



## A REVIEW OF SOCIAL STUDIES COURSEBOOK IN TERMS OF THINKING TRAINING: “SCIENCE IN TIME” UNIT<sup>i</sup>

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### Abstract:

The aim of this study is to examine the 7th grade social studies coursebook unit titled “Science in Time” in terms of thinking training. The data was collected through the technique of document analysis, which is a qualitative research method. The document in question is Social Studies coursebook and student workbook prepared by the Ministry of Education in the academic year of 2016-2017 and used for the 7th grade in primary schools. In order to investigate the qualities of thinking training thoroughly and in detail, a single unit was selected by means of random sampling. , The titles, written materials, visual elements, assessment and evaluation questions (in the unit and at the end of the unit) in the “Science in Time” unit was reviewed in terms three essential thinking skills mentioned in the Ministry of Education program, namely critical thinking, creative thinking, and caring thinking. The data was analyzed by means of content analysis. According to the review results for written materials, the fact that students were asked to guess the concepts given in the concept-box without any definition and the fact that students could see additional resources about in-text subjects were considered positive qualities in terms of making connections among evidences. As for the visual materials, the book lacked any thinking-provoking questions about the pictures. When the book was reviewed in terms of assessment and evaluation, the results revealed positive qualities considering that the “Let’s Think” questions in the chapters and at the end of each chapter as well as the student workbook activities encouraged thinking training skills. However, the evaluation questions at the end of the unit were knowledge level questions, so they were considered inadequate for the use of thinking skills.

**Keywords:** social studies, thinking training, coursebook

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## 1. Introduction

Education system aims at preparing students for social life and the future. Students in an information society are supposed to play an active role in learning instead of passively receiving information from teachers. Therefore, education strives not only for informing students but also providing them with vital skills. Individuals have to acquire thinking skills rather than basic exchange of information. The main function of education has evolved into training individuals who can find information, criticize, solve problems, think out of the box, and possess thinking skills.

Individuals who cannot analyze and transform information are considered ill-trained, so thinking training proves to be of prime importance. Today the main objective of education is to train individuals who can think meaningfully and appropriately rather than the ones who acquire information through traditional methods (Bacanlı, 2012).

Thinking training program not only develops students' thinking skills but also helps students realize the meaning and reasons of their existence within living conditions and shape their own future (MEB, 2007).

Thinking training provides a basis for all other educational activities as it signifies, re-creates, and evaluates knowledge. As a result, education and teaching activities evolve from simple information transfer to an active process which enhances individual talents and potential, raises awareness, and creates self-consciousness. The aim of initiating such a process is grounded on three essential thinking skills: critical thinking, creative thinking, and caring thinking.

### 1.1. Critical Thinking

The word critical is derived from the Greek word "*kritikos*" which means to judge, evaluate, and distinguish (Kaya, 1997).

Critical thinking is a skill which helps individuals to think independently, prove the accuracy and credibility of a piece of information or claim, adopt various perspectives and use different criteria during decision-making, search for evidence before accepting an idea, and filter opinions through criticism. Critical thinking is a thinking skill which encourages recognizing, taking and questioning risks whilst taking action (Abrami, Borokhovski, Wade, Surkes, Tamim, 2008; Özdemir, 2005 cited in Gündoğdu, Eraydın and Kızılkaya, 2017). In thinking training program, critical thinking is defined as making judgement, determining and using criteria, self-correction and self-control, and content-based sensibility (MEB, 2007).

### 1.2. Creative Thinking

The word creative is derived from the Latin word "*creare*". Creative thinking is a skill which helps individuals to create original ideas, follow the latest developments and inventions, and come up with solutions to existing problems. The word create also connotes procreate and generate. Every person has to find solutions to problems at times. Although creativity is a general human attribute, research shows that it is more

common among people who can think critically, have self-reliance, are independent and decisive, interpret diverse discourse by means of logic, and care for individual differences (Doğanay, 2000).

Creative thinking is a way of thinking which provides a phenomenon that needs to be developed in an information-generating atmosphere (Yenilmez & Yolcu, 2007).

According to Yıldırım (1998), attitudes necessary for creative thinking development can be listed as follows:

- Courage to be different;
- Quick decision-making;
- Flexible thinking;
- Quick reasoning;
- Ability to focus quickly;
- Self-confidence;
- Not being perfectionist;
- Not seeing things in black and white;
- Sense of humor;
- Using imagination.

### **1.3. Caring Thinking**

Caring thinking is appreciating the thinking and thinking process (Bacanlı, 2012). Caring thinking is used for determining ends and means, recognizing causality, evaluating options, ordering priorities, and expressing all these qualities. Caring thinking also improves students' ability to appreciate and evaluate. Caring thinking facilitates distinguishing between reason and emotions (MEB, 2007). Individual values and social norms often underlie this type of thinking. The norms are not only written regulations but also traditions and customs. Caring thinking also requires empathy when it is addressed in terms of the causes and consequences of actions (MEB, 2007). Empathy is defined as putting the self in another person's position and sharing their feelings and thoughts.

According to Bacanlı (2012), caring thinkers have the following qualities:

1. Following the instructions
2. Self-awareness: caring thinkers are aware of themselves. They realize their actions and experiences. Thus, they focus on their thinking.
3. Having principles: caring thinkers have principles. People without principles do not care enough.
4. Ethics: caring thinkers are sensitive about having and acting with ethical principles.

### **1.4. Social Studies and Thinking Training**

Social Studies is a field of study which provides students with basic knowledge, skills, attitudes, and values gathered from social sciences disciplines and related to social life in order to raise good and responsible citizens in primary schools (Erden, 1998). Social Studies course not only helps individuals realize their social existence and contribute to

their thinking skills development with an interdisciplinary approach but also makes individuals perceive the meaning of their existence within the living conditions and the reasons for their existence. Social Studies course gives students the knowledge and skills necessary for preparing for the future and making their lives easier. Students need to find solutions, act critically, and make a choice in the face of different situations, so the importance of thinking skills within the education system increases.

Thinking training course aims at training individuals who try different perspectives, embrace diverse opinions, create unique points of view, show interest in arts, philosophy and science, have the competence in understanding and interpreting, have the powers of empathy and sensibility, come up with alternative solutions, appreciate the culture and value environment, and think critically, creatively, analytically, and reflectively.

Developing thinking skills is a learning process. Student cannot be expected to develop thinking skills on their own. A democratic classroom environment, a teacher, teaching methods and material play important roles in this process (Hazer, 2011). Pre-designed texts, workbooks, educational plans, and teaching material also help, but they remain insufficient when used separately (Akinoğlu, 2001). Therefore, coursebooks prepared for a specific teaching purpose should be designed in such a way that they improve students' thinking skills and contribute to their thinking training in order to train individuals who can search, question, and criticize. After all, coursebooks are such tools that direct teachers' and students' learning life and take an important place in the development of students' cognitive, affective, and psychomotor skills.

In addition to giving information on a specific subject field, coursebooks help students participate in research, investigation, and learning process by means of additional subject-related exercises. Workbooks as supplementary material not only function as exercise books but also include activities and evaluation forms which test whether the necessary knowledge, skills, and attitude are acquired (Kabapınar, 2009). Coursebooks need to be designed in such a way that they should arouse interest and develop certain skills. Therefore, this study analyzes the place of thinking training in Social Studies course, particularly in coursebooks.

The study seeks answers to the following questions which state the sub-goals:

1. To what extent does critical thinking take place in Social Studies 7th grade coursebook, "Science in Time" unit?
2. To what extent does creative thinking take place in Social Studies 7th grade coursebook, "Science in Time" unit?
3. To what extent does caring thinking take place in Social Studies 7th grade coursebook, "Science in Time" unit?

## 2. Methodology

This study, which focuses on thinking training, is an example of qualitative research and it uses document analysis technique for data collection. Document analysis is an analysis of written and printed documents about a study field (Yıldırım & Şimşek,

2011). Documents are important sources of information and should be used effectively in qualitative studies. In this type of research, the researcher can obtain necessary data without observation or interviews. Document analysis benefit the researcher in terms of time and expenses (Yıldırım & Şimşek, 2016).

Thinking training is important teaching individuals how to analyze and produce information. Therefore, it is assumed that coursebooks involve thinking skills. Because the Ministry of Education states critical, creative, and caring thinking in the thinking training program, these three skills were analyzed in this study. The data was collected from the unit titled "Science in Time" in Social Studies coursebook and student workbook prepared by the Ministry of Education and used for the 7th grade in primary schools. In order to investigate the qualities of thinking training thoroughly, objectively and in detail, a single unit was selected by means of random sampling. In order to investigate the thinking skills throughout the unit, the researcher reviewed the related literature and defined criteria for critical, creative, and caring thinking. These criteria were presented to two experts in the fields of Education Programs and Social Studies Education as well as two social studies teachers. Following the expert opinion, necessary changes were made and 16 items were determined. The whole unit was analyzed in line with the set criteria. In terms of the prepared criteria table, whether critical, creative and caring thinking skills had a place in the in-text questions in the unit was also examined. Whether the questions in the text fit into thinking training skills or not were determined and the findings obtained from the data were interpreted through the tables prepared. A short version of the criteria table prepared by the researcher was given below:

The characteristics of critical, creative and caring thinking skills in the thinking training program are determined by literature review and these characteristics are written as item. 20 assessment questions in the given unit are examined within these specified properties.

Please use "+" in front of the appropriate lines for the assessment questions in "Science in the time"

**Table 1**

Items	Questions													
	1	2	3	-	-	-	-	-	-	-	-	-	19	20
Is it free from prejudice-free?														
Does it tend to improve students' mental skills?														
Does it lead to exact rights?														
Does it enable the evaluation of the underlying guesses of the thoughts?														
Is it meant to form relation?														

### 2.1 Data Analysis

In this research, critical, creative and caring thinking skills which are determined to be the elements of the program of thinking training were taken as departure points. Content analysis was made so as to explore Social Studies coursebook and workbook in details.

### 3. Findings

During the research, the unit entitled "Science in Time" in Social Studies coursebook of the 7<sup>th</sup> grades was analyzed considering the fundamental characteristics of critical, creative and caring thinking skills and the below findings were obtained. Findings were presented as written elements, visual elements and assessment and evaluation elements respectively.

#### 3.1. Written Elements

In this section, it has been tried to determine how the thinking skills take place by examining the titles, texts and concepts of those titles in the unit "Science in Time".

##### 3.1.1. Titles

###### A. Titles in the Coursebook

There are 5 topics within the unit "Science in Time". This subject matter has been examined according to the basic features of critical, creative and caring thinking within the thinking training.

Titles give information about the content of the text and it serves to draw attention about the texts (Pektaş, 2001). The titles of "Every Scientific Invention is a New Achievement, Written Words Remain, The Scientists in the Turkish and Islamic States, the Freedom of Thought and Science" are included in the unit "Science in Time". When the titles in this section are taken into consideration solely, no comments can be made about their critical, creative and caring thinking skills. The title "How Scientific Knowledge Was Created" is an example of critical and creative thinking skills when examined by considering the characteristics of thinking skills. Critical thinking assumptions are important to make predictions about that topic. Thinking independently and in different dimensions of the title is crucial in critical thinking (Özden, 1997). This question does not change by depending on clearing the prejudices and is expressed away regardless of certain truths. The elimination of prejudices can contribute to their creative and critical thinking by contributing to the freedom of thought of the students (Munzur, 1999).

###### B. Titles in the Workbook

There are 7 titles in the unit "Science in Time" in the workbook. These titles were examined according to the basic characteristics of critical, creative, and caring thinking within the thinking training.

The title "The Wheel Making Life Easier" is aimed to direct students to the benefits that they provide in a particular way. They are straightly directed to see the options rather than making students compare, analyze thus, realizing the options. Here we have not encountered anything that could develop creativity skills and approach them critically. No evidence on thought skills has been identified in the titles "From the Letters and Symbols to the Writing, The Exhibition of Islamic Civilization, A Scientist,

Let's Complete a Time Line, and The Importance of Freedom of Thought". It seems that the students have been informed about the work to be done.

It has been determined that the title "What Would Have Happened Had It Was Not Found" included critical, creative and caring thinking skills. Critical thinking, which is the subject of inquiry and discussion, has been found to be an example that can develop the ability to think creatively about the effectiveness of thinking and thus to understand what can be thought about in such a way as to be able to acquire the skill of caring thinking while observing and comparing observation.

### **3.1.2. Written Elements in the Text**

It is seen that the information about the topic is presented in the coursebook. This information is important in terms of learning the subject. Rather than directly conveying the information provided, the topic must be presented in such a way that it will be able to meet the interests and needs of the student and to encourage their curiosity. Here are mentioned the findings of thinking skills.

On page 98 of the coursebook, it appears that the text under the topic "Every Scientific Invention is a New Achievement" contains subjective thoughts. The paragraph is expressed in a way uttering that "... the Pyramid of Keops is one of the most magnificent works of Egypt. Historian Herodotus, ...". The questions of why, when, and by whom it is determined as the "most glorious" statement remain unanswered in this paragraph. It includes an opinion rather than a fact. This sentence guides students to accept what is said directly on a topic they do not know. The knowledge here can be reached only after investigating and reviewing all the works in Egypt, whether the work is really glorious or not according to the value that the students make for the work of their own thought. With such an expression, it has been determined that critical, creative and caring thinking skills of students can be prevented. It is important to educate individuals who are questioning instead of attitudes, who are able to look critically, who are free from certain prejudices, who have the ability to make decisions according to objective decisions, and develop independent thoughts. Doğanay (2009) also included the step of "separating discrepancies in information, prejudice and pattern judgments and emotional proposals" while expressing the stages of critical thinking. It is seen as a step to guide the teaching of critical thinking by examining the judges who overcame emotional tones and by making them aware of them. In this respect, Munzur (1999) emphasizes that coursebooks should prepare students to think independently, to be critical and creative, rather than giving readers the knowledge that will direct them to form their thoughts.

On page 100 of the coursebook is a paragraph that gives an example of the contributions of the Chinese civilization to scientific and technological developments: "... Without doubt, gunpowder is the most well-known of Chinese inventions, like compass and steel ...". Here, the answer of the questions to why, when, by whom is it "undoubtedly, the most well-known" statement remain unanswered. This statement was also found to be negative in terms of critical, creative and caring thinking skills. It is also seen here that subjective ideas are included in the unit. Instead, it must be indicated

where the required information was gathered. This sentence directs students to accept what is straightly said on a topic they do not know. Ulusoy (2008) mentioned the qualities that should be found in coursebooks to be taught in school. One of these qualities is to be away from prejudice and normative proposals and to include different aspects of the issue. The avoidance of interpretations based on the writer's attitude and prejudices such as "the most splendid, undoubtedly most known" in the texts can contribute to the development of students' thinking skills and their ability to create their own interpretations by thinking in a multifaceted way freely.

When the texts in the coursebook on page 101 are examined, it has been found that critical thinking skills are involved. This page also contains a text entitled "The Adventure of Sand" in a colored box. This text explains how glassmaking is done by giving short examples from the texts written by historians. At the end of this text, there is a website address "www.tubitak.gov.tr" as the source of where this information is obtained. It is seen that this knowledge is an element that can contribute to the critical thinking ability by testing the reliability of the sources of information and capturing the difference between proven facts (Kökdemir, 2000). This is where the related parts of the visuals are quoted from where they are related. Scientific suspicion provides the opportunity to examine the relevant site to investigate. It has been determined that 5 sources are based on the evidence in the written elements included in the unit and 1 news resource is included in the workbook. It is necessary to carefully evaluate the evidence related to the subject, and to inquire through this evidence, and to establish a relationship between them, in terms of the development of thinking skills.

### **3.1.3. Concepts**

In the coursebook, in the beginning of every unit there is concept box which contains concepts of the unit. The concepts not defined in the box but the teachers book ask the students to guess their meaning. It will contribute to the students' understanding of these concepts by considering logically or by understanding their own thinking according to the conditions, they are in. The adequacy of definitions and the ability to measure appropriateness of results, assessed in terms of their lack of clarity and uncertainty in their interpretation and appreciation of the individual's own considerations are seen as an example in terms of their critical and creative thinking skills.

## **3.2. Visual Elements**

In this section, the visuals in the coursebook and the workbook are examined and the findings and comments about how thinking skills take place in the unit "Science in Time" are included.

### **3.2.1. Visuals in the Coursebook**

There are 38 visuals in "Science in Time" unit. It has been determined that elements such as pictures, photographs or drawings are used in relation to these visual elements, but it has been determined that the sources of these visuals are not available and the



guiding questions given under the visuals are not used as much as they should be. The guiding questions under the images are the factors that influence the thinking about that topic. In this respect, the unit visuals are examined and there are 2 visuals that students are asked to answer the related questions. Both visuals include examples that can contribute to the development of critical, creative and caring thinking skills. Here is an example of this topic:

**Image 1:** The Findings on the Visuals in Coursebook



*(For what purposes did the people who lived in the prehistoric ages use the tools seen in the photo above? Please explain with examples)*

Under Image 1, the question "For what purposes did the people who lived in the prehistoric ages use the tools seen in the photo above? Please explain with examples." is asked. Such questions are given as examples of developing creative, critical and caring thinking skills. It is exemplified by the ability of students to develop a new perspective on independent thinking, decision making and objects that can improve their imagination; that is, their ability to think critically and creatively. That they predict why people in prehistoric ages used them will contribute to their caring thinking, which also means understanding the emotions of the person they communicate. It is defined as empathy that an individual emotionally reacts appropriately, taking into account the situation of the other person (Hoffman, 1994; cited in Günindi, 2008). Caring thinking skill also involves developing empathy (MEB, 2007).

Other images included in the course book have also been found to have no reference to where the images were obtained, where they were taken, or drawn.

### 3.2.2. Visuals in the Workbook

When the images in the workbook were examined, it was seen that the pictures summarizing the topic were included. The images used are far from being pictures based on genuine actual evidence. It has been seen that it is composed of hand-made pictures related to that topic. Bangir Alpan (2004) says that graphic design and visual characteristics of coursebooks add to the knowledge and experience of the students. In this respect, it is important that the visual elements in the coursebooks take place in accordance with the developmental stages of the student. For example, instead of the

picture below, photographs such as written tablets, inscriptions, hieroglyphs containing the period can be included according to 7th grade level.

**Image 2:** The Findings on the Visuals in Coursebook



It is stated in the workbook which age the visuals given at the "Completion of the Timeline" activity belong to were and at the end of the unit, the students are asked to complete the box by making their own decisions. In the study pursued here, the student can see that he can produce creative thinking, his own decisions and thoughts; as well as contributing to the development of critical thinking skills with time comparisons, as well as providing a model for the student to contribute to the development of caring thinking skills in the direction of his own thoughts and ideas.

### 3.3. Assessment and Evaluation

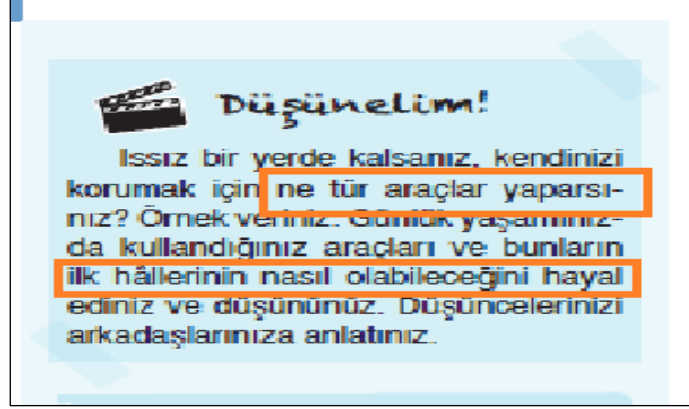
In this section, assessment and evaluation questions, coursebook and workbook will be given under separate titles in the unit "Science in Time". The following ideas and discussions were obtained by considering and analyzing the sections of "Let's Think", the questions in the coursebook, the questions within the section of "What have we learnt?" and unit evaluation questions, the workbook activities, and self-evaluation parts.

#### 3.3.1. The Assessment and Evaluation Questions in the Coursebook

##### Let's Think

There are 5 "Let's Think" questions in the unit. It has been determined that all of the questions are in accordance with thinking training skills. Below are examples of this.

**Image 4:** An example of "Let's Think" Question in the Coursebook



This visual is a question of thinking about the "A New Discovery of Scientific Knowledge". It says "If you were trapped in a deserted place, what kind of tools would you use to protect yourself? Give an example. Imagine and think about the tools you use in your daily life and what they first looked like." It is an issue that requires the student to develop a new point of view in order to think creatively by using their imagination and to evaluate the conditions of the existing situation by bringing the students to different situations and conditions at the same time. In this respect, it has been seen as an example of critical, creative and caring thinking skills.

The question "How can the scientific developments which facilitate our life and the tools that we use in our daily life have emerged?" is included in the "The Scholars in the Turkish and Islamic States". This question sets an example for critical and creative thinking skills. It leads students to think logically, carefully by interrogating. It is an example of a question that can show students that they can examine, question and discuss everything, including everyday life. It is an example that can contribute to the understanding of the contributors to the development and change process through critical and creative thinking, to pay attention to the contributors.

### A. The Questions in the Text

The questions in the text have also been examined according to the criteria table prepared by the researcher during the unit examination phase.

In this unit, there are 20 questions in the text. It has been determined that the questions in the text are generally suitable for teaching critical, creative, and caring thinking skills. There were no findings regarding any of the 6 thinking skills related to the question. Only 20 questions with critical thinking from the 20 questions in the text, 6 questions with only caring thinking, no question with only creative thinking; 4 that contain both critical and creative; 3 containing both creative and caring; 1 containing both critical and caring. Below are examples of questions.

- "By looking at the Hieroglyphs, discuss what the ink may have been used for." This question serves to transform the classroom environment into a questioning environment. The forming of a discussion on a subject is one of the purposes of

thinking training. This question sets an example for the development of critical, caring and creative thinking skills.

- "Which alphabets can you write more easily? Which of these alphabets is similar to the one we use?" poses critical and caring thinking skills. The understanding and conception of certain knowledge of people is the development of a range of thinking skills. Choosing the similarities and differences in the expression here and justifying these choices are important for the development of thinking skills. It has been found that the selection process and the determination of its cause give the ability to think critically by the development of caring thinking, by distinguishing similarities and differences and justifying them.
- The question "What might be the reason for the establishment of the museum? In what areas are Muslim scientists more informed?" has proved that there *is* the ability to think critically and creatively. Making a certain assumption about the reasons for the establishment of the museum is related to their creative different thinking and decision-making in order to reach a certain conclusion about the works they examine.
- The questions "In what areas did the introduced scientists study? What kind of research would you do if you were in the position of these scientists?" and "If you were an explorer living in the 15th century, what would you take with you when you were on a discovery trip?" and "If the people who judged Galileo because he said that the Earth was orbiting lived today, how would they feel?" were found to have creative and caring thinking skills. Putting themselves in shoes of the scientists and the explorers is an issue that allows them to develop empathy skills and to develop caring thinking when assessed in terms of thinking training. At the same time, the student acts on the assumption that he or she puts himself in the others' shoes, takes into consideration the conditions required by the period or situation, and evaluates according to certain criteria.
- The question "What differences would there have been in our lives if there were no developments in these areas? How did these scientific developments affect our lives?" was found to have a critical and creative thinking ability. This question leads to making a certain assumption and thinking about the necessary options. It does not include a certain prejudice, and does not include a referral to a certain point. The assumption and the options are an assessment and comparison.
- "How do we learn innovations and discoveries made in the field of science and thought? What can be the consequences if these innovations are not announced to us? And what is his main idea in his words when Bruno was judged? What might happen when scientists are not free?" It seems that these assumptions are trying to evaluate alternatives and justify them in the framework of these assumptions. When the questions were examined, findings of critical thinking were obtained.

## **B. Unit Evaluation Questions**

There are testing and assessment and evaluation questions that guide the learning and teaching process under the titles "Unit evaluation" in the coursebook and "I am evaluating myself" in the workbook.

The unit evaluation in the coursebook consists of steps A and B. In step A, scientists living in Turkish and Islamic countries in two separate columns and science branches they have been working on are given for matching activity. When this study is examined, the mapping of information that students have learned throughout that unit is an inquiry into the cognitive field of knowledge. The question at the information part was found to be inadequate in terms of critical, creative and caring thinking skills.

In step B, there are 6 multiple-choice questions. These questions have been found to be inadequate in terms of the ability to remember and recognize the information and knowledge, in the sense of being recognized.

### **3.3.2. The Assessment and Evaluation Questions in Workbook**

There are 9 assessment and evaluation questions in the Self-Assessment section of the workbook. The questions in this section are in the information section and four of them are the reading comprehension questions that can be extracted from the sentences given in the text. It seems that the questions in this section are not appropriate for developing thinking skills.

#### **A. Activities in the Workbook**

There are 7 activities in unit "Science in Time" within the workbook. The activities appearing here include questions that contribute to thinking skills. When a few examples of activities are examined;

##### *Activity 1: The Wheel Making Life Easier*

This activity consists of steps A and B. After examining a cartoon given in step A, it was asked to write the answer to the question "What convenience has the wheel brought to human life?" The question helps the evaluation and interpretation of the cartoon.

There are 2 questions at step B of the activity. The first one is "How would you design a wheel model according to your needs in the past when you were living in prehistoric ages?" The students are asked to draw their design in the box below. This question, which will contribute to justification of thoughts by taking into account the necessary conditions on an assumption, has been deemed appropriate in terms of creative thinking, critical thinking and caring thinking abilities.

The second question asked was "What contributions do you think will make the wheel model you are drawing on scientific and technological developments?" This is a question that supports Question 1. This question supports the students' ability to think critically about the development of the belief that students can produce their own ideas independently while discussing the effectiveness of creative ideas.

##### *Activity 2: What Would Have Happened Had It Was Not Found?*

In this activity, it is asked to examine the first civilizations and their inventions by giving the pictures. The students were asked to write their opinions with the

question "What would have happened if they were not invented?" In this activity, students are well suited to creative, critical and caring thinking skills. Finding similarities and differences between the non-existent and the existent can also provide the development of caring thinking skills in terms of making certain decisions about what their own thought is doing with a particular system and why.

*Activity 3: From the Letters and Symbols to the Writing*

There are 5 questions in this activity. It is asked to examine the pictures and texts and to write the answers to the questions that indicate the points. Some of the 5 questions are listed below:

- Are Viking or Hieroglyphic words is tough to write? Why?
- Which alphabets have similarities? What are the reasons for this similarity?
- What changes have occurred in the lives of people with the invention of writing?

Looking at questions 1, 2 and 3, both texts allow comparing and examining the other options. It has also been found that when the person is assessed with certain justifications according to themselves, they make a decision at the end and compares the similarities and differences of the others with each other and evaluates these similarities in terms of revealing interesting ideas, interpretation, comparison and other factors related to the reasons.

*Activity 4: The Exhibition of Islamic Civilization*

In this activity, an event was reported on 12.03.2006 from a newspaper. Three relevant questions were asked. The first two questions are the comprehension questions that you read about the track. The third question is "What else can be done to show the contribution of Islamic civilization to modern science and technology?" It has been determined that this question is an example of creative thinking skill in terms of determining alternatives. What is better than the current situation is an inquiry into the emergence of completely original ideas.

## **4. Conclusion**

### **4.1. Written Elements**

#### **4.1.1. Titles**

Within the unit, the titles of the coursebook and workbook have been examined. There are 5 titles in the coursebook: "Each Scientific Invention is a New Achievement, Written Words Remain, The Scientists in the Turkish and Islamic States, Freedom of Thought and Science, How Scientific Knowledge Was Created". There are 7 titles in the workbook: "From Letters and Symbols to the Writing, The Exhibition of Islamic Civilization, A Scientist, Let's Complete a Time Line, The Importance of Independent Thought, What Would Have Happened Had It Was Not Found? And The Wheel Making Life Easier." With the titles in the coursebook "How Was Scientific Knowledge Created?" and in the workbook "What would have happened had it was not found?", it has been determined that there are critical, creative and caring thinking skills related to the topic. When the titles apart from these are taken into consideration solely, comments about critical, creative and caring thinking skills cannot be made.

The titles are articles that provide readers with background information about the text, often providing readers with prejudice about the text (Bangir Alpan, 2008). At the end of the examinations made, it was seen that there were fewer questions about the topic and the way of thinking training. For example, in the title "Every Scientific Invention is a New Achievement", a clear statement has been made from the students that they can question, doubt and approach from a critical perspective. Clearly, these learners may be able to get direct acceptance without questioning them. The Ministry of National Education's Regulation on Coursebooks and Educational Instruments mentions that the titles should be systematically organized and attention is paid to the fact that the titles are interesting. Since the topic is an integral part of the text, it is included in these regulations that students should be treated in a way that will lead them to think independently and creatively (Ders Kitapları ve Eğitim Araçları Yönetmeliği, 2011). It is important that the titles in the coursebooks take the form of questions in a way that attracts attention by the students, contributing to their critical and creative thinking. It is suggested to ask that "Is Each Scientific Invention a New Success?" Thus, discussions and comparisons of ideas through the titles will contribute to the establishment of links between concepts and activities.

#### **4.1.2. The Written Elements in the Text**

The written texts in the coursebooks and workbooks should be learned and organized in line with the interests and needs of the learners and should be objectively based on evidence. The texts in the coursebooks have also included expressions such as "the most magnificent, of course, the most known", which contain subjective thoughts. The students here can decide according to the value they give to their thoughts after they have investigated all the works in Egypt, whether they are really glorious or not, and after reviewing them. The coursebooks should avoid giving them ready-made thoughts to convey the readiness information to the students and make them think freely (Munzur, 1999). This can negatively affect critical, creative and caring thinking when thinking in terms of educational skills.

There are six of the written elements in the coursebooks and workbooks, which are of a crucial aspect in providing the relevant resources where the relevant news and articles are taken. A careful evaluation of the evidence related to the subject, and the examination of these evidences and their interrogation and interrelationships are necessary for the creating of thinking skills.

Resource Usage is a necessary skill for the individual to establish students' "causal relationships, to check the validity of existing information, to provide a scientific doubt, to identify students" sources of knowledge in social studies classes and to question existing sources critically (Kabapınar, 2009).

In the unit, the concept box is located before the topic begins. There is a total of 5 concept boxes in this unit. When evaluated from the aspects that there are concepts that are not defined and evaluated in terms of students' predictions, their lack of clarity in their descriptions, their uncertainty in the results, and that the ability to test the appropriateness in the results and the individual's self-awareness, the concept box was



found positive in terms of the development of critical, creative and caring thinking skills, if supported by the teacher's book.

#### **4.2. Visual Elements**

There are 38 visuals in the coursebook. The guiding questions under the images are the factors that influence the way of thinking about that topic. It is important to ask questions in the development of critical and creative thinking. It is necessary to make use of the questions to improve students' creative and critical thinking. Asking open-ended questions that do not have a single correct answer, thinking about possible solutions and making an assessment can enable us to comment on different options (Doğanay, 2009). In these images, there are 2 pictures asking guidance questions. These questions are positively found in terms of critical, creative and caring thinking. In the other images, it is determined that the related pictures, photographs or drawings are used but the sources of these images are not available and that there are not enough places in the guidance questions below the visuals. The images in the student workbook have also included pictures that summarize the topic. In addition, some visuals in the unit did not seem to match the level of development of the students. According to the level of primary 7<sup>th</sup> grade students, the pictures to be included in the book must be different according to the visual elements in the lower classes of primary education. This is because one of the points to be taken into consideration in preparing the texts included in the coursebooks is that the images are appropriate for the development levels of the students, they are clear and clear due to visual perception, and the colors are adaptable (Ulusoy, 2008). At the same time, the fact that the sources of the texts in the coursebook are not given has negative consequences when evaluated in terms of thinking skills. The granting of resources will contribute to careful evaluation of the relevant evidence and to relevant reviews and comparisons. However, this unit has been observed in the visuals except for a few examples.

#### **4.3. Assessment and Evaluation**

In a unit, there are questions in the text that take students to mid-text evaluations and assessment and evaluation questions at the end of the unit. Assessment and evaluation questions enable students to improve their knowledge and skills in the topic they are learning, as well as to blend and transform the information they have gained and to be aware of the lacking points related to the topic (Özçelik, 1981, Kılıç & Seven, 2008). Therefore, the questions in the unit need to be well-prepared. When the research is examined, it is emphasized that the students should not only have the questions of repetition and memorization in the knowledge level but also have the questions in the level of analysis and synthesis to develop the skills of thinking critically, creatively and in different ways.

When the results obtained from the assessment and evaluation are examined, there are five "Let's Think" questions in the unit. Four of the questions were found to be appropriate for thinking skills.



When looking at the questions in the text, there are 20 questions. When the questions in the text were examined, it was seen that there were not any comments about the thinking skills in 6 questions, and 14 questions could contribute to the development of critical, creative and caring thinking skills.

There are 6 multiple choice questions in the unit evaluation and 9 assessment and evaluation questions in the self-evaluation section of the coursebook and the workbook. The questions in this section are in the information level and four of them are reading comprehension questions that can be extracted from the sentences given in the text. From this point of view, the question in the information section of this section was found to be inadequate in terms of critical, creative and caring thinking skills. In this context, the use of alternative assessment methods was seen appropriate (MEB, 2007). In this respect, it has been seen that alternative assessment and evaluation methods are lacking in coursebooks and workbooks.

Involving activities in the coursebooks that allow students to develop their thinking skills should guide them to think correctly and be in harmony with the thinking features of the appropriate subject area. In addition to the questions that students can answer independently, they should be able to think of them in different ways, in the way they can refer to other people's views and thoughts (Kılıç & Seven, 2008).

When the activities included in the workbook are examined by the assessment and evaluation dimension, there are 7 activities in the unit "Science in Time". It is a positive feature to include questions in the activities listed here that contribute to the thinking skills. Composition writing and open-ended questions are positive features in terms of the development of thinking skills. In addition to the activities such as drawing pictures, writing a composition, poetry that will enable creative and different point of views to think, it is important to have questions about open-ended and possible expressions including thinking skills (Seferoğlu & Akbıyık, 2006; Kılıç & Seven, 2008; Munzur, 1999; Alkan & Kurt, 1998; Çalışkan, 2009).

## 5. Suggestions

In the light of the results obtained from the study, the following suggestions are made:

- The sources of the pictures in the book should be included and it should be taken into consideration that these visual elements should be prepared in accordance with the development levels of the students,
- In the sections related to the visual elements, the students should be asked questions, written ones or questions that will lead them to think about the development of the thinking skills,
- The coursebook and the workbook should include questions that will improve the thinking skills of the students in the preparation of the assessment questions at the end of the unit,
- The activities in the workbook were found positive in terms of the development of students' thinking skills. Removal of workbooks in the academic year 2018-

2019 is on agenda. In terms of contributing to the thinking skills of the students, it is recommended to include the activity examples in the workbooks in the coursebooks.

- The concepts in the coursebook are supported by the teacher's book, which contributes positively to the development of students' thinking skills. Examples of questions that will assist teachers from the aspect of making these concepts to be considered should be included. From this point of view, the elimination of teacher's books in the academic year 2018-2019 and the lack of a guidance to support the coursebook and workbook will be a drawback for both teachers and students. In this respect, it is suggested that such sample questions that will support the concept box in the coursebooks should be included in terms of the development of thinking skills in case of the elimination of teacher's book.
- Compared to coursebooks and workbooks, it has been seen that the latter provide students with a greater amount of activities in terms of the development of thinking skills such as critical, creative and caring thinking; and in this respect, students are more active and think better than coursebooks. Removal of student workbooks with the 2018 Program is considered to be a drawback in this respect. It is suggested that workbooks should not be removed and used more actively in the courses.

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