67), 217-232.
- Cam Aktas, B. (2016). Examining critical reading self-efficacy perceptions and reflective thinking tendencies of students in pedagogic formation program. *Electronic Journal of Social Sciences*, 15(59), 1186-1202.
- Celikturk Sezgin, Z., & Akyol, H. (2018). Influences of concept oriented reading instruction on reading motivation and reading comprehension of fourth graders. *Elementary Education Journal*, 17(2), 546-561.
- Cetinkaya Edizer, Z., & Ozbilgin, E. (2019). Metacognitive reading awareness of the eighth grade students. *International Journal of Society Researches*, 10(17), 154-175.
- Cifci, M. (2006). Critical reading. *Yearbook of Turkic Studies - Belleten*, 54(1), 55-80.
- Cogmen, S., & Saracaloglu, A. S. (2010). Adaptation of Metacognitive Reading Strategies Questionnaire to Turkish. *Pamukkale University Journal of Education*, 28(28), 91-99.
- Daguay-James, H., & Bulusan, F. (2020). Metacognitive strategies on reading english texts of ESL freshmen: A sequential explanatory mixed design. *TESOL International Journal*, 15(1), 20-30.
- Demir, T. (2022). *An examination on the relationship between metacognitive reading strategies and multiple intelligences of physical education and sport teacher candidates* (Master's thesis). Anadolu University.
- Emre, P. (2019). *The relation between reading comprehension strategies and using metacognitive reading strategies of pre-service English teachers*. (Master's thesis). Kırşehir Ahi Evran University.
- Eskimen, A. D. (2018). Analysis of prospective Turkish language and literature teachers' self-efficacy perceptions on critical reading. *Universal Journal of Educational Research*, 6(9), 1891-1899.
- Field, A. (2013). *Discovering statistics using IBM SPSS statistics*. Sage.
- Fraenkel, J. R., Wallen, N. E., & Hyun, H. H. (2012). *How to design and evaluate research in education* (8th ed.). McGraw-Hill.
- Firat, T., & Kocak, D. (2019). Cognitive and metacognitive strategies used by good readers and students with

- learning disabilities to understand a text. *Kastamonu Education Journal*, 27(2), 669-681.
- Gecgel, H., Kana, F., Ozturk, N. E., & Yalcin Akkas, İ. (2020). Investigation of the relationship between pre-service teachers' reading motivations and social media-specific epistemological beliefs. *Journal of Language Education and Research*, 6(2), 478-507.
- Güner, P. & Erbay, H. N. (2021). Metacognitive Skills and Problem-Solving. *International Journal of Research in Education and Science (IJRES)*, 7(3), 715-734. <https://doi.org/10.46328/ijres.1594>
- Gunes, F. (2014). *Turkce Ogretimi Yaklasimlar ve Modeller*. Pegem Akademi.
- Gunes, A., & Gunes, F. (2014). Critical reading associate with education and role of school librarians. *Turkish Librarianship*, 28(1), 182-188.
- Hwang Y. S., Vrongistinos, K., Kim, J., & Min, A. E. (2021). Kindergarten children's metacognitive self-regulated learning during and after watching other child's problem-solving behaviors. In V. Akerson & M. Shelley (Eds.), *Proceedings of IConSES 2021-- International Conference on Social and Education Sciences* (pp. 178-183), Chicago, USA. ISTES Organization.
- Jou, Y. J. (2015). Investigation of technological university students' use of metacognitive reading strategies in first and second languages. *English Language Teaching*, 8(1), 180-188.
- Kaplan, K. (2021). The relationship between media literacy competencies and critical reading self-efficacy perceptions of prospective teachers of Turkish. *International Journal of Curriculum and Instruction*, 13(3), 2513-2534.
- Kana, F. (2015). A multivariate analysis of pre-service teachers use of metacognitive reading strategies. *The International Journal of Research in Teacher Education*, 6(3), 72-83.
- Karabay, A. (2013). The effects of critical reading-writing training on Turkish language teacher candidates' Turkish course planning and practice skills. *Turkish Studies*, 8(8), 745-759.
- Karabay, A., Kusdemir Kayiran, B., & Isik, D. (2015). The investigation of pre-service teachers' perceptions about critical reading self-efficacy. *Eurasian Journal of Educational Research*, 59, 227-246.
- Karasakaloglu, N., Saracaloglu, A. S., & Yilmaz Ozelci, S. (2012a). Turkish prospective teachers' reading strategies, critical thinking attitudes and metacognitive competencies. *Ahi Evran University Journal of Kirsehir Education Faculty*, 13(1), 207-221.
- Karasakaloglu, N., Saracaloglu, A. S., & Yilmaz Ozelci, S. (2012b). Primary school teachers' critical reading self-efficacy perceptions. *Mustafa Kemal University Journal of Social Sciences Institute*, 9(19), 405-422.
- Kennedy, U., & Chinokul, S. (2020). Effect of the Scaffolded Reading Experience using a graphic novel on the English reading comprehension and reading motivation of Thai EFL students. *LEARN Journal: Language Education and Acquisition Research Network Journal*, 13(2), 158-175.
- Kosem, V. C. (2019). *Critical reading with teacher reading attitudes the relationship between self-efficacy perceptions (Manisa Celal Bayar University Faculty of Education)*. Master's thesis, Manisa Celal Bayar University.
- Kurnaz, H. (2019). Okuma İc Motivasyonu Olcegi: Gecerlik ve guvenirlik calismasi. *Ahi Evran University Journal of Kirsehir Education Faculty*, 20(1), 234-250.
- Kucukoglu, H. (2008). *Self efficiency perception of the student teachers on critical reading* (Master's thesis). Dicle University.
- Maltepe, S. (2016). An analysis of the critical reading levels of pre-service Turkish and literature teachers.

- Eurasian Journal of Educational Research*, 63, 169-184.
- Ozdemir, S. (2018). The levels of using reading strategies of the prospective teachers. *Bartın University Journal of Faculty of Education*, 7(1), 296-315.
- Ozden, M. (2018). Awareness of upper cognitive reading strategies of Turkish education students. *Turkish Studies Educational Sciences*, 13(19), 1427-1439.
- Ozensoy, A. U. (2011). The effects of the social studies course organized according to critical reading, on students' critical thinking skills. *Mersin University Journal of the Faculty of Education*, 7(2), 13-25.
- Ozturk, M. B., & Aydogmus, M. (2021). Relational assessment of metacognitive reading strategies and reading motivation. *International Journal of Progressive Education*, 17(1), 357-375.
- Saraceli Celik, S., & Karasakaloglu, N. (2021). Correlation between 4th grade primary school students' level of correct and fluent silence word reading and reading comprehension skills and reading motivation. *Ahi Evran University Institute of Social Sciences Journal*, 7(2), 467-484.
- Savaskan, V., & Ozdemir, A. (2017). Determining the variables that affect the reading motivation of educational faculty students. *Educational Research and Reviews*, 12(13), 660-676.
- Schutte, N. S., & Malouff, J. M. (2007). Dimensions of reading motivation: Development of an adult reading motivation scale. *Reading Psychology*, 28(5), 469-489.
- Soyucok, M., & Balantekin, Y. (2021). Investigation of the relationship between primary school teachers' reading and occupational motivation with their sense of efficacy for literacy instruction. *Journal of Uludag University Faculty of Education*, 34(3), 1171-1203.
- Sahin, N. (2019). An analysis of the correlation between critical reading self-sufficiency perceptions and reading motivations of Turkish teacher candidates. *RumeliDE Journal of Language and Literature Studies*, 16, 214-233.
- Senturk, R., & Gocer A. (2019). Evaluation of reading motivations of teacher candidates: Erciyes University examination. *Mustafa Kemal University Journal of Social Sciences Institute*, 16(44), 332-358.
- Tabachnick, B. G., & Fidell, L. S. (2014). *Using multivariate statistics*. Pearson Education.
- Taraban, R., Kerr, M., & Rynearson, K. (2004). Analytic and pragmatic factors in college students' metacognitive reading strategies. *Reading Psychology*, 25, 67-81.
- Thongwichit, N., & Buripakdi, A. (2021). A glimpse of metacognitive reading strategy instruction through modeling technique in ESP class at the tertiary level. *LEARN Journal: Language Education and Acquisition Research Network*, 14(1), 118-145.
- Turkben, T. (2020). Relationships between middle school students' reading anxiety, motivation levels and comprehension skills. *Journal of Language Education and Research*, 6(2), 657-677.
- Ulu, H. (2019). Examining the relationships between the attitudes towards reading and reading habits, metacognitive awarenesses of reading strategies, and critical thinking tendencies of pre-service teachers. *International Journal of Contemporary Educational Research*, 6(1), 169-182.
- Ulu, H., Avsar-Tuncay, A., & Bas, O. (2017). The relationship between multimodal literacy of pre-service teachers and their perception of self-efficacy in critical reading. *Journal of Education and Training Studies*, 5(12), 85-91.
- Uyar, Y., Ates, S., & Yildirim, K. (2012). Self-regulated learning skills used by pre-service teachers during reading comprehension process. *Mustafa Kemal University Journal of Social Sciences Institute*, 9(18),

227-247.


Urun Karahan, B. (2015). Kafkas University pre-service teachers' investigation of reading motivation for the purpose of several variables. *Turkish Studies*, 10(11), 1569-1586.

Yildiz, M., & Akyol, H. (2011). The relationship between 5th graders' reading comprehension, reading motivation and reading habits. *Gazi University Journal of Gazi Educational Faculty*, 31(3), 793-815.

Yildiz, M., Yildirim, K., Ates, S., & Cetinkaya, C. (2013). Turkish adaptation of Adult Reading Motivation Inventory. *Electronic Journal of Social Sciences*, 12(44), 348-359.

Author Information

Kayhan Bozgun

 <https://orcid.org/0000-0001-9239-2547>

Assist. Prof. Dr.


Adiyaman University

Adiyaman

Turkey

Contact e-mail: kayhanbozgun@gmail.com

Fatih Can

 <https://orcid.org/0000-0002-9593-2382>

Assoc. Prof. Dr.

Amasya University

Faculty of Education C Building, Amasya

Turkey