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Content Area Reading and Writing: Practices and Beliefs

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Abstract: The main purpose of this study was to investigate science, social studies, and classroom teachers' reading and writing practices, and to investigate their beliefs about content area reading and writing. One hundred and forty-three teachers filled out the survey developed to learn their content area reading and writing practices and beliefs. In the second part of the study, semi-structured interviews were conducted with 12 teachers. The study results showed that teachers did not employ specific reading and writing strategies. They used question-asking strategy before, during, and after reading. This study concluded that there is a need for content area reading and writing courses for pre-service and in-service teachers.

Introduction

Content area reading refers to helping students better understand what they read in a particular content area course. It has been broadened in recent years to integrate reading, writing, talking, listening, and viewing in text-related learning (Vacca & Vacca, 2005). The main idea is to use these language parts effectively to maintain high-level learning. A number of studies have shown that children could be taught strategies to improve learning of fictional and informational texts (Pressley, Johnson, Symons, McGoldrick, & Kurita, 1989). Content area literacy movement is based on the assumption that all students can be taught to read better. In addition, all pre-service and in-service teachers who teach in conventional school setting should have information about content area literacy (Manzo, Manzo, & Estes 2001).

Because of using content area literacy strategies, students increase their abilities to internalize content of courses, and develop conceptual understanding about subject matters (Stephens & Brown, 2000). After the third grade, students read more content area materials and they need necessary skills to use reading and writing to learn course content. Teachers who want to provide their students effective and quality instruction should apply reading and writing strategies, and teach students how to use these strategies before, during, and after reading. As Massey and Heafner (2004) stated, middle and high school teachers should be teachers of reading, because all students ideally should enter middle and high schools by knowing how to read and comprehend, but we do not live in an ideal world so middle and high school teachers should be both teachers of reading and of content.

Literature Review

"Teachers can increase their effectiveness in reaching more students by integrating content literacy strategies into their regular classroom instruction" (Stephens & Brown, 2000, p. 9). Research about the teachers' familiarity and use of content area reading strategies between 1991 and 2007 revealed the following results: Olson and Gee (1991) asked 47 primary grade classroom teachers from school districts in southwest Texas how helpful they had found 17 recommended practices in helping students learn to read expository texts. In this study, previewing concepts and vocabulary, manipulations, retelling, individual or class summary, visualization, and brainstorming were rated as the first six strategies that provide outstanding help for teachers. Jackson and Cunningham (1994) also investigated both pre-service and in-service teachers' conceptions of the use, value, and effectiveness of study strategy instruction. In this study, 104 subjects completed an open-ended questionnaire. Results revealed that active and purposeful reading, identifying important information, note taking, managing time, and critical listening/reading/thinking were the most frequently cited strategies. In Bigenho's (1997) study, teachers indicated that questioning, modeling, and background knowledge enrichment were the three most frequently used methods of reading instruction. Spor and Schneider's (2001) study showed that 70% of teachers indicated that they became familiar with content reading strategies because of university courses in reading/language arts. Teachers were most familiar with such content reading strategies as study guides, outlining, journals/logs, webbing, and SQ3R. In Barry's (2002) study, content area teachers indicated that visual aids, analogy, graphic organizer, note taking, writing to learn, study guide, and vocabulary activities were the seven most frequently practiced content reading strategies. Nichols, Young, and Rickelman (2007) investigated the extent to which content area reading and writing strategies were implemented by middle school teachers in their content areas. The results of the study showed that graphic organizers, test-taking strategies, setting purpose, note taking, and brainstorming were the most often used strategies by teachers. The results also revealed that teachers of different content areas selected their own unique strategies dependent upon curricular goals. English teachers selected guided reading, Math teachers selected 3-Minute Pause and reflection, science teachers selected brainstorming, and social studies teachers selected test-taking strategies as their number one strategy.

Literature has many studies that have results about the teachers' unawareness and their unfamiliarity with content area reading strategies. For example, Jackson and Cunningham's (1994) study illustrated that pre-service and in-service teachers were unaware or placed low value on most of the traditional strategies. In addition, Spor and Schneider's (1999) study revealed similar results. The results of their study showed that content reading strategies were not widely known and used by content area teachers, but teachers were receptive to learning these strategies. Howe, Grierson, and Richmond (1997) also found parallel results. In their study, although teachers indicated familiarity with reading strategies, many content reading strategies were unfamiliar to them, and teachers reported using general reading strategies. Teachers with five or less years of teaching experience and teachers who took content reading courses were more familiar with specific reading strategies. Another study by Spor and Schneider (2001) supports the findings of these previous studies. The authors investigated classroom content reading practices of 92 K-12 beginning teachers. Results showed that most of the teachers were not familiar with surveyed reading strategies, and there was a discrepancy between knowledge of reading strategies and actual classroom practice.

Resistance towards Content Area Reading

Content area teachers do not frequently employ content area teaching techniques (McKenna & Robinson, 2006). Teachers do not know much about how to teach reading, but they were asked to teach reading to students who need it the most (Bintz, 1997). As Mallette, Henk, Waggoner, and DeLaney (2005) stated, "most of the 20th century could be characterized by the resistance to teaching reading across the content areas" (p. 33). Resistance to incorporating reading instruction into content areas (Stewart & O'Brien, 1989), and secondary teachers' resistance to becoming teachers of reading (Conley, Kerner, & Reynolds, 2005) is well documented. According to Moje (2008), a significant body of research over the last 20 years has showed that in-service teachers rarely enact content literacy strategies in their classrooms. Mallette et al. (2005) also indicated that historically many teachers in the middle grades have believed that the responsibility for instruction in reading and other aspects of literacy is the responsibility of the language arts or English teachers.

The source of teachers' resistance towards the content area literacy may be explained by teachers' acceptance of integrating reading and writing in their instruction as to teach an additional content (Jacobs, 2002) or they may see these strategies as time consuming and not particularly efficient (Moje, 2008). Bintz (1997) asked teachers to write their reading nightmares, their successes with reading in their classrooms, their questions that they have no answers, and their wishes to get rid of their reading nightmares. Bintz found that over the years little has changed and nightmares have gotten worse, and indicated that teachers felt betrayed because they did not receive formal knowledge of reading in their teacher education training, frustrated because they did not have personal experience with the teaching of reading, and overwhelmed because they were expected to teach both content and reading. A review of the literature (Hall, 2005) illustrated that there were pre-and in-service teachers' four different beliefs about teaching reading in the content areas including content area teachers should not teach reading, teaching reading is someone else's responsibility, teaching reading is important in subject areas, and teachers would like to teach reading but they do not know how to do it.

Teaching reading and content may be seen as two different tasks by content area teachers, but as Manzo et al. (2001) stated, coaching reading and thinking can be best done while teaching content. Nowadays, it is accepted that content area literacy instruction is not just for middle and secondary level students. Actually, the importance of reading instruction in school subjects was emphasized for K-12 students as early as 1925 (Swafford & Kallus, 2002). Because of integrating reading and content instruction during the elementary grades, students both have an ability to learn to read and read to learn (Moss, 2005; Swafford & Kallus, 2002).

The Need for Research

In Turkey, pre-service teachers receive a four-year-long theoretical and practical education in the Faculty of Education. They receive general culture, pedagogical formation, and content area related courses. After teacher candidates graduate, they have a chance to work in the state or private schools. The review of Turkish literature did not reveal any studies about content area teachers' reading and writing practices and beliefs. A research conducted by Akyol and Ulusoy (2010) illustrated that candidate teachers from social studies, science, math, Turkish, early childhood and primary education departments accepted the responsibility to improve their future students' reading skills. There is a need for research to learn Turkish in-service teachers'

content area reading and writing practices. It is hoped that this study will reveal Turkish content area teachers' in-class practices and beliefs concerning their roles as a teacher of reading. In addition, due to this study, Turkish researchers' interests can be taken into this old but not adequately studied issue. Therefore, the main purpose of this study was to learn science, social studies, and classroom teachers' in-class reading and writing practices, and to investigate their beliefs and opinions about content area reading and writing.

Method

The main approach of this descriptive study was qualitative in nature. We mainly collected qualitative data by using survey and interview techniques. We thought that the qualitative inquiry might allow us to receive richer and more insightful responses from the participants.

Sample

Science, social studies, and classroom teachers from 1st to 8th grades, selected from the middle Anatolian cities of Turkey (Ankara, Kırsehir, Yozgat, and Eskisehir) participated in this study. The main reason of selecting science, social studies, and classroom teachers is that they frequently use reading and writing activities in their courses. The survey was distributed to the purposefully selected 20 elementary schools from the different parts of the cities. In these schools, voluntary teachers filled out the instruments. In total, 143 teachers (about 50% of all the teachers) were willing to participate in the study. The sample of the study included 42 science, 47 social studies, and 54 classroom teachers. In the second part of the study, we interviewed four teachers from each subject area. There were 75 female and 68 male teachers ranged from first year teachers to teachers with more than 22 years of experience. The sample included 5 teachers with PhD degree, 16 teachers with master degree, and 122 teachers with BA degree. The experience levels of the teachers can be seen in Table 1.

Experience	*f*
1 Year	20
2-5 Years	37
6-10 Years	47
11-15 Years	24
16+ Years	15
Total	143

Table 1: Experience Levels of the Teachers.

Instrumentation

After reviewing content area reading textbooks and articles (Barry, 2002; Hall, 2005; Kinney-Sedgwick & Yochum, 1996; McKenna & Robinson, 2006; Moore, Moore, Cunningham & Cunningham, 2003; Neufeld, 2005/2006; Nourie & Lenski, 1998; Olson & Gee, 1991; Spor & Schneider, 1999, 2001; Stewart & O'Brien, 1989; Vacca & Vacca, 2005) about content area

literacy, we developed an instrument, which is called "Content Area Teachers' Reading Beliefs and Practices Survey." We used the following procedures to develop the instrument: In the first phase, a question pool was developed and repetitions were deleted. The survey items were discussed with the people who are experts in the area of reading and writing. Thereafter, five teachers were wanted to read and evaluate the survey questions. Each survey question was discussed with these teachers to make sure questions have authors' intended meaning. Based upon these teachers' comments, we developed the final survey instrument. The survey included 5 close-ended and 12 open-ended questions (see Appendix-I) which required subjects to compose narrative responses. With these questions, we intended to learn and investigate teachers' content area reading and writing practices and beliefs. We thought that open-ended questions could capture richer and more insightful opinions of teachers because open-ended questions allow teachers to answer the questions in their own words and allow us to learn these teachers' unique perspectives in great detail. Closed-ended questions were also used to learn the number of male and female teachers, number of social studies, science, and classroom teachers and so on.

In the second part of the study, we followed emerging themes and issues with a semi-structured interview style. Voluntary teachers (6 male and 6 female) participated in the interviews. Based on the answers to the following interview questions, we asked additional questions such as "Tell me more about that" and "Please give me an example."

1. How could you define content area literacy?
2. Which reading and writing techniques do you use in your classrooms?
3. How do you determine students' reading and comprehension levels on a specific material?
4. What should a quality and effective teacher do to make all students good readers and writers?
5. What kinds of materials and sources do you use in your courses?
6. What is the role of technology in your courses?
7. Which materials do you read to learn about reading and comprehension techniques?
8. Which materials do you read to learn about your content area?

Data Collection

We created a school list to visit and distributed the surveys to voluntary teachers. In total, we distributed 300 surveys, but because of teachers' time limitation to complete the surveys, return rate was 47.7%. Teachers needed nearly 30 minutes to complete the survey. During these visits, voluntary teachers were requested to participate in one-hour long semi-structured interviews. Twelve science (n = 4), social studies (n = 4), and classroom teachers (n = 4) were recruited at various experience levels. In addition, an equal number of male (n = 6) and female (n = 6) teachers were recruited for the interviews.

Data Analysis

In analyzing the open-ended survey questions, we wrote participants' responses on word processors. Then, the first and second author evaluated each survey response independently, created categories, and placed comments into these categories to find major themes and issues. Thereafter, we met to compare the themes and issues each of us had identified. After discussing,

we agreed that there were three major themes in the data. Analyze results also revealed that there was a consensus for all of the responses. We also classified and tallied the closed ended survey questions as percentage scores and frequencies.

In analyzing the interview data, we transcribed the tape-recorded interviews and read them in detail. Thereafter, we coded transcribed data and made cross-case comparisons. Mainly, we compared interviewees' responses to the same question; identified similarities, differences, and major patterns; and found major themes and issues that emerged from the data. In this study, we used investigator triangulation strategy to collect, analyze and interpret the data (Johnson & Christensen, 2004). Mainly, the first and second author evaluated each interview independently and found emerging themes and issues. After discussing, we reached an agreement on sub categories. We also conducted member-checking strategy (Creswell, 2003; Hatch, 2002; Richards, 2005) to enhance the validity of the research. Interviewees read the transcriptions, and commented on our descriptions and interpretations. Member checking results showed that all the interviewees agreed with these descriptions and interpretations.

In analyzing the open-ended survey questions and interviews, we used explanatory and inferential pattern codes that identify an emergent theme, pattern, or explanation (Miles & Huberman, 1984). Data analyze results revealed three top-level codes for data sorting. They were reading and writing activities, reading assessment and improvement, and beliefs about the teacher of reading. To summarize teachers' unique opinions and perceptions about the survey items and interview questions, we investigated science, social studies, and classroom teachers' responses for the each content area under the reading and writing activities.

Results

We organized the results section under the three main themes, including reading and writing activities, reading assessment and improvement, and beliefs about the teacher of reading.

Reading and Writing Activities

Classroom Teachers. All the classroom teachers indicated that they almost always spent time for reading activities. Of the 54 teachers, 37 took reading courses during their undergraduate education years and 17 teachers did not take any courses about reading. All the teachers indicated that they were not offered in-service training regarding the reading and writing instruction.

The survey results also revealed that textbooks, informational texts, the Internet, and storybooks were the most frequently used sources by the classroom teachers. Before the reading, classroom teachers ask questions about the topics, activate students' background knowledge, conduct picture walk activity, and receive students' predictions about the main ideas. A female teacher with 3 years of experience said,

> Generally, I think about the types of texts that can take the interests of my students. I determine some examples to explain unknown words, and ask students some interesting questions to take their interests and to activate their background knowledge. Then, I introduce the pictures and headings of the texts, and want students to make guesses about the topic.

During the reading, reading aloud, question asking, determining and teaching unknown words, and reading a part of the text and then making guesses for the rest of the text were the most frequently used strategies. After the reading, teachers receive students' reflections, ask "what if" type of questions, and require students to make concept maps and summarize the text they read. Sixteen teachers stated that they frequently make dramatizations to improve students' comprehension of the text. A male teacher with 24 years of experience stated,

> I generally want my students to dramatize the text we just read. I believe that my students learn and remember better if they actively participate in the lesson. Dramatization technique allows them actively to participate in the lesson. For example, yesterday, students dramatized the relationship between the different institutions of the government. They acted out as if they were the president of these institutions.

Teachers reported using very limited writing activities in their courses. The two strategies with which teachers were most familiar were summarization ($f = 50$), and written answers to the questions ($f = 48$).

Interview results showed that the most important thing that should be done by a classroom teacher was to give students a reading habit. Teachers stated that students who read storybooks and newspapers develop their readings and writings, and they value reading. These students also easily understand what they read. Classroom teachers often listen to their students' readings, and these reading aloud activities give them some ideas about the students' reading errors or difficulties. A female teacher with 12 years of experience stated,

> I check whether my students read fluently or not. Mainly, I listen to their readings and have an idea about the reading levels of my students. I observe that weak readers get bored very easily while reading. They cannot answer the questions, and cannot get the meaning in their first readings. They generally need to reread the text.

In the interviews, observing students, listening to their reading aloud, and checking their writings were the main strategies in assessing students' readings and writings. To improve students' readings, teachers often want them to read aloud in the classroom, give them reading assignments and comprehension questions, educate parents about how to help students at home, and suggest students read storybooks.

Social Studies Teachers. Eleven social studies teachers almost always and 36 teachers most of the time spent time for reading activities. All of the teachers stated that they did not take reading courses during their undergraduate education years. In addition, they have not received in-service education about reading and comprehension strategies. Teachers indicated that course textbook, research papers, encyclopedias, the Internet, and newspapers were the main materials for the social studies courses.

Before the reading, teachers make connection between new and previous topics, ask students questions to learn their background knowledge, require students to make summarization, require different students to read a particular part of the text, and conduct brainstorming activities. A female teacher with 7 years of experience stated, "I generally use books related to the topic at hand. Before the reading, I first introduce the book, its author, and its intended audience. Thereafter, I show them the book, and students check the books if they want." During the reading, asking question, requiring students to read, lecturing subjects, and explaining unknown words were the most frequently used strategies. A male teacher with 14 years of experience stated, "If the textbook is too difficult for my students, I prefer reading the text for them. Then, I explain the text paragraph by paragraph. Sometimes, students read aloud the text." After the reading, assessing students' comprehension by asking "why, who, what,

where, when, and how" questions, and giving them reading assignments were the main strategies. Discussing the text as an after reading strategy was also frequently used by the social studies teachers.

Dictating important parts of the subjects (f = 23), creating tables (f = 14), writing answers to the study book questions (f = 35), and summarizing texts (f = 39) were the most frequently used writing activities. It is interesting to note that eight teachers indicated not using writing activities in their courses at all. A female teacher with 11 years of experience stated,

> Generally, I do not use writing activities in my courses, because these activities require a considerable amount of time, which I do not have. Sometimes, I give homework. Students answer the questions at their homes, and write down the answers on their notebooks. Generally, I do not find time to check these questions. I just receive students' verbal answers, and if there are wrong answers, I correct them. Students check their answers individually and make the necessary corrections on their notebooks.

Three interviewed teachers indicated that giving students a case and requesting their comments on the issues was a commonly used strategy in their courses. They also indicated that social studies curriculum include many research projects that students should be done individually. All the interviewed teachers stated that summarizations, reports about research topics, graphs, and answers to given questions can be seen in students' portfolios as writing related activities. During the courses, writing activities are not preferred, as the students get bored while they were writing. The most commonly found pattern in teachers' responses to the question about reading and writing activities teachers apply in their classrooms was the close relationship between reading and writing. A male teacher with 12 years of experience stated,

> If a student has a reading problem it means s/he has a writing problem. I have to improve both of them at the same time. I do not know any specific technique, but correcting their errors is my main strategy. I also conduct classroom discussions and give students some responsibilities to search and share the course topics.

Science Teachers. Most of the science teachers (f =34) indicated that they sometimes use reading strategies, and eight of them indicated rarely using these strategies in their courses. All the teachers stated that they were not offered reading related courses during their undergraduate education years and during their teaching careers. Science teachers reported very limited materials that they use in their instruction such as textbooks, study books, and the internet. They also reported very narrow use of strategies before, during, and after reading including demonstration, direct instruction, and assessing students' comprehension by asking right there and inference type of questions. A 12 years experienced female teacher's following statement shows a general use of before, during and after reading activities in science courses: "I give my students reading assignments. They come prepared to class by reading the texts. I explain unknown words and lecture the topics. As an after reading strategy, I ask them questions to test their comprehension levels." Writing important parts of the subjects on whiteboard (f = 23), writing experiment reports (f = 16), summarizing subjects (f = 15), and writing answers to questions (f = 14) were the teacher reported writing activities.

The most commonly found patterns in science teachers' responses to the interview question regarding how they teach the course were lecturing the important points, and frequently asking students if they have questions about the topics. Teachers indicated that some students could not express their feelings and ideas in the classrooms so that they should have given a chance to speak in front of a crowd. Students also do not have a good listening skill to understand each other's conversation. Eight of the science teachers indicated that students' not

only reading and writing skills but also their listening skills should be improved. In spite of the need for this improvement, they do not have necessary qualifications to improve students' reading, writing, listening, and speaking skills, as they have not received any formal training about these areas. An additional problem that was indicated by a male teacher with 20 years of experience was students' misconceptions about the science terms. He said,

> Sometimes students have both reading difficulties and misconceptions about science terms. It is very hard to handle these problems. For example, when I use a science term while lecturing the course, some of my students imagine different things in their minds.

Reading Assessment and Improvement

Survey results showed that classroom teachers' students have reading difficulties, they get bored while reading, and they have problems with keeping their attention alive while reading and writing. All the classroom teachers reported that they have enough qualifications to assess and improve students' these weaknesses. Observing students while they read aloud was the only technique that teachers employed. To improve their readings, teachers provide reading hours, try to match the reading levels of students and readability levels of books, employ vocabulary techniques, and encourage students read storybooks at their homes. They check the students' comprehension by asking questions. A male classroom teacher with 3 years of experience stated,

> I frequently check whether students understand the topics or not. I believe question asking is the best way to see their comprehension. Good comprehenders easily answer the right there and inference questions. I try to make all of my students fluent readers and good comprehenders. Generally, fluent readers have a good level of comprehension.

Social studies teachers indicated that their students have reading difficulties such as they cannot read fluently and they have comprehension problems. Teachers stated that they did not have enough qualifications to improve students' these reading problems, but they could easily determine students who have reading and comprehension problems by employing reading aloud and question asking strategies. Suggesting students read books, explaining the unknown words, lecturing the subjects, taking attention to the important parts of the topics, giving ample examples, and making connections between the topics were the main strategies teachers use to improve students' reading and comprehension problems. Finding the text at the reading levels of students was very difficult for the teachers.

All the science teachers stated that their students have serious reading and comprehension problems. For example, they cannot read fluently, and do not understand what they read. The most important cause of the reading problems is that students do not know the meanings of some science terms. They also cannot correctly pronounce the terms and the name of foreign scientists that they read. A male teacher with 4 years of teaching experience stated, "I generally do not require my students to read aloud in the class because some of them could not read the texts. Students should not be offended because of their low literacy skills." Students have attention problems, and they get easily bored while reading. Most of the science teachers ($f = 38$) felt that they did not have enough qualifications and training to assess and improve students' readings and writings. Reading the texts for their students, lecturing the subjects, explaining the terms, and adapting texts with simple explanations were the main strategies that teachers use to improve students' comprehension levels.

Interview results illustrated that only one female classroom teacher with 6 years of experience indicated using a running record technique to assess her students' reading miscues.

We asked her how she learned to conduct this technique. She learned about running record technique during their graduate education. Other teachers did not indicate any special technique to assess their students' reading abilities. Listening students' reading aloud was the main strategy for them. Teachers stated that they could determine students' reading errors and difficulties very easily by observing them while they were reading. A female social studies teacher with 19 years of experience stated, "During the courses, I give my students chances to read texts, so that I can see their reading levels and miscues. Generally, I do not want to correct their reading errors, because they can be offended." Four of the interviewed teachers stated similar ideas about not correcting students' reading errors. Cooperation with Turkish teachers and encouraging students to use every chance to read were the main suggested strategies to improve their readings. Teachers thought that they should have received a formal training about content area reading strategies and reading assessment. We asked teachers what a quality and effective teacher should do to make all students better readers and writers. Being a good role model for students was shared by all the interviewed teachers. A male social studies teacher with 11 years of experience said,

> Teachers should be good readers to be good role models for their students. Teachers should show students what a good reader does and how he/she reads. I am a good reader. I often read aloud for my students, so that they can have a chance to observe and listen to a good reader. I believe all teachers are actually teachers of reading, but only qualified teachers who have training about the content area reading and writing can do it adequately. I spend so much time and effort to improve my students' both reading and writing skills, and to make them proficient readers, but I am not sure how successfully I am doing it.

Beliefs about the Teacher of Reading

According to the classroom teachers, students should receive effective and quality reading and writing instruction in the first three years of elementary schools. Providing reading hours for students ($f = 39$), spending time for reading in all courses ($f = 35$), and teaching students speed reading techniques ($f = 14$) would help students to be better readers and writers in the upper grades. All the social studies teachers indicated that students should be helped to develop reading habits ($f = 47$) in all of the courses. In addition, teachers should encourage students read books ($f = 42$), should provide reading hours ($f = 37$), should give reading assignments ($f = 32$), and should adapt the texts and contents for weak comprehenders ($f = 29$). Science teachers also indicated that providing regular reading hours ($f = 28$), cooperation between content area and Turkish teachers ($f = 21$), and cooperation between content area teachers and parents ($f = 19$) might help students to be better readers and writers.

Most of the classroom teachers ($f = 50$) agreed that all teachers are actually teachers of reading and writing, but they believe content area teachers generally do not accept this important responsibility. Classroom teachers try to make all students better readers and writers, but they did not receive enough support from content area teachers. The most important cause of this lack of support is lying in content area teachers' undergraduate training. A female classroom teacher with 17 years of experience elucidated this lack of training and said,

> Content area teachers do not spend enough time on reading and writing related activities in their courses. I think they do not accept this responsibility. They receive content loaded

> teacher training. I am sure content area teachers do not take reading and writing courses during their teacher education years. They should be offered content area reading and writing courses. All teachers should have a responsibility to make our students better readers and writers…

All of the social studies teachers accepted that they have a responsibility to make students better readers and writers, but because of the time limitation, they cannot spend enough time to improve students' readings and writings. Twenty-three social studies teachers indicated that they should cooperate with classroom and Turkish teachers to solve students' reading and writing problems. Seventeen teachers also stated that they conduct reading and writing activities in their courses, but they cannot receive enough support from parents. A male social studies teacher with 6 years of experience stated,

> We have to follow an overloaded curriculum. Teachers have time limitations. I try, but I cannot leave enough time for literacy activities. Parents should be cooperating with us, and they should help students at their homes. More than half of my students come to school without reading their assignments. From my experience, I can say that fluent readers are better comprehenders. All students should read frequently. Reading is the most basic skill in social studies courses. How can a student be successful if s/he does not understand what s/he reads?

More than half of the science teachers (f =30) stated that they are not reading and writing teachers. Only 12 science teachers indicated that all teachers are responsible to make students better readers and writers. Science teachers could not employ reading and writing strategies in their classrooms because of time limitation (f = 35), overloaded curriculum (f = 32), and the lack of qualification on literacy strategies (f = 32). Interview results revealed that classroom teachers stressed the importance of reading and writing activities during the early grades of elementary schools to make students good readers and writers. Giving the students good reading habits was the second reported specialty of good and quality reading and writing teachers. Science and social studies teachers stated that classroom teachers have very big responsibilities to prepare students as good readers and comprehenders. According to them, the lack of reading habits was the most important barrier in reaching this aim. In addition, they accepted families, and all classroom and content area teachers as responsible for giving students this important habit. Science and social studies teachers indicated that providing in-class reading hours, giving students reading assignments, using interesting expository and fiction books, and employing effective reading and writing activities were useful strategies to improve students' reading and writing skills. A female social studies teacher with 9 years of experience stated,

> I go to my courses with books. Students see my books and realize that I am a reader. Every week I change the book I read. I frequently talk about these books. Students should know that I regularly read books. As a social studies teacher, I have a responsibility to give my students a good reading habit. I believe that a regular reading habit helps students to be a fluent reader and a good comprehender.

We asked teachers whether they have any idea about the definition of content area literacy. Half of the interviewed teachers defined content area literacy as using reading and writing strategies to comprehend the course content. We asked them how they reached this definition. Reading articles and professional talks with other colleagues were the source of this definition. The other half indicated that they were not familiar with this term. All interviewed

teachers from three groups stated that they try to use technology in their courses considering the technological capabilities of their schools. For example, they used computer-connected projectors, overhead projectors, computers, DVD players, and educational software in their courses.

Interview results showed that teachers generally do not follow content area related books and journals, and books about reading and writing instruction. Lack of time, lack of sources to buy journals, and other responsibilities were the main reasons for not following new developments about content knowledge and literacy. We asked them how they developed their personal knowledge about the content areas and skills about literacy strategies. Most of the interviewed teachers indicated that they use teacher manuals of the textbooks and materials given free by publishers. Only a doctoral candidate social studies and a doctoral candidate science teacher indicated that they follow books about comprehension strategies, scientific journals about their content areas, and the Internet based discussion forums.

Discussion and Conclusion

The results of this study showed that all science and social studies teachers did not take reading courses during their undergraduate education years. In addition, 17 classroom teachers indicated that they did not take reading and writing courses during their undergraduate education years. It is interesting to note that classroom teacher programs include courses about reading and writing instruction. It may be argued that these classroom teachers did not internalize the reading and writing related courses they took, or they did not remember much about these courses. Spor and Schneider's (1999, 2001) studies revealed different results. In their studies, teachers indicated that they learned and were familiar with reading strategies because of college or university courses. All three-teacher groups also indicated that they did not receive in-service training about literacy while they were working as teachers.

Kragler, Walker, and Martin (2005) observed science and social studies instruction in primary-grade classrooms, and noticed that teachers primarily relied on content textbook teachers' manuals. Kinney-Sedgwick and Yochum's (1996) study also showed that teachers followed the text closely and went through the book page by page. A similar result was found in this present study. All teacher groups indicated that they closely followed the course textbooks and the internet. Instead of using the Internet just for searching the course topics, teachers may use some strategies. For example, Internet workshops, Internet inquiries, Internet projects, and WebQuests (Vacca & Vacca, 2005) instructional strategies may provide students an online learning environment.

The results showed that question asking was the only strategy that all teachers indicated using it in their courses as a before reading strategy. As Neufeld (2005/2006) stated, "question asking and answering can be viewed as the strategy that drives all of the other strategies" (p. 304). Actually, having an ability to ask and answer questions before, during, and after reading is an important specialty of a strategic reader (Neufeld, 2005/2006). Classroom and social studies teachers used question asking, determining unknown words, and reading aloud activities during the reading. Science teachers preferred using demonstration and direct instruction techniques as during reading activities. All teacher groups employed the question asking strategy as an after reading strategy as well. We also asked teachers to report their writing activities and saw that all teacher groups used the strategies of summarization and written answers to questions. It is clear

that the subjects of this study did not use specific reading and writing strategies. They preferred employing general learning strategies. This result is parallel with Howe, Grierson, and Richmond's (1997) study. In their studies, teachers reported using general reading strategies. Spor and Schneider's (1999) study also illustrated a similar result. They found that content reading strategies are not widely known and used by teachers.

Interview and survey results illustrated that observing and listening students were the main strategies to assess their readings. Out of a doctoral degree holder classroom teacher, no teachers stated using any special reading assessment technique. Even though classroom teachers felt that they had enough qualifications to assess students' readings, they did not employ any special reading assessment technique. Social studies and science teachers stated that they do not have enough qualification to assess and improve students' readings. All teachers stressed the need of a formal training about reading assessment. Teachers' reluctance to include literacy improvement activities into content area classrooms were documented in literature (Fritz, Cooner, & Stevenson, 2009). In our study, teachers also indicated that their students have reading difficulties. All teacher groups used similar techniques to improve students' reading levels. Classroom teachers provided their students reading hours, encouraged students to read at their homes, and matched the reading levels of students and readability levels of texts to teach reading. On the other hand, social studies and science teachers tried to improve their students' comprehension.

In this study, all teacher groups indicated that providing reading hours in schools was a useful activity in helping students to gain a good reading ability. Generally, content area teachers did not view themselves as reading teachers (Bryant, Linan-Thompson, Ugel, Hamff, & Hougen, 2001), they are frequently unprepared to employ literacy techniques (Cantrell & Hughes, 2008), and they frequently do not employ content area reading and writing techniques (McKenna & Robinson, 2006). As Rozmiarek (2006) stated, teachers of all subjects are teachers of reading. Our study revealed parallel results with Rozmiarek's statement. All classroom and social studies teachers stated that all teachers are actually teachers of reading and writing, and have a responsibility to make students better readers and writers. Mallette et al. (2005) found a similar result in their study. The authors found that of the 81 teachers, 76 were favorable toward the statement of "every teacher is a teacher of literacy." In our study, classroom teachers thought that content area teachers do not accept this important responsibility. More than half of the science teachers did not accept their responsibility in teaching students reading and writing. Time limitation, overloaded curricula, and the lack of qualification on literacy strategies were the important factors in science teachers' resistance towards the idea of teachers of reading and writing. In congruence with Rozmiarek (2006), we agree that all teachers are actually teachers of reading and writing, because "content area teachers can teach content area reading and writing best" (Moore, Moore, Cunningham, & Cunningham, 2003, p. 5).

Interview results showed that according to the classroom teachers, good and quality teachers conduct reading and writing activities, and provide their students a good reading habit. Interview results also revealed that social studies teachers stressed the close relationship between reading and writing, and science teachers stressed the lack of formal training on reading, writing, listening, and speaking skills. As Olson and Gee (1991) stated, skills and habits students acquire with primary level content texts will help them in the following years as the number and diversity of texts increase. Science and social studies teachers also stated that families and all teachers have some responsibilities to prepare students as good readers and comprehenders. They saw the lack of reading habit as the most important barrier in making students good readers.

Students can learn to read and read to learn at the same time if reading and content instruction to be integrated in the elementary grades (Moss, 2005). Actually, reading to learn and learning to read are the same process (Bintz, 1997).

Even though research indicates that the learning of reading strategies in college courses is not generally transferred to actual classroom practice (Nourie & Lenski, 1998), offering college level content area literacy courses for candidate teachers, and in-service content area literacy and reading assessment courses for content area teachers would help them familiar with reading strategies and help them to be user of content reading strategies in their courses. Several studies showed that graduate level courses and extended in-services regarding content area reading might help teachers feel better prepared to teach reading and understand the advantages of teaching students reading in their content areas (Hall, 2005). Therefore, colleges and Ministry of National Education (MONE) should offer content area reading and writing courses for pre-service and in-service teachers. Fritz, Cooner, and Stevenson (2009) indicated that because of a university literacy course, pre-service teachers began to see themselves as both reading teachers and content specialists. In these courses, disciplinary literacy instructional programs would be most productive and useful (Moje, 2008). As Siebert and Draper (2008) indicated, literacy educators must move beyond generalities and address the specific texts, literacies, literacy strategies, and instructional methods in discipline-appropriate ways.

In future studies, college professors' and MONE officials' opinions about the offering content area literacy courses for pre-service and in-service teachers should be searched. This study is limited with teachers' self reported opinions and beliefs. Future studies should focus on teachers' in-class practices and their actual use of reading strategies.

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APPENDIX-I
CONTENT AREA TEACHERS' READING BELIEFS AND PRACTICES SURVEY

1) What is your subject?
( ) Social studies ( ) Science ( ) Classroom Teacher
2) How many years of teaching experience do you have?
3) What is your education level?
( ) Two Years College ( ) College ( ) Master ( ) PhD
4) What is your gender?
( ) Female ( ) Male
5) How often do you leave time for reading related activities in your courses?
( ) Always ( ) Most of the time ( ) Sometimes ( ) Rarely ( ) Never
6) Did you take any reading, reading strategies, and reading instruction related courses during your undergraduate education, or did you participate in an in-service education about these subjects? Please explain.
7) Which kinds of reading materials do you use in your courses? Please explain.
8) Which "before reading" strategies do you use and activities do you employ?
9) Which "during reading" strategies do you use and activities do you employ?
10) Which "after reading" strategies do you use and activities do you employ?
11) Which writing strategies do you use in your courses? Please explain.
12) Which problems do your students encounter while they are reading texts or textbooks?
13) Do you determine the students who have reading and comprehension problems while reading texts? If your answer is yes, how?
14) Do you have enough qualification about assessing students' readings?
( ) Yes ( ) No
15) How do you help students when they have difficulties about reading and understanding the texts?
16) What do you think about the following statement? Please write: "Every teacher is a teacher of reading and has a responsibility in improving students' readings and writings."
17) What should be done to make students fluent readers and good comprehenders at the 6^{th}, 7^{th}, and 8^{th} grades?