# AN EVALUATION OF THE EXAM QUESTIONS OF SOCIAL STUDIES COURSE ACCORDING TO REVIZED BLOOM'S TAXONOMY

<sup>1</sup>Melehat GEZER<sup>\*</sup>, <sup>2</sup>Meral ONER SUNKUR, <sup>3</sup>İbrahim Fevzi SAHİN

<sup>12</sup>Primary Education Department, Dicle University, Diyarbakir, Turkey <sup>3</sup>Primary Education Department, Ataturk University, Erzurum, Turkey

## **Abstract**

In this research, it was aimed to investigate the written exam questions asked in the first term of the 2012-2013 academic year by the social studies teachers according to knowledge and cognitive process dimension of Revized Bloom's Taxonomy. The scope of the study comprised the questions asked in the written exams by the social studies teachers working at the elementary schools located in İzmir, Manisa, Bursa, İstanbul, Adana, Gaziantep, Sanliurfa, Diyarbakır and Erzurum provinces. Research data were collected via document analysis, one of the qualitative research methods. The questions were examined separately by the researchers according to Revized Bloom's Taxonomy and were placed in the two-dimensional taxonomy. According to the research findings, the questions were represented at the highest level in the factual knowledge and the conceptual knowledge sub-dimensions of the knowledge dimension, while they were represented at the lowest level in the procedural knowledge sub-dimension of the knowledge dimension. It was revealed that no exam questions were prepared regarding metacognitive knowledge sub-dimension. In the cognitive process dimension, the questions were prepared in remember, understand, analyze, evaluate and apply subdimensions respectively. It was found that cognitive process sub-dimension was not used in the process of preparation of the exam questions. In the light of these results, it may be suggested that the social studies teachers mostly used the items measuring learning at basic level in their classroom measurement and evaluation practices.

**Key Words:** Revized Bloom's Taxonomy, Written Exam Questions of the Social Studies Course, Curriculum of Social Studies Course

# Introduction

The curricula developed to meet the individuals and societies' interests, expectations and needs come into being after a planned and systematic process (Uzunboylu & Hürsen, 2012). This process starts with a purpose, continues with learning-teaching activities and ends with an evaluation (Gunduz, 2009). Each process is complementary to and continuation of one another. The last component is evaluation, and it gives information to the curriculum developers and practitioners about the effectiveness of the curriculum and the students (Cikrikci Demirtasli, 2012; Demirel, 2010). Evaluation, from this perspective, is carried out to determine the congruence of the decisions made about the curricula (Erden, 1998; Erturk, 1998; Sezgin, 1994), characteristics and talents of the students (Ahmad, 1996) and their achievement (Tekin, 1994).

An effective evaluation can be conducted with effective questions (Baysen, 2006). Selecting the question types which are appropriate for the content of the outcomes and subjects makes the evaluation process more meaningful (Yilmaz & Sunbul, 2000). Teachers generally use the items that measure learning at the knowledge level in their classroom measurement and evaluation practices (Cepni & Azar, 1998; Cikrikci Demirtasli, 2012; Colak, 2008; Gardner et al., 1997; Ozmen & Karamustafaoglu, 2006). However, quality questions which measure metacognitive skills such as metacognitive knowledge stimulating student thinking, *apply*, *evaluate*, *analyse* and *create* besides the questions about conceptual knowledge dimension and remembering which are central to

learning (Akbulut, 1999; Cikrikci Demirtasli, 2012; Filiz, 2004; Morgan & Saxton, 1994; Ozden, 2011).

Classifications are used to determine the cognitive level of the questions to be asked to the students (Bloom 1956, Haladyna 1997, Hauenstein, 1988, Marzano 2001). The most highly accepted classification is Bloom's Taxonomy which was formed by Bloom and his colleagues in 1956 because it pays attention to measurement (Bumen, 2007; Grounlund, 1998; Lipscomb, 2001; Kropp, Stoker, & Bashaw, 1966; Mcbain, 2011; Oermann & Kathleen, 2013; Ozden, 2011; Poole, 2006).

According to Bloom's Taxonomy, the categories in the cognitive domain are ordered from simple to complex. It includes six levels in which each category is the prerequisite to the previous one and ranges from concrete to abstract. These are Knowledge, Comprehension, Application, Analysis, Synthesis and Evaluation. Knowledge, Comprehension, Application are accepted as subcategories, and Analysis, Synthesis and Evaluation are viewed as meta-categories (Anderson et al., 2001; Bloom, 1956; Bloom, Hastings & Madaus, 1971; Erturk, 1998; Kropp, Stoker, & Bashaw, 1966; Saban, 2009; Sahinel, 2002). Bloom's Taxonomy was revised by Anderson, Krathwohl et al. (2001) because of the need to integrate new trends about developmental and learning psychology, teaching methods and measurement-evaluation with the taxonomy (Anderson et al., 2001; Bumen, 2006; Krathwohl, 2002; Turgut & Baykul, 2012).

Revized Bloom's Taxonomy (RBT) is designed in a two-dimensional structure which is different from the original taxonomy (Anderson et al., 2001; Ari, 2011; Turgut & Baykul, 2012). In the Revized Taxonomy table consisting of knowledge and knowledge processes, *knowledge dimension* is placed in the vertical axis, and *cognitive process dimension* is placed in the horizontal axis (Anderson et al., 2001; Gokler, 2012; Turgut & Baykul, 2012). In the knowledge dimension, meta-cognitive knowledge dimension is added, which is different from the original taxonomy, and thereby forming four sub-dimensions which are Factual, Conceptual, Procedural and Metacognitive knowledge types. In the cognitive process dimension, from simple to complex (Ayvaci & Turkdogan, 2010), there are six sub-dimensions which are *remember*, *understand*, *apply*, *analyze*, *evaluate* and *create* (Anderson et al., 2001; Forehand, 2005; Krathwohl, 2002; Lipscomb, 2001). These dimensions, the sub-dimensions and the classifications included in sub-dimensions are presented in Table 1.

**Table 1.** Table of Revized Bloom's Taxonomy

The Knowledge Dimension		The Cognitive Process Dimension					
		1. Remember	2. Understand	3. Apply	4. Analyze	5. Evaluate	6. Create
A: Factual Knowledge	A: Knowledge of terminology  A: Knowledge of specific details and elements						
B: Conceptual Knowledge	B:Knowledge of classifications and categories  B: Knowledge of principles and generalizations  B: Knowledge of theories, models,						
C: Procedural Knowledge	and structures  C: Knowledge of subject-specific skills and algorithms  C: Knowledge of subject-specific techniques and methods  C: Knowledge of criteria for determining when to use appropriate procedures	Telling what one knows,ex plaining via writing or using symbols or graphics	-Interpreting -Exemplifying -Classifying -Summarizing -Inferring -Comparing -Explaining	Implementing a learned generalization or principle in a new context different from the content of what is taught	- Differentiating -Analysis of organizing principles - Analysis of main principles in functioning of the system	Making judgments based on criteria and standards	Generating a consistent, useful and original product
D: Metacognitive knowledge	D: Strategic knowledge  D: Knowledge about cognitive tasks, including appropriate contextual and conditional knowledge  D: Self-knowledge						

Another change made in the original taxonomy is that the taxonomy is revized in a way to classify high order cognitive skills and knowledge emphasized by the student-centered curricula (Anderson et al., 2001). At this point, it should be noted here that RBT can help the teachersto

prepare questions that are sufficient to measure high order cognitive skills and knowledge in particular.

When literature is reviewed, it can be seen that the original taxonomy (Akpinar, 2003; Akpinar & Ergin, 2006; Baysen, 2006; Bikmaz, 2002; Cepni & Azar, 1998; Cepni, Ayvaci, Keles, 2001; Colak, 2008; Colak & Demircioglu, 2010; Dindar & Demir, 2006; Gierl, 1997; Gunduz, 2009; Karaman, 2005; Kaya, 2003; Koray & Yaman, 2002; Kogce, 2005; Mutlu, Usak & Aydogdu, 2003; Ozcan & Oluk, 2007; Ozmen & Karamustafaoglu, 2006; Sagir, 2003; Sesli, 2007) is used too often in the evaluation of the courses, so is Revized Bloom's Taxonomy (Gokler, Aypay & Ari, 2012; Ayvaci & Turkdogan, 2010; Gokler, 2012; Kogce & Baki, 2009; Ozer & Keskin, 2011; Tanik & Saracoglu, 2011). However, no studies have dealt with the analysis of the exam questions of the social studies course. Drawing on this point, in this research, the researchers investigated the written exam questions prepared by the social studies teachers according to the Primary Education Social Studies Curriculum (PESSC) of the 5th, 6th and 7th grades in terms of Revized Bloom's Taxonomy.

#### Method

This research is a qualitative study, and document analysis method was used. Document analysis is the investigation of features of one text, document by quantifying through content analysis (Yildirim & Simsek, 2011). In the research, as source of the data, written documents including the questions prepared by 14 social studies teachers working in various primary schools in İzmir, Manisa, İstanbul, Diyarbakir, Sanliurfa, Gaziantep and Adana provinces in 2012-2013 academic year were used. The collected data were investigated by the researchers in accordance with the knowledge and cognitive knowledge dimensions of Revized Bloom's Taxomony. In qualitative analysis of the data, the researchers coded each exam question separately. The emerging codes were compared at the end of each unit to reach a concensus on coding. A total of 702 exam questions were examined in the research. Percentages of the exam questions investigated according to the grades are presented in the Table 2.

Table 2.							
Distribution of the Exam Questions According to the Grades							
Grade	Number of questions examined	% Distribution					
5	166	24					
6	254	36					
7	282	40					

Sample questions which were investigated to determine the level of the questions in the taxonomy are given with explanations below:

The sample questions in the *Factual knowledge* dimension and *Remember* sub-dimension of the cognitive process dimension are:

- -The highest mountain of our country is ...... Mountain.
- -The flora of the Mediterranean climate is .....
- -The reduction ratio of the maps is called .....
- -The sultan who conquered Istanbul is .....

The questions presented above are associated with Knowledge of specific details and elements sub-dimension of the Factual knowledge category. Knowledge of specific details and

elements sub-dimension includes knowledge related to the subjectarea. It is thought that these questions represent the *factual lknowledge* dimension since specific details regarding one subject were asked in the given examples. Furthermore, it is considered that they represent *remember* sub-dimension of the *cognitive process* dimension as the questions examined knowledge at *remember* level, used the content in the same pattern as knowledge was stored, required students to write the answers when they saw them (Anderson et al., 2001; Turgut & Baykul, 2012).

The sample question in the *Conceptual* knowledge dimension and *Understand* sub-dimension of the cognitive process dimension is:

Some reasons why the Crusadeswere held are given below.

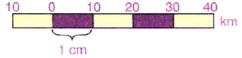
- I. Europeans' longing for the wealth of the East
- II. Pope Urban's desire to assert power on Christians
- III. Byzantine's seeking help from Europe

Which of these reasons can be put under the heading of "Economic reasons of the Crusades"?

- A) Only I
- B) II and III
- C) Only III
- D) I, II and III

The question given above is congruent with *Knowledge of classifications and categories* sub-dimension of the *Conceptual knowledge*. *Knowledge of classifications and categories* sub-dimension includes knowledge about how various knowledge pieces and units of knowledge pieces are related and integrated in a more systematic pattern. In the given example, one can infer that the question is associated with the conceptual knowledge dimension as the student is asked to classify the reasons of the Crusades under one heading. In the *cognitive process* dimension, the student is asked to find the category (generalization, concept or principle) to which one situation or example belongs, so one can infer that this question represents the *classification* sub-category at *Understand* level (Anderson et al., 2001; Turgut & Baykul, 2012).

The sample question in the *Procedural* knowledge dimension and *Apply* sub-category of the cognitive process is:



On the map drawn according to the linear scale above, the distance between two cities is 5 cm, how many kilometres is the air distance between these two cities in reality?

This sample question is associated with Knowledge of subject-specific skills and algorithms sub-dimension of the Procedural Knowledge category of the Knowledge Dimension. In the social studies, interpreting maps requires subject-specific knowledge, skills regarding the knowledge procedures of the scales and calculating the real distance. The fact that the sample question reflects knowledge and thinking styles specific to social studies indicates that it examines knowledge of subject-specific skills and algorithms. In the cognitive processdimension, as the student is asked to use his/her knowledge and carry out the procedure, one can infer that this question is associated with executing sub-category at Apply level (Anderson et al., 2001; Turgut & Baykul, 2012).

The sample question in the *Conceptual knowledge* and *Analyze* sub-dimension of the *cognitive process* is;

Events occurring as a result of the Geographical Discoveries;

- The Spice Route and the Silk Road lost their importance,
- The harbors of the Mediterranean lost their importance,
- The routes to Good Hope and Indian Sea were found,
- The harbors of the Atlantic Ocean gained importance,

When considered separately, which of the following was most affected by these developments?

A) Economic situation B) Military structure

C) Administrative structure D) Educational institutions

This sample question is associated with knowledge of classifications and categories sub-dimension of the conceptual knowledge dimension of the Knowledge category. Knowledge of classifications and categories contains knowledge about how various knowledge pieces and units of knowledge pieces are related and integrated in a more systematic pattern. In the sample above, it may be infered that the question is associated with the conceptual knowledge dimension as the student is asked to classify the results of the Goegraphical Discoveries under one heading. In the cognitive process dimension, the student is asked to differentiate irrelevant knowledge from relevant knowledge or important knowledge from unimportant knowledge and to direct his/her attention to related and important knowledge; therefore, one can argue that this question represents the differentiating sub-category at Analyze level.

The sample question in the *Factual* knowledge dimension and *Evaluate* sub-dimension of the *cognitive process* category is;

"People from various religions and races such as Muslims, Christians and Jews were living together in the Ottoman Empire"

Which characteristic of the Ottoman management mentality does a historian who says that statement focus on?

I. Coercive

II. Theocratic

III. Tolerant

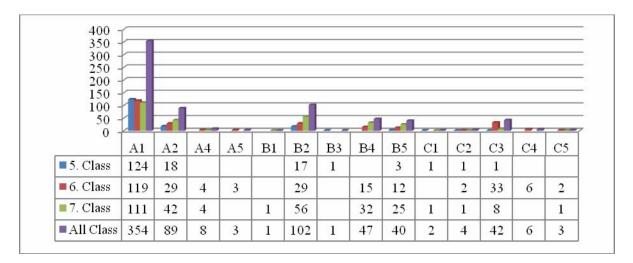
IV. Democratic

# A)I B)II C)III D)IV

The sample question given above is related to knowledge of specific details and elements sub-dimension of the factual knowledge dimension in the knowledge category. Knowledge of specific details and elements contains knowledge about one specific story, a given context or a theme in one statement. Given the sample question, it is thought that the question represents the factual knowledge dimension as the characteristic to be emphasized was asked through one statement. It can be argued that this question represents Evaluate sub-dimension of the cognitive process dimension becasue it describes evaluation in critiquing of interpersonal dialogues, speeches of politicians and writings in the newspapers and making a judgment about knowledge and ideas in various fields like scientific research and papers (Anderson et al., 2001; Turgut & Baykul, 2012).

## **Findings**

In this research, 702 written exam questions prepared by the social studies teachers to evaluate the students in the 2012-2013 academic year were investigated according to RBT. Graphic 1 demonstrates research findings.



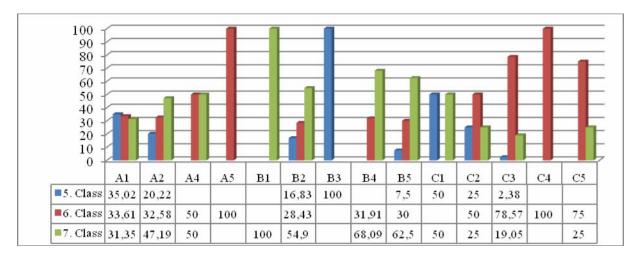
**Graphic 1:** Analysis of the Exam Questions According to Revized Bloom's Taxonomy

When distibution of the exam questions presented in Graphic 1 is examined, it is clearly seen that the questions represented *factual knowledge* with 454 questions in the *knowledge dimension* at the highest level, *conceptual knowledge* dimension with 191 questions, *procedural knowledge* dimension with 57 questions which is the lowest level. It was concluded that no exam questions regarding *metacognitive knowledge* sub-dimensions were prepared. Moreover, the findings indicated that the questions represented *remember* sub-dimension with 357 questions, *understand* sub-dimension with 195 questions, *apply* dimension with 43 questions, *analyze* sub-dimension with 61 questions and *evaluate* sub-dimension with 46 questions. It was also revealed that no exam questions regarding *createcognitive process* sub-dimension were prepared.

The findings demonstrated that *factual knowledge* was represented at *remember* cognitive process dimension (A1) with 354 questions and at *understand* cognitive process dimension (A2) with 89 questions for all grades. *Conceptual knowledge* was represented at *understand* sub-dimension (B2) with 102 questions, *analyze* sub-dimension (B4) with 47 questions and *evaluate* sub-dimension (B5) with 40 questions. *Procedural knowledge* was represented at *apply* cognitive process dimension (C3) with 42 questions.

In addition, no questions were found in *apply* (A3) and *create* cells (A6) of the cognitive process sub-dimensions of the *factual knowledge* dimension; *create* cell (B6) of the cognitive process sub-dimensions of the *conceptual knowledge* dimension; *create* cell (C6) of the cognitive process sub-dimensions of the *procedural knowledge* dimension and all of the cells (D1, D2, D3, D4, D5, D6) of the cognitive process sub-dimensions of the *metacognitive knowledge* dimension.

Even though remember cell of factual knowledge is central to learning, the fact that the exam questions accumulated at this level contributes to the evaluation of the basic level knowledge and skills only (Anderson et al., 2001). However, that no exam questions were prepared regarding metacognitive knowledge and create cognitive process sub-dimension indicates that the questions examined in this research are not sufficient to measure all of the knowledge and cognitive process dimensions.



**Graphic 2:** Percentage analysis of the Exam Questions According to Revized Bloom's Taxonomy at the Grade level

When all of the grades are taken into consideration in the knowledge dimension, it is seen that as the percentage of the questions at *remember* level of *factual knowledge* decreased, the grade level increased (35,025% at 5th grade, 33, 61% at 6th grade, 31, 35% at 7th grade). Additionally, the percentage of the questions regarding *conceptual knowledge* increased (5, 93% at 5th grade, 15,81% at 6th grade, 32, 20% at 7th grade) and *procedural knowledge* was represented at the lowest level at 5th grade (5, 26%) and the highest at 6th grade (75, 43%). In the *cognitive process* dimension, as the grade level increased, the level of *remember* decreased, and the levels of *understand*, *analyze* and *evaluate* sub-dimensions increased. In the light of these findings, it was concluded that as the grade level increased, the number of the questions regarding the *metacognitive process* dimensions increased, too.

# **Conclusion and Suggestions**

Teachers ask questions to monitor/supervise the students' knowledge and understanding. They make use of various taxonomies while preparing and evaluating these questions. One of these taxonomies is Bloom's Taxonomy (Akbulut, 1999; Filiz, 2004; Morgan & Sakton, 1994; Ralph, 1999; Senemoglu, 2005; Yesil, 2008). In the current study, the exam questions of the social studies course were investigated on the basis of Revized Bloom's Taxonomy. The findings obtained in the research suggested that the exam questions were represented at highest with the factual knowledge dimension in the knowledge dimension. The factual knowledge dimension includes the fundamental elements that students have to learn to recognize one discipline or solve any problems in this discipline. These elements are some symbols shaped with concrete objects or a set of symbols transferring important knowledge in general. Because of these features, factual knowledge requires a rather low level of abstract thinking skills (Anderson et al., 2001). The questions measuring the factual knowledge dimension were mostly comprised of completion, true-false, matching and definition questions. Accordingly, the fact that the number of the questions in the factual knowledge sub-dimension is too many suggests that the students are directed to memorizing instead of utilizing their skills effectively (Oermann & Gaberson, 2013). This is not consistent with the philosophy of instruction of the constructivist approach on which Social Studies Curriculum depends (Ayvaci & Turkdogan, 2010). Therefore, it may be proposed that the questions measuring the factual knowledge sub-dimension should not be used except for the required fundamental knowledge.

According to the research results, the *conceptul knowledge* dimension was second to *factual knowledge* in terms of representation in the knowledge dimension. *Conceptual knowledge* contains knowledge of the relationship between *knowledge of the categories and classifications* and more

complex and organized knowledge forms. It includes knowledge individuals have about some topics like how specific schemas, models and theories, a specific subject area are organized and structured, how different knowledge pieces and parts of the knowledge pieces are linked and integrated, and how these parts function together (Anderson et al., 2001; Turgut & Baykul, 2012). Factual knowledge and Conceptual knowledge are in to each other as both contain knowledge about the answer to the question "what", but conceptual knowledge is more organized and systematic than knowledge of the terms and unrelated facts (Anderson et al., 2001). Representing Factual and Conceptual knowledge dimensions too much indicated that teachers paid more attention to the evaluation of the students' skills of recognizing the concepts they had learned, knowing the symbols and establishing the relationships between the concepts correctly. However, teachers must ask questions measuring how to apply and organize knowledge besides remembering or recognizing knowledge (Ayvaci & Turkdogan, 2010).

Procedural knowledge is used with theskills specific to one subject or discipline, algorithms, techniques and methods in a limited way. As procedures are specific to subjects, this knowledge category reflects knowledge specific to one discipline or thinking styles specific to one discipline rather than general strategies that can be applied to problem solving in all disciplines (Anderson et al., 2001; Turgut & Baykul, 2012). Only 8, 11% of the questions were prepared according to the procedural knowledge dimension, which is a very low rate for social studies courses. This is because in social studies, there are some procedures about interpreting maps, predicting age of the physical objects, and collecting historical information (Anderson et al., 2001). Teaching these procedures to the students is one of the main objectives of the Social Studies Curriculum (MONE, 2010). Therefore, it is suggested that increasing number of the questions based on procedural knowledge may help achieve objectives of the curriculum.

In this research, it was concluded that there were not any questions about *metacognitive knowledge*. *Metacognitive knowledge* is defined as the state of awareness about the conditions under which general strategies related to thinking and problem solving to be used effectively and the individual's knowing his/her strengths and weaknesses in terms of his/her own cognition and learning (Anderson et al., 2001). This definition is closely associated with the fundamental objective of the constructivist learning process in which the student is responsible for his/her own learning and checking the learning process (Abbott & Ryan 1999; Dunlop & Grabinger, 1996). The questions of the Social Studies Course which is organized on the basis of the constructivist approach (Beskisiz, 2009) are expected to evaluate the *metacognitive knowledge* dimension.

Given the general distribution of the exam questions in the cognitive process dimension, it is seen that the teachers asked the questions in *remember* cognitive process dimension to evaluate the students in all grades. The purpose of the questions related to remembering is to recall the answer through mental processes based on recognizing and memorizing in a simpler way. These sorts of questions are the ones that provide reliability of correct answers, but have the narrowest content (Moore, n.d.; Oermann & Kathleen, 2003). Although *remember* level is central to learning, the questions accumulated at this level, which led to evaluation of the higher order skills.

According to the research results, the *understand* cognitive process sub-dimension was second only to the *remember* sub-dimension in terms of representation. The questions at *remember* level depend on memorizing one subject rather than understanding it. However, for the questions measuring comprehension skills; it is not good for the students to learn knowledge in the same format as in a course or a coursebook (Ensar, 2002). What is wanted from the student at *understand* level is to delineate knowledge in a different way or recognize and transform knowledge explained before in a different way. In these sorts of the questions, the student must add something from his/her knowledge to solve one question (Anderson et al., 2001). In this sense, it may be proposed that the *understand* sub-dimension is more complex than the *remember* sub-dimension, but it contains basic level cognitive processes and thus it is not sufficient to evaluate high-level skills.

Apply cognitive process dimension includes the use of procedures with the purpose of exercising and problem solving. Apply dimension comprises of two basic cognitive processes. Among these, at executing level, the student employs only the acquainted skills and algorithms in a situation, problem or task experienced before. This level at which a new product is not generated is more of an exercising process. At implementing level, which is the second level, the student uses procedures thinking in detail when faced with a new situation, problem or task. Therefore, implementing level can be used in relation tocreate cognitive process dimension. That's why, create level is regarded as the high level cognitive process in some resources (Anderson et al., 2001). However, in this research, no evaluation questions were found at implementing level of the apply cognitive dimension. Therefore, apply cognitive process dimension is regarded as the basic level cognitive process. To execute the procedures, both the problem and the solution must be understood. It, therefore, may be suggested that understanding knowledge is the prerequisite for implementing knowledge (Anderson, 2001). In this respect, apply sub-dimension is more complex than understand sub-dimension, but it is not very sufficient to evaluate high order skills.

The research results revealed that *analyze* and *evaluate* took place at high level cognitive process dimension partly and less than basic level cognitive process dimensions, and no questions were prepared concerning *create* level. However, *analyze*, *evaluate* and *create* sub-dimensions (Anderson, 2001; Mayer, 2002), stimulate high-level learning (Acikgoz, 2011) and thus deepening knowledge processing (Rickards, 1979). The social studies curriculum prepared through new trends in education supports high order thinking styles such as the student's structuring knowledge, implementing problem solving methods, analyzing, questioning, concluding, creating (generating) and making a judgement (Cepni & Azar, 1998; Colak, 2008; Gardner et al., 1997; MEB, 2010; Ozmen & Karamustafaoglu, 2006). Drawing on this point, it can be suggested that the exam questions regarding high level cognitive process skills be used in the social studies course.

Given all the grade levels, the questions at remember level regarding factual knowledge in the knowledge dimension were used fewer when the grade level increased (35,02% at 5th grade, 33,61% at 6th grade, 31,35% at 7th grade), the number of the questions regarding conceptual knowledge increased (5, 93% at 5th grade, 15,81% at 6th grade, 32,20% at 7th grade), and procedural knowledge was used at the lowest level at 5th grade (5, 26%) and at the highest level at 6th grade (75, 43%). Based on this result, it can be proposed that as the grade level increased, knowledge dimensions different from conceptual knowledge were used. The fact that the procedural knowledge sub-dimension was used most at 6th grade may stem from the features of the subjects taught (interpreting maps, predicting age of the physical objects, collecting historical information etc.). In the cognitive process dimension, as the grade level increased, the level of remember decreased, the use of understand, analyze and evaluate sub-dimensions increased. According to this result, it may be stated that as the grade level increased, the questions regarding high-level cognitive process dimensions were used more. That apply sub-dimension was used most at 6th grade can be explained with the fact that it includes the subjects requiring more procedural knowledge at this grade. Overall, high-level questions were not represented adequately at knowledge and cognitive process dimension for all grades.

The questions requiring basic level thinking are not sufficient for having knowledge (Baki, 2008; Brualdi, 1998; Cepni & Azar, 1998; Rawadieh, 1998; Thompson, 2008; Wilen, 1991). This is because when the questions that thestudents solve require basic level thinking skills, they do not need to use their high order thinking skills (Hummel & Huit, 1994). Thus, the students are limited with the activities like repeating knowledge, explaining and exemplifying, implementing what they have learned in new situations (Newman, 1990). When literature is reviewed, it could be seen that the questions that teachers asked to the students has not gone beyond basic-level thinking styles (Akbulut, 1999; Akpinar, 2003; Aslan, 2009; Aslan, 2011; Ayvaci & Turkdogan, 2010; Baysen, 2006; Cikrikci Demirtasli, 2012; Colak, 2008; Colak & Demircioglu, 2010; Dindar & Demir, 2006; Es, 2005; Filiz, 2004; Gokler, 2012; Gufta & Zorbaz, 2008; Gunduz, 2009; Harrop & Swinson, 2003; Karaman, 2005; Kaya, 2003; Koray & Yaman, 2002; Koray & Altuncekic& Yaman, 2005;

Kogce, 2005; Morgan & Saxton, 1994; Ozcan & Oluk, 2007; Ulger, 2003; Yesil, 2008; Yesil & Ozbek, 2008; Zahorik, 1971).

The reason why teachers heavily use the exam questions that measure basic level thinking styles may be that these questions require the least preparation in the process of writing and evaluating basic level questions. Another reason may be that teachers do not think they are competent in terms of skills requiring high order thinking styles (Akbulut, 1999; Dinc, 2005; Filiz, 2002; Korkmaz & Yesil, 2011; Yesil, 2008). Consistent with this reason, teachers noted that they do not think themselves as competent to carry out measurement and evaluation congruent with the Social Studies Curriculum which is designed in accordance with the constructivist approach (Dinc & Dogan, 2010; Yapici & Demirdelen, 2007). It is important to improve teachers' skills of asking questions to enable students' cognitive development, to help students bring up as the individuals thinking critically and creatively, applying what is learned and making decisions after making judgements (Bekaroglu, 2007) and effectively improving high order thinking styles and learning structures (Hebert, 2000). Shaunessy (2000) noted that to have mastery in asking effective questions, teachers can use Bloom's Taxonomy. Accordingly, teachers must recognize the questions in RBT's knowledge and cognitive process dimensions and prepare questions in accordance with all dimensions and ask these questions effectively. In this way, it is believed that teachers can prepare evaluation questions enabling to reach the objectives in the Social Studies Curriculum (Colak & Demircioglu, 2010; Es, 2005; Eyup, 2012; Tuzel, Yilmaz & Bal, 2013).

## References

- 1. Abbott, J. & Ryan, T. (1999). Constructing Knowledge, Reconstructing Schooling. *Educational Leadership*, 57(3), 66-69.
- 2. Ahmad,Z. (1996). Existing System of Examination and the Need of Reform. *Journal of Elementary Education*, 1(3) 56.
- 3. Acikgoz, U.K. (2011). Active Learning. İzmir: Bilis Publishing.
- 4. Akbulut, T. (1999). *The Evaluation of Questioning Skills of Primary School Teachers in Terms of Certain Variables*. Cukurova University, Unpublished Master Thesis, Mersin.
- 5. Akpinar, E. (2003). Cognitive Levels of the Written Exam Questions of the Secondary Schools Geography Courses. *Ataturk University Journal of Erzincan Faculty of Education*, 5(1), 13-21.
- 6. Akpinar, E. & Ergin, O. (2006). Evaluating Written Exam Questions of the Science Teachers. *National Education*, 172, 225-230.
- 7. Anderson, L. W. & Krathwohl, D. R. (Ed.) (2001). *A Taxonomy for Learning Teaching and Assessing. A Revision of Bloom's Taxonomy of Educational Objectives*. New York: Longman.
- 8. Ari, A. (2011). Finding Acceptance of Bloom's Revised Cognitive Taxonomy on the International Stage and in Turkey. *Educational Sciences: Theory and Practice*, 11(2), 767-772.
- 9. Aslan, C. (2009, July). Investigation of the Questions Asked by Language Teachers In Terms of Improving High Order Thinking. Proposal Presented at the II. International Turkish Teaching-Education, Urgup.
- 10. Aslan, C. (2011). Effects of Teaching Applications for Developing Question Asking Skills on Question Forming Skills of Prospective Teachers. *Education and Science*, 36, 236-249.
- 11. Ayvaci, H. S. & Turkdogan, A. (2010). Investigating the Questions of Science and Technology Course According to Revized Bloom's Taxonomy. *Journal of Turkish Science Education*, 7(1), 13-25.
- 12. Baki, A. (2008). *Mathematics Education: Theory into Practice*. Ankara: Harf Egitim Publishing.

- 13. Baldwin, T. S. (1971). *Industrial Education.Handbook on Formative and Summative Evaluation of Student Learning*. In Bloom, B. S., Hastings, J. T. & Madaus, G. F. (Eds).New York: Mcgraw-Hill.
- 14. Baysen, E. (2006). The Levels of Teacher Questions and Student Answers. *Kastamonu Journal of Education*, 14(1), 21-28.
- 15. Bekaroglu, A. (2007). *Investigation and Evaluation of the Written Exam Questions of Primary School 6<sup>th</sup> Grade Accroding to Question Levels The Case of Kastamonu*. Abant İzzet Baysal University, Unpublished Master Thesis, Bolu.
- 16. Beskisiz, E. (2009). Consideration of Sort of Questions Which 5th Grade Teachers Ask According to the Learning Styles and Their Cognitive Levels in Social Studies Lesson. Cukurova University, Institute of Social Sciences, Unpublished Master Thesis, Adana.
- 17. Bikmaz, F. H. (2002). Analysis of the Written Exam Questions of the Science Education Course of 4th and 5th Grades of Primary Schools in Terms of Learning Levels and Types. Eurasian Journal of Educational Research, 8, 74-85.
- 18. Bloom, B.S. (1956). *Taxonomy of Educational Objectives: The Classification Of Educational Goals, Handbook I: The Cognitive Domain.* New York: David Mckay Company Inc.
- 19. Brualdi, A. 1998). Classroom Questions. *Eric Clearninghouse on Assessment and Evaluation*, The Catholic University of America: College Park, MD.
- 20. Bumen, N. T. (2006). A Revision of Bloom's Taxonomy: A Turning Point in Curriulum Development. *Education and Science*, 31(142), 3-14.
- 21. Cepni, S., Ayvaci, H.S. & Keles, E. (2001, September). Comparison of the Science Education Exams Asked in the Schools and Entrance Exams of High Schools According to Bloom's Taxonomy. Proposal Presented at Symposium on Science Education in Turkey at the Beginning of the New Century. Maltepe University, İstanbul.
- 22. Colak, K. & Demircioglu, I. H. (2010). Classification of History Exam Questions According to Cognitive Levels of Bloom's Taxonomy. *National Education*, 187, 160-170.
- 23. Cepni, S. & Azar, A. (1998, September). *Analysis of The Questions Asked in High School Physics Exams*. Proposal Presented at the III. National Science Teaching Symposium. Karadeniz Technical University.
- **24.** Cikrikci Demirtasli, R. N. (2012). *Measurement and Evaluation in Education*. Ankara: Elhan Book Printing-Distribution.
- 25. Colak, K. (2008). Classification of History Exam Questions According to Cognitive Levels of Bloom's Taxonomy. Karadeniz Technical University Institute of Social Sciences, Unpublished Master Thesis, Trabzon.
- 26. Demirel, O. (2010). *Curriculum Development in Education: Theory into Practice*. Ankara: PegemA Publishing.
- 27. Dindar, H. & Demir, M. (2006). Evaluation of Fifth Grade Primary Teachers' Questions in Science Exams According to Bloom's Taxanomy. Journal of Gazi Faculty of Education, 26(3), 87-96.
- 28. Dunlop, J. C. & Grabinger, R. S. (1996). *Rich Environments for the Active Learning İn Higher Education*. Wilson, G. B. (Ed.). Constructing Learning Environments: Case Studies İn İnstructional Design. Englewood Cliffs, New Jersey: Educational Technology Publications.
- 29. Ensar, F. (2002). An Investigation of the Questions under Texts in the Turkish Teaching Coursebooksof the 6th Grade of Primary Schools. Gazi University, Institute of Educational Sciences, Unpublished Master Thesis, Ankara.
- 30. Erden, M. (1988). Curriculum Evaluation in Education. Ankara: Ani Publishing.
- 31. Erturk, S. (1998). *Curriculum Development in Education*. Ankara: Hacettepe University Publication.
- 32. Es, H. (2005). An Evaluation of Science Exam Questions of Primary School Science Courses According to Bloom's Taxonomy. Gazi University, Institute of Educational Sciences, Unpublished Mater Thesis, Ankara.

- 33. Eyup, B. (2012). Evaluation of the Questions Prepared by Turkish Language Teacher Candidates According to the Revised Bloom's Taxonomy. Kastamonu Journal of Education ,20(3), 965-982.
- 34. Filiz, S. B. (2004). The Art of Asking Questions. Ankara: Asil Printing-Distribution.
- 35. Forehand, M. (2005). *Bloom's Taxonomy: Orginal and Revised*. In M. Orey (Ed.), Emerging Perspectives on Learning, Teaching, and Technology. Web: http://projects.coe.uga.edu/epltt/Retrieved on 10.08.2013.
- 36. Gardner, W., Demirtas, A. & Doganay, A. (1997). *Teachers' Guide/ Social Sciences Curriculum*. Yok/Dunya Bankasi.
- 37. Gierl, M. J. (1997). Comparing the Cognitive Representations of Test Developers and Students on a Mathematics Achievement Test Using Bloom's Taxonomy. *Journal of Educational Research*, 91, 26–32.
- 38. Gokler, Z. S. (2012). Evaluation of English LessonObjectivesFunctions SBS QuestionsandExamQuestions in Primary School According to Revised Bloom Taxonomy. Osmangazi University, Unpublished Master Thesis, Eskisehir.
- 39. Gokler, Z. S., Aypay, A. & Ari, A. (2012). Evaluation of English Lesson Objectives Functions SBS Questions and Exam Questions in Primary School According to Revised Bloom Taxonomy. *Journal of Policy Analysis in Education*, 1(2), 115-133.
- 40. Gufta, H. & Zorbaz, K. Z. (2008). A Review Regarding Levels of Written Examination Questions for Turkish Courses of the Secondary School. *Cukurova University Journal of Institute of Social Sciences*, 17(3), 205-218.
- 41. Gronlund, N. E. (1998). Assessment of Student Achievement. Boston: Allyn and Bacon.
- 42. Gunduz, Y. (2009). Analysis of Primary School 6, 7 and 8th Grades Science and Technology Questions According to Measurement Scales and Bloom's Taxonomy of the Cognitive Domain. *Yuzuncu Yil University, Journal of Faculty of Education*, 4(2), 150-165.
- 43. Harrop, A., & Swinson, J. (2003). Teachers' Questions in the Infant, Junior and Secondary School. *Educational Studies*, 29(1), 49–57.
- 44. Hebert, E. A. (2000). *Lessons Learned About Student Portfolios*. In K. M. Cauley, F.Linder, J. H. Mcmillan (Eds.), Educational Psychology (Pp.: 218-220). Dushkin: Mcgraw Hill.
- 45. Hummel, J., & Huitt, W. (1994). What You Measure is What You Get. *Gaasdnewsletter: The Reporter*. 10-11.
- 46. Karaman, İ. (2005). An Analysis of Physics Exam Questions in the High Schools of Erzurum According to the Levels of Bloom's Taxonomy. *Journal of Gazi Faculty of Education*, 25(1), 77–90.
- 47. Kaya, N. (2003). Investigation of Content Validity and Taxonomic Dimension of the Written Exam Questions Prepared by Social Sciences Teachers for Democratic Life Unit at 6<sup>th</sup> Grade, KTU Institute of Social Sciences, Unpublished Master Thesis, Trabzon.
- 48. Koray, O., Altuncekic, A., Yaman S. (2005). Evaluation of Question Asking Skills of Prospective Science Teachers According to Bloom's Taxonomy. *Pamukkale University Journal of Faculty of Education*, 17, 38-46.
- 49. Koray, O., Yaman, S. (2002). Evaluation of Question Asking Skills of Science Teachers According to Bloom's Taxonomy. *Gazi University Kastamonu Journal of Education*, 10(2), 317–324.
- 50. Kogce, D. & Baki, A. (2009). Comparing the Levels of Mathematics Questions' in Different Types of High Schools According to Bloom's Taxonomy. *Kastamonu Journal of Education*. 17(2), 557-574.
- 51. Kogce, D. (2005) Comparing the Mathematics Questions Asked in OSS and Written Exam Questions Asked in High Schools According to Bloom's Taxonomy, KTU Graduate School of Science, Unpublished Master Thesis, Trabzon.
- 52. Krathwohl, D. R. (2002). A Revision of Bloom's Taxonomy: An Overview. *Theory into Practice*, 41(4), 212-218.

- 53. Kropp, R. P., Stoker, H. W., & Bashaw, W. L. (1966). The Validation of the Taxonomy of Educational Objectives. *Journal of Experimental Education*, 34, 69-76.
- 54. Lipscomb, J.W. (2001). Is Bloom's Taxonomy better than Intuitive Judgement for Classifying Test Questions? *Education*, 106(1), 102-108.
- 55. Mayer, R. E. (2002). Rote Versus Meaningful Learning. Theory into Practice. 41(4), 226-232.
- 56. Mc Bain, R. (2011). How High Can Students Think? A Study of Students' Cognitive Levels Using Bloom's Taxonomy in Social Studies. ERIC.
- 57. MEB (2010). Primary School Social Sciences Curriculum. Web: http://ttkb.meb.gov.tr/program2.aspx?islem=1&kno=38 Retrieved on 10.08.2013.
- 58. Moore, K. (n.d.), Instruction Skills. In Altintas, E. (Ed.). Trans.: Nizamettin Kaya, Ed: Ersin Altintas.
- 59. Morgan, N. & Saxton, J. (1994). Asking Better Questions. Ontario: Pembroke Publications.
- 60. Mutlu, M, Usak, M. & Aydogdu M. (2003). An Evaluation of Science Questions. *Gazi University Kirsehir Journal of Faculty of Education*, 4(2), 87-95.
- 61. Newman, P. M. (1990). Higher Order Thinking in Teaching Social Studies: A Rationale For The Assessment of Classroom Thoughtfulness. *Journal of Curriculum Studies*, 22, 41-56.
- 62. Oermann, M. H. & Kathleen B. G. (2013). *Evaluation and Testing in Nursing Education*. Springer Publishing Company.
- 63. Ozcan, S. & Oluk, S. (2007). Analysis of Questions Used in Science Lessons at Primary School According to Piaget and Bloom Taxonomy. *Dicle University Ziya Gokalp Faculty of Education Journal*, 8, 61-68.
- 64. Ozden, Y. (2011). Learning and Teaching. Ankara: PegemA Publishing.
- 65. Ozer Keskin, M. & Aydin S. (2011). A Study of the Biology Questions in the 6th Grade Science and Technology Test of the Level Assessment Examination Based on the Revised Taxonomy. *Gazi University Gazi Journal of Faculty of Education*, 31(3), 727-742.
- 66. Ozmen, H. & Karamustafaoglu, O. (2006). The Analysis of High School II. Physics-Chemistry Exam Questions' and Students' Success in Energy Chapter as to Cognitive Domain . *Gazi University Gazi Journal of Faculty of Education*, 14(1), 91-100.
- 67. Poole, R. L. (2006). Characteristics of the Taxonomy of Educational Objectives: Cognitive Domain–A Replication. *Psychology in the Schools*, 9(1), 83–88.
- 68. Ralph, E. G. (1999). Oral Questioning Skills of Novice Teachers: ... Any Questions? *Journal of Instructional Psycology*, 26(4), 286.
- 69. Rawadieh, S.M. (1998). An Analysis of the Cognitive Levels of Questions in Jordan Secondary Social Studies Textbooks According to Bloom's Taxonomy, Unpublished Doctoral Dissertation, Ohio University, College of Education, Greece.
- 70. Rickards, J. (1979). Adjunct Postquestions in Text: A Critical Review of Methods and Processes. *Review of Educational Research*, 49, 181-196.
- 71. Saban, A. (2009). *Learning-Teaching Process: New Theories and Approaches*. Ankara: Nobel Publ. and Dist.
- 72. Sagir, D. (2003). *Teachers' use of Bloom's Taxonomy in Evaluation of Students in Terms of Construction of the Earth Unit of High School 1st Grade Geography Course*, Gazi University, Institute of Educational Sciences, Unpublished Master Thesis, Ankara.
- 73. Savage, L. B. (1998). Eliciting Critical Thinking Skills Through Questioning. *Clearing House*, 71(5), 291-294.
- 74. Senemoglu, N.(2005). *Development, Learning and Instruction*. Ankara: Gazi Publishing House.
- 75. Sesli, A. T. (2007). A Comparative Analyses of the Questions Asked in Exams by Biology Teachers and the Questions Asked in the University Entrance Exams According to Bloom's Taxonomy, Karadeniz Technical University, Gradute School of Science, Unpublished Master Thesis, Trabzon.

- 76. Sezgin, S. İ.(1994). *Curriculum Development in Vocational and Technical Education*. Ankara: Gazi Buro Publishing house.
- 77. Shaunessy, E. (2000). Questioning Techniques in the Gifted Classroom. *Gifted Child Today Magazine*, 23(5).
- 78. Sahinel, S. (2002). Critical Thinking. Ankara: PegemAPublishing,
- 79. Tanik N. & Saracoglu S. (2011). Analysis of the Exam Questions for the Science and Technology Course Based on Revised Bloom's Taxonomy. *Tubav Science Journal*,4(4), 235-246
- 80. Tekin, H. (1994). *Measurement and Evaluation in Education*. Ankara: Yargi Book and Publishing house.
- 81. Thompson, T. (2008). Mathematics teachers' interpretation of higher-order thinking in Bloom's Taxonomy. *International Electronic Journal of Mathematics Education*, 3(2), 96-109.
- 82. Turgut, M. F. & Baykul Y. (2012). *Measurement and Evaluation in Education*. Ankara: PegemA Publishing.
- **83.** Tuzel, S., Yilmaz E. & Bal, M. (2013). An Investigation of Prospective Turkish Teachers' Questions Regarding Text Processing in Accordance with Revised Bloom's Taxonomy. *The Journal of Academic Social Science Studies*, 6(8), 1085-1100.
  - 83. Uzunboylu, H. & Hursen C. (2012). *Curriculum and Its Evaluation*. Ankara: PegemA Publishing.
- 84. Ulger, U. (2003). A Review Regarding Levels of Written Examination Questions for Turkish Courses of the Secondary School, Gazi University Institute of Educational Sciences, Unpublihed Master Thesis, Ankara.
- 85. Yesil, R. (2008). Capacities of Social Studies Candidate Teachers About Utilizing Questions in In-Class Teaching-The Case of AEU Faculty of Education. *Ahi Evran University Journal of Kirsehir Faculty of Education*, 9(3), 161-174.
- 86. Yesil, R. & Ozbek, R. (2008). Capacities of "Branch" Lecturers at Social Sciences Education Department about Utilizing Questions (The Case of Firat University). *Ahi Evran University Journal of Kursehir Faculty of Education*, 9(3), 175-186.
- 87. Yildirim, A. & Simsek, H. (2011). *Qualitative Research Methods in Social Sciences*. Ankara: Seckin Publishing.
- 88. Yilmaz, H. & Sunbul, A. M. (2000). *Planing and Evaluation in Instruction*. Konya: Mikro Printing-Distribution.
- 89. Wilen, W. (1991). *Questioning skills for teachers. What research says to the teacher?* 3rd Ed. Washington, DC: National Education Association. (ERIC Document Reproduction Service No: ED 332983).
- 90. Zahorik, J. A. (1971). Questioning in the Classroom. Education, 91(4), 358-368.

Article received: 2013-11-20