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## Investigation of the Earthquake Content in Social Studies Coursebooks within the Scope of Middle School Students' Views

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Earthquake is one of the issues of social studies education within the scope of being a phenomenon affecting social life. As a matter of fact, social studies is a course that deals with all the elements related to social life. Earthquake, which is an issue of social studies, should then be taught comprehensively due to its impact on individual and social life. For this very reason, the content related to earthquake in social studies coursebooks should be both adequate and appropriate for the particular levels. The aim of this study was to examine the content on earthquake in social studies coursebooks within the scope of the views of middle school students. The views of the students in 11 provinces affected by the earthquakes that took place in Kahramanmaraş province of Türkiye on February 6, 2023 were consulted. A basic qualitative design was used in the study. Maximum diversity and criterion sampling techniques were used to determine the participant group. A semi-structured interview form was resorted to with a view to collecting the data. Content analysis was utilized to analyze the data. In the study, it was determined that the students perceive earthquake as a disruptive phenomenon, that the students thought social studies course had an important role in teaching the concept of earthquake, that the students found social studies coursebooks insufficient on the elaboration of earthquake topic and thought that the books should be redesigned accordingly. Depending on the results, recommendations for researchers and education planners were made.

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## Introduction

Due to its natural structure, our world frequently witnesses natural disasters. Natural disasters are caused by climate change and human activities as well as the processes of change that our world is undergoing. Our world experiences a wide variety of natural disasters such as earthquakes, tsunamis, hurricanes, floods and avalanches, volcanic eruptions, fires and droughts. These natural disasters threaten people's lives and cause material and moral losses. An earthquake is one of the natural disasters on the agenda of the world and Türkiye. As a matter of fact, the earthquakes that took place in Kahramanmaraş province of Türkiye on February 6, 2023, also affected many provinces around

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Kahramanmaraş (Adana, Adıyaman, Diyarbakır, Elâzığ, Gaziantep, Hatay, Kilis, Malatya, Osmaniye, Şanlıurfa). These earthquakes were on the agenda of both Türkiye and the world.

Earthquakes are tremors caused by movements in the earth's crust below the earth's surface (Meskouris et al., 2019). Earthquakes take place by transferring the energy generated by the plates that make up the Earth's crust and are in constant motion while rubbing against each other to the Earth's surface (Parrinello, 2022). Due to the unstable structure of the earth, earthquakes can take place at any time in the earth's crust, but they can take place more frequently and more severely in areas where fault lines pass (Coen, 2019). This is because the earth's crust consists of large plates that are constantly moving. As a result of the friction of these plates, fault lines are formed. Fault lines are considered to be the riskiest areas in terms of earthquakes because they are the friction centers of fractures in the Earth's crust (Vermij, 2020). Türkiye is considered as one of the countries in these risky areas due to its location in a region where important fault lines pass through the world. As a matter of fact, Türkiye is a country located on important fault lines such as Northern Anatolia, Eastern Anatolia, Western Anatolia, Fethiye-Muğla and Southern Anatolia (Kuzucuoğlu, Şengör and Çiner, 2019).

Earthquakes affect social life as they cause loss of life, injury, material damage, and psychological destruction (Maki et al., 2019). Reducing the damage caused by earthquakes and ensuring that societies are better prepared for earthquakes can be possible by educating individuals who make up societies about earthquakes (Torani et al., 2019). In this context, education becomes one of the most important factors that play a role in protecting societies from earthquakes or ensuring that they survive earthquakes with minimal damage.

Earthquake education is provided both through special education programs and school courses as a part of natural disaster education. When it is considered in terms of individuals at primary and middle school grades, earthquake education is provided through the social studies course that deals with daily life. As a matter of fact, earthquake is a direct subject of individuals' daily life as a reality that can be experienced at any time.

Social studies is a course that adapts knowledge gathered from various social science disciplines to the grades of students at primary and middle school and teaches it to these students. Social studies is a course that aims to provide students with knowledge, skills and values they can use daily (Evans, 2004; Singer, 2008). Considering the aim of social studies, it is within the scope of social studies to provide students with knowledge and skills about earthquakes, which is the subject of daily life. On the other hand, the effects of earthquakes on society and individuals, the organization of the daily lives of people living in earthquake-prone areas, and post-earthquake social assistance and recovery activities are also important issues in terms of social studies. As a matter of fact, presenting earthquake related content in the social studies course to students at an adequate level can contribute to students' understanding of the difficulties caused by earthquakes by raising awareness about earthquakes and providing them with knowledge about earthquake protection, earthquake management, rescue activities, and relief services. From this point of view, in this study, the content of social studies coursebooks on earthquake issue was examined according to the views of middle school students.

Social studies education is carried out through the social studies curriculum and coursebooks. In the learning areas of the current 2018 Social Studies Course Curriculum (SSCC) for the middle school grade, the topic of earthquake is addressed as a part of the general topic of natural disasters (MoNE, 2018). In fact, natural disasters covering also the topic of earthquake

are included in two learning outcomes in the 5th grade People, Places and Environments learning area and in one learning outcome in the 7th grade Global Connections learning area. These outcomes and their explanations are as follows (MoNE, 2018):

*SS.5.3.4. Questions the causes of disasters and environmental problems in his/her environment.*

*SS.5.3.5. Explains the effects of natural disasters on social life with examples.*

*SS.7.7.4. Develops ideas for solving global problems with his/her friends. (Global climate change, natural disasters, hunger, terrorism, and migration will be discussed.)*

When the 2018 SSCC's content on earthquake was examined, it was determined that there was only one explanation that directly included the term earthquake in the program, and the other learning outcomes related to this subject had general explanations addressing all natural disasters. Middle school social studies coursebooks cover the earthquake topic in a more detailed way than the 2018 SSCC. The information about the middle school social studies coursebooks is shown in Table 1:

Table 1: Information about the Middle School Social Studies Coursebooks

Book	Authors	Publisher
<i>Middle School and Imam Hatip Middle School Social Studies 5th Grade Coursebook</i>	Salim Açıkgöz	E Kare Eğitim Publication
<i>Middle School and Imam Hatip Middle School Social Studies 6th Grade Coursebook</i>	Cengiz YILDIRIM, Fatih KAPLAN, Hayriye KURU, Mukaddes YILMAZ	MoNE Publication
<i>Middle School and Imam Hatip Middle School Social Studies 7th Grade Coursebook</i>	Hikmet AZER	Eğitim Publication Printing

As seen in Table 1, middle school social studies coursebooks published by three different publishers were examined within the scope of the aim of the study. The earthquake related content in the coursebooks is shown in Table 2:

Table 2: The Earthquake Related Content in the Middle School Social Studies Coursebooks (Açıkgöz, 2018; Yıldırım et al., 2019; Azer, 2019)

Grade	Unit	Theme	Content
5	<i>Our Rights and Responsibilities</i>	<i>Lesson Social Studies</i>	<i>A story about the necessity of having an earthquake kit</i>
5	<i>Let's Know Our Environment</i>	<i>Disasters and Environmental Problems</i>	<i>Definition of earthquake, visualization of earthquake zones in Türkiye</i>
5	<i>Let's Know Our Environment</i>	<i>The Impact of Natural Disasters</i>	<i>1999 Marmara Earthquake, The consequences of the earthquake, Examples of major earthquakes in the world</i>
6	<i>We and Our Values</i>	<i>One Hand Makes No Difference, Two Hands Make a Sound</i>	<i>Aid campaigns after the 2011 Van Earthquake</i>
7	<i>Bridges Between Countries</i>	<i>We Will Save the World</i>	<i>General definition of natural disasters and measures to be taken against natural disasters</i>

When Table 2 is examined, it is seen that the earthquake related content in the 5th grade coursebook is in the form of a story about having an earthquake bag, defining the earthquake, visualizing earthquake zones and giving examples of earthquakes in Türkiye and the world; in

the 6th grade coursebook, it is in the form of the importance of solidarity campaigns in case of earthquakes; and in the 7th grade coursebook, it is in the form of defining the earthquake within the general subject of natural disasters and the measures to be taken about earthquakes. On the other hand, it is understood that the content of the coursebooks does not contain detailed information on earthquake. As a course that teaches social issues, however, social studies is expected to have complete content on situations that affect society, such as earthquakes.

When the literature on the subject of the study was reviewed, no study was found that specifically examined the place of earthquake issue in coursebooks in Türkiye or in the world. In the literature review, it was found that the earthquake related content in coursebooks was analyzed both in Türkiye (Duman Kocabaş, 2011; Kırıkkaya, Ünver and Çakın, 2011; Kılıç, 2019; Önal, 2019; Değirmenci, Kuzey and Yetişensoy, 2019; Karaca, 2022) and in the world (Morrissey, 2004; Izadkhah and Hosseini, 2005; Komac, Zorn and Cigliç, 2013; Hayashi, 2014; Seddighi et al, 2021; Li et al. 2022, Seddighi et al., 2022) as part of the topic of general disasters. Both in Türkiye and in different countries around the world [Japan (Satake, 2015), USA (Gerstenberger et al., 2005), Philippines (Ong et al., 2021), China (Xiang et al., 2021), Taiwan (Chao et al., 2020), India (Hazarika and Kayal, 2022), Greece (Bonatis et al, 2022), Romania (Micu, Micu and Havenith, 2023), Canada (Eyre et al., 2022), Germany (Sach, Buchner and Schmeiden, 2020), Finland (Veikkolainen et al., 2021) etc.] earthquakes take place sometimes and negatively affect daily life. In this context, it is important to investigate whether the social studies coursebooks in the countries where social studies course is taught (Türkiye USA, Finland, Germany, Greece, Japan, Korea etc.) are adequate. It is especially important to investigate whether social studies textbooks are adequate in terms of earthquake content within the scope of student views. As a matter of fact, taking the views of students on this topic is important in terms of determining the deficiencies of social studies textbooks on earthquake related content. From this point of view, it is thought that this study will contribute to the literature in terms of its originality and examining both the content of middle school social studies coursebooks on earthquake topics and the views of students in this context. It is also expected that the results of this study will be resources that will be useful for educational planners in organizing the earthquake related content of social studies coursebooks in countries with earthquake hazards. Through the results of this study, educational planners will take students' views into consideration when preparing the content of social studies coursebooks. In this context, it is thought that this study which focuses on students' views will provide knowledge that educational planners can benefit from. On the other hand, it is thought that the results of this study will be a resource that researchers who will conduct similar studies can benefit from. Because it is assumed that this study will encourage researchers to examine the earthquake content in social studies coursebooks with different methods and techniques and to confirm the results of this study in different ways.

## **Aim**

In this study, it was aimed to examine the earthquake related content in middle school social studies coursebooks within the scope of the views of middle school students living in 11 provinces affected by the earthquakes that took place in Kahramanmaraş province of Türkiye on February 6, 2023. For this aim, the following questions were sought to be answered.

- How do middle school students perceive the phenomenon of earthquake?



- What are the views of middle school students on the role of social studies course in teaching about earthquake?
- What are the views of middle school students on the content on earthquake in social studies coursebooks?
- What are the views of middle school students on the redesign of social studies coursebooks within the scope of earthquake?

## **Method**

Qualitative research method was used in this study. Qualitative research is a method that examines events, phenomena and situations within their own conditions and aims to collect in depth information (Denzin and Lincoln, 2018). The why qualitative research method used in this study is to examine the participants' views on earthquake related content in middle school social studies coursebooks are to be examined in depth. This study was conducted within the scope of the permission obtained from scientific research ethics committee of a university in Türkiye with the decision dated 16.03.2023 and numbered 67215.

## **Design**

The basic qualitative design was used in the study. The basic qualitative design is used in studies that examine how people understand concepts in depth (Merriam and Tisdell, 2015). The reason for using the basic qualitative design in this study is to investigate how middle school students understand the earthquake related content in social studies coursebooks.

## **Participants**

The participant group of the study consisted of students studying in secondary schools in 11 provinces (Adana, Adıyaman, Diyarbakır, Elâzığ, Gaziantep, Hatay, Kahramanmaraş, Kilis, Malatya, Osmaniye, Şanlıurfa) affected by the earthquakes that took place in Kahramanmaraş province of Türkiye on February 6, 2023. The participant group was formed in two stages. The content of the stages followed while forming the participant group is as follows:

**First Stage:** Criterion sampling method was used in the first stage of the process of forming the participant group. Criterion sampling is aimed at selecting participants with the characteristics appropriate to the aim of the study (Byrne, 2001). The criterion considered at this stage was to live in the provinces (Adana, Adıyaman, Diyarbakır, Elâzığ, Gaziantep, Hatay, Kahramanmaraş, Kilis, Malatya, Osmaniye, Şanlıurfa) affected by the earthquakes that took place in Kahramanmaraş province of Türkiye on February 6, 2023.

**Second Stage:** In the second stage of the participant group formation process, maximum diversity sampling was used. Maximum diversity sampling aims to form the participant group from people who will provide maximum data diversity (Byrne, 2001). The reason for using maximum diversity sampling is that the study aims to provide maximum data diversity by including participants from all provinces affected by the February 6, 2023, earthquakes. The



participants' names and the schools they attended were kept confidential in accordance with ethical rules. In this context, the participants were included in the study with the names of the city they lived in. Information about the participants was shown in Table 3.

Table 3: Information about the Participants

Province	Grade		
	5th	6th	7th
Hatay	S1*, S2*		
Gaziantep		S3*, S4*	
Kahramanmaraş	S5*		S6*
Malatya		S7*	S8*
Adıyaman		S9*	S10*
Diyarbakır	S11*		
Elazığ	S12*		
Kilis		S13*	
Adana		S14*	
Şanlıurfa			S15*
Osmaniye			S16*

\* Participants were coded by adding numbers from 1 to 16 to S, the initial letter of the word student.

As seen in Table 3, a total of 16 participants from all provinces affected by the earthquake took part in the study. Five of the participants, two from Hatay, one from Diyarbakır, one from Elâzığ and one from Kahramanmaraş, were in the 5th grade; six participants, two from Gaziantep, one from Kilis, one from Adana, one from Adıyaman and one from Malatya, were in the 6th grade; and five participants, one from Adıyaman, one from Kahramanmaraş, one from Osmaniye, one from Malatya and one from Şanlıurfa, were in the 7th grade.

#### **Data collection tool and data collection process**

A semi-structured interview form developed by the researcher was used as a data collection tool. In the process of developing the interview form; various procedures were carried out. These procedures are as follows respectively:

- (1) A professor working in the field of Guidance and Psychological Counseling was consulted about the appropriateness of the questions in the interview form. Within the scope of the opinions of the professor in question, the expressions evocative of the earthquake moment in the questions were deleted and the questions were rewritten.
- (2) A professor working in the field of Turkish Language was asked for his opinion on whether the questions in the interview form were appropriate for the level of middle school students. Depending on the feedback given by the professor, the questions in the form were revised and made suitable for the level of middle school students.
- (3) Two professors who had conducted qualitative studies similar to this study were asked for their opinions on whether the questions were suitable for qualitative data collection. Within the scope of the feedback received from the professors, the limiting statements in the questions were removed and the questions were finalized.
- (4) The final version of the interview form was piloted with three students, one from 5th grade, one from 6th grade and one from 7th grade.

After the corrections made within the scope of the opinions received from the experts and the experiences during the pilot study, it was determined that the interview form was convenient for collecting the data of this study.

The participants in the study were interviewed via video call using an internet connection. The interviews with the participants were recorded electronically with the permission of the participants. The data were then transcribed and prepared for analysis.

### **Data analysis**

To analyze the data, content analysis was used. Content analysis is an analysis method that aims to reach conceptual and relational structures data set (Creswell & Poth, 2018). The reason for using content analysis in the study is that the analysis was conducted within the scope of natural themes that emerged during the analysis, not according to predetermined themes. One third of the codes and themes created by analyzing the data were sent to a professor who is competent in qualitative data analysis and an opinion was obtained on their suitability. Some of the codes were deleted and some themes were redesigned with the recommendations of the expert.

### **Ethics**

In the study, various procedures were carried out within the scope of scientific ethics rules. These procedures are as follows:

- Before starting the study, ethics committee permission was obtained from scientific research ethics committee of a university in Türkiye.
- The participants and their parents, from whom the qualitative data of the study were collected, were informed about the content of the study and a declaration was obtained from them that they voluntarily participated in the study.
- The records taken were filed with the knowledge of the participants and it was reported that the data would be destroyed after the publication of the study.
- The data were used only for this study.
- The names and other private information of the participants in the study were kept confidential.

### **Limitations**

The limitations of the study are following:

- The participant group of the study was limited to a total of 16 middle school students from 11 provinces affected by the earthquake in Kahramanmaraş province of Türkiye on February 6, 2023.
- The data collection tools of the study are limited to a semi-structured interview form.

### **Trustworthiness**

In the study, trustworthiness, which is valid for qualitative studies, was satisfied. Within this scope, various procedures were carried out. The procedures are listed below:

- The following procedures were performed for the questions in the semi-structured interview form used to collect the data of the study.
  - ✓ The opinions of two field experts were taken to ensure its suitability in terms of language and psychological connotation.
  - ✓ In order to ensure its suitability for the purpose of the study, the opinion of an expert competent in qualitative studies was consulted.
  - ✓ It was piloted to ensure its suitability for middle school students.
- The data collected during the study process were filed by remaining faithful to their originality.



- One third of the codes and themes were sent to an expert to asked about their suitability.

## Findings

The findings reached in the study were presented under four themes. The findings were supported by direct quotations and the relationship between the codes and the themes were visualized.

### *Perceptions of students about the phenomenon of earthquake*

In the study, the perceptions of students about the phenomenon of earthquake was researched. The findings obtained in this context are shown in Figure 1.

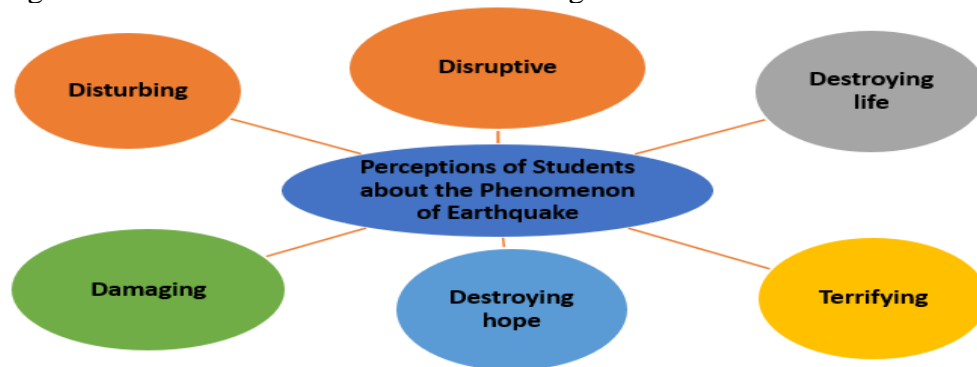


Figure 1. Perceptions of Students about the Phenomenon of Earthquake

As seen in Figure 1, there are six codes under the theme of the perceptions of students about the phenomenon of earthquake. These codes were disruptive, destroying life, terrifying, destroying hope, damaging, and disturbing. Some representative statements were as follows:

It was determined that some of the participants in the study perceived the phenomenon of earthquake as something disruptive. One of the most striking expressions providing the finding was presented by S1. The participant expressed his/her perception on earthquake by saying *"I think earthquake is the most disruptive thing in the world. I think there is nothing else as disruptive as earthquake."* S2 also expressed his/her view with similar sentences. S2 first talked about his/her earthquake experience by saying *"At the time of the earthquake I thought I was going to die. Our house shook so violently that I thought it was all over."* S2 continued *"A wobble like this can destroy everything. Earthquake is a bad thing that destroys everything."* and revealed that he/she perceived the phenomenon of earthquake as something disruptive. Another participant who associated earthquake with something disruptive was S10. This participant said *"Many times I saw videos of earthquakes on TV or on the internet, but it was when I experienced the earthquake that I clearly understood what it was like. The earthquake destroys everything."* and embodied his/her perception on the subject. S10 continued *"We must recognize the earthquake very well. If we do not recognize the earthquake, it can destroy our world. That's why everyone needs to learn about earthquakes."* and expressed the importance he/she attributed to the phenomenon of earthquake.

It was determined that one of the students participating in the study perceived earthquake as something destroying life. The student mentioned is S7 presented his/her perception in this context with the following words:

*"The first earthquake took place in the morning. The second earthquake took place at noon. I never thought the earth could shake like that. I felt like I was on a ship."*

*Everything was spinning around me. There were noises coming from the walls. The walls were cracking. Everything was falling. I wanted to get up and run outside, but I couldn't. At last, I got up and ran outside. Everything around was collapsing. The earthquake was destroying everything. I hope no human being will ever experience an earthquake. Earthquake is a very bad thing. Earthquake is a destroyer."*

It was determined that the perception of some participants on the phenomenon of earthquake were based on terrifying. As a matter of fact, S3 said *"Earthquake is a terrifying thing. Even now I am terrified when I think about it. I shake when I think about the earthquake. I don't remember ever being so scared. Everyone in the house was screaming at the time of the earthquake. Even my mother and father hugged each other out of fear."* S3 continued *"I knew the earthquake was a disaster, but I didn't think it could be so terrible."* and embodied the phenomenon of earthquake. S5 also presented his/her perception of the phenomenon of earthquake in a similar way. S5 said *"The moment of the earthquake was very terrifying. Both my family members and our neighbors were screaming. Everyone was terrified. I hope there will never be another earthquake. I don't want to experience such a terrifying moment ever again."* and he/she expressed that he/she perceived earthquake as something terrifying.

It was found that the participant with the code S6 in the study perceived earthquake as something destroying hope. The striking statements of S6 providing the finding are as follows:

*"Our house collapsed in the earthquake. The earthquake destroyed all our hopes for life. We have no home to go. We have no beds to sleep in. My family and I are living in a tent. We don't know what will happen when we wake up tomorrow. We don't know anything. We just live. We try not to think about anything. Because even if we think too much, we cannot solve any problem. We have lost all our hopes now. The earthquake destroyed our hopes."*

It was observed that some participants in the study expressed the phenomenon of earthquake as something damaging. For example, one of the participants, S14 embodied his/her thoughts as follows: *"Our house was not collapsed in the earthquake, but it was damaged. Some of our neighbors' houses were also damaged. Earthquake is a something damaging."* Another participant, S16 said *"Earthquake is something that damaging people."* Another participant Elâzığ said *"Earthquake damages people's lives and property."*

It was determined a few students participating in the study perceived earthquake as something disturbing. One of these students mentioned is S13. S13 presented his/her perception in this context with saying *"Even thinking about the earthquake disturbs me. I don't want to think that there will be an earthquake again. I feel very disturbed when I think about the earthquake."* Another participant S14 presented his/her perception in a similar way *"I feel like I'm going crazy when somebody talks about earthquakes. The earthquake issue makes me very disturbed."* and he/she expressed that he/she perceived earthquake as something disturbing.

### ***Views of students on social studies course's role in teaching earthquake issue***

In the study views of students on social studies course's role in teaching earthquake issue was researched. The findings obtained in this context are shown in Figure 2.

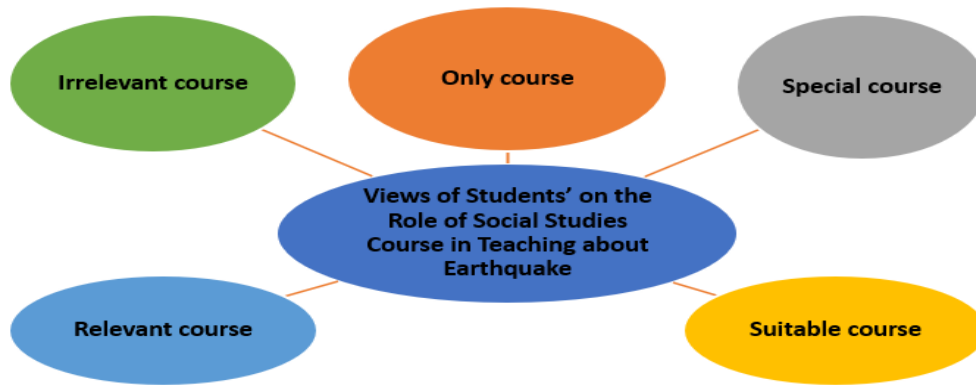


Figure 2. Views of Students on Social Studies Course's Role in Teaching Earthquake Issue

As seen in Figure 2 there are five codes under the theme of views of students on social studies course's role in teaching earthquake issue. The codes in Figure 2 were shown that students considered social studies course's role in this context as an only, special, suitable, relevant, and irrelevant course. The most interesting statements of the participants in this context are as follows:

Many students stated that earthquake is the subject that can be taught through the social studies course. For example, S4 stated, *"Earthquake issues are only in social studies books. I think social studies is the only course that includes earthquakes."* he/she indicated that social studies the only course that this subject can be taught to middle school students. S4 made his/her point of view clearer by stating: *"As far as I know, natural disasters such as floods, earthquakes and forest fires are the subject of social studies course only."* Another participant who used striking expressions was S11. S11 expressed his/her point of view to the question posed to his/her during the interview, with the definitive statement, *"Of course, we can say that the social studies course is the special course for this subject."* Continuing his/her words with the statements, *"Because earthquake is a social issue. Therefore, earthquake is taught through social studies course."* Another view came from participant S8. S8 emphasized the scope of social studies by stating, *"I think the most suitable course for teaching earthquake issue is social studies."* Continuing his words, S8 made clear that the issue of earthquake is within the scope of social studies, *"Earthquake is a social event because it affects the society. Therefore, it is taught in the social studies course."* Another participant who made remarkable statements was S1. The participant made comprehensive statements on the subject. S1's view on this issue is as follows:

*"My family, our neighbors and I experienced the earthquake. We experienced two earthquakes. Now our house and our neighbors' houses are in a very bad condition. My family's psychology is bad. My family's economy is bad. My family and I have been through so much, and the earthquake is the cause of it all. So, an earthquake is something that causes so many things. In this direction, the earthquake affected every part of my life and my family's life. And something that affects our lives so much is related to social life. Things related to social life are taught in social studies course. Therefore, earthquake is also a subject relevant to social studies course."*

In the study a few participants stated that earthquake issue cannot be taught through the social studies course. For example, participant S6 said, *"In my opinion, earthquake is not the subject of social studies. I think earthquake is the subject of Turkish language course."* he/she stated that earthquake is not the subject of social studies course. A similar view was expressed by

S14. S14 said *I couldn't make a connection between social studies and earthquakes. I think the two are not relevant.*

### **Views of students on the content on earthquake in social studies coursebooks**

In the study views of students on the content on earthquake in social studies coursebooks was researched. The findings obtained in this context are shown in Figure 3.

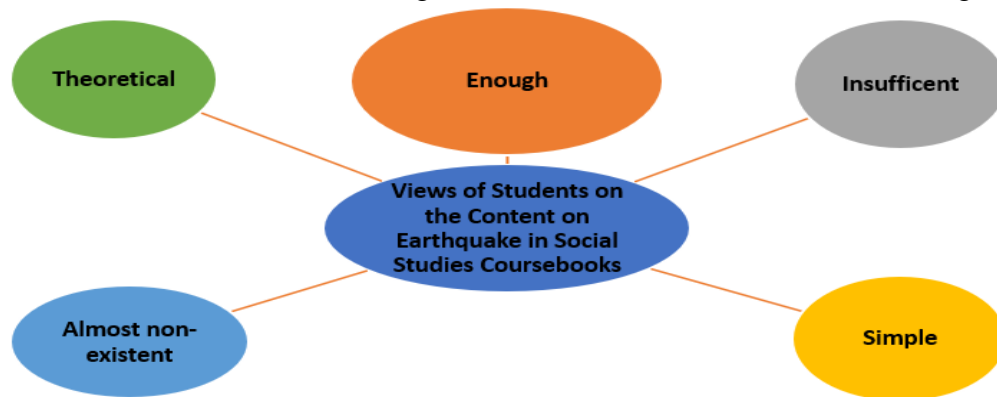


Figure 3. Views of Students on the Content on Earthquake in Social Studies Coursebooks

As seen in Figure 3, the theme of views of students on the content on earthquake in social studies coursebooks includes five codes. The students view the content on earthquake in coursebooks as enough, insufficient, simple, almost non-existent and theoretical. Some of the statements that provide the findings are as follows:

Some participants hold the view that there is enough content on earthquake in the social studies coursebooks. One of these participants is S12. S12 thinks that the books are sufficient in terms of earthquake, *"I think our book (5th grade social studies coursebook) has enough content about earthquakes."* He/she added *"Because as far as I remember, there were a lot of earthquake related topics in the book."* A similar view was expressed by S5. The participant: *"I think the social studies coursebook contains enough knowledge on this topic (on earthquake topic)."*

A few participants stated that they considered the social studies coursebooks insufficient on earthquake issue. One of the participants who made remarkable statements on the subject was S9. S9's view on this issue is as follows:

*"There is no knowledge on earthquake topic in the social studies book. This year (in 6th grade) we didn't study anything about earthquakes. I think social studies books are insufficient in this subject. Because of the insufficiency of social studies on earthquakes, students do not learn anything about earthquakes. Since they don't learn anything, they don't know what to do in case of an earthquake. This is a deficiency."*

Another participant, S16, used similar expressions. He/she said, *"There is very little knowledge on earthquake topic in the social studies book. The book (social studies coursebook) is insufficient in this context."*

Some of the participants stated that they found the social studies coursebooks simple on earthquake issue. For example, S15 said, *"In the book (in social studies coursebook) there are only one or two places where there is simple knowledge about earthquakes."* S10 found the social studies coursebooks simple on earthquake issue. He/she expressed the simple side of the coursebooks on the subjects by stating, *"I'm thinking now, I remember that we studied earthquakes only once in social studies course. We read a very simple story. That's all."*

It was determined that some of the participants in the study considered that the content on earthquake issue in social studies coursebooks almost non-existent. One of the most striking views in this context was expressed by S3 as follows:

*"I swear, the earthquake topic in the social studies book is almost non-existent. There are a lot of history topics in the book. There is a lot of knowledge about the environment. There is also a lot about environmental pollution. But the topics about earthquake are very few. Therefore, we do not learn anything about earthquakes. For example, if I had knowledge about earthquakes, I wouldn't have been so scared during the earthquake. I would have done what was necessary immediately. I would have secured myself. But I didn't know what to do during the earthquake. That's why I was so scared. Because I didn't learn anything about earthquakes at school."*

A few participants stated that they considered the social studies coursebooks theoretical on earthquake issue. One of these participants was S2. S2 expressed his/her views in this context, *"In the books (in social studies coursebooks), earthquake related topics are explained without practice. There is information about earthquakes in the books. But we do not learn what to do in case of an earthquake practically. However, if we learned practically, we would know what to do in case of an earthquake."* Another participant, S11, used similar expressions. He/she said, *"One cannot learn something just by reading. We never practiced earthquake drills at school. OK, we learned about earthquakes in social studies class, but knowledge without drills is useless."*

#### ***Views of students on the redesign of social studies coursebooks within the scope of earthquake***

In the study views of students on the redesign of social studies coursebooks within the scope of earthquake was researched. The findings obtained in this context are shown in Figure 4.

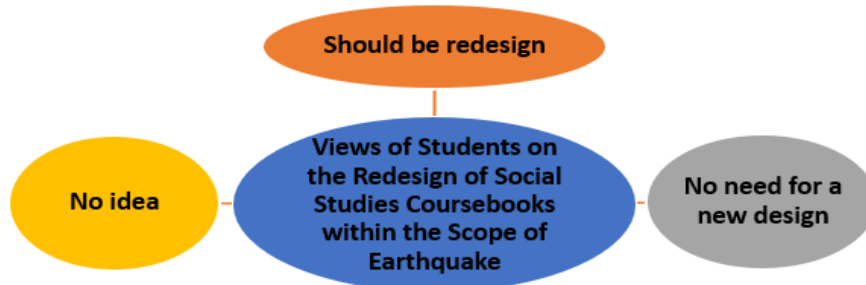


Figure 4. Views of Students on the Redesign of Social Studies Coursebooks within the Scope of Earthquake

Regarding Figure 4, there are three codes under the theme of the views of students on the redesign of social studies coursebooks within the scope of earthquake. Some of the statements of the students in this context were as follows:

Many participants stated that the content of the social studies coursebooks was insufficient within the scope of earthquake and should be revised. The most striking expressions providing the finding was presented by S7. The participant used the following statements:

*"I think the books (social studies coursebooks) are insufficient about earthquake. Because there is very little knowledge on earthquake in the books. This little knowledge is not useful for anyone. Nobody learns anything with so little knowledge. Because of*



*that the books should be redesigned within the scope of earthquake. More knowledge on earthquake should be added to the books. Because earthquake is now a part of our lives. An earthquake can take place at any moment."*

The participant S13 used similar statements. He mentioned the insufficiency of social studies books on earthquake and the need to be redesigned: *"The book (social studies coursebook) is not suitable for this subject. There is no knowledge in the book. I think it should be redesigned."*

Some participants stated that there was no need to change the social studies coursebooks. For example, S9, said, "For me there is no need to change the books (social studies coursebooks). Because there is enough knowledge on earthquake issue in the books." S6 said, "For me, the books (social studies coursebooks) are sufficient. They can stay as they are."

On the other hand, a few participants in the study did not express any view on the subject. Thus, a few students stated that they did not have any idea about this issue.

In the study it was determined that all of the students perceived the phenomenon of earthquake as something very bad. Many students believed that social studies course had an important role in teaching about earthquake issue. On the other hand, students believed that the content on earthquake in social studies coursebooks was insufficient. Students also thought that the social studies course was an important course in teaching about earthquake. The study reported that most of the students believed the social studies coursebook should be reformed within the scope of earthquake issue.

## Discussion and Conclusion

The results of the study were discussed in the light of similar studies in the literature and presented below.

All of the students in the study perceived the phenomenon of earthquake as something disruptive, destroying life, terrifying, destroying hope, damaging and disturbing. It is thought that the reason why students perceive the earthquake phenomenon in this way is that they were affected by the earthquakes that took place on February 6, 2023. In the literature review conducted to discuss this result, studies with similar results were encountered. In a study conducted with 1065 high school students, Shaw, Kobayashi, and Kobayashi (2004) reached similar results and found that students perceived earthquake as a danger to life just like all natural disasters. Another study that examined the perception about earthquake was conducted with students from University of Bucharest, Faculty of Geography by Armaş (2006). The researcher found that students living in Bucharest consider earthquake as an extremely worrying phenomenon due to the high risk of earthquakes in Bucharest. Kung and Chen (2012), who investigated the perception of earthquake risk in Taiwan according to gender and past earthquake experience, found that women and those with past earthquake experience perceived earthquake as a destructive situation. Ao et al. (2021), who investigated how people living in rural areas perceive earthquake risk, found that individuals with a high grade of knowledge about earthquakes perceived earthquakes as less frightening. Different studies (Aksa et al., 2020; Paradise, 2005; Shrestha, Sliuzas and Kuffer, 2018) that reached similar results were also found in the literature. Earthquake is perceived as a frightening concept by people within the scope of being a life-threatening phenomenon. As a matter of fact, in this study and similar studies in the literature, it has been determined that individuals who have experienced earthquakes see earthquakes as a threat.



Students consider the social studies as an important course in teaching earthquake issue. It is thought that the reason why students think this way is that they see social studies as a course for teaching all the phenomena and cases related to daily life. This confirms various studies. For example, Avcı and Gümüş (2020) in the study on the effect of outdoor education in social studies course emphasized that social studies is a course in which the content about earthquakes is taught. Tokcan (2013), in his study on the use of cartoons in teaching earthquake issue in social studies course, concluded that social studies course is an important course in teaching earthquake issue. Öcal (2005) examined the evaluation of earthquake issue in social studies education and stated that social studies is a course for teaching earthquake issue. Social studies includes all subjects related to daily life. Earthquake is one of the subjects of the social studies course within the scope of being a subject related to daily life. Both in this study and in other studies in the literature, it was concluded that social studies course is an important course in teaching earthquake.

The students in the participant group consider social studies coursebooks insufficient regarding earthquake issue. This view is based on the fact that the earthquake content in social studies coursebooks is insufficient in real terms. Indeed, as explained in the theoretical dimension of the study (Table 2), the earthquake content in social studies coursebooks is not sufficient for a country like Türkiye where earthquakes are frequently experienced. Topkaya and Şimşek (2016), in the study in which they utilized cartoons while teaching the earthquake issue in the social studies course, stated that social studies books were insufficient in terms of earthquake education. Öcal (2010) examined hazard education in grades 4-7 and found that social studies coursebooks were insufficient in earthquake education. Sözen (2019), in the study that utilized the earthquake awareness levels of undergraduate students, stated that coursebooks were insufficient on earthquake issue. Social studies coursebooks should have rich earthquake related content since social studies is a course that includes earthquake. If the content of social studies coursebooks on earthquake is insufficient, the coursebooks should be improved.

Participants believed social studies coursebooks should be revised in accordance with earthquake. It is thought that the students' belief that the coursebooks should be revised was formed as a result of the earthquake they experienced on February 6. It is thought that students more carefully examined the earthquake related content of social studies coursebooks after the earthquakes they experienced. In the literature, studies with similar results were found. Ghaderi et al. (2019) examined the content on events that cause social crises in coursebooks. The researchers stated that the content of coursebooks on all natural disasters and earthquakes that cause social crises is insufficient and that coursebooks should be redesigned for this reason. Panić et al. (2013) examined the importance of natural disaster education and found that coursebooks are insufficient in the education of natural disasters such as earthquakes and therefore need to be redesigned. Seddighi et al. (2021) identified the shortcomings of coursebooks prepared to provide disaster education to children in Iran and stated that coursebooks should be redesigned. Since social studies coursebooks are the materials used in earthquake education, they should have sufficient earthquake related content. Otherwise, they should be redesigned.

According to the present study, students perceive phenomenon of earthquake as something very bad. Besides, students consider the social studies coursebooks insufficient on earthquake issue and, they believe the coursebooks should be revised. The students state that social studies is an important course in teaching about earthquake.

## Recommendations

Based on these findings of the study, various recommendations have been developed. The recommendations are followed.

In this study, it was examined how middle school students perceive the earthquake phenomenon. In future studies, Future studies can investigate how social studies teachers and prospective social studies teachers perceive the earthquake phenomenon. It is important to investigate how the earthquake phenomenon is perceived by social studies teachers and pre-service social studies teachers in order to reveal their awareness about earthquake.

In this study the views of middle school students on the role of social studies course in teaching about earthquake were examined. Future studies can investigate the views of social studies teachers and prospective social studies teachers on the role of social studies course in teaching about earthquake. It is important to investigate the views of social studies teachers and prospective social studies teachers on the role of social studies course in earthquake teaching in order to reveal whether they know that social studies course deals with every subject related to daily life.

In this study the views of middle school students on the content on earthquake in social studies coursebooks were examined. Future studies can investigate the views of social studies teachers and prospective social studies teachers on the content on earthquake in social studies coursebooks. Investigating the views of social studies teachers and prospective social studies teachers on this topic can help content designers to enrich social studies coursebooks in terms of earthquake related content.

In this study the views of middle school students on the redesign of social studies coursebooks within the scope of earthquake were examined. Future studies can investigate the views of social studies teachers and prospective social studies on the redesign of social studies coursebooks within the scope of earthquake. Investigating the views of social studies teachers and prospective social studies teachers on this topic can also help content designers to enrich social studies coursebooks in terms of earthquake related content.

Quantitative studies can examine the role of social studies course in teaching the earthquake issue within the scope of middle school students views. Quantitative studies will contribute to the literature as they will examine students' views on the role of the social studies course in teaching earthquake related topics with statistical measurements.

On the other hand, quantitative studies can examine the role of social studies course in teaching the earthquake topic within the scope of social studies teachers' and prospective teachers' views. Quantitative studies within this scope will reveal the views of social studies teachers and prospective social studies teachers on the role of the social studies course in teaching earthquake related topics with statistical measurements.

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