

An Analysis of National Standard School Examination Items Based on The Characteristics of Higher Order Thinking Skills Questions For The Main Items of K13-071 Academic Year 2016/2017 in Karawang Regency

Siti Muslichah Kurniawati¹, Dadang Sundawa²

Department of Civic Education, Universitas Pendidikan Indonesia, Bandung.

Abstracts. This research aims to describe the items on the National Standard School Examination on Pancasila and citizenship education subject of the 2016/2017 Academic Year based on the characteristics of HOTS questions in Karawang Regency. It adopted quantitative content analysis method with descriptive content analysis approach. The sampling was done purposively. The research sample was the test items on the National Standard School Examination on Pancasila and civic education subject of the K13-071 code in Karawang Regency. Data were collected through the techniques of documentary study, literature review, and questionnaire distribution. The data were then analyzed with descriptive statistics. The results show that for the main K13-071 items which measure higher order thinking skills (HOTS) according to the three top levels of the cognitive process dimensions of Bloom's revised Taxonomy, 7 items (15.6%) were found to be concerned with the cognitive processes of analyzing and evaluating, while the dimension of creating was not found. There were 4 HOTS items (8.9%) that used stimuli (basic questions) in the forms of illustrations, case examples, and survey results. The remaining 3 items on HOTS (6.7%) did not use any stimulus. The main items on the test which contain HOTS were still very low in number and limited to using stimuli in the forms of illustrations, case examples, and survey results, while other stimuli in the forms of photos/images, tables/graphs/diagrams, and the like were not used.

Keywords: Items of USBN on Pancasila and citizenship education subject, Bloom's revised Taxonomy, HOTS (higher order thinking skills), HOTS questions' characteristics.

Correspondence. sitimuslichahkurniawati@gmail.com¹, dadangsundawa@upi.edu²,

Article History. Received January 2018, Received in revised March 2018, Accepted June 2018

©2018. International Journal Pedagogy of Social Studies. Department of Social Studies Education

A. INTRODUCTION

The changes in the current learning paradigms, in line with the implementation of the revised 2013 curriculum, as stated by the Directorate of Senior High School Development-Directorate General of Primary and Secondary Education-Ministry of Education and Culture (2017), include: 1) A shift in the learning approach from teacher-centered to student centered; 2) Lesson plans or designs that integrate 21st century skills through 4C (Critical Thinking and Problem Solving, Creativity and Innovation, Communication, and Collaboration), strengthen character education, and

develop literacy culture; and 3) Application of various learning models, such as: discovery/inquiry learning, problem-based learning, project-based learning, and other learning models that emphasize active and contextual learning through a scientific approach comprising of Observing, Asking, Collecting Information, Associating/Reasoning, and Communicating. All of these are expected to provide creative space for teachers to be able to create a learning process at the level of HOTS (higher order thinking skills) as well as to assess learning (process and outcomes) of students at the HOTS level.

If the learning process is at HOTS level, but it is not followed by the implementation of assessment of learning outcomes that meet the characteristics of HOTS, accurate and objective data or information regarding the level of competency attainment of students will not be obtained. Kunandar (2014, p. 12) likens assessment to a tree, in which an assessment done by the teacher should not only measure the shade of the leaves and twigs, but must also be able to measure the stem and roots. That is, the instrument (question) used by the teacher must stimulate students' higher order thinking skills, logic, and analysis. Thus, assessment of learning outcomes by the teacher can provide information about the level of attainment of students' competencies in a real and accurate manner. In addition, if learning at HOTS level is not followed by HOTS assessment, it may result in the low quality of Indonesian students' abilities. This is supported by a statement from the Head of the Center for Educational Assessment, Nizam, in *Kompas* (2016), that "Indonesian students are good at working on memorized questions, but are not so in applying and reasoning. School learning that starts from daily tests to school exams does not sharpen reasoning. The National Final Examination also gives too much burden on students." The results of a survey of Indonesian students' participation in several assessment programs at international level, such as PISA and TIMSS further confirm this problem. The results of 2015 PISA (Program for International Student Assessment) assessing 15-year-old students in science, reading and mathematics (OECD, 2016), for instance, show that "Indonesia ranked 62 of the 70 countries who participated in the PISA."

Indonesia's rank rose by two places compared to the 2012 PISA results, which according to data from OECD (2014), Indonesia was previously ranked 64 out of 65 participants for math, reading, and science skills. Despite rising by 2 points, this result is still not encouraging because Indonesia is still far behind neighboring countries, namely Singapore, Vietnam, and Thailand in the 2015 PISA survey. This was also recognized by the Ministry of Education and Culture (2017, p. 1) which stated that "in general the ability of Indonesian students are very low in: (1) understanding complex information; (2) theory, analysis, and problem solving; (3) use of tools, procedures, and problem solving; and (4) conducting investigations."

Similarly, the results of TIMSS (Trends in International Mathematics and Science Study), as cited in *Kompas* (2016), show that "in 2015 the score of the fourth grade elementary school students' math abilities was 397, placing Indonesia at the 45th place out of the 50 participating countries. Meanwhile, in the field of science the score was 397, which put Indonesia in the 45th place out of 48 countries. For reasoning using tables/graphs, only 4% was correct."

Higher order thinking skills (HOTS), according to the Directorate of Senior High School Development-Directorate General of Primary and Secondary Education-Ministry of Education and Culture (2017, p. 3), is defined as the ability to think that is not merely concerned with remembering (recalling), restating, or referring without processing (reciting). This definition is in line with that of Thomas & Thorne (2009) who stated that higher order thinking or higher level thinking is thinking on a level

that is higher than memorizing facts or telling something back to someone exactly the way it was told to you. When a person memorizes and gives back the information without having to think about it, we call that rote memory. Higher level thinking, takes thinking to higher levels than restating the facts. Higher level thinking requires that we do something with the facts. We must understand them, infer from them, connect them to other facts and concepts, categorize them, manipulate them, put them together in new or novel ways, and apply them as we seek new solutions to new problems.

According to the revised Bloom's Taxonomy, higher order thinking skills (HOTS) are at the level of analyzing, evaluating, and creating. This is similar to the opinion of Krathwohl (in Devi, 2017, p. 27-28), who explained that indicators for measuring higher-order thinking skills include analyzing, evaluating, and creating. Meanwhile, in the original Bloom's Taxonomy (before revision), classification for the cognitive domains, from the simplest to the complex as stated by Majid (2015, p. 4-6), consists of "... knowledge/C-1, understanding (comprehension)/C-2, application/C3, analysis/C4, synthesis/C-5, evaluation/C-6." The last three domains of Bloom's original Taxonomy, when referring to Krathwohl's definition, belong to the HOTS category. The difference lies in the change in the cognitive structure of the domains in Bloom's original taxonomy, where in the revised version the six sequences of knowledge (C1), understanding (C2), application (C3), analysis (C4), synthesis (C5), and evaluation (C6) which originally used nouns are changed to verbs. So, the analysis category that is the highest category in the original Bloom's

Taxonomy is changed to analyzing. Likewise, the synthesis category is changed to creating as the highest category in the revised Bloom's Taxonomy.

The three top levels of cognitive process dimensions which include analyzing, evaluating, and creating on the revision of Bloom's Taxonomy are further explained by Anderson and Krathwohl (2001, p. 79-86) as follows:

1. *Analyze* involves breaking material into its constituent parts and determining how the parts are related to one another and to an overall structure. This process category includes the cognitive processes of *differentiating*, *organizing*, and *attributing*.
2. *Evaluate* is defined as making judgments based on criteria and standards. The criteria most often used are quality, effectiveness, efficiency, and consistency. The category *evaluate* includes the cognitive processes of *checking* (judgments about the internal consistency) and *critiquing* (judgments based on external criteria).
3. *Create* involves putting elements together to form a coherent or functional whole. Objectives classified as *Create* have students make a new product by mentally reorganizing some elements or parts into a pattern or structure not clearly present before. Thus, the creative process can be thought of as starting with a divergent phase in which a variety of possible solutions are considered as the student attempts to understand the task (*generating*). This is followed by a convergent phase, in which the student devises a solution method and turns it into a plan of

action (*planning*). Finally, the plan is executed as the student constructs the solution (*producing*).

From the various definitions above, it can be concluded that higher order thinking skills (HOTS) emphasize higher level skills or thinking skills, not just remembering and repeating statements or concepts, but more than that, being able to process information or concepts obtained critically (critical thinking) and use the information or concepts to solve problems (problem solving and creative thinking).

In 2017, for the first time, Civic Education in the 2006 curriculum or PPKn (Pancasila and Citizenship Education) in the 2013 curriculum at the senior high school level was included in the subject groups tested in the USBN (National Standard School Examination). Previously, PPKn or Pancasila and citizenship education, was only included in the subjects tested in the school examination, in which the questions were prepared by members of MGMP (Subject Teachers' Forum) located in each regency/city with the multiple choice (objective test) questions being the most commonly given. Meanwhile, in the 2016/2017 academic year, the questions for the test were prepared by the government (BSNP/National Education Standards Agency) in collaboration with the subject teachers' forum at the level of junior and senior/vocational high schools, under the coordination of the provincial/district/municipal education office. The government made 20%-25% of the total questions, while the subject teachers' forum 75%-80%. The test consisted of 40 multiple choice questions and 5 essay questions. This arrangement is as stipulated in Article 13 points a and

b of the Regulation of the Ministry of Education and Culture No. 3 of 2017 concerning Assessment of Learning Outcomes by the Government and Assessment of Learning Outcomes by the Education Unit, which states that "USBN test consists of: a. A total of 20% (twenty percent) of items prepared by the Ministry; b. 75% up to 80% items prepared by the MGMP (Subject Teachers' Forum) for junior high school/madrasah *tsanawiyah* or equivalent schools and senior/vocational high school or equivalent schools under the coordination of the education office in accordance with its authority."

The difference between the current school examination and the national standard school examination (henceforward, USBN) tests for the senior high school citizenship education from those of the previous years lies not only in the addition of essay questions to the objective (multiple choice) questions. This is, according to the authors, is a step forward in the implementation of the assessment of learning outcomes conducted by the education unit (school). The essay questions can train and develop students' reasoning, because students will not answer the questions by only guessing as what they commonly do with multiple questions. Thus, students can develop their ability to think logically, critically, and variedly as part of higher order thinking skills.

USBN as a form of assessment of learning outcomes conducted by an education unit has the aim to assess the attainment of graduate competency standards in each subject and serves as a requirement for student graduation from an education unit as well as an effort to improve and assure quality education at the education unit level (Regulation of the

Ministry of Education and Culture No. 20 of 2016 Article 4 paragraph (2) jo. Article 7 paragraphs (2) and (3)).

The qualifications of graduates (students) at the senior high school level in the dimension of knowledge, in accordance with the 2013 curriculum, include possessing not only factual, conceptual and procedural, but also metacognitive knowledge (Attachment to the Regulation of the Ministry of Education and Culture No. 20 of 2016 concerning Graduate Competency Standards of Primary and Secondary Education). It is this metacognitive knowledge that requires higher order thinking skills, which in their revision of Bloom's Taxonomy, Anderson & Krathwohl (2010, p. 361) explained that there is a relationship between metacognitive knowledge and the cognitive domain, in which metacognitive knowledge is paired with the cognitive dimensions of analyzing and evaluating. In addition, the 2017 Senior High School Assessment Guidelines (2017, p. 27) stipulates, "The assessment for senior high schools should be more emphasized on higher order thinking skills (HOTS), namely the questions should require the levels of thinking starting from analyzing, evaluating, to creating." In the authors' opinion, this is certainly intended to train, accustom, and make students able to answer questions at various levels of cognitive processes, both the low processes (remembering, understanding, applying), and the higher ones (analyzing, evaluating, and creating). Therefore, it is necessary that the questions tested through the USBN (national standard school examination) meet the characteristics of HOTS, which can measure higher order thinking skills,

in addition to other characteristics such as using stimuli, being based on contextual problems, and using various forms of questions. (Directorate of Senior High School Development-Directorate General of Primary and Secondary Education-Ministry of Education and Culture, 2017 p. 3-5).

However, in reality HOTS questions have not been included in many instruments for assessment of learning outcomes or test items made by teachers, education units (schools), and the government. In addition, teachers still lack the ability in making HOTS questions. This is evidenced by the results of previous studies on several science subjects (natural sciences) and mathematics for secondary education (junior and senior high schools), including research conducted by Pratiwi & Hariyatmi (2015) which shows that the ability of natural science subject teachers at SMP Negeri (State Junior High School) 1 Kragan Rembang in making HOT questions based on Bloom's Taxonomy was relatively low (1.1%), while their ability in making LOT questions was high (98.9%). Another study was conducted by Dwi Astuti (2017) which showed that the items in the Final Semester Assessment of biology in the high schools throughout Surakarta in 2016-2017 which included LOTS made up 59.9% of the test, whereas those classified as HOTS 40.10% with a cognitive level of analysis. The results of other studies were those by Qoni'ah (2017) showing that the percentages of HOTS items in junior high school mathematics Final National Examination in 2013, 2014, and 2015 were 75%, 12.5%, and 10%, respectively. Another study by UuliaIffa et al. (2017) shows that the items categorized as HOTS in the Physics National Final

Examination for Junior High School/Madrasah Tsanawiyah (its Islamic equivalent) in 2016, 2015, 2014 made up 8.7%, 11.7%, and 0% respectively. The absorption of students in working on questions categorized as HOTS in the 2016 final national exam was 20.1%.

These various reasons have motivated the authors to conduct research on the national standard school examination (USBN) of Pancasila and citizenship education subject for senior high school in terms of the characteristics of HOTS (higher order thinking skills) questions for the main questions of K13-071 (KI is Indonesian term for Core Competencies) 2016/2017 academic year in Karawang Regency. This aim is elaborated in two research questions, namely: 1) how many questions in the USBN for the subject are concerned with the cognitive processes of Bloom's revised Taxonomy (analyzing, evaluating, creating) for the main questions of K13-071 in the 2016/2017 academic year in Karawang Regency?; 2) how many questions in the USBN test that meet the characteristics of HOTS (higher order thinking skills) in terms of the use of stimuli (basic questions)?.

The results of this study are expected to provide information especially for Pancasila and citizenship education educators/teachers to further improve the quality of Pancasila and citizenship education learning outcomes by increasing the number of questions that can develop students' higher order thinking skills, so as to encourage the attainment of graduate competency standards and the meeting of the goals of Pancasila and citizenship education subject and the national education, which is to create students who will be

intelligent, critical, and creative citizens and who have a strong character (sense of nationalism, patriotism, democracy, and responsibility).

B. METHOD

The research employed quantitative content analysis method to measure dimensions or aspects of content/documents with quantitative techniques. Eriyanto (2011, p. 2) explained that "in general, quantitative content analysis can be defined as a scientific research technique that is intended to describe the characteristics of content and draw inference from content. Content analysis is intended to systematically identify the content of the communication is visible (manifest), and is carried out objectively, validly, reliably, and the result is replicable." Thus, in the perspective of quantitative methodology, content analysis is a data analysis technique that emphasizes quantitative techniques that use calculations and measurement of aspects of the contents/documents that can be seen (manifest) and presents the results of the research quantitatively.

The research approach used by the researchers is a descriptive content analysis approach. According to Eriyanto (2011, p. 47), descriptive content analysis is "content analysis intended to describe in detail a message, or a particular text. This analysis design is not intended to test a particular hypothesis or test the relationship between variables. Content analysis is only for description, describing aspects and characteristics of a message."

The research used purposive sampling technique. Sugiyono (2014, p. 85) defined this technique as "sample determination technique with certain

considerations.”The considerations include: First, the research problems on the USBN (National Standard School Examination) of Pancasila and citizenship education for senior high school based on the characteristics of HOTS questions for the K13-071 main questions tested in Karawang Regency in the 2016/2017 academic year; second, the questions tested in the said test that were different from the previous ones given through school examinations; and third, the number of objects under research that was not doable, namely four documents concerning USBN of Pancasila and citizenship education for senior high school in 2016/2017 academic year in Karawang Regency, which consists of 2 main packages: 1 follow-up package and 1 backup package. Hence, it is not possible for the researchers to analyze all of the documents, considering the limited energy and time to conduct the research.

The sample in this research was the main document of the 2016/2017 National Standard School Examination of Pancasila and citizenship education for senior high school with the K13-071 question code used by the six senior high schools in Karawang Regency that have implemented the 2013 curriculum from the 2014/2015 academic year, namely SMAN (State Senior High School) 1 Karawang, SMAN 3 Karawang, SMAN 4 Karawang, SMAN 1 Batu Jaya, SMAN 1 Tempuran and SMAN 1 Telagasari. Data were collected through the techniques of documentary study, literature review, and questionnaire in the form of coding sheets. Data were analyzed with the technique of descriptive statistics, in which the data are presented in tables and calculation of percentages and mean value.

In terms of validity test, data-oriented validity was carried out, which is a validity that assesses how well the measuring instruments present information that is embedded in and associated with available data. The type of validity included in this category is face validity to determine the extent to which the measuring instrument actually measures what is measured (Eriyanto, 2011, p. 260). To find out whether the measuring instrument we used meets the element of face validity can be done in two ways (Eriyanto, 2011, pp. 262-263): “First, with the approval of the scientific community; second, testing the measuring instrument by a panel of experts.” In this research, the researchers used instruments based on the approval of a scientific community, in the form of Assessment Guidance by Educators and Education Unit for Senior High School 2017 and Module Preparation of Higher-Order Thinking Skills (HOTS) issued by the Directorate of Senior High School Development—Directorate General of Primary and Secondary Education—Ministry of Education and Culture of the Republic of Indonesia.

To see whether the data obtained and collected through the coding sheet are appropriate, reliability test was also conducted. In this case, the researchers used the Holsti formula, introduced by Ole R. Holsti (in Eriyanto, 2011, p. 290), as follow:

$$\text{Intercoder Reliability} = \frac{2M}{N1+N2}$$

Notes:

M= the amount of the same coding (approved by each coder).

N1= the amount of coding made by coder 1.

N2= the amount of coding made by coder 2.

Based on the Holsti formula, the tolerable minimum reliability is 0.7 or 70%. That is, if the calculation result shows the reliability of above 0.7, it means that this measuring instrument is truly reliable. But if the score is below 0.7, it means that the measuring sheet (coding sheet) is not reliable.

The intercoder reliability test was carried out by the researchers as coder A by involving two experts in the field of Pancasila and citizenship education learning and evaluation, namely Prof. Dr. Hj. Kokom Komalasari, M.Pd. as coder B, and Dr. Iim Siti Masyitoh, M.Si. as Coder C to give opinions, responses, and evaluations (assessments) on the items of the USBN (National School Standard Examination) for Senior High School

Pancasila and citizenship education, through questionnaires in the form of coding sheets.

C. RESULTS AND DISCUSSION

To find out the reliability of the research instrument, the researchers used the reliability test between the coders using the Holsti formula.

The results of the reliability test between coders A, B and C, for distribution of items on the USBN for Senior High School Pancasila and Citizenship education in 2016/2017 Academic Year on the main problems of K13-071 based on the cognitive process dimensions of Bloom's revised Taxonomy are presented in Table 3.1.

Table 1. Intercoder Reliability Score

Cognitive Process Dimension of Bloom's Revised Taxonomy	Coder A	Coder B	Coder C
	Number of Items		
<i>Lower-Order Thinking Skills (LOTS):</i>			
- Remembering	1, 8, 10, 15, 20, 30, 34, 42, 44	1, 7, 8, 10, 15, 20, 30, 34, 42, 44	1, 8, 10, 15, 20, 30, 34, 42, 44
- Understanding	3, 4, 6, 7, 9, 12, 14, 16, 19, 32, 35, 36, 37, 41, 45	3, 4, 6, 9, 12, 14, 16, 19, 32, 35, 36, 37, 41, 45	3, 4, 6, 7, 9, 12, 14, 16, 19, 32, 35, 36, 37, 41, 45
- Applying	2, 5, 18, 21, 22, 25, 27, 29, 31, 33, 38, 39, 40, 43	2, 5, 18, 21, 22, 25, 27, 29, 31, 33, 38, 39, 40, 43	2, 5, 18, 21, 22, 25, 27, 29, 31, 38, 39, 40, 43
<i>Higher Order Thinking Skills (HOTS):</i>			
- Analyzing	13, 17, 23, 24, 28	13, 17, 23, 24, 28	13, 17, 23, 24, 28, 33
- Evaluating	11, 26	11, 26	11, 26
- Creating	-	-	-
Intercoder Reliability Score			
A and B =		A and C =	
0.98 or 98%		0.98 or 98%	

Based on Table 1, the scores of intercoder reliability for the distribution of items on the USBN for Senior High School Pancasila and Citizenship education in 2016/2017 Academic Year on the main items of K13-071 based on the cognitive process dimension of Bloom's revised Taxonomy for coders A and B and coders A and C are 0.98 or 98%, respectively. It can be concluded then that based on the Holsti formula, the data collected through the coding sheet for Coders A and B and A and C were reliable.

Table 1 also indicates that the out of the 45 items tested on the USBN, the number of questions that meet the characteristics of HOTS (higher order thinking skills) questions in terms of the cognitive process dimension of Bloom's revised Taxonomy for the main items of K13-071 was 7 items or 15.6%, consisting of 5 (11.1%) items at the level of analyzing (C4) and 2 (4.4%) for evaluating (C5). On the other hand, no questions were found for the cognitive process dimension of creating (C6). The remaining 38 (84.4%) items only measure lower order thinking skills (LOTS), on the dimensions of remembering (C1) for 9 items (20%), understanding (C2) for 15 (33.3%) items, and applying (C3) for 14 (31.1%) items.

This is certainly does not fulfil the mandate of the 2013 curriculum, both before and after the revision. In the previous 2013 curriculum (2014), as attached to the Ministry of Education and Culture Regulation No. 54 of 2014 concerning 2013 Senior High School/Madrasah Aliyah Curriculum concerning Core Competencies and Basic Competencies for Pancasila and Citizenship education subject, it is

stipulated that there are 24 basic competencies that must be attained and possessed by students for the dimension of knowledge at the senior high school level, with 75% developing higher order thinking skills (HOTS) at the cognitive process levels of analyzing (C4) and evaluating (C5), and 25% developing lower order thinking skills at the level of understanding (C2).

Meanwhile, in the revised 2013 curriculum (2016), in the Appendix of the Ministry of Education and Culture Regulation No. 24 of 2016 concerning Core Competencies and Basic Competencies in Primary Education and Secondary Education, it is stated that of the 17 basic competencies that must be attained and possessed by students for the knowledge dimension at the senior high school level in Pancasila and citizenship education subject based, 82.4% of the basic competencies should develop higher order thinking skills (HOTS) at the levels of analyzing (C4) and evaluating (C5), and 17.6% developing low order thinking skills (LOTS) at the levels of understanding (C2).

Thus, it can be inferred that the USBN questions for Senior High School Pancasila and Citizenship education in 2016/2017 Academic Year on the main items of K13-071 in Karawang Regency, in terms of the characteristics of HOTS questions that measure high level thinking skills are still very low, and cognitive process dimensions that are measured only include analyzing and evaluating, while creating has not yet been included both in the USBN items and basic competencies to achieve Core Competencies 3/KI-3 (Knowledge) in Pancasila and citizenship education subject at the senior high school level. In

fact, according to the revised Bloom's Taxonomy by Anderson & Krathwohl (2010, p. 403), there are six dimensions of the cognitive process which are "remembering, understanding, applying, analyzing, evaluating, creating." Thus, the highest level of the cognitive process dimensions, namely creating should be included in the basic competencies of the 2013 curriculum.

This is also in line with the objectives of the Pancasila and citizenship education subject that plays

an important role in realizing the national education goals as stated in Law No. 20 of 2003 concerning the National Education System, Article 3, "to develop the potential of students to become human beings who are ... creative ... independent and to become democratic and responsible citizens."

Next, the results of the analysis of the stimuli or basic questions analyzed by the coders (A, B, C) are presented in Table 3.2:

Table 2. Intercoder Reliability Score on the Use of Stimuli (basic questions) in the HOTS items of K13-071

Indicator	Coder A	Coder B	Coder C
	No. of HOTS Items		
1. HOTS items using interesting and contextual stimuli	11, 23, 26, 28 (present) 13, 17, 24 (absent)	11, 23, 26, 28 (present) 13, 17, 24 (absent)	11, 23, 26, 28, 33 (present) 13, 17, 24 (absent)
2. Types of stimulus (basic questions)	Illustration, case sample, and survey results		
Intercoder Reliability Scores			
A and B		A and C	
1.00 or 100%		0.93 or 93%	

Based on Table 3.2, the scores of intercoder reliability on the use of stimuli (basic questions) in the HOTS items for K13-071 for coders A and B and coders A and C were 1.00 or 100% and 0.93 or 93%, respectively. From these results, it can be concluded that based on the Holsti formula, the data collected through the coding sheet for Coders A and B and coders A and C were reliable. The table further indicates that according to coders A and B, there were 4 (8.9%) items on HOTS for K13-071, for items number 11,

23, 26, and 28. The remaining 3 (6.7%) items did not use any stimulus (numbers 13, 17, 24). Meanwhile, according to coder C, as many as 5 HOTS items (11.1%) used stimuli (items 11, 23, 26, 28, 33). The remaining 3 (6.7%) items did not use any stimulus. The forms of stimuli as stated by the three coders were illustrations, case examples, and survey data. Other forms of stimuli such as photos, pictures, tables, or graphs and the like were not found in the items.

This finding clearly shows the lack of variation in the forms of stimuli used in the National Standard School Examination for Senior High School Pancasila and Citizenship education subject of the 2016/2017 academic year for the K13-071 items. On the other hand, Devi (2017, p. 27) argued that “in order for written items to hone students’ higher-order level thinking, each item should always be given a basic question (stimulus) in the forms of sources/reading materials, such as reading texts, paragraphs, drama texts, fragments of novels/stories/fables, poems, cases, pictures, graphics, photos, formulas, tables, lists of words/symbols, examples, maps, films, or recorded sound.” Thus, from this opinion, the HOTS items in the test need to include various stimuli, not only in the form of illustrations/examples/fragments of cases, but also other stimuli that are interesting and contextual based on problems in the real life.

Another interesting thing to be discussed is that the five items which are tested on the USBN (National Standard School Examination) for the two main problems of K13-071 actually measure the lower order thinking skills (LOTS) at the levels of cognitive process dimension (C1), understanding (C2) and applying (C3) Meanwhile, theoretically essay questions should be used by test makers because this form of question has various advantages such as being able to train and develop students’ reasoning and to measure high level cognitive aspects. This is as stated by Sudjana (2017, p. 36-37), that the advantages of essay question include the ability to:

a) measure high mental or cognitive processes;

- b) develop language skills, both oral and written in accordance with the rules of the language;
- c) train the ability to think regularly or reasoning, namely thinking logically, analytically and systematically;
- d) developing problem-solving skills;
- e) technically speaking, teachers are also at advantage because they can make items in the test in a shorter time and they can directly see students’ thinking process.

Thus, it is expected that essay questions can be used to measure higher order thinking skills by first presenting stimuli (basic questions) that are more interesting and based on contextual problems. In addition, the findings show that the type of essay questions used was the limited one with clear and measurable answers. According to the researchers, limited essay question is still appropriate and can be given in examinations such as USBN and daily quizzes conducted by the teacher at school, while still being able to measure students’ higher order thinking skills by preparing questions that can train critical, analytical, and argumentative thinking which are open to various perspectives.

D. CONCLUSION

The results show that out of the 45 items tested in the USBN (National Standard School Examination) for Pancasila and Citizenship education subject of senior high school in Karawang Regency, 2016/2017 Academic Year, the number of questions that met the characteristics of HOTS (higher order thinking skills) in terms of the cognitive process dimensions of Bloom’s revised

Taxonomy (analyzing, evaluating, creating) for the questions coded K13-071 are still classified as very low and only represented the levels of cognitive process dimensions of analyzing (C4) and evaluating (C5). Meanwhile, items that measure the level of creating (C6) were not found, both in the USBN and basic competencies of the 2013 curriculum which are intended to achieve KI-3 (knowledge) at the senior high school level. In addition, the five essay questions which theoretically should allow for the measurement of students' reasoning or higher level cognitive aspects did not contain any HOTS at all. The five items referring to K13-071 were limited essay questions that only measure lower order thinking skills of remembering (C1), understanding (C2) and applying (C3). The results also suggest the stimuli of HOTS questions used were only in the forms of illustrations, case examples, and survey results. Other forms of stimuli such as images, photos, and tables/graphs, and the like have not been used.

REFERENCES

- Anderson, L. W. & Krathwohl, D. R. (2001). *A Taxonomy for Learning, Teaching, and Assessing: A Revision of Bloom's Taxonomy of Educational Objectives*. New York: Addison Wesley Longman, In.
- Anderson, L. W. & Krathwohl, D. R. (2010). *Kerangka Landasan untuk Pembelajaran, Pengajaran dan Asesmen-Revisi Taksonomi Pendidikan Bloom* (Trans. Yogyakarta: Pustaka Pelajar.
- Directorate of Senior High School Development-Directorate General of Primary and Secondary Education-Ministry of Education and Culture. (2017). *Panduan Penilaian oleh Pendidik dan Satuan Pendidikan untuk Sekolah Menengah Atas*. Jakarta: Directorate of Senior High School Development- Directorate General of Primary and Secondary Education-Ministry of Education and Culture.
- Directorate of Senior High School Development-Directorate General of Primary and Secondary Education-Ministry of Education and Culture. (2017). *Materi Umum Materi Pokok Bimbingan Teknis Implementasi Kurikulum 2013 SMA Tahun 2017*. Jakarta: Directorate of Senior High School Development-Directorate General of Primary and Secondary Education-Ministry of Education and Culture.
- Directorate of Senior High School Development-Directorate General of Primary and Secondary Education-Ministry of Education and Culture. (2017). *Modul Penyusunan Soal (A Module of the Making of Questions on) Higher Order Thinking Skill (HOTS)*. Jakarta: Directorate of Senior High School Development-Directorate General of Primary and Secondary Education-Ministry of Education and Culture.
- Eriyanto. (2011). *Analisis Isi Pengantar metodologi untuk Penelitian Ilmu Komunikasi dan Ilmu-ilmu Sosial Lainnya*. Jakarta: Kencana.
- KOMPAS. (2016, Desember). *Daya Imajinasi Siswa Lemah (Students' Weak Imagination Power)*. Retrieved from <http://nasional.kompas.com/read/2016/12/15/23091361/daya.imajinasi.siswa.lemah>

- Kunandar. (2014). *Penilaian Autentik-Penilaian Hasil Belajar Peserta Didik Berdasarkan Kurikulum 2013 (Third edition)*. Jakarta: Rajawali Pers.
- Law No. 20 of 2003 regarding National Education System.
- Lewis, A., & Smith, D. (1993). Defining Higher Order Thinking. *Theory Into Practice*, XXXII(2), p. 131-137.
- Majid, A. (2015). *Penilaian Autentik Proses dan Hasil Belajar*. Bandung: PT Remaja Rosdakarya.
- OECD. (2014). Pisa 2012 Results: What Students Know and Can Do-Student Performance in Mathematics, reading and Science. *OECD Publishing*, 1 (Revised Edition), February 2014.
- OECD. (2016). *Pisa 2015 Result in Focus*. Retrieved from <https://www.oecd.org>.
- Regulation of the Ministry of Education and Culture No. 20 of 2016 regarding Graduate Competency Standards of Primary and Secondary Education.
- Regulation of the Ministry of Education and Culture No. 21 of 2016 regarding Standard Content for Primary and Secondary Education.
- Regulation of the Ministry of Education and Culture No. 23 of 2016 regarding Standard of Educational Assessment.
- Regulation of the Ministry of Education and Culture No. 24 of 2016 regarding Core Competencies and Basic Competencies in Curriculum 2013 at Primary and Secondary Education.
- Regulation of the Ministry of Education and Culture No. 3 of 2017 concerning Learning Outcomes Assessment by the Government and Learning Outcomes Assessment by Unit of Education.
- Regulation of the Directorate General of Primary and Secondary Education, Ministry of Education and Culture No. 08/D/HK/2017 concerning Standard Operational Procedures for National Standard School Examination for Primary and Secondary Education, Academic Year 2016/2017.
- Sudjana, N. (2017). *Penilaian Hasil Proses Belajar Mengajar (Assessment of Teaching and Learning Outcomes)*. Bandung: PT Remaja Rosdakarya.
- Thomas, A., & Thorne, G. (2009). *How to Increase Higher Level Thinking*. Retrieved from <http://www.cdl.org/articles/how-to-increase-high-order-thinking/>.