



## Analysis of High Order Thinking Skill (HOTS) Type Questions in the Final Assessment of Elementary School Theme 2 Class V Academic Year 2021/2022

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| Article Info   | Abstract  |
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| <b>Article History</b><br>Received: 2022-12-12<br>Revised: 2023-01-17<br>Published: 2023-02-02<br><br><b>Keywords:</b><br><i>High Order Thinking Skills Type Questions; End Of Semester Assessment.</i>    | <p>The purpose of National Education is to create a prosperous Indonesian society by forming a quality, independent, and able to realize the ideals of the nation. This goal is implied in the field of Education by applying 21st century skills. One form of 21st century literacy that applies higher-order thinking in learning to improve students' abilities. Application in education is carried out through planning, implementation, and evaluation. The form of evaluation is a test and non-test, one of which is a <i>HOTS-type</i> question to measure high-level thinking ability. The research data is sourced from documents about the final semester assessment of class V theme 2 Malang city for the 2021/2022 school year. The data were analyzed using descriptive and qualitative techniques. The purpose of the study is to determine the application of the end of Semester Assessment class V theme 2 Malang City for the 2021/2022 Academic Year. The results of the study: (1) questions that measure students' analytical ability emphasize elemental analysis and relationship analysis; (2) questions that measure a student's synthesizing ability emphasize hypothesizing a symptom; (3) questions that measure students' evaluation ability emphasize the assessment of a material based on applicable rules; (4) <i>High order thinking skills</i> type questions contain measuring elemental analysis and relationship analysis skills. The commonly used form of the test is multiple choice, while the stimulus uses story illustrations.</p>          |
| Artikel Info   | Abstrak   |
| <b>Sejarah Artikel</b><br>Diterima: 2022-12-12<br>Direvisi: 2023-01-17<br>Dipublikasi: 2023-02-02<br><br><b>Kata kunci:</b><br><i>High Order Thinking Skills Type Questions; Penilaian Akhir Semester.</i> | <p>Tujuan Pendidikan Nasional adalah mewujudkan masyarakat bangsa Indonesia yang sejahtera dengan membentuk masyarakat yang berkualitas, mandiri, dan mampu mewujudkan cita-cita bangsa. Tujuan tersebut diimplikasikan dalam bidang Pendidikan dengan menerapkan kecakapan abad 21. Salah satu bentuk kecakapan abad 21 yang penerapan berpikir tingkat tinggi dalam pembelajaran untuk meningkatkan kemampuan siswa. Penerapan dalam pendidikan dilakukan melalui perencanaan, pelaksanaan, dan evaluasi. Bentuk evaluasi adalah tes dan non tes, salah satu bagiannya soal bertipe <i>HOTS</i> untuk mengukur kemampuan berpikir tingkat tinggi. Data penelitian bersumber dari dokumen soal penilaian akhir semester gasal kelas V tema 2 kota Malang tahun ajaran 2021/2022. Data dianalisis dengan menggunakan teknik deskriptif dan kualitatif. Tujuan penelitian untuk mengetahui penerapan soal Penilaian Akhir Semester kelas V tema 2 Kota Malang Tahun Ajaran 2021/2022. Hasil penelitian: (1) soal yang mengukur kemampuan analisis siswa menekankan kepada pada analisis unsur dan analisis hubungan; (2) soal yang mengukur kemampuan sintesis siswa menekankan pada membuat hipotesa terhadap sebuah gejala; (3) soal yang mengukur kemampuan evaluasi siswa menekankan pada penilaian terhadap sebuah materi berdasarkan aturan yang berlaku; (4) Soal tipe <i>high order thinking skills</i> memuat mengukur kemampuan analisis unsur dan analisis hubungan. Bentuk tes yang umumnya digunakan adalah pilihan ganda, sedangkan stimulus menggunakan ilustrasi cerita.</p> |

### I. INTRODUCTION

The rapid development of technology creates competition in various fields of work, so it is necessary to have skills and ability development. Greenstein (2012) explained that with students to be able to survive in the 21st century, they must master skills, science, be able to think critically, creatively, and collaborate and communicate. This is in accordance with the objectives

of national education, namely realizing a prosperous Indonesian society by forming a quality, independent, and able to realize the ideals of the nation (BSNP, 2015: 10). The explanation shows the importance of a society that has the quality of behavior and intelligence achieved through the education process. The government designed the 2013 curriculum as a 21st century-based learning based on students

(Sugiyarti, L. et al, 2018). Teachers as representatives of the government carry out learning in schools to be able to apply 21st century learning. The BSNP team (2015) explained that learning in 21st century competencies lead's to students being able to think creatively, think critically, collaborate and communicate. The explanation in favor of 21st century learning is to develop higher-order thinking skills.

Thomas and Glenda explain that higher-order thinking is a mental activity at a higher level than explaining something to someone is the same as something told (Usmaedi, 2017: 91). Rofiah (2013: 18) explains that higher-order thinking and mental activity include: connecting, manipulating, and transforming its knowledge and experience to think critically and creatively in the face of new conditions. Based on Pohl's explanation and Lewy explains that Bloom's Taxonomy is the basis of higher-order thinking (Lailly & Asih, 2015: 28). In Bloom's Taxonomy, the categories of higher-order critical thinking include: synthesis, analysis, and evaluation. Bloom (1956:162) describes cystesis as the union of parts into a whole from a part that is not yet intact and clear. Based on the results, synthesis is grouped into three sub-categories, that is, it generates a typical form of communication, generates a set of operating activities or plans, generates abstract relationships (Bloom, 1956:186). Bloom (1956:144) explains Analytical ability is the process of breaking matter into elements or parts and finding relationships between them. Analytical skills are not demanding in understanding the material alone. Based on the focus of analysis, the material is divided into three types, namely relationship analysis, element analysis, and organizing principle analysis (Bloom, 1956: 146). Evaluation is explained as making consideration of the value of a (Bloom, 1956: 185). The assessment of something is based on certain criteria. Bloom (1956:186) explains two types of criteria in conducting evaluations, namely internal and external.

One of the learning objectives is that students can carry out activities that contain high-level thinking, so teachers in planning, implementing, and evaluating learning must lead to higher-order thinking activities. Evaluation of learning is carried out using tests and non-tests, while tests are carried out in written and oral. Assessment of students' high-level thinking ability, HOTS (high Order thinking skills) type questions are needed to measure students' high-level thinking ability. The characteristics of HOTS questions are (1)

contextual problem-based; (2) measuring high-level thinking ability; (3) using various question forms (Widana, 2017: 3). The contextual problems in question are problems experienced by students in their daily lives; higher-order thinking skills include synthesis, analysis, and evaluation; while the various forms of the questions are objective and subjective. The severity that occurs in the field of evaluation activities carried out in schools is still not widely applied to HOTS-type questions. This makes researchers want to know how to apply HOTS questions in class V at SDN Gadang 3 on the end-of-semester assessment (PAS) questions for the 2021/2022 academic year.

## II. METHOD

The research method used is qualitative research. The purpose of this research is to explain an overview of the content of the HOTS question type at the end of semester assessment (PAS) even class V Malang City. Furthermore, in analyzing and describing findings using descriptive research. The source of the data used is a document about the PAS even class V Malang City for the 2021/2022 school year. Data analysis uses Miles & Huberman's qualitative data analysis, namely data reduction, data presentation, and conclusion drawing. Data reduction is carried out by sorting data with guidelines for identifying the characteristics of the construction of HOTS type questions and identification guides for HOTS. Data reduction is presented in the table, then analyzed to find out the picture of the problem in measuring high-level thinking.

## III. RESULT AND DISCUSSION

### A. Result

The results of the study found that there were 15 *HOTS* type questions out of 40 questions contained in PAS gasal class V Malang City for the 2021/2022 school year Subject: Theme 2 (Clean Air for Health). The results of the study stated that the HOTS type questions in theme 2 were most commonly found in PPkn and IPS content.

**Table 1.** Recapitulation of Data Classification Based on Theme and Learning Content

| No. | Learning Content | Many Questions |   |                     |
|-----|------------------|----------------|---|---------------------|
|     |                  | Item 2         |   | Total               |
|     |                  | N              | H | Number of Questions |
| 1.  | PPKn             | 3              | 5 | 8                   |

|     |            |    |    |    |
|-----|------------|----|----|----|
| 2.  | Indonesian | 7  | 3  | 10 |
| 3.  | IPA        | 6  | 2  | 8  |
| 4.  | IPS        | 2  | 5  | 7  |
| 5.  | SBDP       | 0  | 0  | 7  |
| Sum |            | 17 | 15 | 40 |

Information: N: No HOTS, H: HOTS

Furthermore, it is a grouping of HOTS questions based on high-level thinking indicators including relationship analysis, element analysis, organizing principle's analysis, producing distinctive forms of communication, generating plans, generating abstract relationships, giving consideration based on external criteria, giving consideration based on internal criteria.

**Table 2.** Recapitulation of Classifying Data Sources based on High-Order Thinking Indicators

| No  | Pretextual Content | Higher Order Thinking Indicators |             |    |    |    |    |           |    |   |            |   | Total |    |
|-----|--------------------|----------------------------------|-------------|----|----|----|----|-----------|----|---|------------|---|-------|----|
|     |                    | Analysis                         |             |    |    |    |    | Synthesis |    |   | Evaluation |   |       |    |
|     |                    | N1                               |             | N2 |    | N3 | S1 | S3        | E2 |   |            |   |       |    |
|     |                    | K K K K K K                      | K K K K L L | L1 | M6 |    |    |           |    |   |            |   |       |    |
|     |                    | 1                                | 3           | 4  | 5  | 6  | 7  | 8         | 9  | 3 | 9          | 1 |       |    |
| 1.  | PPKn               | 3                                | 0           | 0  | 0  | 0  | 2  | 0         | 0  | 0 | 0          | 0 | 1     | 5  |
| 2.  | B. Indo            | 0                                | 2           | 0  | 0  | 0  | 1  | 0         | 0  | 0 | 0          | 0 | 0     | 3  |
| 3.  | IPA                | 0                                | 1           | 0  | 0  | 0  | 1  | 0         | 0  | 0 | 0          | 0 | 0     | 2  |
| 4.  | IPS                | 1                                | 0           | 0  | 0  | 0  | 2  | 0         | 0  | 0 | 2          | 0 | 0     | 5  |
| 5.  | SBDP               | 0                                | 0           | 0  | 0  | 0  | 0  | 0         | 0  | 0 | 0          | 0 | 0     | 0  |
| Sum |                    | 4                                | 3           | 0  | 0  | 0  | 6  | 0         | 0  | 2 | 0          | 1 | 1     | 15 |

Information:

- N1: Analysis of elements consisting of K1, K3, K4, and K5  
 N2: Relationship analysis consisting of K6, K7, and K8  
 N3: Analysis of organizing principles consisting of K9  
 S1: Produces a typical form of communication consisting of L3  
 S3: Generates an abstract set of relationships consisting of L9 and L11  
 E3: Analysis based on external criteria  
 K1: Recognizing unstated assumptions  
 K3: Finding conclusions backed up with facts  
 K4: Finding the core or main idea in the material  
 K5: Comparing and/or describing parts  
 K6: Identifying relationships between ideas  
 K7: Finding a causal relationship  
 K8: Distinguishing relevant and irrelevant arguments  
 K9: generalizing an idea or perspective on something  
 L3: Generating rhymes/rhymes  
 L9: Hypothesize a symptom  
 L11: Create a conceptional chart of the classification of objects/events

M6: Make judgments on material based on applicable rules

Indicators and descriptors that appear in table 2. This is what is found in the PAS for the 2 V theme class in Malang City for the 2021/2022 Academic year.

## B. Discussion

1. An overview of the formulation of the problem that measures the ability of the analysis.

Based on the results of the study, there are 15 questions that measure the analytical ability in PAS with theme 2 class V Malang City. Fifteen questions are contained in the learning content, PPkn, Bahasa Indonesia, Science, Social Studies, and SBdP. Fifteen questions are divided into three groups of analysis, namely section analysis, relationships, and organizing principles. This grouping is based on Bloom's opinion of analysis as a goal (Bloom, 1956:154). The five questions consist of twelve questions about elements of elemental analysis, two questions about relationship analysis, and one question about the analysis of the principle of negotiation. Based on this presentation, it is known that the analysis of the type of analysis of elements that are most contained in the PAS question. Twelve questions on elemental analysis consist of recognizing unstated assumptions, finding conclusions supported by facts and finding causal relationships. In general, questions that measure the ability to think analytically use the form of multiple-choice questions (objective questions) and short and complementary fill-in questions (subjective questions). The form of the problem contained in the question is a problem that may have been experienced by students in their daily lives. PAS questions that measure analytical ability make stimulus or introductory material in the form of pictures or fragments of paragraphs.

2. Overview of Problem Formulation with synthesis ability.

The question that measures the ability of cystesis in PAS is theme 2 class V Malang city there are two questions. The two questions are contained in the content of social studies learning. The two questions are about stringing together abstract relationships, namely making a hypothesis about a symptom. This is consistent with Bloom's

opinion of stringing abstract relationships together by hypothesizing a symptom as a sub of the category of cystesis ability (Bloom, 1956: 171). All questions that measure synthesis ability are subjective questions, namely short fills, and the problems contained in the questions are problems that students may have experienced in their daily lives. The PAS question that measures the ability of cystesis contains a stimulus or introductory material in the form of an illustration of the story.

### 3. Overview of Problem Formulation with synthesis ability.

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## IV. CONCLUSION AND SUGGESTION

### A. Conclusion

Based on the results of the research analysis can be concluded as follows:

1. The form of questions that measure students' analytical ability in PAS questions on theme 2 of class V Malang City for the 2021/2022 school year contains more analysis of elements and causal relationships. The form of the test questions is in the form of double choices and short fills, as well as the stimulus used are pictures and stories.
2. The form of the question that measures the ability of student synthesis in the PAS question is the theme 2 kela V Malang City for the 2021/2022 school year in the form of making a hypothesis about a symptom. The form of the test questions in the form

of short fills and stimuli used is an illustration of the story.

3. The form of questions that measure students'sU evaluation ability on PAS questions is theme 2 kela V Malang City for the 2021/2022 school year in the form of making an assessment of a material based on applicable rules. The form of the test questions in the form of short fills and stimuli used is an illustration of the story.
4. The form or type of *HOTS* question about PAS is the theme 2 kela V Malang City for the 2021/2022 school year tends to measure the ability of elemental analysis, namely recognizing assumptions that are not stated. The form of the question used is multiple choice and the stimulus that is often used is the illustration of the story.

### B. Suggestion

The results of the study resulted that the *HOTS* type questions listed in the PAS gasal class V theme 2 questions in Malang City for the 2021/2022 School Year still emphasized the analysis of elements and cause-and-effect relationships. It is hoped that the question compiler can expand the scope of *HOTS-type* questions as a whole. Compiling *HOTS* type questions is not an easy thing, it requires knowledge about *HOTS* type questions and practice making *HOTS* type questions. It will be very helpful if relevant parties can facilitate teachers as question compilers to access information about *HOTS* type questions and hone skills in compiling *HOTS-type* questions, by organizing training or seminars on *HOTS-type* questions addressed to teachers.

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