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ARAŞTIRMA MAKALESİ / RESEARCH ARTICLE

INVESTIGATION OF QUESTION TYPES IN HIGH SCHOOL GEOGRAPHY COURSEBOOKS AND THEIR ANALYSIS IN ACCORDANCE WITH THE REVISED BLOOM'S TAXONOMY

Cennet ŞANLI

Pamukkale University, Faculty of Science and Arts, Geography Department
csanli@pau.edu.tr
ORCID: 0000-0003-3285-0950

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Abstract

The present study aimed to evaluate question types used in high school geography coursebooks in Turkey and analyze them based on the Revised Bloom's Taxonomy. Two forms were prepared in order to analyze the data. A total of 1940 questions were analyzed in this study. Descriptive statistics (percentages/ frequencies) were utilized in the analysis of the data. The results indicated that "open-ended questions" and "matching questions", among traditional assessment tools, were the most frequently used type of questions across the four coursebooks. Additionally, the analyses suggested that "open-ended" and "multiple-choice" questions have been mainly used at the "understanding" level of cognitive process dimension across all coursebooks. On the other hand, it was found that matching questions were predominantly used at the "application" level in the 9th grade coursebook, "remembering" level in the 10th and 11th grade coursebooks, and "understanding" level in the 12th grade book. The check lists included in the coursebooks were mainly at the application level. "Gap filling" questions were found to have predominantly been used at the "understanding" level in the 9th grade coursebook and "remembering" level in the 10th, 11th, and 12th grade coursebooks. As for the knowledge dimension analysis, it was found that the open-ended and multiple-choice questions were mainly used at the "conceptual knowledge" level across the four coursebooks. Matching questions were generally used at the "conceptual knowledge" level in the 9th and 12th grade coursebooks, and at the "factual knowledge" level in the 10th and 11th grade coursebooks. Checklist used in the 11th grade coursebook were at the "procedural knowledge" level, and "conceptual knowledge" level in the 10th and 12th grade coursebooks. In the light of these results, it is understood that questions within the geography coursebooks (9th, 10th, 11th, and 12th grades) were commonly used at the "understanding and remembering" levels within the cognitive process dimension, and at the "conceptual and factual knowledge" levels within the knowledge dimension.

Keywords: Geography, coursebook, Revised Bloom's Taxonomy, question types, assessment tools

Öz

Bu araştırmada Türkiye'de ortaöğretim coğrafya ders kitaplarında kullanılan soru türleri ve bu soruların yenilenmiş Bloom taksonomisine göre incelenmesi amaçlanmıştır. Bu amaç doğrultusunda yapılan araştırmada nitel araştırma yönteminden biri olan doküman analiz tekniği kullanılmıştır. Araştırma verilerini belirlenen ortaöğretim coğrafya ders kitaplarında (9,10,11 ve 12.sınıf) yer alan sorular oluşturmuştur. Araştırmada toplam 1940 soru incelenmiştir. Verilerin analizinde betimsel istatistik teknikleri (yüzde/frekans) kullanılmıştır. Araştırmanın sonucunda dört ders kitabı genelinde geleneksel ölçme araçlarından "açık uçlu ve eşleştirme soru" türünün ağırlıklı olarak kullanıldığı görülmüştür. Ayrıca incelenen açık uçlu ve çoktan seçmeli soruların bilişsel süreç boyutunda, ağırlıklı olarak bütün sınıf düzeylerinde "anlama" basamağında kullanıldığı saptanmıştır. Eşleştirme soruların ise ağırlıklı olarak 9.sınıf ders kitabında "uygulama", 10. ve 11. sınıf ders kitabında "hatırlama", 12.sınıf ders kitabında "anlama" basamağında kullanıldığı saptanmıştır. Ders kitaplarında yer alan kontrol listesi soruları ağırlıklı olarak uygulama basamağında yer almaktadır. Boşluk doldurma sorularının ise ağırlıklı olarak 9.sınıf ders kitabında "kavrama" basamağında, 10, 11. ve 12. sınıf ders kitabında "hatırlama" basamağında bulunduğu tespit edilmiştir. Taksonominin bilgi birikimi boyutunda ise incelenen açık uçlu ve çoktan seçmeli soruların ağırlıklı olarak dört ders kitabında da "kavramsal bilgi" basamağında olduğu tespit edilmiştir. Eşleştirme soruları, bilgi birikimi boyutunda ağırlıklı olarak 9. ve 12. sınıf ders kitabında "kavramsal bilgi" basamağında; 10. ve 11. sınıf ders kitaplarında ise "olgusal bilgi" basamağında kullanılmıştır. Kontrol listesi soruları, bilgi birikimi boyutunda 11. sınıf ders kitabında "işlemsel bilgi"; 10 ve 12.sınıf ders kitabında "kavramsal bilgi" basamağındadır. Araştırmanın bu sonuçları dikkate alındığında incelenen ders kitapları genelinde bilişsel düzeyde "kavrama ve hatırlama"; bilgi birikimi boyutunda "kavramsal bilgi ve olgusal bilgi" basamağında soruların coğrafya ders kitaplarında (9,10,11 ve 12.sınıf) yaygın kullanıldığı ifade edilebilir.

Anahtar Kelimeler: Coğrafya, ders kitabı, Yenilenmiş Bloom Taksonomisi, soru türü, ölçme araçları

1. Introduction

Coursebooks are one of the most commonly used teaching materials in teaching/learning processes in Turkey. A coursebook is a fundamental resource which is prepared for the teaching of a specific subject, written for students at a certain level, compatible with the curriculum, and approved by government agencies following a process of evaluation (Ertek, 2010: 1; Gülersoy, 2013: 8). In this sense, *The Geography Coursebook* is a resource which is prepared for the teaching of geography considering students' level and based on the Geography Course Curriculum (GCC), and it is evaluated and approved by the Turkish Ministry of National Education (henceforth MoNE). MoNE is a government agency that plays a significant role in the implementation of educational policies. This institution accepts the geography course as one of the core courses and designs the geography curriculum to be taught in high schools (9^{th}-12^{th} grades), and provides the coursebooks to be used in class.

To a certain extent, coursebooks adopt the function of a guide in relation to what students will learn and what teachers will teach during instruction (Kılıç & Seven, 2003: 19; Semerci, 2004: 49). However, the changes, which are made in line with teachers' and students' needs, require the coursebooks to be updated. In fact, the GCC was renewed in 2005 as part of the transition to the constructivist pedagogy and, as a result, the learning objectives, content, teaching-learning processes, and assessment and evaluation dimensions of the geography course were modified (MoNE, 2005).

The most important reform that was introduced with the renewed GCC was the adoption of a process-oriented assessment approach rather than a product-oriented one. In other words, *"identifying the extent to which a student has understood the topic and what kind of ideas and products the student has come up with when compared to their understanding before tuition"* is far more important than identifying which questions s/he has answered correctly (Coşkun, 2011: 24). In line with this, process-

oriented assessment tools in addition to product-oriented ones should be utilized in geography classes for assessment and evaluation practices (Demiralp and Öztürk, 2007: 242; MoNE, 2005; Pamukcu, 2015: 27).

Product-oriented assessment tools in the curriculum include *"multiple-choice, true-false, gap filling, open-ended, and matching questions"* which are also known as traditional assessment tools. Process-oriented assessment tools, on the other hand, are utilized as complimentary assessment tools in the literature and consist of *"mind maps, performance evaluation, checklist, rubric, self-peer assessment, portfolio, project evaluation" (*see Figure 1).

Moreover, the aim of utilizing such assessment tools in line with the curriculum is to assess students' higher level thinking skills in the cognitive dimension (MoNE, 2005). Various taxonomies are available in the literature which can be used to analyze the cognitive dimension (Arı, 2011; Jo, 2007; Şeker, 2010; Özçelik, 2018). Nevertheless, the taxonomy developed by Bloom and named after him as Bloom's taxonomy is also accepted internationally,

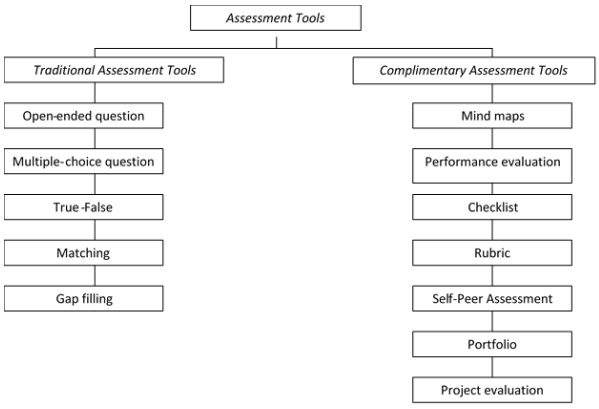


Figure 1- Assessment Tools Utilized in Teaching Geography(MoNE,2005)

The cognitive process dimension of Bloom's taxonomy consists of six levels; knowledge, comprehension, application, analysis, synthesis, and evaluation (Anderson & Krathwohl, 2001: 29). Bloom's original taxonomy has been revised based on rapid changes that has taken place in teaching/learning (Arı, 2011: 765; İlhan & Gülersoy; 2018: 12). "*Dimensionalized Hierarchical Classification Chart" w*as created as a result of the work carried out by Anderson and Krathwohl (2001) and the revision group they led. The columns in this chart represent the cognitive process dimension while the rows represent the knowledge dimension (see Table 1).

Factual knowledge refers to basic elements in relation to a specific subject or discipline that students should certainly know or the basic elements they would need to be able to solve problems in that specific subject or discipline (Anderson et al., 2001: 45). For example, the signs and symbols used in maps can be considered as factual knowledge. *Conceptual knowledge* refers to the knowledge of and the relationships among basic elements that make up an extensive body of knowledge or facts (Anderson et al., 2001: 48). For example, knowledge of factors that constitute the elements of climate and knowledge of the factors that affect settlement can be considered as conceptual knowledge. *Procedural knowledge* refers to the knowledge of "how to do something" (Anderson et al., 2001: 52). For example, knowledge of how to calculate the real length of an area the map length and scale of which are provided, or knowing the steps a student should follow to profile can be considered as procedural knowledge. As for the *meta-cognitive knowledge*, it refers to an individual's knowledge of their cognition and their awareness of it (Anderson et al., 2001: 55). *Meta-cognitive knowledge* includes self-awareness, evaluating self-experiences, and self-regulation (Anderson et al., 2001: 55).

Table 1- Revised Bloom's Taxonomy (Anderson & Krathwohl, 2001: 28).

THE KNOWLEDGE DIMENSION	THE COGNITIVE PROCESS DIMENSION					
	Remember	Understand	Apply	Analyze	Evaluate	Create
Factual knowledge						
Conceptual knowledge						
Procedural knowledge						
Meta-Cognitive knowledge						

The cognitive process dimension of the taxonomy, on the other hand, consists of; *remembering, understanding, application, analysis, evaluation, creation,* and their sub-dimensions (see Table 2). *Remembering* is the level at which an individual retrieves information in relation to the topic of interest from their long-term memory. It includes the sub-dimensions of recognizing and recalling (Anderson et al., 2001: 66). The following examples can be considered as remembering: recalling and naming incidents that caused significant changes in population census in chronological order, or naming the elements of climate. *Understanding* is the level at which an individual can reconstruct the educational message in their minds and make sense of it. It includes the sub-dimensions of; *"interpreting, exemplifying, classifying, summarizing, inferring, comparing,* and *explaining" (*Anderson et al., 2001: 70). For example, being able to compare the areas where the population density is high and low can be considered to be at the level of understanding. *Application* is the level at which a student uses the information s/he learned to solve a problem by following procedures. It includes the sub-dimensions of *"execution* and *implementation"* (Anderson et al., 2001: 70). For example, calculating the slope of an area the length and elevation difference of which is provided can be considered to be at the application level. *Analysis* is the level at which the educational message is broken down into its parts and the relationship among those parts are identified. This stage includes the sub-dimensions of "*differentiation, organization, and attribution*" (Anderson et al., 2001: 79).

Table 2- Revised Bloom's Taxonomy: Knowledge and Cognitive Process Dimensions (Anderson & Krathwohl, 2001: 29).

<table>
<tr><th colspan="2" rowspan="2">KNOWLEDGE DIMENSION</th><th colspan="2">COGNITIVE PROCESS DIMENSION</th></tr>
<tr><th>Main dimensions</th><th>Sub-dimensions</th></tr>
<tr><td>Factual Knowledge</td><td>Knowledge of terminology
Knowledge of specific details and elements</td><td>1. Remembering</td><td>1.1. Recognizing
1.2. Recalling</td></tr>
<tr><td>Conceptual Knowledge</td><td>Knowledge of classifications and categories
Knowledge of principles and generalizations
Knowledge of theories, models, and constructs</td><td rowspan="2">2. Understanding</td><td rowspan="2">2.1. Interpreting
2.2. Exemple
2.3. Classifying
2.4. Summarizing
2.5. Comparing
2.6. Explaining</td></tr>
<tr><td>Procedural Knowledge</td><td>Knowledge of subject-specific skills and algorithms
Knowledge of subject-specific techniques and methods
Knowledge of criteria for determining when to use appropriate procedures</td></tr>
<tr><td rowspan="4">Meta-cognitive Knowledge</td><td>Strategic knowledge</td><td rowspan="2">3. Application</td><td rowspan="2">3.1. Executing
3.2. Implementing</td></tr>
<tr><td>Knowledge about cognitive tasks, including appropriate contextual and conditional knowledge</td></tr>
<tr><td colspan="2" rowspan="3">Self-knowledge</td><td>4. Analyzing</td><td>4.1. Differentiating
4.2. Organizing
4.3. Attributing</td></tr>
<tr><td>5. Evaluation</td><td>5.1 Checking
5.2. Critiquing</td></tr>
<tr><td>6. Creating</td><td>6.1. Generating
6.2. Planning
6.3. Producing</td></tr>
</table>

For example, the analysis of international transportation routes in relation to local and global effects can be considered to be at this level. *Evaluation* is the level at which a judgement is made based on certain criteria. This level includes the sub-dimensions of *"checking* and *critiquing"* (Anderson et al., 2001: 83). For example, evaluation of Turkey's population distribution taking the physical factors into account can be considered to be at this level. *Creation* is the level at which the components of the educational message are combined in a consistent manner and restructured meaningfully and consistently to form a new pattern. It includes the sub-dimensions of "*generating, planning, and producing*" (Anderson et al., 2001: 84). For example, offering an original solution to prevent environmental pollution can be considered to be at this level.

In fact, the higher levels in the knowledge and cognitive process dimensions of the Revised Bloom's Taxonomy corresponds to the higher level higher level thinking skills that are described in the assessment-evaluation principles of the GCC (MoNE, 2005). In other words, the curriculum aims to equip students with higher level higher level thinking skills. In this sense, the coursebooks are expected to include questions which are compatible with learning objectives, take students' individual differences into account, and predict higher level thinking skills.

A number of studies in the literature investigated the questions included in geography coursebooks from different perspectives (i.e. Bilgili, 2011; Geçit & Yarar, 2010; Jo, 2007; Jo & Bednarz, 2009; Mishra, 2015; Scholz et al., 2014; Ünlü, 2016; Şanlı ve Sezer 2018). However, there are only few studies which analyzed the coursebooks in terms of question types (Huynh & Sharpe, 2013; Park, 2005; Yang, Wang & Xu, 2015; Yaşar, 2009). Additionally, few studies analyzed the questions included in geography coursebooks and the exam questions prepared by geography teachers (Geçit & Yarar, 2010), and the questions used in national exams based on Bloom's taxonomy (Sönmez, Koç & Çiftçi, 2013). Moreover, a recent study analyzed learning objectives within the GCC (10^{th} grade) based on this revised taxonomy (İlhan & Gülersoy, 2018). In this sense, the present study is considered to compliment previous studies. Furthermore, the results of this study will allow making a judgement in relation to the extent to which the questions included in the coursebooks correspond to the assessment-evaluation guidelines presented in the GCC. Therefore, the study will provide coursebook authors who are assigned in book preparation commissions within MoNE and the teachers teaching geography with valuable data. The geography coursebooks in Turkey are used as the only teaching resource by most practitioners in the field (Artvinli, 2009: 58; Artvinli & Kaya, 2010: 306; Yaşar, 2005: 9) and, therefore, the activities in the course books become a habit for the teachers (Pınar, 2011). Thus, if taken into account, the findings of the study are expected to result in tendency changes in teachers' use of assessment tools. Last but not least, the coursebooks in Turkey are provided by MoNE free of charge. And this leads to the use of the coursebooks more than any other kind of materials in geography classes by students. Therefore, making arrangements by taking into account the findings in relation to the assessment-evaluation dimensions of the books will be important for student learning.

In line with the arguments presented above, this study aimed to identify the question types included in the geography books that are used in public high schools across Turkey, and the level of those questions in the Revised Bloom's Taxonomy. Thus, the answers to the following research questions were sought:

- What are the questions types included in geography course books (9^{th}, 10^{th}, 11^{th}, and 12^{th} grades)?
- What are the levels of the question types included in geography course books (9^{th}, 10^{th}, 11^{th}, and 12^{th} grades) in the Revised Bloom's Taxonomy?

2. Method

The present study, which aimed to analyze the question types included in geography coursebooks and identify their levels within the Revised Bloom's Taxonomy, adopted a qualitative research design. The analysis of question types included in the coursebooks and identifying their levels in the Revised Bloom's Taxonomy required detailed investigation of the coursebooks. Therefore, among qualitative research methods, document analysis was found to be the most

suitable approach to realize the objectives of the study. Document analysis includes finding and reading sources, taking notes, and evaluating the sources based on a specific goal (Karasar, 2000: 183).

As part of the study, the 9th, 10th, 11th, and 12th grade geography coursebooks that are published by MoNE were downloaded from the MoNE supported access portal titled "Education Information Network" (EIN). The reasons for the selection of those books, details of which are provided in Table 3, were the fact that they were prepared by the commission established by MoNE (provided that they comply with the criteria, private publishing companies may be assigned with the task of preparing books by MoNE and those books can only be published after passing through the evaluation of the commission) and that they were used in high schools across Turkey.

The chapters in the books analyzed in this study consisted of the following sections; "Getting Started (GS), Geographical Application (GA), Research (R), Brainstorming (Br), Assessment-Evaluation (AE), Field Work (FW), Extracurricular Activities (EA), Checklist (Ch), Warm Up (WU)" and Preparations for the Topic (PT)". To gather the data for the analysis, the author initially examined all of those sections. After this, two forms were prepared to analyze the questions included in those sections. The preparation of the first form was based on the assessment tools included in the GCC and the second form was based on "Dimensionalized Hierarchical Classification Chart". A total 1940 questions were content analyzed based on those two forms in relation to question types (see Table 4) and their place in the Revised Bloom's Taxonomy (see Figure 2). Additionally, the findings section in this paper includes only the assessment tools that were present in the analyzed books since most of the complimentary assessment tools were missing in the coursebooks. Descriptive statistics (percentages/ frequencies) were used to analyze the data.

Table 3- Geography textbooks examined within the scope of the study

TITLE OF THE BOOK	YEAR	AUTHORS	PUBLISHER
High School Geography Textbook 9	2018	Commission	MoNE
High School Geography Textbook 10	2018	Commission	MoNE
High School Geography Textbook 11	2018	Commission	MoNE
High School Geography Textbook 12	2018	Commission	MoNE

Table 4- The form used to analyze the question types

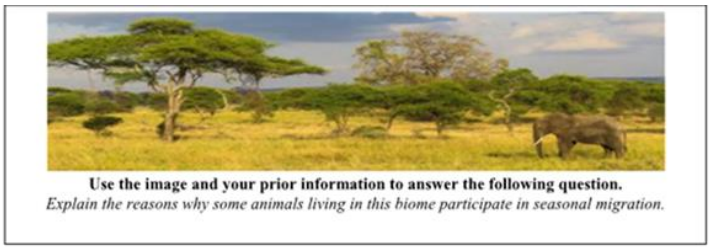
ASSESSMENT TOOLS	SECTIONS WITHIN THE BOOK									
Traditional Assessment Tools	GS	GA	R	Br	AE	FW	EA	Ch	WU	PT
Open-ended question					**X**					
Multiple-choice question										
True-False										
Matching										
Gap filling										
Complimentary Assessment Tools										
Checklist										
Performance evaluation										
Concept Map										
Rubric										
Peer-assessment										
Portfolio										
Project evaluation										

Agreement percentage formula was used to establish the reliability of the study. The agreement percentage was calculated using the following formula: "Reliability = Number of Agreements / (Number of Agreements + Number of Disagreements) x 100" (Miles & Huberman, 1994). To do the reliability analysis, firstly, the 1940 questions included in the books (452 questions in the 9th grade coursebook, 653 in the 10th grade, 523 in the 11th grade, and 312 in the 12th grade) were assessed separately by the author and a subject matter expert based on the classification criteria (question types and their level in the taxonomy). Following this, the author and the expert met and they compared their coding and marked each coding as "Agreement" or "Disagreement". In the end, there were 1883 agreements and 57 disagreements for the question type analysis, and 1828 agreements and 112 disagreements for the questions' place in the taxonomy. Thus, the agreement percentage was calculated as 97 % for the question type analysis, and 94 % for the analysis of questions' place in the taxonomy. According to Yıldırım and Şimşek (2003) agreement percentages over 70 % are accepted as reliable. Additionally, in order to reach an agreement over the disagreements, a second subject matter expert, who was a geography lecturer, was consulted and agreements that were reached following this consultation process were accepted to be accurate and, thus, this process also contributed to further increasing the reliability of the study.

A Sample Question Analysis;

- Identifying the question type;

The question presented in Figure 2, which was copied from the *assessment-evaluation section* in the 36th page of the 11th grade geography coursebook, included a visual and students were asked to use the visual and their prior knowledge to explain the reason (s) for the seasonal migration of animals in that particular biome (see Figure 2). Since it asked students to state the answer freely with their own sentences, this question was evaluated to be an *open-ended question.*



Use the image and your prior information to answer the following question.
Explain the reasons why some animals living in this biome participate in seasonal migration.

Noun: Biome, Seasonal Migration, Some Animals

Verb: Explain

The Knowledge Dimension
A. Factual Knowledge
B. Conceptual Knowledge
C. Procedural Knowledge
D. Meta-Cognitive Knowledge

The Cognitive Process Dimension
1. Remember
2. Understand
3. Apply
4. Analyze
5. Evaluate

The Knowledge Dimension	The Cognitive Process Dimension					
	1. Remember	2. Understand	3. Apply	4. Analyze	5. Evaluate	6. Create
A. Factual						
B. Conceptual		X				
C. Procedural						
D. Meta-Cognitive						

Figure 2- Stages of analysis based on Revised Bloom's Taxonom

- *Revised Bloom's Taxonomy analysis of the question type;*

The open-ended question presented in Figure 2, included terms such as "Biome, Seasonal Migration, Some Animals", was evaluated to be at the level of *"conceptual knowledge"* since it included the basic elements that made up a construct and how those elements were interrelated. As for the cognitive process dimension, the question was evaluated to be at the level of *"understanding"* since the action word (the verb) used in it was *"explain"* which required students to relate their current knowledge with their prior knowledge and provide an explanation using their own sentences.

3. Findings

This section presents findings in relation to the research questions addresses in the study. The first research problem was: *"What are the questions types included in geography course books?"* In line with this, a total of 452 questions in the 9th, 653 in the 10th, 523 in the 11th, and 312 in the 12th grade coursebooks were analyzed to identify the question types (see Table 5).

The analysis of Table 5 shows that the 9th grade coursebook mainly included open-ended questions (f= 257; 57 %) and multiple-choice questions (f= 91; 20 %). The 10th grade coursebook generally included matching questions (f= 283; %43) and open-ended questions (f= 153; 23 %). Open-ended questions (f= 157; 30%- f= 103; 33 %) and multiple-choice questions (f=115; 22 %- f=55; 18 %) were prevalent in the 11th and 12th grade coursebooks respectively. Among complimentary assessment tools, only checklists were included in the coursebooks. The most frequently used question type across the four coursebooks were open-ended questions (f= 670; 35 %) and matching questions (f= 586; 30 %).

Table 5- Question type analysis of the questions included in geography coursebooks

QUESTION TYPE	9th Grade		10th Grade		11th Grade		12th Grade		TOTAL	
	f	%	f	%	f	%	f	%	f	%
Open-ended	257	57	153	23	157	30	103	33	670	35
Multiple-choice	91	20	83	13	115	22	55	18	344	18
Matching	77	17	283	43	143	27	83	27	586	30
Gap-filling	27	6	65	10	55	11	64	21	209	11
Checklist	0	0	71	11	53	10	7	2	131	7
Total (%)	452	100	653	100	523	100	312	100	1940	100

The second research question was: "What are the levels of the question types included in geography course books (9th, 10th, 11th, and 12th grades) in the Revised Bloom's Taxonomy?" In line with this, the open-ended questions, multiple-choice questions, matching questions, checklists, and gap-filling questions in the 9th, 10th, 11th, and 12th grade coursebooks were analyzed to find out their place in the knowledge and cognitive process dimensions of Bloom's taxonomy.

The analysis of open-ended questions included in geography course books (f= 640) in relation to Bloom's taxonomy is presented in Table 6.

In terms of cognitive process dimension, the analysis of Table 6 shows that 7 % (f= 19) of the open-ended questions in the 9th grade coursebook were at the level of remembering, 34 % (f= 87) were at the level of understanding, 21 % (f= 54) were at the level of application, 21 % (f= 55) were at the level of analysis, 14 % (f= 35) were at the level of evaluation, and 3 % (f= 7) were at the level of creation. In terms of the knowledge dimension, 16 % (f= 42) of the questions were at the level of factual knowledge, 58 % (f= 149) were at the level of conceptual knowledge, 26 % (f= 66) were at the level of procedural knowledge, and 2 % (f= 5) were at the level of meta-cognitive knowledge.

The cognitive process dimension analysis of the questions in the 10th grade coursebook showed that 31 % (f= 47) of the open-ended questions were at the level of remembering, 48 % (f= 74) were at the level of understanding, 13 % (f= 20) were at

the level of application, 5 % (f= 8) were at the level of analysis, and 3 % (f= 4) were at the level of evaluation. The knowledge dimension analysis of the questions showed that 8 % (f= 13) of the open-ended questions were at the level of factual knowledge, 88 % (f= 134) were at the level of conceptual knowledge, and 4 % (f= 6) were at the level of procedural knowledge.

34 % (f= 54) of the open-ended questions in the 11th grade coursebook were at the level of remembering, 57 % (f= 89) were at the level of understanding, and 9 % (f= 14) at the level of application in terms of the cognitive process dimension. As for the knowledge domain analysis, 21 % (f= 33) open-ended questions were at the level of factual knowledge and 79 % (f= 124) were at the level of conceptual knowledge.

The cognitive process dimension analysis of the open-ended questions in the 12th grade coursebook showed that 33 % (f= 34) of the questions were at the level of remembering, 54 % (f= 56) were at the level of understanding, 7 % (f= 7) were at the level of analysis, 4 % (f= 4) were at the level of evaluation, and 2 % (f= 2) were at the level of creation. The knowledge dimension analysis of the questions showed that 17 % (f= 17) of the questions were at the level of factual knowledge and 83 % (f= 86) were at the level of conceptual knowledge.

Moreover, the analysis of Table 10 suggests that there were not any open-ended questions at the level of creating in terms of the cognitive process dimension in the 10th and 11th grade coursebooks. There were also no open-ended questions at the level of meta-cognitive knowledge in terms of the knowledge dimension in the 10th,11th, and 12th grade coursebooks. Moreover, the 10th and 12th grade coursebooks did not include any open-ended questions at the level of procedural knowledge in terms of the knowledge dimension.

The analysis of multiple-choice questions included in the geography coursebooks (f= 344) based on Bloom's taxonomy are presented in Table 7.

Cognitive process dimension analysis of multiple-choice questions included in the 9th grade coursebook revealed that 5 % (f=5) of the questions were at the level of remembering, 62 % (f= 56) were at the level of understanding, 10 % (f= 9) were at the level of application, 20 % (f= 18) were at the level of analysis, and 3 % (f= 3) were at the level of evaluation. Knowledge dimension

analysis of the questions indicated that 14 % (f= 13) of the questions were at the level of factual knowledge, 76 % (f= 69) were at the level of conceptual knowledge, and 10 % (f= 9) were at the level of procedural knowledge.

As for the multiple-choice questions included in the 10th grade coursebook, it can be understood from Table 7 that 25 % (f= 21) of the questions were at the level of remembering, 69 % (f= 57) were at the level of understanding, and 6 % (f= 5) were at the level of analysis based on the cognitive process dimension analysis. Knowledge dimension analysis showed that 34 % (f= 28) of the questions were at the level of factual knowledge and 66 % (f= 55) were at the level of conceptual knowledge.

The analyses that were conducted on multiple-choice questions in the 11th grade coursebook based on Bloom's taxonomy showed that 34 % (f= 28) were at the level of remembering, 66 % (f= 55) were at the level of understanding, and 14 % (f= 16) were at the level of analysis in terms of the cognitive process dimension. On the other hand, 21 % (f= 24) of the questions were at the level of factual knowledge and 79 % (f=91) were at the level of conceptual knowledge in terms of the knowledge dimension.

Cognitive process dimension analysis of multiple-choice questions included in the 12th grade coursebook showed that 35 % (f= 19) of the questions were at the level of remembering, 38 % (f= 21) were at the level of understanding, and 27 % (f= 15) were at the level of analysis. Knowledge dimension analysis of the questions indicated that 15 % (f=8) of the questions were at the level of factual knowledge and 85 % (f= 47) were at the level of conceptual knowledge.

On the other hand, none of the coursebooks included any multiple-choice questions at the level of creation with regards to the cognitive process dimension. Similarly, none of the coursebooks included any multiple-choice questions at the level of procedural or meta-cognitive knowledge with regards to the knowledge dimension. Moreover, the 9th grade course book also did not include any

multiple-choice questions at the level of evaluation within the cognitive process dimension.

Bloom's taxonomy based analysis of the matching questions included in the geography coursebooks (f= 586) is presented in Table 8.

The analysis of Table 8 reveals that 6 % (f= 5) of the matching questions, in terms of cognitive process dimension, were at the level of remembering, 75 % (f= 58) were at the level of application, and 18 % (f= 14) were at the level of analysis. Knowledge dimension analysis, on the other hand, revealed that 25 % (f= 19) of the questions were at the level of factual knowledge and 75 % (f= 58) were at the level of conceptual knowledge.

Table 6- The analysis of open-ended questions in geography coursebooks in relation to Bloom's taxonomy.

	KNOWLEDGE DIMENSION																			
	9th Grade Coursebook					10th Grade Coursebook					11th Grade Coursebook					12th Grade Coursebook				
Cognitive Process Dimension	Factual	Conceptual	Procedural	Meta-cognitive	Total	Factual	Conceptual	Procedural	Meta-cognitive	Total	Factual	Conceptual	Procedural	Meta-cognitive	Total	Factual	Conceptual	Procedural	Meta-cognitive	Total
	f	f	f	f	f%	f	f	f	f	f%	f	f	f	f	f%	f	f	f	f	f%
Remember	16	3	-	-	19(7)	6	41	-	-	47(31)	23	31	-	-	54(34)	11	23	-	-	34(33)
Understand	15	63	9	-	87(34)	7	67	-	-	74(48)	10	79	-	-	89(57)	6	50	-	-	56(54)
Apply	7	23	24	-	54(21)	-	14	6	-	20(13)	-	14	-	-	14(9)	-	-	-	-	-
Analyze	4	32	19	-	55(21)	-	8	-	-	8(5)	-	-	-	-		-	7	-	-	7(7)
Evaluate	-	21	14	-	35(14)	-	4	-	-	4(3)	-	-	-	-		-	4	-	-	4(4)
Create	-	7	-	-	7(3)	-	-	-	-	-	-	-	-	-		-	2	-	-	2(2)
Total (%)	42(16)	149(58)	66(26)	-	257(100)	13(8)	134(88)	6(4)	-	153(100)	33(21)	124(79)	-	-	157(100)	17(17)	86(83)	-	-	103(100)

Table 7- The analysis of multiple-choice questions in geography coursebooks in relation to Revised Bloom's Taxonomy

	KNOWLEDGE DIMENSION																			
	9th Grade Coursebook					10th Grade Coursebook					11th Grade Coursebook					12th Grade Coursebook				
Cognitive Process Dimension	Factual	Conceptual	Procedural	Meta-cognitive	Total	Factual	Conceptual	Procedural	Meta-cognitive	Total	Factual	Conceptual	Procedural	Meta-cognitive	Total	Factual	Conceptual	Procedural	Meta-cognitive	Total
	f	f	f	f	f%	f	f	f	f	f%	f	f	f	f	f%	f	f	f	f	f%
Remember	5	-	-	-	5(5)	11	10	-	-	21(25)	14	23	-	-	37(32)	8	11	-	-	19(35)
Understand	6	49	1	-	56(62)	17	40	-	-	57(69)	10	52	-	-	62(54)	-	21	-	-	21(38)
Apply	-	6	3	-	9(10)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Analyze	2	11	5	-	18(20)	-	5	-	-	5(6)	-	16	-	-	16(14)	-	15	-	-	15(27)
Evaluate	-	3	-	-	3(3)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Create	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Total (%)	13(14)	69(76)	9(10)	-	91(100)	28(34)	55(66)	-	-	83(100)	24(21)	91(79)	-	-	115(100)	8(15)	47(85)	-	-	55(100)

The analysis of the matching questions in the 10th grade coursebook, in terms of the cognitive process dimension, showed that 51 % (f= 153) of the questions were at the level of remembering, 27 % (f= 77) were at the level of understanding, and 22 % (f= 63) were at the level of application. The knowledge dimension analysis showed that 80 % (f= 226) of the matching questions were at the level of factual knowledge and 20 % (f= 57) were at the level of conceptual knowledge.

The taxonomy analysis of the matching questions in the 11th grade coursebook suggested that 57 % (f= 82) were at the level of remembering, 38 % (f= 55) were at the level of understanding, and 4 % (f= 6) were at the level of application in terms of the cognitive process dimension. As for the knowledge dimension

analysis, the analysis revealed that 56 % (f= 80) were at the level of factual knowledge and 44 % (f= 63) were at the level of conceptual knowledge.

Taxonomy analysis of the matching questions in the 12th grade coursebook indicated 47 % (f= 39) were at the level of understanding, 39 % (f= 32) were at the level of application, and 14 % (f= 12) were at the level of analysis in terms of the cognitive process dimension. The knowledge dimension analysis showed that 35 % (f= 29) of the questions were at the factual knowledge level and 65 % (f= 54) were at the conceptual knowledge level.

On the other hand, the 9th, 10th, and 11th grade coursebooks did not include any matching questions at the levels of evaluation or creation with regards to the cognitive process dimension, or at the levels of procedural or meta-cognitive knowledge with regards to the knowledge dimension. Moreover, the 10th and 11th grade coursebooks did not include any matching questions at the level of analysis within the cognitive process dimension. Different from others, the 12th grade coursebook did not include any matching questions at the level of remembering within the cognitive process dimension.

Table 8- The analysis of matching questions in geography coursebooks in relation to Revised Bloom's Taxonomy

	KNOWLEDGE DIMENSION																			
	9th Grade Coursebook					10th Grade Coursebook					11th Grade Coursebook					12th Grade Coursebook				
Cognitive Process Dimension	Factual	Conceptual	Procedural	Meta-cognitive	Total	Factual	Conceptual	Procedural	Meta-cognitive	Total	Factual	Conceptual	Procedural	Meta-cognitive	Total	Factual	Conceptual	Procedural	Meta-cognitive	Total
	f	f	f	f	f%	f	f	f	f	f%	f	f	f		f%	f	f	f		f%
Remember	5	-	-	-	5(6)	122	21	-	-	143(51)	48	34	-	-	82(57)	-	-	-	-	-
Understand	-	-	-	-		41	36	-	-	77(27)	32	23	-	-	55(38)	29	10	-	-	39(47)
Apply	14	44	-	-	58(75)	63	-	-	-	63(22)	-	6	-	-	6(4)	-	32	-	-	32(39)
Analyze	-	14	-	-	14(18)	-	-	-	-	-	-	-	-	-	-	-	12	-	-	12(14)
Evaluate	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Create	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Total (%)	19(25)	58(75)	-	-	77(100)	226(80)	57(20)	-	-	283(100)	80(56)	63(44)	-	-	143(100)	29(35)	54(65)	-	-	83(100)

Table 9- The analysis of gap-filling questions in geography coursebooks in relation to Revised Bloom's Taxonomy

	KNOWLEDGE DIMENSION																			
	9th Grade Coursebook					10th Grade Coursebook					11th Grade Coursebook					12th Grade Coursebook				
Cognitive Process Dimension	Factual	Conceptual	Procedural	Meta-cognitive	Total	Factual	Conceptual	Procedural	Meta-cognitive	Total	Factual	Conceptual	Procedural	Meta-cognitive	Total	Factual	Conceptual	Procedural	Meta-cognitive	Total
	f	f	f	f	f%	f	f	f	f	f%	f	f		f	f%	f	f	f	f	f%
Remember	5	3	-	-	8(30)	21	16	-	-	37(59)	27	4	-	-	31(56)	37	19	-	-	56(88)
Understand	12	-	-	-	12(44)	14	12	-	-	26(41)	13	11	-	-	24(44)	-	8	-	-	8(12)
Apply	7	-	-	-	7(26)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Analyze	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Evaluate	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Create	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Total (%)	24(89)	3(11)	-	-	27(100)	35(56)	28(44)	-	-	63(100)	40(73)	15(27)	-	-	55(100)	37(58)	27(42)	-	-	64(100)

The analysis of the gap-filling questions included in the geography coursebooks (f= 209) based on Bloom's taxonomy is presented in Table 10.

The analysis of Table 10 reveals that 30 % (f= 8) of the gap-filling questions in the 9th grade coursebook were at the level of remembering, 44 % (f= 12) were at the level of understanding, and 26 % (f= 7) were at the level of application in the

cognitive process dimension. As for the knowledge dimension, the analysis showed that 89 % (f= 24) of the questions in the 9th grade coursebook were at the level of factual knowledge and 11 % (f= 3) were at the level of conceptual knowledge. As for the gap-filling questions in the 10th grade coursebook, the cognitive process dimension analysis suggested that 59 % (f= 37) of the questions were at the level of remembering and 41 % (f= 26) were at the level of understanding. The knowledge dimension analysis indicated that 56 % (f= 35) of the gap-filling questions were at the level of factual knowledge and 44 % (f= 28) were at the level of conceptual knowledge in the 10th grade coursebook. The taxonomy analysis of the gap-filling questions in the 11th grade coursebook indicated that 56 % (f= 31) of the questions were at the remembering level and 44 % (f= 24) were at the level of understanding in the cognitive process dimension. Knowledge dimension analysis in this coursebook showed that 73 % (f= 40) of the gap-filling questions were at the level of factual knowledge and 27 % (f= 15) were at the level of conceptual knowledge. The analysis of the gap-filling questions in the 12th grade coursebook revealed that 88 % (f= 56) of the questions were at the level of remembering and 13 % (f= 8) were at the level of understanding in the cognitive process dimension. Last but not least, the questions knowledge dimension analysis indicated that 58 % (f= 37) of the questions were at the level of factual knowledge and 42 % (f= 27) were at the level of conceptual knowledge. With the exception of the 9th grade coursebook, the majority of the books did not include any gap-filling questions at the levels of application, analysis, evaluation, or creation within the cognitive process dimension. Furthermore, in terms of the knowledge dimension, none of the coursebooks included any gap-filling questions at the levels of procedural or meta-cognitive knowledge.

The analysis of checklists, complimentary assessment tools, included in the geography coursebooks (f= 131) based on Bloom's taxonomy is presented in Table 10.

Table 10- The analysis of checklists in geography coursebooks in relation to Revised Bloom's Taxonomy

	KNOWLEDGE DIMENSION														
	10th Grade Coursebook					11th Grade Coursebook					12th Grade Coursebook				
Cognitive Process Dimension	Factual	Conceptual	Procedural	Meta-cognitive	Total	Factual	Conceptual	Procedural	Meta-cognitive	Total	Factual	Conceptual	Procedural	Meta-cognitive	Total
	f	f	f	f	f %	f	f	f	f	f %	f	f	f	f	f %
Remember	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Understand	-	16	-	-	16(23)	-	8	-	-	8(15)	-	-	-	-	-
Apply	-	-	35	-	35(49)	-	-	36	-	26(49)	-	7	-	-	7(100)
Analyze	-	8	-	-	8(11)	-	6	-	-	6(11)	-	-	-	-	-
Evaluate	-	5	-	-	5(7)	-	10	3	-	13(25)	-	-	-	-	-
Create	-	-	7	-	7(10)	-	-	-	-	-	-	-	-	-	-
Total	-	29(41)	42(59)	-	71(100)	-	24(45)	29(55)	-	53(100)	-	7(100)	-	-	7(100)

The analysis of Table 9 indicates that the 9th grade geography coursebook did not include checklist.

The analysis of the checklist included in the 10th grade coursebook based on Bloom's taxonomy revealed that 23 % (f= 16) of the questions were at the level of understanding within the cognitive process dimension, 49 % (f= 35) were at the level of application, 11 % (f= 8) were at the level of analysis, 7 % (f= 5) were at the level of evaluation, and 10 % (f= 10) were at the level of creation. The knowledge dimension analysis suggested that 41 % (f= 29) were at the level of conceptual knowledge and 59 % (f= 42) were at the level of procedural knowledge.

As for the analysis of the checklist in the 11th grade coursebook, the results indicated that 15 % (f= 8) of the questions were at the level of understanding, 49 % (f= 26) were at the level of application, 11 % (f= 6) were at the level of analysis, and 25% (f= 13) were at the level of evaluation in terms of the cognitive process domain. Results of the knowledge dimension analysis showed that 45 % (f= 24) of the questions were at the conceptual knowledge level and 55 % (f= 29) were at the level of procedural knowledge.

All of the checklists in the 12th grade coursebook, on the other hand, were at the level of application in the cognitive process dimension and at the level of conceptual knowledge in the knowledge dimension. On the other hand, it is worth noting that the checklists in the 10th, 11th, and 12th grade coursebooks were mainly at the level of application in terms of the cognitive dimension and at the level of procedural knowledge in terms of the knowledge dimension.

4. Discussion and Conclusion

The results of the study showed that open-ended (35 %) and matching questions (30 %) were the most frequently used question types in the geography coursebooks. This was followed by multiple-choice questions (18 %), gap-filling questions (11 %), and checklists (7 %). The most frequently used question type in the 9th, 11th, and 12th grade coursebooks was the open-ended question type and matching question type was the most frequently used question type in the 10th grade coursebook (see Table 5). Similarly, in his study investigating the question types and those questions place in Bloom's taxonomy within 6 geography coursebooks used in Turkey, Yaşar (2009) found that open-ended questions were the most frequently used question type in geography coursebooks. The reason for the selection of open-ended question in the coursebooks, the finding reached in both studies, is the fact that preparation of such questions is relatively easy (Atılgan, Doğan ve Kan, 2006) Moreover, the fact that this type of question was used by the Monitoring and Evaluating Academic Success (MEAS) project (2015) funded by MoNE in Turkey and in national exams such as the Undergraduate Placement Exam (UPE, 2017) administered by the Higher Education Council (HEC) is considered to have encouraged coursebook authors to include open-ended questions which are known to be superior than other types of questions in measuring higher level thinking skills.

As known, common usage of matching questions includes the association of texts in relation to two events, phenomena, or situations (Tekin, 1993) However, the analyzed coursebooks were found to include matching questions that asked students to match texts with geography-related visuals. In fact, such use is considered to be the reason why matching questions were the second most frequently used questions type. In the study which he analyzed 787 geography questions in 6 coursebooks, Yaşar's (2009) found that there were only 5 instances for the use of a matching question. The increase in the use of matching questions (30% f= 586) can be interpreted in the following way; coursebook authors have adopted the use of this question type.

It is worth noting that the most frequently used question types represented traditional assessment tools and that complimentary assessment tools (except for the checklists), which are included in the GCC, were not included in the geography coursebooks. In his study, Yaşar (2009) found that the coursebooks included complimentary assessment tools such as project evaluation, performance evaluation, and portfolios. In fact, one of the suggestions in Yaşar's (2009) study was to increase the use of such assessment tools in the coursebooks. Nevertheless, the analysis of the coursebooks in this study indicate that while coursebook authors have prioritized the use of such complimentary assessment tools at the beginning of the curriculum reform movement, this tendency seems to have been replaced by old habits as time passed. Therefore, the fact that the coursebooks, which have been prepared more than a decade after the GCC reform (MoNE, 2005), still include extensive use of traditional assessment tools necessitates the revision of the geography coursebooks in terms of assessment and evaluation. This is because only product-oriented assessments can be conducted using traditional assessment tools. However, the GCC aims not only to assess learning outcomes but also to evaluate the learning process.

The study also analyzed the place of the questions included in geography coursebooks in the Revised Bloom's Taxonomy. The cognitive

process dimension analysis of the open-ended questions (f= 670) and multiple-choice questions (f= 344) revealed that the questions were mainly at the level of *"understanding"* across all grades (see Table 6, 7). Additionally, matching questions (f= 586) were found to have mainly been used at the level of "*application" i*n the 9th grade coursebook, at the level of *"remembering"* in the 10th and 11th grade coursebooks, and at the level of *"understanding"* in the 12th grade course book (see Table 8). Checklist were not included at all in the 9th grade coursebook, and the 131 checklist included in the 10th, 11th, and 12th grade coursebooks were at the level of *"application"* (see Table 9). And the 209 gap-filling questions were generally used at the *"understanding"* level in the 9th grade coursebook, and at the remembering level in the 10th, 11th, and 12th grade coursebooks (see Table 10).

Questions at the level of *"remembering" and "understanding"* direct students to rote learning rather than activate their cognition and enable them to undertake activities such as "*application, analysis, or evaluation"* (Eyüp, 2012; Çintaş-Yıldız, 2015; Şanlı & Pınar, 2017). Therefore, questions at the level of *"remembering and understanding"* included in the coursebooks may direct students to rote learning. The number of questions at the level of *"creation"* were quite few across the four coursebooks (f= 16). This finding is in line with the findings of previous research conducted in the field of geography teaching (Geçit & Yarar, 2010; Koç et al. 2013; Yaşar, 2009). Research studies conducted by Huynh and Sharpe (2013), Jo (2007), Jo and Bednarz (2009), which analyzed the questions included in Mishra's (2015) geography textbooks based on Costa's (2001) Levels of Questioning, also found that there were only a limited number of questions that required students to activate higher level thinking skills. Yang et al. (2015), who studied the geography questions within 5 coursebooks used in China taking Bloom, Harrow, and Krathwohl's taxonomies, found that the number of questions that challenge students' mid-level cognitive skills were used more frequently than questions at other levels. However, the fact that most of the questions included in the coursebooks in this study remained at the levels of *"remembering* and *understanding"* in spite of the use of different types of questions suggests that question type is not a distinctive variable in activating different kinds of cognitive skills. Nevertheless, it is difficult to make this generalization for all types of questions. This is because, unlike studies in the literature, the fact that there were questions at the level of *"application"* using question types such as *"matching"* and *"checklists"* in Şanlı and Pınar's (2017) study indicate that questions at higher cognitive levels can be formed using these types of questions.

As for the knowledge dimension of the taxonomy, it was found that the open-ended questions (f= 670) and multiple-choice questions (f= 344) included in the 9th, 10th, 11th, and 12th grade coursebooks were mainly at the level of *"conceptual knowledge"* (see Table 6-7). The matching questions (f= 586) were generally used at the level of *"conceptual knowledge"* in the 9th and 12th grade coursebooks, but at the level of *"factual knowledge"* in the 10th and 11th grade coursebooks (see Table 8). The checklist (f =131), on the other hand, were used at the level of *"procedural knowledge"* in the 10th and 11th grade coursebooks and all of the checklist questions included in the 12th grade coursebook were at the level of "*conceptual knowledge".* In this sense, the fact that most of the questions included in the coursebooks were at the levels of *"factual* and *conceptual knowledge"* in spite of the use of various question types suggest that only basic concepts were challenged in the questions. In other words, questions which include meta-cognitive concepts were not included in the four coursebooks that were analyzed. And the assessment sections of the coursebooks mainly included questions at the factual and conceptual knowledge level which were aimed to serve the functions of remembering and understanding. However, it is not possible to activate higher level thinking skill by only using basic concepts in the knowledge dimension. The results of the studies conducted by Jo and Bednraz (2009), Huynh and Sharpe (2013), and Mishra (2015)- in which the questions within geography coursebooks were analyzed in relation to Costa's taxonomy- indicated that the spatial concepts were used at low levels in the questions. The analysis of studies, which analyzed learning outcomes and the geography questions asked in exams in relation to the Revised Bloom's Taxonomy, found similar

results. To explain further, the results of analyses conducted by Arseven, Şimşek and Güden (2016) -in which they investigated 1011 exam questions prepared by geography questions- and the analyses conducted by İlhan and Gülersoy (2018) -in which they investigated 34 learning outcomes within the 10th grade curriculum- indicated that most of the concepts included were at low levels of the cognitive process dimension.

On the other hand, the checklists –which are complimentary assessment tools- included within the four coursebooks were found to have been used at higher levels within the cognitive process dimension and, thus, assessed higher level thinking skills (see Table 10). In this sense, it is considered that more frequent use of such complimentary assessment tools that have been suggested in the GCC will contribute to the process of preparing questions that can assess higher level thinking skills.

In conclusion, it can be argued that the question types and their levels in Bloom's taxonomy do not correspond with the assessment and evaluation standards identified in the GCC. The coursebooks in general included traditional assessment tools that assessed low levels of the knowledge and cognitive process dimensions. It is clear that the assessment tools and the goals that have been set in relation to the cognitive levels of those tools in the GCC have not been met.

Nevertheless, considering that the questions included in the coursebooks could affect teachers' practice and, thus, student learning- then a number of suggestions can be made in relation to the process of preparing the coursebooks. These are:

- In addition to traditional assessment tools, the geography coursebooks should also include complimentary assessment tools such as self-assessment, peer-evaluation, mind maps, project work, and rubric.
- The GCC's section on assessment and evaluation should be taken into consideration during the process of preparing geography coursebooks.
- The coursebooks should include more questions that allow students to practice higher level thinking skills. However, the skill of asking a question requires expertise. Therefore, MoNE should consult assessment and evaluation experts in geography education in preparing the assessment and evaluation sections of the coursebooks rather than leaving this responsibility solely on the coursebook authors.
- In terms of the knowledge dimension, the questions included in the coursebooks were prepared using basic concepts. However the use of higher level thinking skills also requires the use of advanced level concepts in the questions. In this sense, the questions in the coursebooks should include more advanced level concepts.
- The coursebook evaluation commission of the MoNE should recruit a geography pedagogue who is expert in assessment and evaluation.

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