International Journal of Geography and Geography Education

Research Article/Araştırma Makalesi

To Cite This Article: Şanlı, C., & Turhan, Ç. (2022). Analysis of geography textbook activities in the context of units and critical thinking skills. *International Journal of Geography and Geography Education (IGGE)*, 47, 20-31. http://dx.doi.org/10.32003/igge.1137990

ANALYSIS OF GEOGRAPHY TEXTBOOK ACTIVITIES IN THE CONTEXT OF UNITS AND CRITICAL THINKING SKILLS

Coğrafya Ders Kitaplarındaki Etkinliklerin Öğrenme Alanları ve Eleştirel Düşünme Becerisi Bağlamında Analizi

Cennet ŞANLI* **Turhan ÇETİN**

Abstract

This study aimed to examine the activities in the secondary education geography textbooks in the context of textbook units and critical thinking skills. The study used document analysis, which is qualitative research method. The data consisted of 222 activities in the geography textbooks (9th, 10th, 11th, and 12th grades). The data were subjected to content analysis using a form prepared by the researchers. The analysis results showed that the activities in the secondary education geography textbooks are mainly found in the "Natural Systems" and "Human Systems" units. The results also showed that the activities in the geography textbooks predominantly focus on "interpretation" among the key critical thinking skills. This situation indicates that the activities in the geography textbooks generally tend to support students' intellectual processes such as "understanding and classifying geographic information and discussing arguments".

Keywords: Geography education, textbook, critical thinking skills.

Öz

Bu araştırmada ortaöğretim coğrafya ders kitaplarındaki etkinliklerin öğrenme alanları ve eleştirel düşünme becerisi bağlamında incelenmesi amaçlanmıştır. Araştırmada nitel araştırma yöntemlerinden doküman analizi yöntemi kullanılmıştır. Araştırma verileri coğrafya ders kitaplarında (9,10,11 ve 12. Sınıf) yer alan 222 etkinlikten oluşmuştur. Veriler araştırmacılar tarafından hazırlanan forma göre içerik analiziyle çözümlenmiştir. Araştırmanın sonucunda, ders kitaplarındaki etkinliklerin, ağırlıklı olarak "Doğal Sistemler" ve "Beşeri Sistemler" öğrenme alanında bulunduğu tespit edilmiştir. Ders kitaplardaki etkinliklerin, eleştirel düşünme becerisi bağlamında ise çoğunlukla "yorumlama" boyutunda olduğu saptanmıştır. Bu durum coğrafya ders kitaplarında yer alan etkinliklerin genel olarak öğrencilerin "coğrafi bilgileri anlama, sınıflandırma ve argümanları tartışma" gibi düşünsel süreçlerini destekleme eğiliminde olduğunu göstermektedir.

Anahtar Kelimeler: Coğrafya eğitimi, ders kitabı, eleştirel düşünme becerisi

* **Correspondence to:** Assoc. Prof., Pamukkale University, cennet2011@gmail.com

Geliş Tarihi/Recieved: 01.06.2022 **Kabul Tarihi /Accepted:** 18.08.2022 **Ç. Yayınlanma Tarihi/Online Published:** 20.09.2022

INTRODUCTION

Textbooks serve as a guide as to what students will learn and what teachers will teach in the teaching and learning process (Kılıç & Seven, 2002; Semerci, 2004). However, curriculum changes in line with the needs of teachers and students cause textbooks to be updated. In fact, the geography curriculum underwent constructivism-based revision in 2005, thereby bringing a new understanding of learning outcomes, content, teaching and learning processes, measurement, and evaluation (Ministry of National Education, [MoNE] 2005). A major change brought by the revision of the content of the geography curriculum is that more activities are included in the textbooks compared to previous years.

The word activity originated from the French word "activité. This concept refers to all planned, regular and systematic teacher efforts in the transfer of information to students (Rochelle, 1998). Textbook activities provide students with independent learning experiences, involve students in the active learning process, and give the opportunity to stimulate students' creativity. Textbook activities that are interesting, authentic, and based on real-life experiences improve the quality of the teaching process. With these activities, students discover new learning methods and techniques and choose their unique learning strategies by trial and error (Güneş, 2017a). When students do textbook activities, it promotes their self-efficacy, leads them to new learning discoveries, and allows them to make self-evaluations.

Activities used in education have been classified in several ways in the literature. These classifications are made based on the following criteria: discipline, content, method, and connection with real-life experiences (Güneş, 2017b). For example, activities are classified as geography, language, mathematics, and science in terms of disciplines; they are classified as computer activities, thematic activities, and directed activities in terms of content; they are classified as completion activities and gap-fill activities in terms of methods, and they are classified as formal activities and functional activities in terms of connection with real-life experiences. Just as there are different classifications of activities, so different terms are used such as exercises, research, brainstorming, fieldwork, extracurricular activities, and classroom activities (Güneş, 2017a, p. 50).

Textbook activities are of vital importance in geography classes because they initiate and organise learning processes, engage students in the topic at hand, and provide a formative assessment opportunity that helps determine student levels (Bijsterbosch et al., 2017; Krause, et al., 2017). Thus, textbook activities are aimed at developing students' higher-order thinking skills (MoNE, 2005). Underbakke et al. (1993) defined higher-order thinking as the organisation and reconstruction of existing knowledge in the mind to solve a problem, analyse an argument, discuss an issue, or make a prediction. Higher-order thinking skills refer to a complex set of skills that involve critical, logical, reflective, metacognitive, and creative thinking. The fact that higher-order thinking is a concept that comprises these skills causes the terms "higher-order thinking" and "critical thinking" to be used interchangeably in the literature; however, critical thinking is a result-oriented, logical, and evaluative thinking process by which an individual decides what to accept or reject, what to believe, and what to do (Ezberci-Çevik, 2021). In this sense, critical thinking has a distinctive feature as a decision-making mechanism among higher-order thinking skills.

Critical thinking requires having different abilities (Özensoy, 2019). For example, Ennis (2011, p. 4) listed 15 critical thinking abilities as follows: 1) focusing on a question, 2) analysing arguments, 3) clarifying and challenging questions, 4) judging the credibility of sources, 5) observing and judging observation reports, 6) making deductions, 7) making material inferences, 8) making and judging value judgements, 9) offering and judging definitions, 10) scrutinising assumptions, 11) reasoning from premises, 12) integrating other abilities in decision-making, 13) following appropriate situation-specific steps, 14) being sensitive to others' feelings and belief, and 15) using discussion and presentation skills. Facione (1990, p.15) classified the key components of critical thinking as follows: interpretation, analysis, evaluation, inference, explanation, and self-regulation. This classification also defines the subcategories of each skill (Figure 1).

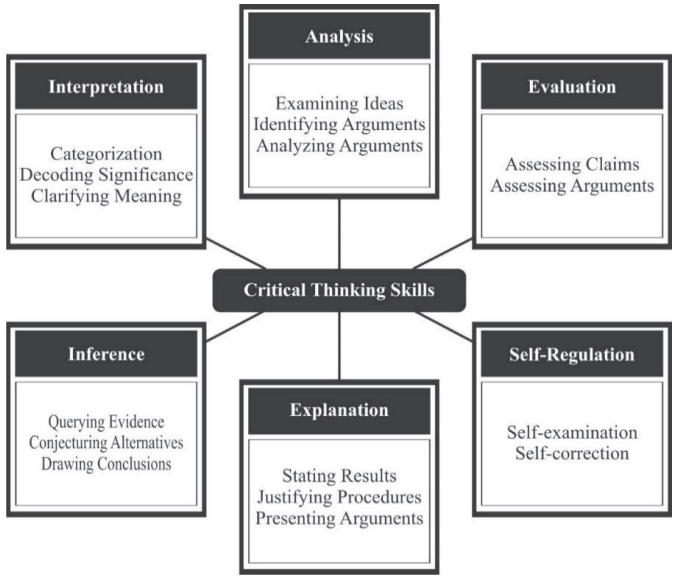


Figure 1. Consensus List of Critical Thinking Cognitive Skills and Sub-Skills (**Source:** Facione, 1990, p. 15)

Interpretation involves understanding and verbalizing the meaning or significance of a broad range of "experiences, situations, data, events, judgments, conventions, beliefs, rules, procedures or criteria" (Facione, 1990, p.13).Analysis means determining "the intended and actual inferential relationships among statements, questions, concepts, descriptions or other forms of representation intended to express beliefs, judgments, experiences, reasons, information, or opinions" (Facione, 1990, p.14). Evaluation means assessing the credibility of statements or other representations that describe one's perceptions, experiences, situations, judgments, beliefs, or opinions as well as assessing "the logical strength of the actual or intend[ed] inferential relationships among statements, descriptions, questions or other forms of representation" (Facione, 1990, p.15). Inference involves identifying and obtaining elements necessary to reach reasonable conclusions, to develop conjectures and hypotheses, to reflect on relevant information, and to make deductions based on "data, statements, principles, evidence, judgments, beliefs, opinions, concepts, descriptions, questions, or other forms of representation". Explanation means expressing "the results of one's reasoning; to justify that reasoning in terms of the evidential, conceptual, methodological, criteriological and contextual considerations upon which one's results were based; and to present one's reasoning in the form of cogent arguments" Facione, 1990, p.16). Self-regulation refers to the self-conscious observation of "one's cognitive activities, the elements used in those activities, and the results educed, particularly by applying skills in analysis and evaluation to one's own inferential judgments with a view toward questioning, confirming, validating, or correcting either one's reasoning or one's results" (Facione, 1990, p.19).

Against this background, this study aimed to examine the activities in the secondary education geography textbooks taught at the national level in Turkey in the context of critical thinking skills and units. The literature includes studies examining geography textbooks from different perspectives (Jo & Bednarz, 2009, Geçit & Yarar, 2013; Sağdıç & İnce, 2020; Sağdıç & Özkan, 2018; Solmaz et al., 2011; Maude & Caldis, 2019; Sezer & Şanlı, 2017). However, a limited number of studies have so for analysed the content of textbooks in the context of thinking skills (Huynh & Sharpe, 2013; Krause et al., 2022a, 2022b; Jo & Bednarz, 2011; Mishra, 2015; Yang, 2013; Yang et al., 2015; Xiang et al., 2022). It is thus believed that the present study will be complementary to the existing studies. Additionally, the results of the study will help reach a judgement about the extent to which the activities in the geography textbooks promote students' critical thinking skills. In this sense, it is expected that the results of the study will provide valuable insights to geography teachers and authors who take part in the textbook design commissions of the MoNE.

METHODS

This study used a qualitative research design. Document analysis was used to thoroughly examine textbook activities. Document analysis involves finding resources, reading, taking notes, and evaluating for a specific purpose (Karasar, 2000, p.183). Within the scope of the study, the 9th-, 10th-, 11th-, and 12th-grade geography textbooks published by the Ministry of National Education in 2021 were downloaded from the Education Information Network (EBA in Turkish acronym) and analysed. The underlying reason for sampling these books was that they were prepared by the commission consisting of geography teachers chosen by the MoNE and they are currently taught in secondary education institutions.

The textbooks analysed in this study consist of the following sections: Preparatory Study, Preparation for the Topic, Starting the Topic, Geographical Practice, Research, Brainstorming, Measurement-Evaluation, Fieldwork, Extracurricular Activity, Classroom Activity, and Checklist. The researchers examined all these sections to obtain the data. A total of 222 activities in the sections of Research, Classroom Activity, Extracurricular Activity, and Geographical Practice were included in the analysis.

The activities in the textbooks of each grade levels (9th, 10th, 11th, and 12th) were separately numbered starting from 1. As a result, the analysis included 70 activities in the 9th-grade textbook, 70 activities in the 10th-grade textbook, 46 activities in the 11th-grade textbook, and 36 activities in the 12th-grade textbook, thereby making a total of 222 activities (Table 1).

Table 1. Distribution of the Analysed Activities in the Geography Textbooks

Grades	Units				
	Natural Systems	Human Systems	Global Environment: Regions and Countries	Environment and Society	Total
9	50	10	6	4	70
10	41	21	4	4	70
11	2	26	14	4	46
12	8	16	7	5	36
Total	101	73	31	17	**222**

The activities were analysed using a form (Appendix 1) designed based on the geography curriculum units (Natural Systems, Human Systems, Global Environment: Regions and Countries, and Environment and Society) and the key critical thinking skills (interpretation, analysis, evaluation, inference, explanation, and self-regulation) (Table.2). Content analysis was used in the analysis of the activities, the findings derived from the analysis were presented in tables. First, the activities were transferred to this form, numbered, and coded separately according to two criteria determined for each grade level. The coding process was conducted by the researchers and a subject matter expert. The researchers carried out the coding process separately. In cases where an activity deals with more than one critical thinking skill, the activity was coded under all the relevant skills. Then, the percentage of agreement between the two researchers was calculated using the following formula: (Percentage of Agreement = Agreement / (Agreement + Disagreement) x 100) (Miles & Huberman, 1994). The agreement between the researchers was found to be 86%. The researchers agreed on the coding of 191 activities and disagreed on the coding of 31 activities. According to Yıldırım and Şimşek (2011, p.265), if the percentage of agreement is 70%, the percentage of reliability is considered to be achieved. Additionally, another subject matter expert was consulted to resolve the disagreement. The agreed items were accepted as correct, and the reliability of the research was improved. Table 2 showed an example of the process followed in the activity analysis.

As seen in Table 2, the first activity in the "Global Environment: Regions and Countries" Unit in the 9th-grade geography textbook is "The Federal Republic of Yugoslavia and the Map of the Countries That Gained Their Independence with the Dissolution of Yugoslavia" and it is aimed at evaluating the change in the regional borders over time. With the expression "evaluation" in the activity, students are expected to compare the spatial change in two maps and "make a decision" and this activity questions students' cognitive evaluation skills. The second activity in the "Natural Systems" unit in the 11th-grade geography textbook shows the areas where biomes are located on the world map. Students are expected to match the biomes

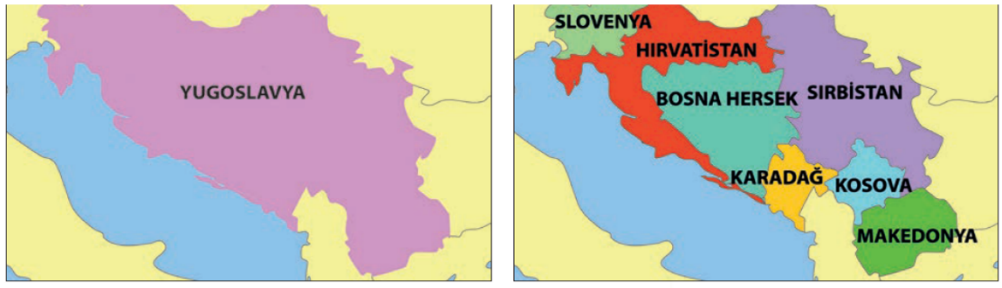
listed with the numbers given on the map. With the expression "matching", students are expected to classify; thus, this activity questions students' cognitive "interpretation" skills.

Table 2. Examples from the Analysis of the Activities

1

Classroom Study

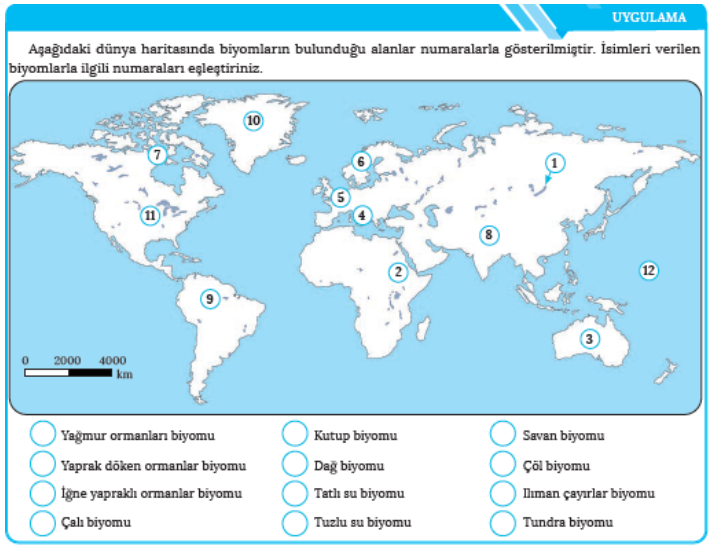
The image below shows the countries that gained their independence with the dissolution of Yugoslavia.



Evaluate this situation in terms of the change in the regional borders over time.

9th-Grade Geography Textbook, p. 185 (Activity number: 63)

2



11th-Grade Geography Textbook, p. 25. (Activity number: 2)

Key Critical Thinking Skills	Units			
	Natural Systems	Human Systems	Global Environment: Regions and Countries	Environment and Society
Interpretation	2			
Analysis				
Inference				
Evaluation			1	
Explanation				
Self-regulation				

FINDINGS

Table 3 shows the analysis of the activities in the 9th-grade geography textbook in relation to the key critical thinking skills.

Table 3: Analysis of the Activities in the 9th-Grade Geography Textbook

Key Critical Thinking Skills	Units			
	Natural Systems	Human Systems	Global Environment: Regions and Countries	Environment and Society
Interpretation	1, 2,3, 4, 6, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25, 26, 27, 28, 29, 31, 32, 33, 34, 35, 36, 37, 38, 39, 40, 41, 43, 44, 45, 46, 48, 49, 50	51, 52, 53, 54, 55, 56, 58, 59, 60	61, 62, 65, 66	67, 69, 70
Analysis	1, 4, 6, 8, 9, 10, 11, 12, 18, 19, 20, 21, 22, 23, 28, 30, 39, 40, 41, 43, 44	52, 53, 54, 56, 57	62, 64, 65, 66	-
Inference	9, 10, 12, 13, 16, 36, 37, 38	51, 53		67, 69
Evaluation	1, 5, 7, 42, 43	52, 53, 57	61, 63, 64	-
Explanation	1, 2, 5, 7, 14, 20, 25, 42, 44, 45, 47, 48, 50	51, 54, 55, 60	61,64, 65	68
Self-regulation	26, 42	-	65	68, 69, 70

Looking at Table 3, it is clear that the activities in the 9th-grade geography textbook are mostly found in the "Natural Systems" and "Human Systems" units. The smallest number of activities in the 9th-grade textbook is found in the "Environment and Society" unit. The activities in the 9th-grade geography textbook mainly focus on "interpretation" and "analysis" among the key critical thinking skills. "Self-regulation" is the least frequently treated skill in the activities in the 9th-grade geography textbook.

Table 4 shows the analysis of the activities in the 10th-grade geography textbook in relation to the key critical thinking skills.

Table 4: Analysis of the Activities in the 10th-Grade Geography Textbook

Key Critical Thinking Skills	Units			
	Natural Systems	Human Systems	Global Environment: Regions and Countries	Environment and Society
Interpretation	1, 2, 3, 4, 6, 7, 10, 11, 12, 13, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, 26, 27, 28, 29, 30, 31, 32, 33, 34, 35, 36, 37, 38, 39, 40	41, 42, 43, 44, 45, 46, 47, 48, 49, 50, 51, 52, 53, 54, 55, 56, 57, 58, 59, 60, 61	62, 63, 64, 65	68, 69, 70
Analysis	5, 6, 7, 12, 15, 16, 18, 19, 20, 21, 22, 23, 24, 25, 26, 28, 29, 39, 40	41, 42, 45, 46, 47, 49, 50, 51, 53, 55, 56, 57, 59, 60, 61	62, 63, 64, 65	66, 69
Inference	9, 10, 12, 13, 16, 36, 37, 38	51, 53	-	67, 69
Evaluation	5, 36, 41	45, 51, 54, 56, 58	62, 64	66, 67,70
Explanation	1, 4, 5, 10, 11, 13, 24, 26, 27, 28, 36, 37, 38	43, 44, 51, 52, 53, 54, 56, 58, 60	62	67, 68, 69, 70
Self-regulation	-	58	-	67, 68

As seen in Table 4, the activities in the 10th-grade geography textbook are mostly found in the "Natural Systems" and "Human Systems" units. The smallest number of activities in the 10th-grade textbook is found in the "Global Environment: Regions and Countries" unit. The activities in the 10th-grade geography textbook mainly focus on "interpretation" and "analysis" among the key critical thinking skills. "Self-regulation" is the least frequently treated skill in the activities in the 10th-grade geography textbook.

Table 5 shows the analysis of the activities in the 11th-grade geography textbook in relation to the key critical thinking skills.

Table 5: Analysis of the Activities in the 11th-Grade Geography Textbook

Key Critical Thinking Skills	Units			
	Natural Systems	Human Systems	Global Environment: Regions and Countries	Environment and Society
Interpretation	1, 2	3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25, 26, 27, 28	29, 30, 31, 32, 33, 34, 35, 36, 37, 38, 39, 40, 41, 42	43, 44, 45, 46
Analysis	1	3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 15, 16, 17, 18, 19, 21, 22, 23, 24, 25, 26, 27, 28	29, 30, 31, 32, 33, 34, 35, 36, 37, 39, 41, 42	43, 44, 45
Inference	1	3, 5, 6, 7, 11, 12, 15, 20	30, 31, 32	-
Evaluation	-	7, 11, 12,15, 18, 20, 23	30, 31, 33	-
Explanation	1	3, 5, 6, 12,15,18,23,26, 27	30, 31, 32, 33, 34, 35, 36, 37, 38, 39, 40	46
Self-regulation	-	7,8,9,20	-	-

Looking at Table 5, it is clear that the activities in the 11th-grade geography textbook are mostly found in the "Human Systems" and "Global Environment: Regions and Countries" units. The smallest number of activities in the 11th-grade textbook is found in the "Natural Systems" unit. The activities in the 11th-grade geography textbook mainly focus on "interpretation" and "analysis" among the key critical thinking skills. "Self-regulation" is the least frequently treated skill in the activities in the 11th-grade geography textbook.

Table 6 shows the analysis of the activities in the 12th-grade geography textbook in relation to the key critical thinking skills.

Table 6: Analysis of the Activities in the 12th-Grade Geography Textbook

Key Critical Thinking Skills	Units			
	Natural Systems	Human Systems	Global Environment: Regions and Countries	Environment and Society
Interpretation	1, 2, 3, 4, 5, 7, 8	9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 23	27, 28, 29, 30, 31	32, 33, 35, 36
Analysis	2, 3, 4, 8	9, 10, 11, 13, 14, 15, 16, 17, 19, 20	27, 28, 29, 30, 31	32, 34, 35, 36
Inference	4, 7	18, 20	25, 26, 27, 30, 31	32, 33
Evaluation	4, 7, 8	12, 15, 18, 19, 20, 23	31	32, 33, 34
Explanation	2, 3, 6, 7, 8	12, 13, 14, 15, 18, 20, 23	27	33
Self-regulation	5, 8	15, 20, 24	27, 31	34

As seen in Table 6, the activities in the 12th-grade geography textbook are mostly found in the "Human Systems" and "Global Environment: Regions and Countries" units. The smallest number of activities in the 12th-grade textbook is found in the "Natural Systems" unit. The activities in the 12th-grade geography textbook mainly focus on "interpretation" and "analysis" among the key critical thinking skills. "Self-regulation" is the least frequently treated skill in the activities in the 12th-grade geography textbook just like the geography textbooks of other grades.

DISCUSSION

The analysis results showed that the activities in the secondary education geography textbooks (9th-, 10th, 11th, and 12th-grades) are mainly found in the "Natural Systems" and "Human Systems" units. The number of activities in the "Global Environment: Regions and Countries" and "Environment and Society" units is quite low. A similar situation was observed in the analysis of the activities according to the grade levels. The highest number of activities in the 9th – and 10th-grade geography textbooks belong to the "Natural Systems" Unit. The highest number of activities in the 11th – and 12th-grade geography textbooks belong to the "Human Systems" Unit. The smallest number of activities in the 9th-grade textbook is found in the "Environment and Society" unit. The smallest number of activities in the 10th-grade textbook is found in the

"Global Environment: Regions and Countries" unit. The smallest number of activities in the 11th – and 12th-grade textbooks are found in the "Natural Systems" unit. The national geography textbooks analysed in earlier research also gave greater weight to the "Natural Systems" and "Human Systems" units compared to the other units (Şanlı & Sezer, 2018). A possible reason for this situation might be that the commission that prepared the textbooks took into account the Geography Curriculum and learning outcomes. Textbook authors and commissions design the learning content of textbooks, that is, activities, based on the learning outcomes of the geography curriculum (Krause et al., 2017; Solmaz et al., 2011) As a natural consequence of this situation, the activities examined in the context of critical thinking are predominantly found in the "Natural Systems" and "Human Systems" units.

The analysis results showed that the activities in the geography textbooks (9th-,10th-,11th-, and 12th-grades) predominantly focus on "interpretation" among the key critical thinking skills. It can thus be said that the content of the textbooks mainly contributes to the development of students' systematic knowledge based on classification. Similar and different findings were also reported in the national literature on the subject. Earlier studies examining geography textbooks have underlined that the content of textbooks is insufficient for students' cognitive development, and, thus, geography textbooks need revision (Demirkaya & Tomal, 2004; Gümüş, 2004; Kızılçaoğlu, 2003; Seyman, 1996; Solmaz et al., 2011; Top, 2009). On the other hand, more recent studies have concluded that the content of the revised geography textbooks is sufficient. For example, Tomal (2019) reported that in geography teachers' opinion, the content of the 9th-grade geography textbook is sufficient. Şanlı and Sezer (2018) found that the content of the textbook is supportive of students' cognitive development. The international literature has suggested that the tasks in geography textbooks are mostly oriented to the middle and lower categories of cognitive taxonomies (Bijsterbosch, 2018; Jo & Bednarz, 2009; Krause et al., 2022a). It can thus be said that textbooks used in geography teaching generally encourage developing students' interpretation skills in the context of critical thinking skills.

The activities in the geography textbooks analysed in this study mostly focus on "interpretation" and "analysis" among the key critical thinking skills. This result might suggest that both lower-order and higher-order thinking skills are questioned. Because lower-order thinking, and higher-order thinking are categorised differently. Some researchers consider all forms of thinking other than remembering information to be higher-order thinking (Bijsterbosch, 2018; Maude & Caldis, 2019), while others accept only the "analysis", "evaluation" and "reconstruction" of information as higher-order thinking (Anderson, et al., 2001; Jo & Bednarz, 2009). Thus, the processes of abstraction such as "classification, understanding importance, and clarification", which are the components of the "interpretation" skill, should be accepted as the foundations of high-order thinking (Krause et al., 2022a; 2022b). According to Bernstein (2000), the actions of classification and clarification always work together, and learning progresses from concrete information and simple procedures to the production of more abstract and complex knowledge structures. Advanced inferences about a subject support critical thinking.

The geography textbook activities analysed in this study focus on "analysis" skills following "interpretation, thereby suggesting that the activities are aimed at helping students examine geographical information, recognise arguments, and connect the causal relations between geographical events. In this sense, the textbook activities support students in the search for solutions to geographical problems. However, an interesting finding is that few activities in the geography textbooks question students' self-regulation skills. Krause et al. (2017) analysed the Dutch and German geography textbooks and reported that the textbook activities are not sufficient to support students' "self-regulation" skills. On the other hand, researchers strongly emphasise that textbooks should involve more activities that support "self-regulation" skills so that students can feel more responsible for their own learning in gaining and developing their critical thinking skills (Aydemir & Çetin, 2021; Lindblom-Ylänne, 2004). Through these activities, students gain self-confidence by participating in social discussions and have the opportunity to use their mother tongue (Akengin, et al. 2014; Çenesiz & Özdemir, 2021; Özensoy, 2020). Studies have also shown that activities are important tools to encourage student learning and lie at the heart of classes. Additionally, some studies evidence a significant relationship between students' academic achievement and self-regulation skills (Pintrich, 2004; Ramdass & Zimmerman, 2011). Thus, it is believed that incorporating activities that support students' self-regulation skills in textbooks will positively affect academic achievement in geography classes.

CONCLUSION

This study set out to examine the activities in the secondary education geography textbooks in the context of critical thinking skills, taking into account the variables of units and grade levels. The analysis results showed that the activities in the 9th-, 10th-, 11th – and 12th – grade geography textbooks are mainly found in the "Natural Systems" and "Human Systems" units. This finding is associated with the fact that the textbooks were prepared based on the geography curriculum. Additionally, the revision of the geography curriculum over the years (2005 and 2017) was reflected in the content of the textbooks. As a natural consequence of this situation, the textbooks prepared in recent years present rich content in the context of questioning critical thinking compared to the textbooks prepared in the past years. However, not all the key critical thinking skills are evenly distributed in the content of the textbooks. "Interpretation" skills, which are among the key critical thinking skills, are given more importance in the textbooks. This result indicates that the activities in the textbooks are mainly aimed at intellectual processes such as understanding geographical information and classifying and discussing arguments in the "Natural Systems" and Human Systems" units. In this regard, it is worth restating that the key critical thinking skills have cognitive interrelationships that support each other rather than merely fitting into a taxonomic classification. It should also be noted that all the key critical thinking skills should be equally improved to help students develop critical thinking. Last but not least, given the small number of activities oriented towards "self-regulation", it would be useful to increase "self-regulation" activities by which students take the responsibility for their own learning.

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APPENDIX. 1. The form used in data analysis

Grade Level	Key Critical Thinking Skills	Units			
		Natural Systems	Human Systems	Global Environment: Regions and Countries	Environment and Society
Geography Textbook 9					
Activity 1	Interpretation				
	Analysis				
	Inference				
	Evaluation				
	Explanation				
	Self-regulation				
Geography Textbook 10					
Activity 1	Interpretation				
	Analysis				
	Inference				
	Evaluation				
	Explanation				
	Self-regulation				
Geography Textbook 11					
Activity 1	Interpretation				
	Analysis				
	Inference				
	Evaluation				
	Explanation				
	Self-regulation				
Geography Textbook 12					
Activity 1	Interpretation				
	Analysis				
	Inference				
	Evaluation				
	Explanation				
	Self-regulation				