

## SUMMATIVE ANALYSIS BASED ON LEVEL OF DIFFICULTY BASED ON HOTS ITEMS IN INDONESIAN LANGUAGE SUBJECT CLASS VII MTs AL KHOIRIYAH

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### ABSTRACT

This research will discuss studies related to learning evaluation, more precisely it will analyze HOTS-based summative multiple choice questions in grade 7 at MTs Al Khoiriyah Sidodowo school. This research uses a qualitative descriptive methodology, with 3 techniques, namely observation, documentation and interviews. The results of the research showed that there were 5 questions in the LOTS category consisting of very easy and easy category questions. There are 17 questions in the MOTS category, consisting of medium category questions and 3 questions in the HOTS category.

### ABSTRAK

Penelitian ini akan membahas kajian terkait evaluasi pembelajaran, lebih tepatnya akan menganalisis butir soal pilihan ganda Sumatif berbasis HOTS pada kelas 7 di sekolah MTs Al Khoiriyah Sidodowo. Penelitian ini menggunakan metodologi deskriptif kualitatif, dengan 3 teknik yakni observasi, dokumentasi, dan wawancara. Hasil penelitian menunjukkan soal dengan kategori LOTS berjumlah 5 soal yang terdiri soal kategori sangat mudah dan mudah. Soal dengan kategori MOTS berjumlah 17 soal yang terdiri atas soal kategori sedang dan soal dengan kategori HOTS berjumlah 3 soal.

**Kata Kunci:** Analisis Sumatif; Tingkat Kesulitan; Berbasis Hots

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### Introduction

Acquisition of knowledge, mastery of knowledge, and formation of attitudes and beliefs in students are the goals of educators' provision known as learning. (Nurrohmatul, 2020) states that learning is an educational system that is designed, implemented and evaluated systematically to ensure that students achieve learning goals well. So that learning outcomes can be known, an evaluation process needs to be held. Suchman (in Ajat Rukajat, 2021:1) views evaluation as a process of determining the results that have been achieved by several activities, which are planned to support the achievement of goals. Meanwhile, in another statement,

learning evaluation is a process for determining the services, value or benefits of learning activities through assessment or measurement activities (Ajat Rukajat, 2021:2) and one form of evaluation is Mid-Semester Summative (STS).

The analysis used is a HOTS (Higher Order Thinking Skills) based analysis which focuses on students' high-level thinking abilities. According to Brookhart in (Herman et al., 2022), higher order thinking skills or also known as higher order thinking skills (HOTS) are complex thinking processes that involve the most basic mental activities, such as describing material, making conclusions, building representations, analyze, and build relationships. So it can be concluded that HOTS analysis is an ability that includes the ability to think critically, creatively, solve problems, make arguments and make decisions. This research will later find the results of the analysis of questions based on the level of difficulty.

Recently, several studies are relevant to this research, one of which is research (Qomariyah et al., 2022) on the analysis of multiple choice questions based on the level of difficulty of differentiating abilities at SDN 2 Kedungdalem. The study shows that there are twenty multiple choice questions with varying levels of difficulty, with five questions in the difficult category and five questions in the easy category. Apart from that, there is an analysis of the differentiating power studied which is proven by the results of students' knowledge tests being above average.

The background to this research is because first, the teacher never tests the difficulty level of the questions, so the teacher only relies on the questions found on the LKS or the internet. Second, the existence of questions in the form of long quotations makes some students lazy to read, so that students simply answer (click on the answer) without knowing the basis of the answer. Third, there is a student mindset that considers the Mid-Semester Summative (STS) to be not that important, because what is included in the report card is the Final Semester Summative (SAS) while the STS is only in sheet form. Fourth, there are problems with internet access when working on questions because most students don't have a quota so the school has to provide WiFi, but when students do questions on WiFi there are problems.

Seeing these conditions, the researcher had the idea to conduct research related to the analysis of test items based on the level of difficulty using descriptive qualitative methods, so that they could provide knowledge and solutions to problems in the field.

## Method

The subjects of this research were a group of twenty-five seventh grade students. This research project focuses on odd Mid-Semester Summative (STS) questions, Indonesian class VII class 2023/2024. The type of research carried out by researchers uses descriptive qualitative research methods, which is research to understand phenomena about what is experienced by research subjects, by descriptive means in the form of words and language (Fiantika, et al. 2022:4). There are three types of data collection techniques in this research, namely observation techniques, interviews and documentation techniques. Observation technique is an observation technique used to describe data in preliminary studies and understand the school environment in general. The documentation technique in this research is in the form of primary data, in the form of STS questions that were tested, answer keys, student work answer sheets (LJK), Teaching Modules, and Learning Objectives Flow (ATP), so that they can be used as a basic tool in analyzing problems. Meanwhile, interview techniques are used as a tool to look at problems, create questions and ask for general school description data from the principal and the head of the curriculum.

## Data Analysis Techniques

### a. Difficulty Level

Calculation of the difficulty level of Odd STS questions using the Anates 4.0.9 application. Test Items The difficulty level of questions according to Karno T.O (Wibisono & Menarianti, 2017) can be calculated using the following formula:

$$Tk = \frac{S_A + S_B}{I_A + I_B} \times 100\%$$

Interpretation of the results of calculating the difficulty index numbers for questions usually uses the following criteria according to table:

Difficulty Level Index	Criteria
0-15%	Very difficult, should be discarded
16%-30%	Difficult
31%-70%	Medium
71%-85%	Easy
86%-100%	Very easy, best to throw away

### b. High Order Thinking Skills (HOTS)

According to several experts, the definition of high-level thinking skills according to Resnick (in Ariyana Yoki et al., 2018) is a complex thinking process in describing material, making conclusions, building representations, analyzing, and building relationships involving the most basic mental activities. So it can be concluded that HOTS questions are questions used to measure high-level thinking abilities. Cognitive Processes correspond to Bloom's cognitive level. Revised LOTS categories include C1: Remembering, MOTS categories include C2: Understanding and C3: Applying. Meanwhile, the HOTS category includes C4: Analyzing, C5: Evaluating and C6: Creating.

### **Research data collection instruments:**

#### 1. Observation Instrument

- a) Permission from the school
- b) Conduct a preliminary study to find out the problems in making questions for the teacher
- c) Request a document in the form of a general description of the school from the principal and head of curriculum.

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#### 3. Documentation Instrument

- a) Request a Work Answer Sheet (LJK) in the form of a result file from Google Form from the subject teacher
- b) Enter student data into the Anates 4.0.9 application and enter the answer key as well as the student's answers

- c) Enter the all automatic processing menu, select difficulty level analysis, then see the existing interpretation results.
- d) Analyze the questions by grouping them based on level of difficulty (very easy, easy, medium, difficult and very difficult) according to the questions analysis guidelines, namely qualitative analysis which includes question material, answer key and CP, then draw conclusions based on the analysis that has been done.

4. Interview Instrument

The interview instrument can be seen in the following table.

**Table of Interview Questions for Teacher**

NO	QUESTION
1	MTs Al Khoiriyah untuk pembuatan soal Sumatif Tengah Semester (STS) Ganjil ini membuat sendiri atau dibuatkan oleh lembaga?
2	Adakah ketentuan dari sekolah saat membuat soal Sumatif Tengah Semester?
3	Cara menyusun STS ini seperti apa ya bu?, apakah mengacu pada CP, ATP dan modul ajar
4	Selama ibu mengajar, apakah pernah ada pengujian tingkat kesukaran soal?
5	Referensi ibu dalam membuat soal, menggunakan LKS atau menggunakan referensi lain?
6	Bagaimana antusias siswa dalam mengerjakan STS?
7	Apakah ada permasalahan terkait judul yang saya ajukan selain pertanyaan yang saya buat?

## Results and Discussion

### 1. Level of Difficulty on Odd Semester Mid-Semester Summative Questions

Based on the results of the analysis using the Anates 4.0.9 application, the following results were obtained:

#### a. Very Easy Category Questions

Based on the results of the analysis of Mid-Semester Summative (STS) questions using the Anates 4.0.9 application. At MTs Al Khoiriyah Sidodowo class VII, 4 questions can be found in the very easy category, namely questions number 8, 10, 15 and 25 with the following research results:

#### *Excerpt from question number 8*

“Dibawah ini yang bukan termasuk tujuan teks deskripsi ialah...”  
(C1/Menyebutkan/LOTS)

Based on the results of the analysis, question number 8 is a level C1 (Remembering) question in the LOTS category with keywords mentioned which are not included in the purpose of the descriptive text. This was proven by 25 students answering correctly out of 25 students who took the Mid-Semester Summative and the difficulty level percentage score was 100%.

#### *Excerpt from question number 10*

“Objek yang dideskripsikan dalam paragraf diatas adalah ...”  
(C1/Menyebutkan/LOTS)

Based on the results of the analysis, question number 10 is a level C1 (Remembering) question in the LOTS category with the keyword mentioning the object described in the description text. This was proven by 24 students answering correctly out of 25 students who took the Mid-Semester Summative and the difficulty level percentage score was 96%.

***Excerpt from question number 15***

“Teks deskripsi adalah...” (C1/Mendeskripsikan/LOTS)

Based on the results of the analysis, question number 15 is a level C1 (Remembering) question in the LOTS category with keywords describing descriptive text. This was proven by 22 students answering correctly out of 25 students who took the Mid-Semester Summative and the difficulty level percentage score was 88%.

***Excerpt from question number 25***

“Apakah aku?” Jawaban yang tepat untuk pertanyaan “apakah aku?” pada paragraf diatas adalah...” (C1/Memberi definisi/LOTS)

Based on the results of the analysis, question number 25 is a level C1 (Remembering) question in the LOTS category with the keyword providing a definition of “what am I” referred to in the descriptive text. This was proven by 25 students answering correctly out of 22 students who took the Mid-Semester Summative and the difficulty level percentage score was 88%.

If seen from the questions and matched with the Learning Objectives Flow (ATP), the questions are in accordance with the Learning Outcomes (CP) elements of reading and identifying things in the descriptive text, which is found at the end of the phase

**b. Easy Category Questions**

Based on the results of the analysis of Mid-Semester Summative (STS) questions using the Anates 4.0.9 application. At MTs Al Khoiriyah Sidodowo class VII, you can find 1 question in the easy category, namely question number 14 with the following research results:

***Excerpt from question number 14***

“Dibawah ini yang merupakan deskripsi tentang pohon adalah...” (C1/Memberi definisi/LOTS)

Based on the results of the analysis, question number 14 is a level C1 (Remembering) question in the LOTS category with the keyword providing a definition of a description of a tree. This was proven by 21 students answering correctly out of 25 students who took the Mid-Semester Summative and the difficulty level percentage score was 84%.

If seen from the questions and matched with the Learning Objectives Flow (ATP), these questions are in accordance with the Learning Outcomes (CP) element of viewing explicit information in the descriptive text at the end of phase D.

### c. Medium Category Questions

Based on the results of the analysis of Mid-Semester Summative (STS) questions using the Anates 4.0.9 application. At MTs Al Khoiriyyah Sidodowo class VII, you can find 17 questions in the medium category, namely question items number 2, 3, 4, 5, 6, 7, 9, 11, 13, 16, 17, 18, 19, 21, 22, 23 and 24. with the following research results:

#### ***Excerpt from question number 2***

“Kutipan teks tersebut merupakan bagian deskripsi...”  
(C2/Mengkategorikan/MOTS)

Based on the results of the analysis, question number 2 is a level C2 (Understanding) question in the MOTS category with keywords that categorize the descriptive part of the quote. This was proven by 14 students answering correctly out of 25 students who took the Mid-Semester Summative and the difficulty level percentage score was 56%.

#### ***Excerpt from question number 3***

“Bacaan diatas termasuk bagian ... pada teks deskripsi”  
(C2/Mengkategorikan/MOTS)

Based on the results of the analysis, question number 3 is a level C2 (Understanding) question in the MOTS category with keywords that categorize parts of the descriptive text. This was proven by 12 students answering correctly out of 25 students who took the Mid-Semester Summative and the difficulty level percentage value was 44%.

#### ***Excerpt from question number 4***

“Berdasarkan perincian diatas, yang termasuk ciri-ciri teks deskripsi adalah...”  
(C2/Menginterpretasikan/MOTS)

Based on the results of the analysis, question number 4 is a level C2 (Understanding) question in the MOTS category with the keyword interpreting the characteristics of descriptive text. This was proven by 12 students answering correctly out of 25 students who took the Mid-Semester Summative and the difficulty level percentage score was 48%.

#### ***Excerpt from question number 5***

“Kalimat diatas dapat diperinci menjadi ...” (C2/Mengartikan/MOTS)

Based on the results of the analysis, question number 5 is a level C2 (Understanding) question in the MOTS category with the keyword meaning understanding based on existing sentences. This was proven by 9 students answering correctly out of 25 students who took the Mid-Semester Summative and the difficulty level percentage value was 36%.

#### ***Excerpt from question number 6***

“Kalimat berikut yang menggunakan terapan pancaindra seolah-olah dapat merasakan adalah...” (C3/Menerapkan/MOTS)

Based on the results of the analysis, question number 6 is a question at level C3 (Applying) in the MOTS category with the keyword applying with the five

senses. This was proven by 13 students answering correctly out of 25 students who took the Mid-Semester Summative and the difficulty level percentage score was 52%.

***Excerpt from question number 7***

“Berdasarkan teks diatas, objek yang dideskripsikan adalah...”  
(C2/Mengartikan/MOTS)

Based on the results of the analysis, question number 7 is a level C2 (Understanding) question in the MOTS category with keywords that interpret the object described in the description text. This was proven by 14 students answering correctly out of 25 students who took the Mid-Semester Summative and the difficulty level percentage score was 56%.

***Excerpt from question number 7***

“Penggalan teks tersebut merupakan struktur teks deskripsi bagian...”  
(C2/Mengkategorikan/MOTS)

Based on the results of the analysis, question number 9 is a level C2 (Understanding) question in the MOTS category with keywords categorizing the structure of the descriptive text. This was proven by 8 students answering correctly out of 25 students who took the Mid-Semester Summative and the difficulty level percentage value was 32%.

***Excerpt from question number 11***

“Berikut yang tidak termasuk ciri teks narratif (cerita imajinasi) adalah...”  
(C2/Mengidentifikasi/MOTS)

Based on the results of the analysis, question number 11 is a question at level C2 (Understanding) in the MOTS category with identifying keywords that are not characteristic of narrative texts. This was proven by 12 students answering correctly out of 25 students who took the Mid-Semester Summative and the difficulty level percentage score was 48%.

***Excerpt from question number 13***

“Berdasarkan teks narasi diatas, yang membuktikan bahwa cerita fantasi memiliki ciri adanya keajaiban atau kemistriusan adalah...”  
(C3/Membuktikan/MOTS)

Based on the results of the analysis, question number 13 is a question at level C3 (Applying) in the MOTS category with the keyword proving that there are characteristics of magic in fantasy stories. This was proven by 14 students answering correctly out of 25 students who took the Mid-Semester Summative and the difficulty level percentage score was 56%.

***Excerpt from question number 16***

“Tujuan teks deskripsi adalah menggambarkan objek secara...”  
(C2/Menampilkan/MOTS)

Based on the results of the analysis, question number 16 is a level C2 (Understanding) question in the MOTS category with the keyword showing the

purpose of the descriptive text. This was proven by 13 students answering correctly out of 25 students who took the Mid-Semester Summative and the percentage of difficulty level was 52%.

#### ***Excerpt from question number 17***

“Berikut yang merupakan ciri teks deskripsi adalah...” (C2/Menunjukkan/MOTS)

Based on the results of the analysis, question number 11 is a level C2 (Understanding) question in the MOTS category with keywords indicating the characteristics of the descriptive text. This was proven by 13 students answering correctly out of 25 students who took the Mid-Semester Summative and the difficulty level percentage value was 36%.

#### ***Excerpt from question number 18***

“Aspek yang dideskripsikan dalam teks diatas berkaitan dengan ...” (C2/Menginterpretasikan/MOTS)

Based on the results of the analysis, question number 18 is a question at level C2 (Understanding) in the MOTS category with the keyword interpreting the aspects described in the question. This was proven by 11 students answering correctly out of 25 students who took the Mid-Semester Summative and the difficulty level percentage was 44%.

#### ***Excerpt from question number 19***

“Berikut ini yang merupakan contoh bagian identifikasi dari teks deskripsi adalah...” (C2/Menginterpretasikan/MOTS)

Based on the results of the analysis, question number 19 is a level C2 (Understanding) question in the MOTS category with the keyword interpreting the identification part of the descriptive text. This was proven by 9 students answering correctly out of 25 students who took the Mid-Semester Summative and the difficulty level percentage value was 36%.

#### ***Excerpt from question number 21***

“Kalimat yang menggunakan pancaindra penglihatan ditunjukkan dengan nomor...” (C2/Menyimpulkan/MOTS)

Based on the results of the analysis, question number 21 is a question at level C2 (Understanding) in the MOTS category with the keyword concluding sentences using the five senses of sight. This was proven by 9 students answering correctly out of 25 students who took the Mid-Semester Summative and the difficulty level percentage value was 36%.

#### ***Excerpt from question number 22***

“Informasi yang sesuai dengan teks deskripsi diatas adalah...” (C2/Menyimpulkan/MOTS)

Based on the results of the analysis, question number 22 is a question at level C2 (Understanding) in the MOTS category with the keyword concluding information in accordance with the descriptive text. This was proven by 14

students answering correctly out of 25 students who took the Mid-Semester Summative and the difficulty level percentage score was 56%.

***Excerpt from question number 23***

“Teks deskripsi diatas menggambarkan tentang ...”  
(C2/Menginterpretasikan/MOTS)

Based on the results of the analysis, question number 23 is a level C2 (Understanding) question in the MOTS category with the keyword interpreting fragments of descriptive text. This was proven by 12 students answering correctly out of 25 students who took the Mid-Semester Summative and the difficulty level percentage score was 48%.

***Excerpt from question number 24***

“Tujuan teks deskripsi adalah ...” (C2/Menunjukkan/MOTS)

Based on the results of the analysis, question number 24 is a level C2 (Showing) question in the MOTS category with the keyword indicating the purpose of the descriptive text. This was proven by 8 students answering correctly out of 25 students who took the Mid-Semester Summative and the difficulty level percentage value was 32%.

If you look at the content, on average the questions above discuss descriptive text and narrative text, in accordance with the Learning Outcomes (CP) identifying general characteristics of procedural texts, being able to use the information obtained to develop their understanding of words and observing (identifying) the characteristics of narrative texts.

**d. Difficult Category Questions**

Based on the results of the analysis of Mid-Semester Summative (STS) questions using the Anates 4.0.9 application. At MTs Al Khoiriyah Sidodowo class VII, you can find 1 question in the difficult category, namely question number 20 with the following research results:

***Excerpt from question number 20***

“Kalimat deskripsi yang tepat untuk melengkapi titik-titik pada paragraf diatas adalah ...” (C4/Mengaitkan/HOTS)

Based on the results of the analysis, question number 20 is a question at level C4 (Analyzing) in the HOTS category with keywords linking sentences to complete the descriptive text. This was proven by 7 students answering correctly out of 25 students who took the Mid-Semester Summative and the difficulty level percentage value was 28%.

If you look at the content, the question above is included in the Learning Outcomes (CP), including the element of analyzing what he has understood in the reading.

**e. Very Difficult Category Questions**

Based on the results of the analysis of Mid-Semester Summative (STS) questions using the Anates 4.0.9 application. At MTs Al Khoiriyah Sidodowo

class VII, 2 questions can be found in the very difficult category, namely questions number 1 and 12 with the following research results:

**Excerpt from question number 1**

“Berikut langkah pertama dalam membuat teks deskripsi adalah...” (C5/Menelaah/HOTS)

Based on the results of the analysis, question number 1 is a question at level C5 (Evaluating) in the HOTS category with the keyword examining the first step in creating descriptive text. This was proven by 2 students answering correctly out of 25 students who took the Mid-Semester Summative and the percentage of difficulty level was 8%.

**Excerpt from question number 12**

“Berikut ini yang bukan merupakan kategori cerita fantasi ditinjau dari latar cerita adalah...” (C5/Menafsirkan/HOTS)

Based on the results of the analysis, question number 12 is a question at level C5 (Evaluating) in the HOTS category with the keyword interpreting related things that are not fantasy stories in terms of the setting of the story. This was proven by 3 students answering correctly out of 25 students who took the Mid-Semester Summative and the percentage of difficulty level was 12%.

If you look at the content, these two questions are included in the Learning Outcomes of Reading and Viewing Elements in descriptive text and narrative text.

## Conclusion

There are 3 questions analyzed based on level of difficulty, namely LOTS questions, MOTS questions and HOTS questions. Questions included in LOTS are questions in the very easy category which consists of 4 questions, the easy category which consists of 1 question. The questions included in the MOTS medium category consist of 17 questions. Meanwhile, questions that are included in HOTS are questions in the difficult category which consists of 1 question and the very difficult category which consists of 2 questions (namely questions number 1 and 12).

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