

Full Length Research Paper

The guiding effects of a critical reading program on the use of external reading strategies when confronting an ironical text

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This study employed a sample of 60 pre-service teachers to examine the guiding effects of understanding critical reading theories on using external reading strategies such as note-taking and underlining when confronting an ironical literary text. The study broke down the teachers into one control group of 30 teachers and one experimental group of 30 teachers. Two ironical texts were used to collect data from the sample of pre-service teachers - one read before the experimental group received instruction in critical reading theories and the other after such instruction which led to the finding that the entire sample of pre-service teachers mostly summarized and read the texts superficially before they had been exposed to training in critical reading instruction. After undergoing the critical reading instruction, most of the pre-service teachers in the experimental group who had previously summarized the subject text now rewrote the author's expressions, which is indicative critical reading. When the notes taken and the expressions underlined by the critical readers were analyzed, it was determined that critical readers underlined and took notes of more critical points more and summarized less.

Key words: Critical reading, reading strategies, pre-service teachers, external strategies.

INTRODUCTION

Because comprehension consists of active and complex processes, it is important to use reading strategies because they provide opportunities to learn methods with which to approach a text. Students have been shown to prefer certain reading strategies, such as note-taking and underlining, when reading texts in their educational environments (Lonka et al., 1994; Slotte and Lonka, 1999). They use these strategies to emphasize important ideas in the text, to summarize the content of the text,

and to rearrange or reflect their ideas about the subject of the text. Reading strategies such as underlining, emphasizing, note-taking, making extra explanations and outlining the general framework of the subject produce external presentation. The cognitive processes that help produce these external representations (presentations) are called external strategies (Kobayashi, 2007). Some researchers call these overt responses (Todd and Kessler, 1971), external learning strategies (Canelos et

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al.,1984), and/or complex study-reading strategies (Caverly et al., 2000). There is substantial evidence showing that external strategies are useful for conducting various cognitive tasks in academic situations, such as learning from a single text (Pevery et al., 2003), writing a composition (Benton et al., 1993); learning during class (Kiewra et al., 1991) and problem-solving (Cary and Carlson, 2001; Hegarty and Steinhoff, 1997). In addition to these strategies, external strategies are also tools for understanding students' reading strategies (Caverly et al., 2000).

Conversely, critical reading is a meta-cognitive process in which the reader interacts with texts, asks questions, makes predictions, makes connections via prior knowledge and experiences, breaks down prejudices, perceives hidden meanings and builds new knowledge (El-Hindi, 1997). In other words, critical reading is reading the text suspiciously and analytically and then evaluating it (Douglas, 2000). In this context, the factors that potentially affect the comprehension of ironical texts might include critical reading and the use of external strategies while reading.

In the literature review, only one study was found that aimed to determine both which external strategies are used by students while reading a text critically and how such strategies are being used, although previous studies have examined reading strategies and critical reading as part of reading pedagogy and despite the acknowledged importance of these two variables in teaching reading (Kobayashi, 2007). Kobayashi (2007) aimed to discover the effects of critical reading on the use of external strategies, such as note-taking and underlining. That study revealed that students who read critically used strategies such as note-taking and underlining more often than students who read less critically; the latter group tended to use summarizing techniques more. Some studies in the literature review examined the relationship of the external strategies used in assessing critical reviews of a text after reading it and the external strategies used while reading the text (Lonka et al., 1994; Slotte and Lonka, 1998, 1999). Lonka et al. (1994) found in their studies that most students used various external strategies such as underlining, note-taking and building mind maps while reading a text during a university entrance exam. Slotte and Lonka (1998) found that the efficacy of the usage of notes that are taken while writing a composition might change depending on the quality of the writing task assigned; that study determined that note-taking affected both the review and the process and that there was a positive relationship-connection between the amount of note-taking and comprehension of the text.

Analyses of studies of reading skills have shown that reading purpose affects students' reading comprehension (Bråten and Samuelstuen, 2004; Linderholm and Van Den Broek, 2002; Van Den Broek et al., 2001). In other words, the students' objectives in reading affect their

note-taking and underlining behavior. According to Ryan (2001), note-taking is a purpose-oriented activity, i.e., students who have different purposes while taking notes about a text they are reading will determine what notes to take depending on what they plan to write about. In this context, critical readers' use of external strategies is expected to vary from those of less critical readers.

According to the demand model of Caverly et al. (2000), talented readers can adjust external strategies to their task demands. Kobayashi (2009) found that adult readers could adjust external strategies according to the reading direction when reading difficult texts. Previous studies have shown that different types of external strategies encourage students to address various types of texts differently (Caverly et al., 2000; Kiewra et al., 1989; Lonka et al., 1994). Thus, if readers use specific external strategies based on various reading purposes, the effects of using external strategies can be expected to change accordingly. In other words, an interpretation of an ironic text might depend on whether its readers adjust their external strategies to meet the reading purpose. Thus, this study also aimed to show whether providing readers with a reading purpose in advance affects how they use external strategies.

The review was used to evaluate critical reading because it makes students connect with their prior knowledge and experiences and contains evaluations based on different variables. The summary was used to evaluate less critical reading because it typically involves deleting unimportant and unnecessary knowledge, choosing important sentences related to the topic and forming a subject sentence that is not clearly written in the text (Brown and Day, 1983). By its nature, summarizing is necessary for readers to infer a message from the text that the author aims to provide, but it is not appropriate for readers to undertake a critical stance in a summary (Kobayashi, 2007). Thus, summarizing was selected because it was expected to limit critical reading.

Briefly, this study aimed to investigate the external strategies that are used by students who read more and less critically while reading a text that requires critical reading. Consistent with this purpose, this study first addressed the questions of 'Which external strategies for reading more and less critically do students use when they are given opportunities to choose their external strategies to use while reading?' and 'What type of notes do students take and what do they underline during more critical reading compared with less critical reading?'

The purpose of the study

This study aimed to investigate the guiding effects of critical reading on the usage of external strategies (such as note-taking and underlining) while reading an ironical text.

Consistent with this purpose, the research questions of this study are as follows:

What do the pre-service teachers in the experimental and control group infer from the ironical text

1. before the program?
2. after the program?

What are the external strategies that the pre-service teachers in the experimental and control group use while reading an ironical text

1. before the program?
2. after the program?

Is there a meaningful difference in performance with respect to the external strategies used by the pre-service teachers in the experimental and control groups before and after the program as applied to summary (less critical reading) or review (more critical reading) of the text?

METHODOLOGY

Research model

This research first aimed to determine whether there was a guiding effect of critical reading on the use of external strategies (such as note-taking and underlining) while reading an ironical text. In addition, 'Critical Reading Activities' and 'The Existing Instruction' were investigated to determine whether they have effects on the critical reading skills of pre-service teachers. Therefore, mixed methods designs comprising both qualitative and quantitative data collection methods and data analysis were used in this study (Creswell, 2008).

Research sample

The study was conducted with 60 undergraduate students in the Elementary Education Department at a state university in southwest coast part of Turkey during the 2009-2010 academic year and consisted of one experimental group and one control group. While determining the distribution of the pre-service teachers in the experimental and control groups, they were analyzed in terms of certain criteria, such as reading books and the family characteristics of the pre-service teachers that influence critical reading skills to provide balance between the groups. It took 18 course h to implement the program of critical reading instruction (PCRI). The researcher implemented the PCRI in the experimental group, whereas a related instructor implemented the existing program in the control group.

Data collection instrument and procedure

Reading texts were given to the pre-service teachers in the experimental and control groups before and after implementation to determine their comprehension levels when reading an ironical text; the pre-service teachers were asked to summarize or review what they comprehended from the text. The reading strategies that the pre-service teachers used while reading the ironical text were defined by examining the texts.

Materials: The text by Ferid Edgu titled 'The Relationships of Our Politicians with Culture and Art' was used in the pre-test, and the text by Aziz Nesin titled 'The Neutron Bomb Will Save Civilization' was used in the post-test to determine the reading strategies employed by the pre-service teachers in our sample while reading the ironical text. 'The Relationships of Our Politicians with Culture and Art' consists of 833 words and 5737 characters in Turkish. 'The Neutron Bomb Will Save Civilization' consists of 693 words and 4635 characters in Turkish.

Procedure: Kobayashi's (2007: 366) procedure and coding is applied. Participants were given an envelope containing the two-page: ironical text and a sheet of white paper. They were told to read the instructions attached to the envelope. The instructions for the experimental and control groups stated: 'You will read a text. Try to answer the questions: 'What is the author trying to say?' or 'What is the main idea/ argument being presented?' Write your opinion regarding the text on the answer sheet. You may prefer to summarize or review the text after reading it. You may underline and take notes on the white paper and in the margins of the text, if necessary.' Participants were given 45 min. After the session, the white papers, text papers, and essays were collected.

Coding: Each participant's white paper and text papers were coded as note-taking strategy use if any intelligible words or marks (e.g., question marks, arrows) were written down, and/or as underlining strategy use if portions of the text (e.g., words, phrases, sentences) were highlighted by lines, brackets, or boxes. The author and a second judge who was blind to the experimental conditions coded all of the white papers and text papers (Kobayashi, 2007, p. 366). The interpreter agreement was 96%. Disagreements were resolved by discussion.

"To assess the effectiveness of reading orientation, each essay was classified as a critique or summary. Essays were coded as critiques if they included participants' opinions about the text-writer's argument and as a summary if they described nothing but the gist of the text-writer's argument. An independent coder was asked to code all of the essays" (Kobayashi, 2007, p. 366). The percentage of agreement with the author was 95%. Disagreements were resolved by discussion.

Teaching methods and implementation

In this research, the program of critical reading instruction (PCRI) was used in the experimental group and the existing program was used in the control group.

PCRI from Goatly (2000) was implemented to the pre-service teachers in the experimental group during the study. The critical reading activities in this program were provided and the instruction was conducted mostly oriented with these activities. According to this program, the program of critical reading instruction consists of three stages. The first stage is 'Code Declination and the Description of the Text (What is meant in the text?); the second stage is 'The Interpretation and Inferential of the Text (What does the author narrate by means of the text?); and the third stage is 'The Ideology behind the first and second stages and the Determination of the Explanations (What are the ideologies lying behind the text?'. A three-hour course of PCRI was arranged during 18 course hours by considering the subjects that were critical reading skill oriented.

Data analysis

In the research, Chi-square analysis was undertaken on the

Table 1. The theme, code and frequency distribution about the meaning that the pre-service teachers formed from the reading text before PCRI

Theme	Sub-theme	Code	F	
			Experimental group	Control group
Deeper Meaning	Irony	Usage of cynical language	6	5
		Usage of lampoons	4	4
		Usage of parables	2	1
Superficial Meaning	Prejudice	Not knowing the Turks	7	8
		Politicians' following what's going on in the country and in the world	4	4
		Politicians' having cultural accumulation	3	4
		Politicians' improving themselves	2	2
		Thinking wrong about the Turks	2	2

quantitative data and content analysis was performed on the qualitative data.

FINDINGS

Research Question 1: The qualitative findings obtained from the ironical texts about reading comprehension

Before the program of critical reading instruction, the pre-service teachers in the experimental group and control group were asked what they had inferred from the ironical text and its reasoning. The theme, code and frequency distribution of the answers to these questions are presented in Table 1.

As Table 1 shows, the answers of the pre-service teachers meet in the two themes of deeper and superficial meaning. Twelve pre-service teachers in the experimental group and 10 pre-service teachers in the control group claimed that the message related in the essay, 'The Relationships of our Politicians with Culture and Art', which was given before the program of critical reading instruction, indicated that the author wrote the essay cynically, using lampoon and parable, and that the author tried to make the exact opposite argument. Two pre-service teachers with this view expressed their opinions as *'In this text, which contains plenty of lampoons, the author used a sarcastic style to reveal reality as if the situation written about already existed'* (EPST11), *'I think the author wanted to express the exact opposite of the literal meaning by using parables'* (CPST33).

According to Table 1, 18 pre-service teachers in the experimental group and 20 pre-service teachers in the control group claimed that the message of 'Turkish politicians read' in the essay given as before the program of critical reading instruction that reflected the

view that politicians do not read was an incorrect hypothesis that was developed by prejudiced people. The expressions of two pre-service teachers with this view were *'...Our politicians are interested in art and our cultural inheritance; they read and are engaged in research about these subjects. They are confident that they have some claim to this status'* (EPST) and *'Our politicians are educated people that have reached this status'* (CPST37).

After the program of critical reading instruction was implemented, the pre-service teachers in the experimental group and the control group were asked about the meaning they perceived from reading the subject text and its reasoning. Themes, codes and frequency distributions of the answers regarding this subject are presented in Table 2.

In the essay titled, 'The Neutron Bomb will save the civilization', which was used as the text for the after the program of critical reading instruction stage, Table 2 shows that the answers of the pre-service teachers can be broken down into two themes of deeper and superficial meaning. Twenty-eight pre-service teachers in the experimental group and 12 pre-service teachers in the control group claimed that the author was against war and the damages of war and against the neutron bomb; in addition, these pre-service teachers believed that the author was trying to show that human beings are valuable. These respondents stated that the author wanted to argue for the opposite view of what he literally wrote in the text by using irony and cynicism. Two of the pre-service teachers expressed their views as *'In fact, the author wants the reader to infer the exact opposite view of what he discusses in the texts. The author wants to emphasize that he is against war by figurative expressions, implications and irony.'* (EPST14) and *'By using his cynical style, the author criticized the views of people who see think that war is population planning, that*

Table 2. Themes, codes and frequency distributions about the meaning that the pre-service teachers perceived in the experimental and control groups from reading the text after PCRI.

Theme	Sub-theme	Code	F	
			Experimental group	Control group
		Implying the exact opposite meaning	9	5
	Irony	Usage of irony	8	-
		Usage of a cynical language	5	3
		Allegorizing	-	3
Deeper Meaning		Word Analysis	Dictating the word "civilized"	3
	Evidence	Usage of numerical data	2	-
	Metaphor	Usage of metaphors	1	1
		Is necessary for civilization to continue	1	14
Superficial Meaning	Foreknowledge	Buildings, museums, temples and libraries are the sources of civilization	1	4

the bomb is bug spray and that human beings have the same worth as flies by using a cynical style'(CPST54).

According to Table 2, two pre-service teachers in the experimental group and 18 pre-service teachers in the control group believed that the author was for the war and the neutron bomb; these respondents thought that the author saw civilization as the buildings that are the creations of human beings and that war and the neutron bomb are required to save and provide for civilization's continuance. Two pre-service teachers with this view represented their opinions as *'The author thinks that war is natural and is required for the maintenance of civilization'* (EPST29), and *'The author tries to show the reader that war is a natural thing indeed'* (CPST39).

Research Question 2: The qualitative findings obtained from ironical texts as related to reading strategies

Before and after implementation of the PCRI, the pre-service teachers in both the experimental and control groups were asked to summarize or review the text after reading it and were left free to choose whether to summarize or review the text. Before the PCRI, 18 of the pre-service teachers in the experimental group and 20 in the control group preferred summarizing the text, whereas 10 pre-service teachers in the control group and 12 in the experimental group preferred reviewing. After the PCRI, 28 of the pre-service teachers in the experimental group and 12 in the control group preferred reviewing, whereas two of the pre-service teachers in the experimental group and 18 in the control group preferred summarizing the text.

Before and after implementing PCRI, the external

strategies that the pre-service teachers in the experimental and control group used while reading an ironical text were studied. The external strategies that the pre-service teachers used and the codes and frequency distributions of the places in which they used these strategies are shown in Table 3.

Table 3 shows that six of the pre-service teachers in the experimental group who preferred summarizing the text underlined the main idea before PCRI. Five of the pre-service teachers in the experimental group took notes regarding the main idea, and three pre-service teachers in the experimental group who preferred reviewing the text underlined the main idea and four of these underlined its irony, whereas two of these pre-service teachers both underlined and took notes of the metaphors and three both underlined and took notes of the irony. In the control group, eight of the pre-service teachers who preferred summarizing the text underlined the main idea. Five pre-service teachers who summarized the text took notes of the main idea. Five pre-service teachers in the control group who had written a reviewing text underlined the main idea, and five both underlined and took notes of the main idea. The pre-service teachers in both the experimental group and the control group who wrote a text reviewing what they read did not use the note-taking external strategy.

Table 3 shows that one of the pre-service teachers in the experimental group in the after PCRI who had preferred summarizing the text they read underlined and took notes regarding the main idea. Three of the pre-service teachers in the experimental group who preferred reviewing the text they read underlined ironic passages; five pre-service teachers both underlined the question and took notes of their own questions about the text, five both underlined and took notes of the metaphors and 12

Table 3. Theme, code and frequency distribution of the external strategies that pre-service teachers used while reading the ironical text before and after PCRI.

Groups	Preferences	The external strategies	The places	F		
				Before PCRI	After PCRI	
Experiment	Summarization (Less critical reading)	Underlining	Main ideas	6	1	
			Total	6	1	
		Note-taking	Main ideas	5	1	
			Total	5	1	
		No note-taking or underlining	Total	7	-	
	Review (Critical reading)	Underlining	Main ideas	3	1	
			Ironies	4	3	
			Emphasized words	-	1	
			Figurative expressions	-	1	
			Total	7	6	
			Questions	-	5	
	Note-taking and/ or underlining	Metaphors	2	5		
		Ironies	3	12		
		Total	5	22		
Control	Summarization (Less critical reading)	Underlining	Main ideas	8	7	
			Total	8	7	
		Note-taking	Main ideas	5	7	
			Total	5	7	
		No note-taking or underlining	Total	7	4	
	Review (Critical reading)	Underlining	Main ideas	5	6	
			Total	5	6	
			Main ideas	5	6	
			Total	5	6	

both underlined and took notes of the ironic passages in the text. Seven of the pre-service teachers in the control group who summarized the text they read underlined the main ideas, and seven took notes of the main idea. Six pre-service teachers in the control group who preferred reviewing underlined them.

Research Question 3: The quantitative findings obtained from ironical texts as related to reading strategies

The third question of this study (Is there a meaningful difference in performance with respect to the external strategies used by the pre-service teachers in the experimental and control groups before and after the program as applied to summary (less critical reading) or review (more critical reading) of the text?) was analyzed using a Chi-Square analysis. Before the program, a Chi-square analysis revealed that the difference between the

experimental group and control group was not statistically significant (for summarization [$\chi^2 (2) = .181, p > .05$]; for review [$\chi^2 (2) = .153, p > .05$]). However, after the program, a Chi-square analysis revealed that the difference between the two groups was statistically significant (for review [$\chi^2 (1) = 4.353, p < .05$]). Consequently, it can be stated that PCRI is effective on the pre-service teachers' reading comprehension and the external strategies used while reading.

DISCUSSION

The results obtained from this research can be addressed and interpreted in two groups as reading comprehension (the message inferred from an ironical text) and the external strategies that are used to read the text. First, the field scanning results that involved the effects of PCRI on the pre-service teachers' reading comprehension achievements also support the findings of previous

research. The study conducted by David (2009) found out that critical reading significantly increases academic achievement compared with the traditional method. Cooper and White (2006) showed that critical reading increases students' reading comprehension achievement scores. Sahinel (2001) demonstrated that critical thinking skills and the approach of improving integrated language skills are more effective for students' academic achievement than traditional teaching methods.

To comprehend, the individual must be able to understand the structure of the text, understand the content of the text, and interpret and criticize the text. Criticizing the text is the action of the reader's thinking about and evaluating the text. In this context, PCRI can improve reading comprehension because it shows how to read a text critically, which is the final step of reading comprehension.

According to the qualitative findings of this research, before the program, a great majority of the pre-service teachers could not find the deeper meaning in the subject text and misunderstood its message. After PCRI, a great majority of the pre-service teachers gleaned the deeper meaning in the text and understood its message correctly. The purpose of reading is to comprehend the text, but it is not sufficient to comprehend the text solely on a literal basis. Roussey and Piolat (2008) found that critical reading is a process that requires more cognitive effort than reading comprehension. The reader must be able to evaluate, interpret and criticize the text after reading it. Critical reading is a process that requires regular questioning, investigation and a suspicious approach toward what the author says (Devine, 1986). A critical reader should evaluate the author's statements thoroughly, carefully, elaborately and purposefully. For this reason, the critical reader generally notices and defies the author's assumptions, perspectives and objectives and engages with the author by producing alternatives to the author's opinion, belief and remarks as expressed in the text (whether literally or figuratively). The critical reader attempts to distinguish knowledge that is related to the author's hypothesis from knowledge that is not related to the author's hypothesis and to ignore things far afield. The critical reader can evaluate the efficacy of the author and the reliability of the data and must be able to define whether there are propaganda tools, such as denotations and overgeneralization, utilized in the text. These all depend on the reader's foreknowledge and habits regarding the control of cognitive processes. In other words, a critical reader must know something about the topic he reads and must be able to use mental tactics – such as evaluating the sufficiency of the knowledge, data collection, and hypothesis formation – while reading a text (Baker and Brown, 1984). In critical reading, the individual must clarify the purposes of the reading, define the important and remarkable points in the written text, question himself or herself to determine what type of

comprehension occurred while reading and take the necessary precautions when problems occur during the formation of metacognitive activities.

This research also aimed to define the external strategies that pre-service teachers used while reading an ironical text on both before and after PCRI basis. Consistent with this purpose, the pre-service teachers were asked to either review what they read (which requires critical reading) or summarize (which requires less critical reading). Before PCRI, the pre-service teachers mostly preferred summarizing the text. After PCRI, the pre-service teachers in the EG mostly preferred reviewing the text and the pre-service teachers in the control group mostly preferred summarizing the text. The majority of the pre-service teachers who preferred summarizing rewrote the author's expressions. Conversely, the pre-service teachers who preferred reviewing took notes, underlined expressions and used less summarization. It was also determined that the critical readers underlined and took notes of more critical points and used less summarization when the notes that were taken and the points that were underlined by the pre-service teachers were analyzed. In this context, it can be said that pre-service teachers who read critically took notes that were idiosyncratic to themselves.

The findings obtained from this research parallel those obtained by Kobayashi (2007), who found that students who read critically used the external strategies of underlining and note-taking, which is idiosyncratic to themselves, whereas the students who read less critically used summarization more. Critical readers took more critical notes and underlined more expressions compared with readers who read less critically. Conversely, readers who read less critically took more summarizing notes than critical readers.

These results demonstrate that students decide on external strategies depending on the important requirements of critical reading, such as showing resistance and judging value. Moreover, the external strategies used by the students were goal-oriented (Ryan, 2001). These students were sensitive to the purposes of reading and about deciding on external strategies while reading a text. The flexible use of text-processing strategies is characteristic of skilled strategy users (Bråten and Samuelstuen, 2004; Paris et al., 1983; Pressley and Afflerbach, 1995).

In other words, the reading purpose might have affected the external strategies employed. Critical reading involves thinking about a text that is being read, thinking over the rights and wrongs in the text and interpreting the subject matter. Thus, reading is not limited to comprehending directly what is written. Thinking while reading, interpreting the subject or seeing what is written critically can also be undertaken (Ozdemir, 2002). Thus, criticism consists of two parts: criticizing the subject/purpose and evaluating the interpretations. In a critical

investigation, what is said in the text is presented first. Then, evaluations and interpretations are made (Spivey, 1997). Moving from these data, it can be said that the external strategies of note-taking and underlining – techniques used by critical readers – to form and locate the subjects of criticism are found in the first half of the process of emphasizing and summarizing and are an important production of critical readers. Emphasizing contributes to choosing and marking important information in the text that the readers can later include in either summaries or critical reviews (Caverly et al., 2000).

Conclusion

In conclusion, this study found that prior to the experimental implementation, pre-service teachers mostly preferred summarizing the text that they read and did not comprehend the message of the author and read the text superficially. After PCRI, the pre-service teachers in the experimental group mostly preferred reviewing the text and the pre-service teachers in the control group mostly preferred summarizing the text. Most of the pre-service teachers who summarized the text rewrote the author's expressions. It was also determined that the pre-service teachers who had preferred commenting took notes and underlined expressions while reading. When the notes taken and the expressions underlined by the critical readers were analyzed, it was determined that critical readers underlined and took notes of more critical points more and summarized less.

RECOMMENDATIONS

Based on the results of this paper and findings in the relevant literature, it is suggested that this research is limited to the effects of PCRI on the pre-service teachers' critical reading and the external strategies they used while reading. How the pre-service teachers use the PCRI in the classroom environment remains to be investigated. In this study PCRI was used on groups whose first language is Turkish, another study can be made on groups' second languages and/or bi-linguistic groups.

Conflict of Interests

The authors have not declared any conflict of interests.

REFERENCES

- Baker K, Brown AL (1984). *Metacognitive skills and reading*. New York: Longman.
- Benton SL, Kiewra KA, Whitfill J M, Dennison R (1993). Encoding and external-storage effects on writing processes. *J. Educ. Psychol.* 85:267–280.
- Bråten I, Samuelstuen MS (2004). Does the influence of reading purpose on reports of strategic text processing depend on students' topic knowledge? *J. Educ. Psychol.* 96:324-336.
- Brown AL, Day JD (1983). Macro rules for summarizing texts: The development of expertise. *J. Verbal Learn. Verbal Behav.* 22:1–14.
- Canelos J, Dwyer F, Taylor W, Nichols R (1984). The note taking strategy of directed overt activity for improving learning on three types of intellectual tasks. *J. Instructional Psychol.* 11:139–148.
- Cary M, Carlson RA (2001). Distributing working memory resources during problem solving. *J. Exp. Psychol.: Learn. Memory Cognit.* 27:836-848.
- Caverly DC, Orlando VP, Mullen JAL (2000). Textbook study reading. In: RF Flippo, DC Caverly (Eds): *Handbook of college reading and study strategy research*. Hillsdale NJ: Erlbaum pp.105–147.
- Cooper K, White RE (2006). Action research in practice: critical literacy in an urban grade 3 classroom. *Educ. Action Res.* 14:83- 99.
- Creswell JW (2008). *Educational research: planning, conducting, and evaluating quantitative and qualitative research*. New Jersey: Pearson Merrill Prentice Hall.
- David FD (2009). Critical reading an evaluation of a teaching approach. Located at <http://portal.acm.org/citation.cfm?id=1733818>.
- Devine TG (1986). *Teaching reading comprehension*. Boston: Allyn & Bacon.
- Douglas NL (2000). Enemies of critical thinking: Lessons from social psychology research. *Read. Psychol.* 21:129–144.
- El-Hindi AE (1997). Connecting reading and writing: College learner's metacognitive awareness. *J. Dev. Educ.* 21:10-15.
- Goatly A (2000). *Critical reading and writing*. London: Routledge.
- Hegarty M, Steinhoff K (1997). Individual differences in use of diagrams as external memory in mechanical reasoning. *Learn. Individ. Differ.* 9:19-42.
- Kiewra KA, DuBois NF, Christian D, Kim S, Lindberg N (1989). A more equitable account of the note-taking functions in learning from lecture and from text. *Instructional Science* 18: 217–232.
- Kiewra KA, DuBois NF, Christian D, McShane A, MeyerhoVer M et al. (1991). Note- takingfunctions and techniques. *J. Educ. Psychol.* 83:240–245.
- Kobayashi K (2007). The influence of critical reading orientation on external strategy use during expository text reading. *Educ. Psychol.* 27:363–375.
- Kobayashi K (2009). Comprehension of relations among controversial texts: Effects of external strategy use. *Instructional Sci.* 37:311–324.
- Linderholm T, Van Den Broek P (2002). The effects of reading purpose and working memory capacity on the processing of expository text. *J. Educ. Psychol.* 94:778-784.
- Lonka K, Lindblom-Ylanne S, Maury S (1994). The effect of study strategies on learning from text. *Learn. Instruction* 4:253–271.
- Ozdemir E (2002). *Critical reading*. Ankara: Bilgi.
- Paris SG, Lipson MY, Wixson KK (1983). Becoming a strategic reader. *Contemporary Educ. Psychol.* 8:293-316.
- Peeverly ST, Brobst KE, Graham M, Shaw R (2003). College adults are not good at self- regulation: A study on the relationship of self-regulation, note taking, and test taking. *J. Educ. Psychol.* 95:335–346.
- Pressley M, Afflerbach P (1995). *Verbal protocols of reading: The nature of constructively responsive reading*. Hillsdale, NJ: Erlbaum.
- Roussey JY, Piolat A (2008). Critical reading effort during text revision. *Euro. J. Cognit. Psychol.* 20:765-792.
- Ryan MP (2001). Conceptual models of lecture learning: Guiding metaphors and model- appropriate notetaking practices. *Read. Psychol.* 22:289-312.
- Slotte V, Lonka K (1998). Using notes during essay-writing: Is it always helpful? *Educ. Psychol.* 18:445-459.
- Slotte V, Lonka K (1999). Review and process effects of spontaneous note-taking on text comprehension. *Contemp. Educ. Psychol.* 24:1-20.
- Spivey NN (1997). *The constructive metaphor: Reading, writing, and the making of meaning*. New York: Academic Press.
- Sahinel S (2001). *Developing integrated language skills via critical thinking skills*. Ph. D. Thesis, Unpublish-ed. Ankara: University of

Hacettepe.

Todd WB, Kessler CC (1971). Influence of response mode, sex, reading ability, and level of difficulty on four measures of recall of meaningful written material. *J. Educ. Psychol.* 62:229–234.

Van Den Broek P, Lorch RF, Linderholm T, Gustafson M (2001). The effects of readers' goals on inference generation and memory for texts. *Memory Cognit.* 29:1081-1087.